

# Appendix M

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## Hazards Supporting Information

- Phase II Environmental Site Assessment – 700 Innes
- Phase I/II Investigation Targeted Brownfields Assessment – 900 Innes
- Preliminary Study Geotechnical and Environmental Issues
- Foreshore Sediment Sampling Technical Memorandum – 900 Innes
- Analysis of Brownfield Cleanup Alternatives –Shipwright’s Cottage, 900 Innes
- Updated Phase 1 Environmental Site Assessment –700 Innes
- India Basin Shoreline Park Soil Sampling Results
- India Basin Shoreline Park Soil Sampling Proposal
- Site Mitigation Plan – India Basin Shoreline Park, 900 Innes, and India Basin Open Space
- Revised Site Mitigation Plan – 700 Innes
- Conceptual Remedial Action Plan – 900 Innes
- Technical Memorandum – Environmental Testing Rationale at India Basin Redevelopment Project



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**PHASE II ENVIRONMENTAL SITE ASSESSMENT**  
**India Basin**  
**San Francisco, California**

*Prepared For:*

**Build Inc.**  
**San Francisco, California**

*Prepared By:*

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**2 September 2014**  
**731626702**

***LANGAN TREADWELL ROLLO***

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2 September 2014

Mr. Patrick Banks  
Build Inc.  
1215 Fourth Ave, Suite 2400  
Seattle, WA 98161

Subject: Phase II Environmental Site Assessment  
Transbay Block 6  
San Francisco, California  
Langan Project: 731626702

Dear Mr. Banks:

Langan Treadwell Rollo (Langan) is pleased to present this Phase II Environmental Site Assessment, for the India Basin property in San Francisco, California.

In performing this Phase II ESA, we have endeavored to observe that degree of care and skill generally exercised by other consultants undertaking similar studies at the same time, under similar circumstances and conditions, and in the same geographical area.

We appreciate the opportunity to assist you with this project. If you have any questions or need any information clarified, please call Mr. Peter J. Cusack at (415) 955-5244.

Sincerely yours,  
**Langan Treadwell Rollo**

Karianne Staehlin  
Staff Scientist

Peter J. Cusack  
Senior Associate

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**PHASE II ENVIRONMENTAL SITE ASSESSMENT**  
**India Basin**  
**San Francisco, California**

**1.0 INTRODUCTION**

This Phase II Environmental Site Assessment (ESA) was prepared for the proposed project located at India Basin (Site) in San Francisco, California (Figure 1). This Site is bound by Innes Street and Hudson Avenue on the west, Earl Street on the south and San Francisco Bay on the north and east. Arelious Walker Drive runs through the center of the Site from Innes Avenue and terminates at the east end of the Site. The Site is roughly rectangular in shape with average plan dimensions of 1,100 by 1,200 feet. With the exception of the structures fronting Innes Avenue, the Site it is mostly vacant. Elevations at the high end of the Site, fronting Innes Avenue, vary from 45 to 30 feet<sup>1</sup>; along Hudson Avenue they vary from Elevation 16 to 20 feet; grades slope down to Elevations 6 to 10 feet near the edge of the Site fronting the Bay.

The Site is bayward of the original historic shoreline and subject to the requirements of the City of San Francisco's Article 22A (Maher) Ordinance. Article 22A states that construction projects in San Francisco, which are bayward of the historic 1852 high tide line and disturb more than 50 cubic yards of soil, require assessment of the Site history (Phase I ESA) and subsurface soil quality (Phase II ESA).

Previous investigations of properties bayward of the Article 22A boundary have found fill material with elevated levels of metals and petroleum hydrocarbons as a result of the 1906 earthquake and fire. If fill materials are encountered which contain contaminants that exceed hazardous waste threshold concentrations, they will require special handling and disposal. Site mitigation and health and safety plans will also be required before construction and off-haul of the fill materials to designated landfills.

**2.0 PROPOSED PROJECT DESCRIPTION**

The proposed development will occupy the entire Site. The proposed structures will be at-grade, with a 1- to 2-level concrete podium and 4 to 6 stories of wood/steel-framed construction. The northeastern portion of the site will be used as open space. Site grading will

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<sup>1</sup> Elevations are referenced to San Francisco City datum.

require cuts up to 15 feet adjacent to Innes Avenue. Several feet of fill might be placed near the shoreline to mitigate potential sea rise.

### **3.0 BACKGROUND**

AEI Consultants prepared a Phase I ESA for the Site dated 15 April 2013. Based on their review of regulatory files, the Site history, Site reconnaissance, and Site information obtained during the Phase I ESA, AEI's assessment had revealed the following RECs associated with the subject property or nearby properties:

- The subject property was listed in the regulatory database as a State Hazardous Waste Site (SHWS), a Voluntary Cleanup Program (VCP) site and an "Other" site. The listings pertain to the presence of contaminated fill materials on the land portions of the subject property. Fill materials have the potential to have originated from the dredging of nearby harbor areas and to have elevated levels of metals or petroleum product constituents. A groundwater investigation was conducted in 1994 to assess the potential for subsurface impact of metals, hydrocarbons and volatile organic compounds (VOCs) from the fill materials. Soil and groundwater results showed levels of semi-VOCs (SVOCs) and hydrocarbons in excess of levels of concern, and metals concentrations exceeded both California and US Maximum Contaminant Levels (MCLs) for arsenic, barium, chromium, copper, lead and mercury. The original sampling report was not provided to AEI. However, based on a previous ESA performed for the subject property in 2008, it appears that no further investigation has been performed at the subject property since 1994. Therefore, the presence of elevated concentrations of metals in soil and groundwater at the subject property represents evidence of a recognized environmental condition.

### **4.0 SCOPE AND PURPOSE OF PHASE II WORK**

The objective of the Phase II ESA is to assess the presence of petroleum hydrocarbon and heavy metal contamination in the soil, groundwater, and soil-gas beneath the Site that may be removed and disposed during the proposed construction activities. Concentrations of chemical compounds and metals detected in the soil, groundwater, and soil-gas samples were compared to state and federal criteria for hazardous waste and local landfill requirements for disposal options.

Our work included collecting soil samples from the fifteen geotechnical borings (B-1 through B-15) and the seven exploratory borings (EB-1 through EB-7) that were drilled in areas to supplement the geotechnical boring and to provide additional special coverage throughout the Site, chemical testing of selected soil samples, and evaluating the results. We also collected a grab groundwater sample (EB-2-GW) and four soil-gas samples (EB-3-SG, EB-4-SG, EB-6-SG, and EB-7-SG) from exploratory borings drilled during the investigation.

## **5.0 FIELD INVESTIGATION**

The fifteen geotechnical borings (B-1 through B-15) were drilled in November 2013 and March, April, and June 2014 and the seven environmental borings (EB-1 through EB-7) were drilled in August 2014. The approximate locations of the borings are presented on Figure 2.

Prior to drilling we obtained the necessary drilling permits from the San Francisco Department of Public Health (SFDPH) and San Francisco Department of Public Works (SFDPW). We retained a private utility locating subcontractor to check for underground utilities near the proposed boring and CPT locations. As required by law, we notified Underground Service Alert (USA) at least 48 hours prior to drilling.

Our field exploration and laboratory testing programs are discussed in the remainder of this section.

### **5.1 Geotechnical Borings**

Between 1 and 3 November 2013, three geotechnical borings were drilled along Arellious Walker Street, designated B-1, B-2 and B-5. In March and April 2014, twelve additional geotechnical borings were drilled across the Site, designated B-3, B-4, and B-6 through B-15. Geotechnical borings B-1 through B-7 and B-15 were drilled by Pitcher Drilling Co. of Palo Alto, California, with a rig equipped with rotary wash drilling equipment. The rotary wash borings extended to depths of 95.5 to 151.5 feet below the existing ground surface (bgs). Borings B-8 through B-14, were drilled by Exploration Geoservices, Inc. of San Jose, California with a truck-mounted hollow-stem drill rig, extended to depths of 33 to 84.5 feet bgs. The borings were drilled under the direction of our field engineer who logged the soil/rock encountered and obtained representative samples for laboratory testing. Logs of the borings are presented on Figures A-1 through A-15 in Appendix A. The soil and rock encountered in the borings was classified in accordance with the Classification Chart, presented on Figure A-16 and A-17.

## 5.2 Environmental Borings

The drilling and sampling was conducted on 5 and 6 August 2014. Seven exploratory borings, EB-1 through EB-7, were drilled to depths of approximately 12 to 16 feet bgs by Gregg Drilling and Testing of Martinez, California at the locations shown on Figure 2. The exploratory drilling was advanced using hydraulically-driven, direct push technology and hand auger equipment. Soil samples collected from the direct push technology were collected using a macrocore sampler, lined with clean acetylene liners driven 48 inches into the soil. Soil samples collected from the hand auger equipment were collected with clean stainless steel liners. Groundwater was encountered in the exploratory boring (EB-2) at approximately 13 feet bgs. Boring logs from this investigation are presented on Figures B-1 through B-7 in Appendix B. The material encountered was classified according to the soil classification system described on Figure B-9.

### Soil Sampling

Soil samples were retained from the exploratory borings at depths of approximately 1.5, 2.5, 3.0, 5.0, 6.0, 7.5, 8.0, 10.0, 10.5, 12, 15, and 17.5 feet bgs for laboratory analysis. Sample ends were covered with Teflon, sealed with plastic end caps, labeled and stored on ice until delivery to the analytical laboratory. All samples were delivered under chain-of-custody control to McCampbell Analytical, Inc. (McCampbell), a California Department of Public Health certified analytical laboratory in Pittsburg, California.

### Groundwater Sampling

On 6 August 2014, one grab groundwater sample (EB-2-GW) was collected from the exploratory boring. The groundwater sample was decanted into laboratory prepared containers, sealed and stored on ice until delivery to the analytical laboratory. The sample was delivered under chain-of-custody control to McCampbell in Pittsburg, California.

### Soil-Gas Sampling

On 6 August 2014, four soil-gas samples (EB-3-SG, EB-4-SG, EB-6-SG, and EB-7-SG) were collected in general accordance with the California Department of Toxic Substances Control's (DTSC) documents titled "*Advisory – Active Soil Gas Investigation*" dated April 2012 and "*Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*" dated October 2011. The soil gas samples were delivered under chain-of-custody control to McCampbell and analyzed for VOCs by EPA Method TO-15.

## 6.0 SUBSURFACE CONDITIONS

Subsurface information was obtained from both our environmental and geotechnical investigations at the Site. We used the results of our review and field investigation to summarize the Site surface and subsurface conditions.

The Site is primarily east of the edge of the historic San Francisco shoreline. It was filled between 1946 and 1968; only a small portion of the Site is west of the historic shoreline (Figure 2). In general, the Site is blanketed by fill, underlain by Bay Mud, sand, Old Bay Clay and bedrock.

The Site is blanketed by 16 to 41 feet of fill material and the fill thickness increases towards the bay. The fill consists primarily of loose to medium dense sand with varying amounts of silt, clay, gravel, concrete, brick and wood fragments. The fill includes isolated layers of stiff to hard clay. A weak and compressible marine clay and silt deposit, referred to as Bay Mud, underlies the fill. This layer ranges from 2 to 55 feet in thickness where explored within the project Site and includes occasional layers of clayey sand. Bay Mud was not encountered in the borings west of Hudson Avenue. In general, the Bay Mud is underlain by relatively incompressible dense sand with varying amounts of clay and silt. The sand layer is about 5 to 33 feet thick. The top 5 to 10 feet of the sand layer in some areas of the Site consists of medium dense clayey sand.

A medium stiff to hard clay and silt layer, locally known as Old Bay Clay, is present beneath the native sand. The thickness of the clay layer varies across the site from 9 to 50 feet. The Old Bay Clay slopes down and becomes thicker in the northeast corner of the Site towards the bay. The Old Bay Clay is underlain by strong, relatively incompressible residual soil (completely weather rock) consisting of very stiff to hard clay and very dense sand and gravel. The residual soil is 3 to 14 feet thick. Bedrock of the Franciscan Complex consisting of shale, sandstone and serpentinite, underlies the residual soil. The bedrock surface slopes steeply from the ground surface west of the site to a depth of 23 feet near Inness Avenue and slopes down to a depth of 149 feet near the eastern side of the site. The bedrock encountered is moderately to closely fractured, soft to hard, plastic to moderately strong, and deeply to moderately weathered.

The groundwater at the Site is likely at the elevation of the water in the Bay. Groundwater was measured in several of the boreholes at depths 7 feet (at the northeast area) to 33 feet

(southwest area across Hudson Avenue). The groundwater level at the project Site is anticipated to vary a few feet seasonally and with the fluctuations in the water level of the San Francisco Bay. Given the depth of the proposed excavation activities, groundwater may be encountered during development activities.

## **7.0 SAMPLE SELECTION AND ANALYTICAL TESTING**

The objective of the soil, groundwater, and soil-gas sampling was to assess the presence of hazardous materials and petroleum hydrocarbons in the soil, groundwater, and soil-gas beneath the Site that may be disturbed during the proposed construction activities.

The soil samples were submitted to McCampbell for some or all of the analyses as listed below:

- Total petroleum hydrocarbons (TPH) as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo) by Modified EPA Method 8015B;
- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270C;
- Polychlorinated biphenyls (PCBs) by EPA Method 8081;
- California administrative manual (CAM) 17 metals by EPA Method 6020;
- Leaking underground fuel tank (LUFT) five metals by EPA Method 6010/200.7 series;
- Total lead by EPA Method 6010/200.7;
- Total cyanide by EPA Method SM4500;
- Acid soluble sulfide by EPA Method 9030A/E376.2;
- pH by EPA Method 9045D; and
- Asbestos by EPA Method 435 California Air Resource Board (CARB).

Analytical results for metals concentrations in soils were compared to the total threshold limit concentration (TTLC). Samples with elevated concentrations of lead and chromium were also

analyzed for soluble metals using the soluble threshold limit concentration (STLC) by California waste extraction test (WET) method and by the Federal toxicity characteristic leaching potential (TCLP) analyses. These analyses were run to assess if metals concentrations in soil were at State and/or Federal hazardous waste levels.

The grab groundwater sample was submitted to McCampbell for the analyses as listed below:

- Total petroleum hydrocarbons (TPH) as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo) by Modified EPA Method 8015B;
- Volatile organic compounds (VOCs) by EPA Method 8260B; and
- California administrative manual (CAM) 17 metals by EPA Method E200.8.

The soil-gas samples were submitted to McCampbell and analyzed for:

- VOCs by EPA Method TO-15.

## **8.0 LABORATORY TEST RESULTS AND EVALUATION**

The laboratory analytical results for the soil samples are summarized in Tables 1 and 2, for the groundwater samples on Tables 3 and 4, and the soil-gas on Table 5. Copies of the certified laboratory analytical reports are presented in Appendix C. The analytical results are discussed in the following section.

### **8.1 Soil Analytical Results**

Soil analytical results for parameters other than metals are summarized in Table 1. TPHg was detected above the method reporting limit (1.0 milligrams per kilogram (mg/kg)) in 18 of the 74 samples analyzed at concentrations ranging from 1.2 mg/kg to 13 mg/kg. TPHd was detected above the method reporting limits (1.0 and 2.0 mg/kg) in 69 of the 74 samples analyzed at concentrations ranging from 2.3 mg/kg to 210 mg/kg. TPHmo was detected above the method reporting limit in 69 of the 74 samples analyzed at concentrations ranging from 7.1 mg/kg to 2,800 mg/kg.

Low levels of VOCs were detected in 5 of the 30 samples analyzed. Naphthalene was detected at a concentration of 0.0090 mg/kg in sample B-5 at a depth of 7.5 feet bgs, cis-1,2-dichloroethene was detected at a concentration of 0.017 mg/kg in sample B-9 at a depth of

5.5 feet bgs, TCE was detected at a concentration of 0.034 mg/kg in sample EB-2 at a depth of 1.5 feet bgs, naphthalene was detected at a concentration of 0.060 mg/kg in sample EB-5 at a depth of 15 feet bgs and at a concentration of 0.014 mg/kg in sample EB-6 at a depth of 10 feet bgs.

Low levels of the pesticides chlordane was detected at a concentration of 0.011 mg/kg and Dieldrin was detected at a concentration of 0.0081 mg/kg in sample B-8 at a depth of 3 feet bgs. G-chlordane was detected at a concentration of 0.27 mg/kg, a-chlordane was detected at a concentration of 0.023 mg/kg, g-chlordane was detected at a concentration of 0.028 mg/kg, and dieldrin was detected at a concentration of 0.021 mg/kg in sample B-13 at a depth of 5 feet bgs.

The SVOCs acenaphthene was detected at a concentration of 1.0 mg/kg, dibenzofuran was detected at a concentration of 1.0 mg/kg, fluoranthene was detected at a concentration of 1.3 mg/kg, fluorene was detected at a concentration of 0.97 mg/kg, phenanthrene was detected a concentration of 3.7 mg/kg, and pyrene was detected at a concentration of 0.85 mg/kg was detected in sample B-15 at a depth of 10.5 feet bgs. The SVOCs benzo(a)anthracene at a concentration of 2.2 mg/kg, fluoranthene was detected at a concentration of 8.1 mg/kg, phenanthrene was detected at a concentration of 2.5 mg/kg, fluoranthene was detected at a concentration of 8.1 mg/kg, and pyrene was detected at a concentration of 6.7 mg/kg in sample EB-6 at a depth of 10 feet bgs

No other VOCs, SVOCs, pesticides, PCBs, sulfides, or asbestos were detected at or above method reporting limits in the sample analyzed. Total cyanide was detected above the method reporting limits (0.10 mg/kg) in 5 of the 11 samples analyzed at concentrations ranging from 0.13 mg/kg to 0.25 mg/kg.

The metal analytical results are summarized in Table 2. Total lead was detected in all 75 samples analyzed at concentrations ranging from 0.65 mg/kg to 840 mg/kg. None of the samples exceeded the State of California hazardous waste criteria of 1,000 mg/kg for total lead. A total of 27 samples were analyzed for STLC lead by California WET method and concentrations ranged from 0.49 milligrams per liter (mg/L) to 12 mg/L. A total of 16 soil samples exceeded the State of California hazardous waste criteria of 5.0 mg/L. TCLP lead was detected at or above the method reporting limits (0.20 mg/L) in 3 of the 20 samples analyzed at concentrations ranging from 0.28 mg/L to 0.64 mg/L. None of the soil samples analyzed exceeded the Federal hazardous waste criteria of 5.0 mg/L.

Chromium was detected in all of the 58 samples analyzed at concentrations ranging from 30 mg/kg to 330 mg/kg. A total of 30 soil samples were subsequently analyzed for STLC chromium to determine soluble chromium levels. STLC chromium was detected at or above the method reporting limits in all the samples analyzed at concentrations of 0.074 mg/L and 0.99 mg/L. None of the soil samples exceeded the State of California hazardous waste criteria of 5.0 mg/L.

The remaining metal concentrations were within normal<sup>2</sup> background ranges found in the western United States with the exception of nickel which was detected at a concentration of 2,600 mg/kg in sample EB-1 at a depth of 3 feet bgs.

## 8.2 Groundwater Analytical Results

The groundwater analytical results are presented in Tables 3 and 4. TPHg and VOCs were not detected above the method reporting limit in the groundwater sample analyzed. TPHd was detected above the method reporting limit a concentration of 510 micrograms per liter ( $\mu\text{g/L}$ ) and motor oil was detected at a concentration of 4,200  $\mu\text{g/L}$ . The metal concentrations were within normal<sup>1</sup> background ranges found in the western United States.

## 8.3 Soil Gas Analytical Results

Four soil-gas samples were collected from borings EB-3, EB-4, EB-6, and EB-7. The soil-gas samples were analyzed for VOCs using EPA Method TO-15. Soil gas analytical results are summarized in Table 5. Several VOCs, including tetrachloroethylene (PCE), trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), benzene, toluene, ethylbenzene, total xylenes, tetrahydrofuran, carbon disulfide, and other VOCs were detected at concentrations above laboratory reporting limits. Detected soil-gas results were compared to the RWQCB's shallow soil gas vapor intrusion ESLs for residential land use (Table E, RWQCB, 2013). Benzene is the only compound detected above its respective ESL. Benzene was detected above its ESL ( $42 \mu\text{g/m}^3$ ) in EB-4 and EB-6 at concentrations of 67 and  $50 \mu\text{g/m}^3$ <sup>33</sup>, respectively. No other soil gas detections were reported at concentrations exceeding their residential ESLs during this investigation.

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<sup>2</sup> "U.S.G.S. Professional Paper 1270, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States," 1984.

<sup>3</sup> ESL-R – "Regional Water Quality Control Board, San Francisco Bay Region, Environmental Screening Level for Residential Land Use Soil," Revised May 2008.

According to available historical information, the parcels on the Site have been undeveloped in the past. The parcels were reported to be consisting of fill materials that were filled in between 1946 and 1968. Fill materials have the potential to contain elevated petroleum products and VOCs. Therefore, the detection of several VOCs can be attributed to the fill materials present on the Site.

## **9.0 CONCLUSIONS AND PRELIMINARY RECOMMENDATIONS**

This Phase II Environmental Site Assessment (ESA) was prepared for the proposed project located at India Basin in San Francisco, California (Figure 1). This Site is bound by Innes Street and Hudson Avenue on the west, Earl Street on the south and San Francisco Bay on the north and east. Arellous Walker Drive runs through the center of the Site from Innes Avenue and terminates at the east end of the Site. With the exception of the structures fronting Innes Avenue, the Site it is mostly vacant.

AEI Consultants prepared a Phase I ESA for the Site dated 15 April 2013. Based on their review of regulatory files, the Site history, Site reconnaissance, and Site information obtained during the Phase I ESA, AEI's assessment had revealed the following RECs associated with the subject property or nearby properties:

- The subject property was listed in the regulatory database as a State Hazardous Waste Site (SHWS), a Voluntary Cleanup Program (VCP) site and an "Other" site. The listings pertain to the presence of contaminated fill materials on the land portions of the subject property. Fill materials have the potential to have originated from the dredging of nearby harbor areas and to have elevated levels of metals or petroleum product constituents. A groundwater investigation was conducted in 1994 to assess the potential for subsurface impact of metals, hydrocarbons and volatile organic compounds (VOCs) from the fill materials. Soil and groundwater results showed levels of semi-VOCs (SVOCs) and hydrocarbons in excess of levels of concern, and metals concentrations exceeded both California and US Maximum Contaminant Levels (MCLs) for arsenic, barium, chromium, copper, lead and mercury. The original sampling report was not provided to AEI. However, based on a previous ESA performed for the subject property in 2008, it appears that no further investigation has been performed at the subject property since 1994. Therefore, the presence of elevated concentrations of metals in soil and groundwater at the subject property represents evidence of a recognized environmental condition.

The Site is blanketed by 16 to 41 feet of fill material and the fill thickness increases towards the bay. The fill consists primarily of loose to medium dense sand with varying amounts of silt, clay, gravel, concrete, brick and wood fragments. The fill includes isolated layers of stiff to hard clay. A weak and compressible marine clay and silt deposit, referred to as Bay Mud, underlies the fill. This layer ranges from 2 to 55 feet in thickness where explored within the project Site and includes occasional layers of clayey sand. Bay Mud was not encountered in the borings west of Hudson Avenue. In general, the Bay Mud is underlain by relatively incompressible dense sand with varying amounts of clay and silt. The sand layer is about 5 to 33 feet thick. The top 5 to 10 feet of the sand layer in some areas of the Site consists of medium dense clayey sand.

A medium stiff to hard clay and silt layer, locally known as Old Bay Clay, is present beneath the native sand. The thickness of the clay layer varies across the site from 9 to 50 feet. The Old Bay Clay slopes down and becomes thicker in the northeast corner of the Site towards the bay. The Old Bay Clay is underlain by strong, relatively incompressible residual soil (completely weather rock) consisting of very stiff to hard clay and very dense sand and gravel. The residual soil is 3 to 14 feet thick. Bedrock of the Franciscan Complex consisting of shale, sandstone and serpentinite, underlies the residual soil. The bedrock surface slopes steeply from the ground surface west of the site to a depth of 23 feet near Inness Avenue and slopes down to a depth of 149 feet near the eastern side of the site. The bedrock encountered is moderately to closely fractured, soft to hard, plastic to moderately strong, and deeply to moderately weathered.

The groundwater at the Site is likely at the elevation of the water in the Bay. Groundwater was measured in several of the boreholes at depths 7 feet (at the northeast area) to 33 feet (southwest area across Hudson Avenue). The groundwater level at the project Site is anticipated to vary a few feet seasonally and with the fluctuations in the water level of the San Francisco Bay. Given the depth of the proposed excavation activities, groundwater may be encountered during development activities.

Based on the analytical results from this Phase II ESA, some of the fill material at the Site contains petroleum hydrocarbons and heavy metals and in some areas the fill contained soluble lead at concentrations exceeding State of California hazardous waste levels.

The areas of fill material containing soluble lead concentrations exceeding the State of California hazardous waste criteria are located near borings B-6 at depths of 3 feet, 5.5 feet,

and 10 feet bgs, B-7 at a depth of 8 feet, B-8 at a depth of 10.5 feet bgs, B-9 at depths of 3 feet and 10 feet bgs, B-10 at a depth of 2.5 feet, B-12-at a depth of 3 feet bgs, EB-1 at a depth of 10 feet bgs, EB-2 at depths of 1.5 feet and 5 feet bgs, EB-4 at depths of 3 feet and 7.5 feet bgs, EB-6 at a depth of 10 feet bgs, EB-7 at a depth of 3 feet bgs. Total nickel exceeded the State of California hazardous waste criteria in boring EB-1 at a depth of 3 feet bgs.

Based on analytical results of the groundwater sample analyzed that detected low levels of petroleum hydrocarbons, approval of the groundwater discharge from the dewatering system should be granted by San Francisco Public Utilities Commission (SFPUC). A permit will be obtained from SFPUC prior to any groundwater discharge. If petroleum hydrocarbon contamination is detected in the groundwater at levels greater than those established by SFPUC, the groundwater should be properly treated prior to disposal by the contractor.

Benzene is the only compound detected above its respective ESL. Benzene was detected above its ESL ( $42 \mu\text{g}/\text{m}^3$ ) in EB-4 and EB-6 at concentrations of 67 and  $50 \mu\text{g}/\text{m}^3$ , respectively. No other soil gas detections were reported at concentrations exceeding their residential ESLs during this investigation.

Because hazardous materials were detected at the Site, a Site mitigation plan (SMP) and a health and safety (H&S) plan (prepared by others) will be required prior to construction. The SMP will provide recommended measures to mitigate the long-term environmental or health and safety risks caused by the presence of hazardous materials in the soil. The SMP will also contain contingency plans to be implemented during soil excavation if unanticipated hazardous materials are encountered. The H&S plan will outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction.

## **10.0 LIMITATIONS**

Descriptions of specific field activities and historical events are based on our observations and on information provided by others. The opinions and information presented in this report apply to Site conditions and the information that was available at the time the work was performed and do not apply to changes of which we are not aware or have not had the opportunity to evaluate. Langan Treadwell Rollo makes no guarantees or warranties with respect to the accuracy or completeness of this information.

**TABLES**

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**Table 1**  
**Non-Metals Analytical Results in Soil**  
**India Basin**  
**San Francisco, California**

Sample ID	Depth (feet)	Date Sample	TPHg	TPHd	TPHmo	Total Cyanide	VOCs	SVOCs	OCP +PCBs	Sulfide	pH	Asbestos
(mg/kg)											@25C	%
B-1-2.5	2.5	11/01/13	< 1.0	2.3	10	--	ND	ND	ND	--	--	--
B-1-5	5.0	11/01/13	< 1.0	21	76	--	--	--	--	--	--	--
B-1-7.5	7.5	11/01/13	< 1.0	18	75	--	ND	ND	ND	--	--	--
B-1-10	2.5	11/01/13	< 1.0	11	38	--	--	--	--	--	--	--
B-2-2.5	2.5	11/02/13	< 1.0	52	160	--	--	--	ND <sup>10</sup>	--	--	--
B-2-5	5.0	11/02/13	< 1.0	15	79	--	ND	ND	ND <sup>11</sup>	--	--	--
B-2-7.5	7.5	11/02/13	13	23	36	--	--	--	--	--	--	--
B-2-10	10.0	11/02/13	< 1.0	1.6	7.7	--	--	--	--	--	--	--
B-3-3	3.0	05/03/14	< 1.0	170	220	--	--	--	ND	--	--	--
B-3-5.5	5.5	05/03/14	< 1.0	23	100	--	ND	ND	--	--	--	--
B-3-8	8.0	05/03/14	< 1.0	8.8	28	--	--	--	--	--	--	< 0.25
B-4-3	3.0	05/08/14	< 1.0	55	190	0.16	ND	ND	ND	< 10	8.89	--
B-4-6	6.0	05/08/14	< 1.0	57	230	--	--	--	--	--	--	--
B-5-2.5	2.5	11/02/13	< 1.0	24	95	--	ND	ND	ND	--	--	--
B-5-5.0	5.0	11/02/13	< 1.0	84	390	--	--	--	--	--	--	--
B-5-7.5	7.5	11/02/13	< 1.0	26	120	--	ND <sup>1</sup>	ND	--	--	--	--
B-5-10	10.0	11/02/13	< 1.0	12	60	--	--	--	--	--	--	--
B-6-3	3.0	03/31/14	< 1.0	36	150	--	ND	ND	ND	--	--	--
B-6-5.5	5.5	03/31/14	3.5	110	740	--	--	--	--	--	--	--
B-6-10	10.0	03/31/14	< 1.0	45	370	0.25	ND	ND	--	< 10	8.26	--
B-6-15.5	15.5	03/31/14	< 1.0	4.2	9.1	--	--	--	--	--	--	--
B-7-2.5	2.5	04/02/14	< 1.0	130	2,600	--	--	--	ND	--	--	--
B-7-5	7.5	04/02/14	< 1.0	< 2.0	< 5.0	< 0.10	ND	ND	--	< 10	8.4	--
B-7-8	8.0	04/02/14	< 1.0	68	230	--	--	--	--	--	--	--
B-7-15.5	15.5	04/02/14	< 1.0	9.5	38	--	--	--	--	--	--	--
B-8-3	3.0	03/25/14	< 1.0	9.3	22	--	--	--	ND <sup>2</sup>	--	--	--
B-8-5	5.0	03/25/14	< 1.0	5.6	34	--	--	--	--	--	--	--
B-8-10.5	10.5	03/25/14	1.2	37	130	--	--	--	--	--	--	--
B-9-3	3.0	03/25/14	4.1	22	230	--	--	--	--	--	--	--
B-9-5.5	5.5	03/25/14	2.0	140	2,800	--	ND <sup>3</sup>	ND	--	--	--	--
B-9-8	8.0	03/25/14	< 1.0	17	100	--	--	--	--	--	--	--
B-9-10	10.0	03/25/14	7.0	210	330	--	ND	--	--	--	--	--
B-10-2.5	2.5	03/24/14	< 1.0	48	730	< 0.10	ND	ND	ND	< 10	10.2	--
B-10-5.5	5.5	03/24/14	1.7	40	140	--	--	--	--	--	--	--
B-10-8	8.0	03/24/14	1.1	26	120	--	ND	ND	--	--	--	< 0.25
B-10-10.5	10.5	03/24/14	1.7	16	230	--	--	--	--	--	--	--
B-13-3	3.0	03/25/14	2.9	20	170	--	--	--	--	--	--	--
B-13-5.5	5.5	03/25/14	2.8	38	360	--	ND	ND	ND <sup>4</sup>	--	--	--
B-13-8	8.0	03/25/14	< 1.0	12	130	--	--	--	--	--	--	--
B-13-10.5	10.5	03/25/14	1.5	36	610	< 0.10	--	--	--	< 10	8.51	--
B-11-3	3.0	03/26/14	< 1.0	34	330	--	ND	ND	ND	--	--	--
B-11-5	5.0	03/26/14	4.2	25	62	< 0.10	--	--	ND	< 10	7.69	--
B-12-3	3.0	03/26/14	1.7	9.5	25	--	--	--	--	--	--	--
B-12-5.5	5.5	03/26/14	< 1.0	< 2.0	< 5.0	--	ND	ND	--	--	--	--
B-12-8	8.0	03/26/14	< 1.0	< 2.0	< 5.0	--	--	--	--	--	--	< 0.25
B-12-10.5	10.5	03/26/14	< 1.0	< 2.0	< 5.0	--	--	--	--	--	--	--
B-14-3	3.0	03/26/14	< 1.0	9.0	46	< 0.10	ND	ND	ND	< 10	8.03	--
B-14-5.5	5.5	03/26/14	2.2	12	57	--	ND	ND	--	--	--	--
B-14-17.5	17.5	03/26/14	1.9	10	53	--	--	--	--	--	--	--
B-15-3	3.0	05/10/14	< 1.0	7.5	56	--	--	--	--	--	--	--
B-15-5.5	5.5	05/10/14	< 1.0	63	510	--	ND	ND	ND	--	--	< 0.25
B-15-8	8.0	05/10/14	< 1.0	39	230	--	--	--	--	--	--	--
B-15-10.5	10.5	05/10/14	< 1.0	< 1.0	< 5.0	0.13	ND	ND <sup>5</sup>	--	< 10	8.11	--
EB-1-1.5	1.5	08/06/14	< 1.0	6.6	67	--	--	--	--	--	--	--
EB-1-3.0	3.0	08/06/14	< 1.0	12	100	0.21	ND	ND	< 0.050	< 10	8.79	--
EB-1-5.0	5.0	08/06/14	--	--	--	--	--	--	--	--	--	--
EB-1-7.5	7.5	08/06/14	--	--	--	--	--	--	--	--	--	--
EB-1-10	10	08/06/14	3.8	71	190	--	--	--	--	--	--	--

**Table 1**  
**Non-Metals Analytical Results in Soil**  
**India Basin**  
**San Francisco, California**

Sample ID	Depth (feet)	Date Sample	TPHg	TPHd	TPHmo	Total Cyanide	VOCs	SVOCs	OCP +PCBs	Sulfide	pH	Asbestos
(mg/kg)											@25C	%
EB-2-1.5	1.5	08/06/14	< 1.0	86	260	--	ND <sup>6</sup>	ND	< 0.10	--	--	--
EB-2-3.0	3.0	08/06/14	--	--	--	--	--	--	--	--	--	--
EB-2-5.0	5.0	08/06/14	--	--	--	--	ND	ND	--	--	--	--
EB-2-7.5	7.5	08/06/14	--	--	--	--	--	--	--	--	--	--
EB-2-10	10	08/06/14	--	--	--	--	--	--	--	--	--	--
EB-2-15	15	08/06/14	< 1.0	2.5	8.9	--	ND	ND	--	--	--	--
EB-3-1.5	1.5	08/05/14	< 1.0	21	180	--	--	--	--	--	--	--
EB-3-3.0	3.0	08/05/14	< 1.0	20	120	--	--	--	--	--	--	--
EB-3-5.0	5.0	08/05/14	< 1.0	7.2	32	< 0.10	ND	ND	--	< 10	9.45	--
EB-3-7.5	7.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-3-10	10	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-4-1.5	1.5	08/05/14	< 1.0	20	110	--	--	--	--	--	--	--
EB-4-3.0	3.0	08/05/14	4.3	56	220	--	--	--	--	--	--	--
EB-4-5.0	5.0	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-4-7.5	7.5	08/05/14	< 1.0	55	170	--	ND	ND	< 0.50	--	--	--
EB-4-10	10	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-5-1.5	1.5	08/05/14	< 1.0	17	200	--	--	--	--	--	--	--
EB-5-3.0	3.0	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-5-5.0	5.0	08/05/14	< 1.0	6.1	23	--	--	--	--	--	--	--
EB-5-7.5	7.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-5-10	10	08/05/14	< 1.0	48	210	--	--	--	--	--	--	--
EB-5-15	15	08/05/14	< 1.0	34	150	--	ND <sup>7</sup>	ND	< 0.25	--	--	--
EB-6-1.5	1.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-6-3.0	3.0	08/05/14	< 1.0	9.2	75	--	--	--	--	--	--	--
EB-6-5.0	5.0	08/05/14	< 1.0	17	54	--	--	--	--	--	--	--
EB-6-7.5	7.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-6-10	10	08/05/14	< 1.0	120	270	0.24	ND <sup>8</sup>	ND <sup>9</sup>	< 2.5	< 10	8.02	--
EB-6-15	15	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-7-1.5	1.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-7-3.0	3.0	08/05/14	< 1.0	15	130	--	--	--	--	--	--	--
EB-7-5.0	5.0	08/05/14	< 1.0	48	410	--	--	--	--	--	--	--
EB-7-7.5	7.5	08/05/14	--	--	--	--	--	--	--	--	--	--
EB-7-10	10	08/05/14	< 1.0	1.9	7.1	--	ND	ND	< 0.050	--	--	--
EB-7-12	12	08/05/14	--	--	--	--	--	--	--	--	--	--

Notes:

mg/kg - milligrams per kilograms

TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M

TPHd - Total Petroleum Hydrocarbons as Diesel Range, EPA Method 8015M

VOCs - Volatile Organics, EPA Method SW8260B

SVOCs - Semi-Volatile Organics, EPA Method SW8270C

OCPs - Organochlorine Pesticides, EPA Method SW8081A/8082

PCBs - Polychlorinated Biphenyls, EPA Method 8081

ND - Not detected at or above the laboratory reporting limit

< 1.0 - Analyte was not detected above the laboratory reporting limit (1.0 mg/kg)

<sup>1</sup> - Naphthalen was detected at a concentration of 0.0090 mg/kg.

<sup>2</sup> - g-Chlordane was detected at a concentration of 0.011 mg/kg and Dieldrin was detected at a concentration of 0.0081 mg/kg

<sup>3</sup> - cis-1,2-Dichloroethene was detected at a concentration of 0.017 mg/kg

<sup>4</sup> - Chlordane was detected at a concentration of 0.27 mg/kg, a-Chlordane was detected at a concentration of 0.023 mg/kg, g-Chlordane was detected at a concentration of 0.028 mg/kg, and Dieldrin was detected at a concentration of 0.021 mg/kg

<sup>5</sup> - Acenaphthene was detected at a concentration of 1.0 mg/kg, Dibenzofuran was detected at a concentration of 1.0 mg/kg, Fluoranthene was detected at a concentration of 1.3 mg/kg, Fluorene was detected at a concentration of 0.97 mg/kg, Phenanthrene was detected a concentration of 3.7 mg/kg, Pyrene was detected at a concentration of 0.85 mg/kg.

<sup>6</sup> - a total concentration of 0.034 mg/kg TCE was detected at EB-2-1.5.

<sup>7</sup> - a total concentration of 0.060 mg/kg Napthalene was detected at EB-5-15.

<sup>8</sup> - a total concentration of 0.014 mg/kg Napthalene was detected at EB-6-10.

<sup>9</sup> - a total concentration of 2.2 mg/kg Benzo(a)anthracene, a total concentration of 8.1 Fluoranthene, a total concentration of 2.4 mg/kg Phenanthrene, and a total concentration of 6.7 mg/kg Pyrene were detected at EB-6-10.

<sup>10</sup> - B-2-2.5 was analyzed for OCP, not PCBs

<sup>11</sup> - B-2-5 was analyzed for PCBs, not OCP

-- not analyzed

**Table 2**  
**Metal Analytical Results in Soil**  
**India Basin**  
**San Francisco, California**

Sample ID	Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium (mg/kg)	Cadmium	Chromium	Chromium STLC (mg/L)	Cobalt (mg/kg)	Copper (mg/kg)	Lead	Lead STLC (mg/L)	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium (mg/kg)	Silver	Thallium	Vanadium	Zinc	
																							290
B-1-2.5	2.5	11/01/13	< 0.50	11	290	0.70	< 0.25	28	--	15	36	15	--	--	0.058	0.72	43	< 0.50	< 0.50	< 0.50	34	83	
B-1-5	5.0	11/01/13	13	37	390	0.63	0.37	64	--	22	920	340	--	--	3.6	1.7	82	< 0.50	4.4	< 0.50	77	340	
B-1-7.5	7.5	11/01/13	--	--	--	--	0.29	52	--	--	--	160	--	--	--	--	54	--	--	--	--	240	
B-1-10	2.5	11/01/13	--	--	--	--	--	--	--	--	--	35	--	--	--	--	--	--	--	--	--	--	--
B-2-2.5	2.5	11/02/13	0.70	8.9	280	0.51	< 0.25	41	--	17	78	28	--	--	0.35	0.71	60	< 0.50	< 0.50	< 0.50	42	130	
B-2-5	5.0	11/02/13	--	--	--	--	0.32	58	--	--	--	140	--	--	--	--	73	--	--	--	--	190	
B-2-7.5	7.5	11/02/13	--	--	--	--	--	--	--	--	--	48	--	--	--	--	--	--	--	--	--	--	
B-2-10	10.0	11/02/13	< 0.50	2.6	43	< 0.50	< 0.25	47	--	7.1	8.0	6.2	--	--	< 0.050	< 0.50	31	< 0.50	< 0.50	< 0.50	40	26	
B-3-3	3.0	05/03/14	0.86	5.6	190	0.58	< 0.25	58	--	14	34	58	--	--	1.5	0.58	170	< 0.50	< 0.50	< 0.50	43	100	
B-3-5.5	5.5	05/03/14	--	--	--	--	0.30	74	--	--	--	98	--	--	--	--	63	--	--	--	--	150	
B-3-8	8.0	05/03/14	--	--	--	--	--	--	--	--	--	110	--	--	--	--	--	--	--	--	--	--	
B-4-3	3.0	05/08/14	4.3	18	130	< 0.50	0.40	170	--	27	210	130	--	--	0.57	1.2	270	< 0.50	< 0.50	< 0.50	84	130	
B-4-6	6.0	05/08/14	--	--	--	--	1.2	130	--	--	--	120	--	--	--	--	220	--	--	--	--	230	
B-5-2.5	2.5	11/02/13	1.4	10	220	0.54	< 0.25	55	--	15	59	59	--	--	0.42	0.64	61	< 0.50	< 0.50	< 0.50	53	110	
B-5-5.0	5.0	11/02/13	--	--	--	--	0.38	32	--	--	--	120	--	--	--	--	45	--	--	--	--	120	
B-5-7.5	7.5	11/02/13	--	--	--	--	< 0.25	48	--	--	--	41	--	--	--	--	73	--	--	--	--	130	
B-5-10	10.0	11/02/13	--	--	--	--	--	--	--	--	--	62	--	--	--	--	--	--	--	--	--	--	
B-6-3	3.0	03/31/14	--	--	--	--	--	--	--	--	--	140	9.8	< 0.20	--	--	--	--	--	--	--	--	
B-6-5.5	5.5	03/31/14	--	--	--	--	1.7	70	0.66	--	--	120	7.9	0.64	--	--	73	--	--	--	--	120	
B-6-10	10.0	03/31/14	1.6	8.0	170	< 0.50	0.49	83	0.34	16	59	92	6.0	< 0.20	0.38	0.52	75	< 0.50	< 0.50	< 0.50	66	230	
B-6-15.5	15.5	03/31/14	--	--	--	--	< 0.25	59	0.28	--	--	48	--	--	--	--	28	--	--	--	--	55	
B-7-2.5	2.5	04/02/14	--	--	--	--	0.39	35	--	--	--	29	--	--	--	--	48	--	--	--	--	93	
B-7-5	7.5	04/02/14	< 0.50	3.3	15	< 0.50	< 0.25	30	--	4.3	3.4	5.0	--	--	< 0.050	< 0.50	20	< 0.50	< 0.50	< 0.50	27	15	
B-7-8	8.0	04/02/14	--	--	--	--	--	--	--	--	--	200	7.7	--	--	--	--	--	--	--	--	--	
B-7-15.5	15.5	04/02/14	--	--	--	--	--	--	--	--	--	75	2.1	--	--	--	--	--	--	--	--	--	
B-8-3	3.0	03/25/14	< 0.50	3.8	180	< 0.50	< 0.25	31	--	6.3	24	63	0.49	--	0.087	< 0.50	41	< 0.50	< 0.50	< 0.50	34	72	
B-8-5	5.0	03/25/14	--	--	--	--	--	--	--	--	--	240	3.7	--	--	--	--	--	--	--	--	--	
B-8-10.5	10.5	03/25/14	--	--	--	--	0.39	53	--	--	--	840	9.0	< 0.20	--	--	55	--	--	--	--	250	
B-9-3	3.0	03/25/14	0.67	5.2	150	< 0.50	< 0.25	73	0.36	16	25	120	10	0.28	0.33	1.3	160	< 0.50	< 0.50	< 0.50	44	110	
B-9-5.5	5.5	03/25/14	--	--	--	--	< 0.25	43	--	--	--	40	--	--	--	--	46	--	--	--	--	65	
B-9-8	8.0	03/25/14	--	--	--	--	--	--	--	--	--	57	2.9	--	--	--	--	--	--	--	--	--	
B-9-10	10.0	03/25/14	--	--	--	--	< 0.25	50	0.59	--	--	120	10	< 0.20	--	--	43	--	--	--	--	96	
B-10-2.5	2.5	03/24/14	1.2	3.8	170	< 0.50	0.26	54	0.33	12	32	140	7.5	< 0.20	0.22	< 0.50	100	< 0.50	< 0.50	< 0.50	68	120	
B-10-5.5	5.5	03/24/14	--	--	--	--	< 0.25	42	--	--	--	16	--	--	--	--	35	--	--	--	--	66	
B-10-8	8.0	03/24/14	--	--	--	--	--	--	--	--	--	16	--	--	--	--	--	--	--	--	--	--	
B-10-10.5	10.5	03/24/14	--	--	--	--	< 0.25	57	0.37	--	--	21	--	--	--	--	54	--	--	--	--	44	

**Table 2**  
**Metal Analytical Results in Soil**  
**India Basin**  
**San Francisco, California**

Sample ID	Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium STLC (mg/L)	Cobalt	Copper		Lead	Lead STLC (mg/L)	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
											(mg/kg)	(mg/kg)											
B-11-3	3.0	03/26/14	-	--	--	--	< 0.25	68	0.54	-	--	21	--	--	--	--	--	49	--	--	--	--	68
B-11-5	5.0	03/26/14	1.1	5.8	70	< 0.50	0.32	70	0.34	11	42	65	2.8	--	--	0.37	0.51	71	< 0.50	< 0.50	< 0.50	49	120
B-12-3	3.0	03/26/14	--	--	--	--	--	--	--	--	--	120	7.0	< 0.20	--	--	--	--	--	--	--	--	--
B-12-5.5	5.5	03/26/14	--	--	--	--	< 0.25	130	0.13	--	--	5.6	--	--	--	--	--	270	--	--	--	--	41
B-12-8	8.0	03/26/14	--	--	--	--	< 0.25	180	0.091	--	--	4.9	--	--	--	--	--	500	--	--	--	--	38
B-12-10.5	10.5	03/26/14	< 0.50	2.2	40	< 0.50	< 0.25	130	0.074	16	9.9	2.8	--	--	--	< 0.050	< 0.50	450	< 0.50	< 0.50	< 0.50	43	28
B-13-3	3.0	03/25/14	--	--	--	--	--	--	--	--	--	42	--	--	--	--	--	--	--	--	--	--	--
B-13-5.5	5.5	03/25/14	0.50	3.9	86	< 0.50	< 0.25	40	--	8.4	16	25	--	--	--	0.14	< 0.50	35	< 0.50	< 0.50	< 0.50	47	58
B-13-8	8.0	03/25/14	--	--	--	--	< 0.25	39	--	--	--	13	--	--	--	--	--	37	--	--	--	--	54
B-13-10.5	10.5	03/25/14	--	--	--	--	--	--	0.51	--	--	59	0.51	--	--	--	--	--	--	--	--	--	--
B-14-3	3.0	03/26/14	0.93	2.3	53	< 0.50	< 0.25	330	0.62	77	21	48	--	--	--	0.16	< 0.50	1,300	< 0.50	< 0.50	< 0.50	32	64
B-14-5.5	5.5	03/26/14	--	--	--	--	< 0.25	200	--	--	--	92	3.8	--	--	--	--	760	--	--	--	--	110
B-14-7.5	17.5	03/26/14	--	--	--	--	--	--	--	--	--	49	--	--	--	--	--	--	--	--	--	--	--
B-15-3	3.0	05/10/14	1.4	6.5	120	< 0.50	1.0	87	--	10	67	170	--	--	--	0.61	0.55	53	< 0.50	0.50	< 0.50	66	180
B-15-5.5	5.5	05/10/14	--	--	--	--	3.5	120	--	--	--	410	--	--	--	--	--	110	--	--	--	--	260
B-15-8	8.0	05/10/14	--	--	--	--	< 0.25	76	--	--	--	110	--	--	--	--	--	63	--	--	--	--	110
B-15-10.5	10.5	05/10/14	< 0.50	5.3	130	< 0.50	< 0.25	130	--	14	31	45	--	--	--	0.26	< 0.50	110	< 0.50	< 0.50	< 0.50	72	87
EB-1-1.5	1.5	08/06/14	0.50	4.8	180	< 0.50	< 0.25	75	--	9.9	18	35	--	--	--	0.084	< 0.50	63	< 0.50	< 0.50	< 0.50	55	56
EB-1-3.0	3.0	08/06/14	--	--	--	--	1,300	--	--	--	--	0.65	--	--	--	--	--	2,600	--	--	--	--	87
EB-1-10	10	08/06/14	--	--	--	--	--	--	--	--	--	90	12	< 0.20	--	--	--	--	--	--	--	--	--
EB-2-1.5	1.5	08/06/14	2.9	6.8	98	< 0.50	3.9	88	0.99	9.0	110	160	12	< 0.20	4.0	0.74	86	< 0.50	1.4	< 0.50	50	220	
EB-2-5.0	5.0	08/06/14	--	--	--	--	< 0.25	69	0.38	--	--	97	5.5	< 0.20	--	--	67	--	--	--	--	140	
EB-2-15	15	08/06/14	--	--	--	--	< 0.25	85	0.50	--	--	6.3	--	--	--	--	56	--	--	--	--	60	
EB-3-1.5	1.5	08/05/14	--	--	--	--	< 0.25	62	0.58	--	--	25	--	--	--	--	180	--	--	--	--	53	
EB-3-3.0	3.0	08/05/14	0.57	5.1	170	< 0.50	< 0.25	200	0.27	51	33	25	--	--	24	< 0.50	1,400	< 0.50	< 0.50	< 0.50	42	190	
EB-3-5.0	5.0	08/05/14	--	--	--	--	< 0.25	49	--	--	--	19	--	--	--	--	180	--	--	--	--	81	
EB-4-1.5	1.5	08/05/14	--	--	--	--	0.37	82	0.29	--	--	120	4.1	< 0.20	--	--	110	--	--	--	--	130	
EB-4-3.0	3.0	08/05/14	1.5	4.8	110	< 0.50	0.45	110	0.82	13	37	87	6.3	< 0.20	0.54	0.62	150	< 0.50	< 0.50	< 0.50	54	110	
EB-4-7.5	7.5	08/05/14	--	--	--	--	6.0	85	0.96	--	--	180	10	< 0.20	--	--	110	--	--	--	--	270	
EB-5-1.5	1.5	08/05/14	--	--	--	--	--	--	--	--	--	63	2.0	< 0.20	--	--	--	--	--	--	--	--	--
EB-5-5.0	5.0	08/05/14	--	--	--	--	< 0.25	51	0.067	--	--	26	--	--	--	--	66	--	--	--	--	83	
EB-5-10	10	08/05/14	--	--	--	--	< 0.25	78	0.34	--	--	150	4.0	< 0.20	--	--	67	--	--	--	--	110	
EB-5-15	15	08/05/14	0.99	5.7	77	< 0.50	< 0.25	72	0.44	9.1	25	72	4.4	< 0.20	0.38	< 0.50	54	< 0.50	< 0.50	< 0.50	48	93	
EB-6-3.0	3.0	08/05/14	--	--	--	--	0.28	97	0.75	--	--	14	--	--	--	--	150	--	--	--	--	48	
EB-6-5.0	5.0	08/05/14	--	--	--	--	< 0.25	96	0.37	--	--	18	--	--	--	--	71	--	--	--	--	52	

**Table 2**  
**Metal Analytical Results in Soil**  
**India Basin**  
**San Francisco, California**

Sample ID	Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium STLC (mg/L)	Cobalt (mg/kg)	Copper (mg/kg)	Lead	Lead STLC (mg/L)	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium (mg/kg)	Silver	Thallium	Vanadium	Zinc
EB-6-10	10	08/05/14	1.7	5.4	75	< 0.50	0.97	83	0.56	9.8	50	88	6.3	< 0.20	0.65	0.56	74	< 0.50	< 0.50	< 0.50	59	110
EB-7-3.0	3.0	08/05/14	2.7	5.4	110	< 0.50	0.26	70	0.16	9.6	25	490	11	< 0.20	0.38	< 0.50	35	< 0.50	< 0.50	< 0.50	69	150
EB-7-5.0	5.0	08/05/14	--	--	--	--	< 0.25	54	--	--	--	87	--	--	--	--	84	--	--	--	--	96
EB-7-10	10	08/05/14	< 0.50	< 0.50	6.1	< 0.50	< 0.50	120	0.38	82	2.4	2.0	--	--	< 0.050	< 0.50	1,900	< 0.50	< 0.50	< 0.50	4.2	25
Hazardous Waste Criteria																						
			500	500	10,000	75	100	2,500	--	8,000	2,500	1,000	--	--	20	3,500	2,000	100	500	700	2,400	5,000
			15	5	100	0.75	1	--	5	80	25	--	5	--	0.2	350	20	1	5	7	24	250
			--	5	100	--	1	--	--	--	--	--	--	5	0.2	--	--	1	5	--	--	--

Notes:  
mg/kg - milligrams per kilograms  
mg/L - milligrams per liter  
< 0.5 - Analyte was not detected above the laboratory reporting limit (0.5 mg/kg).  
-- Not analyzed  
TTL - California Total Threshold Limit Concentration - State hazardous waste criterion  
STLC - California Soluble Threshold Limit Concentration  
TCLP - Federal Toxicity Characteristic Leaching Procedure

**Table 3**  
**Metal Analytical Results in Groundwater**  
**India Basin**  
**San Francisco, California**

Sample ID	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury (µg/L)	Molybdenum	Nickel	Selenium	Silver	Dissolved Sulfide	Thallium	Vanadium	Zinc
EB-2-GW	08/06/14	1.3	9.1	340	< 0.50	< 0.25	< 1.0	6.7	< 2.0	< 0.50	< 0.025	9.8	12.0	< 0.50	< 0.19	< 0.50	< 0.50	0.73	58

Notes:  
µg/L - micrograms per Liter  
< 0.5 - Analyte was not detected above the laboratory reporting limit (0.5 mg/kg).

**Table 4**  
**Volatile Organic Compound Analytical Results in Grab Water**  
**Vallejo Station Parking Structure**  
**India Basin**  
**SAN Francisco, California**

Sample	Date	TPHg	TPHd	TPHmo	VOC
<b>ID</b>	<b>Sample</b>	<b>mg/L</b>			
EB-2-GW	08/06/14	< 50	510	4,200	ND

Notes:

mg/L - milligrams per Liter

TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M

TPHd - Total Petroleum Hydrocarbons as Diesel Range, EPA Method 8015M

TPHmo - Total Petroleum Hydrocarbons as Motor Oil, EPA Method 8015M

VOC - Volatile Organics Compounds, EPA 8260B

**Table 5**  
**Non-Metals Analytical Results in Soil Gas**  
India Basin  
San Francisco, California

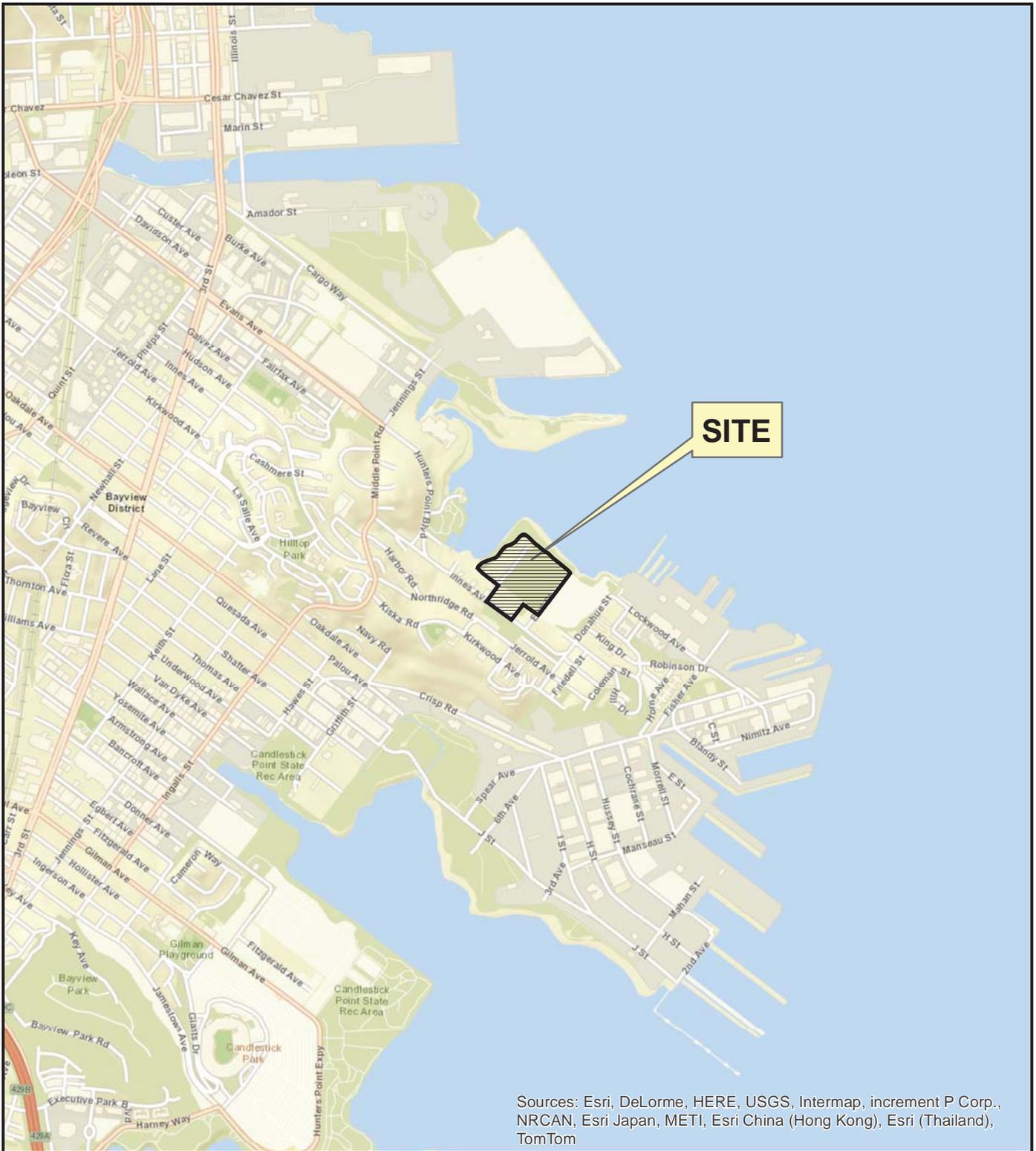
Sample ID	Date Sample	VOCs															Helium									
		Acetone	Benzene	Bromo-dichloro-methane	1,3-Butadiene	Carbon Disulfide	Chloro-form	Chloro-methane	Cyclohexane	1,1-DCE	1,1-Dichloro-ethene	Ethyl-benzene	Heptane	Hexane	2-Hexanone	MIBK		Methyl Methacrylate	PCE	Tetrahydrofuran	Toluene	1,1,2-TCA	TCE	Trichloro-fluoro-methane	Xylenes, Total	All Other VOCs
µg/m <sup>3</sup>																										
EB-3-SG	08/06/14	< 84	26	< 4.9	21	130	< 3.4	< 1.5	44	< 2.8	< 2.8	< 130	< 3.1	33	48	< 3.0	< 2.9	27	< 2.1	49	< 3.9	5.3	< 4.0	10	ND	< 0.0070
EB-4-SG	08/06/14	210	67	25	< 2.2	190	< 4.9	< 2.1	180	< 4.0	32	< 190	5.4	280	850	9.9	18	< 6.9	< 3.0	26	9.3	34	< 5.7	< 13	ND	< 0.0050
EB-6-SG	08/06/14	260	50	< 7.0	< 2.2	70	< 4.9	< 2.1	< 35	< 4.0	21	320	4.9	100	250	< 4.2	< 4.2	< 6.9	< 3.0	32	< 5.5	18	< 5.7	14	ND	< 0.0050
EB-7-SG	08/06/14	84	35	< 3.5	7.8	36	8.2	11	< 18	< 2.0	< 96	8.3	27	30	< 2.1	< 2.1	8.5	28	430	< 2.8	< 2.8	22	27	ND	< 0.0050	
<b>ESL-R</b>		1.60E+07	4.20E+01	3.30E+01	NE	NE	2.30E+02	4.70E+04	NE	1.00E+05	NE	NE	4.9E+2	NE	NE	NE	1.60E+06	2.10E+02	NE	1.60E+05	7.60E+01	3.00E+02	NE	5.20E+04	NA	NE

**Notes:**

- µg/m<sup>3</sup> - micrograms per cubic meter
- VOCs - Volatile Organics, EPA Method SW8260B
- 1,1-DCE - 1,1-Dichloroethene
- MIBK - 4-Methyl-2-pentanone
- PCE - Tetrachloroethene
- 1,1,2-TCA - 1,1,2-Trichloroethane
- TCE - Trichloroethene
- ND - Not detected at or above the laboratory reporting limit
- < 1.0 - Analyte was not detected above the laboratory reporting limit (1.0 mg/kg)
- ESL-R - Regional Water Quality Control Board, Table E-2, Environmental Screening Levels for residential soil gas
- NE - Not established
- NA - Not available

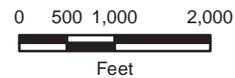
**FIGURES**

DRAFT



Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom

World street basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online. Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN.



**INDIA BASIN**  
San Francisco, California

**SITE LOCATION MAP**

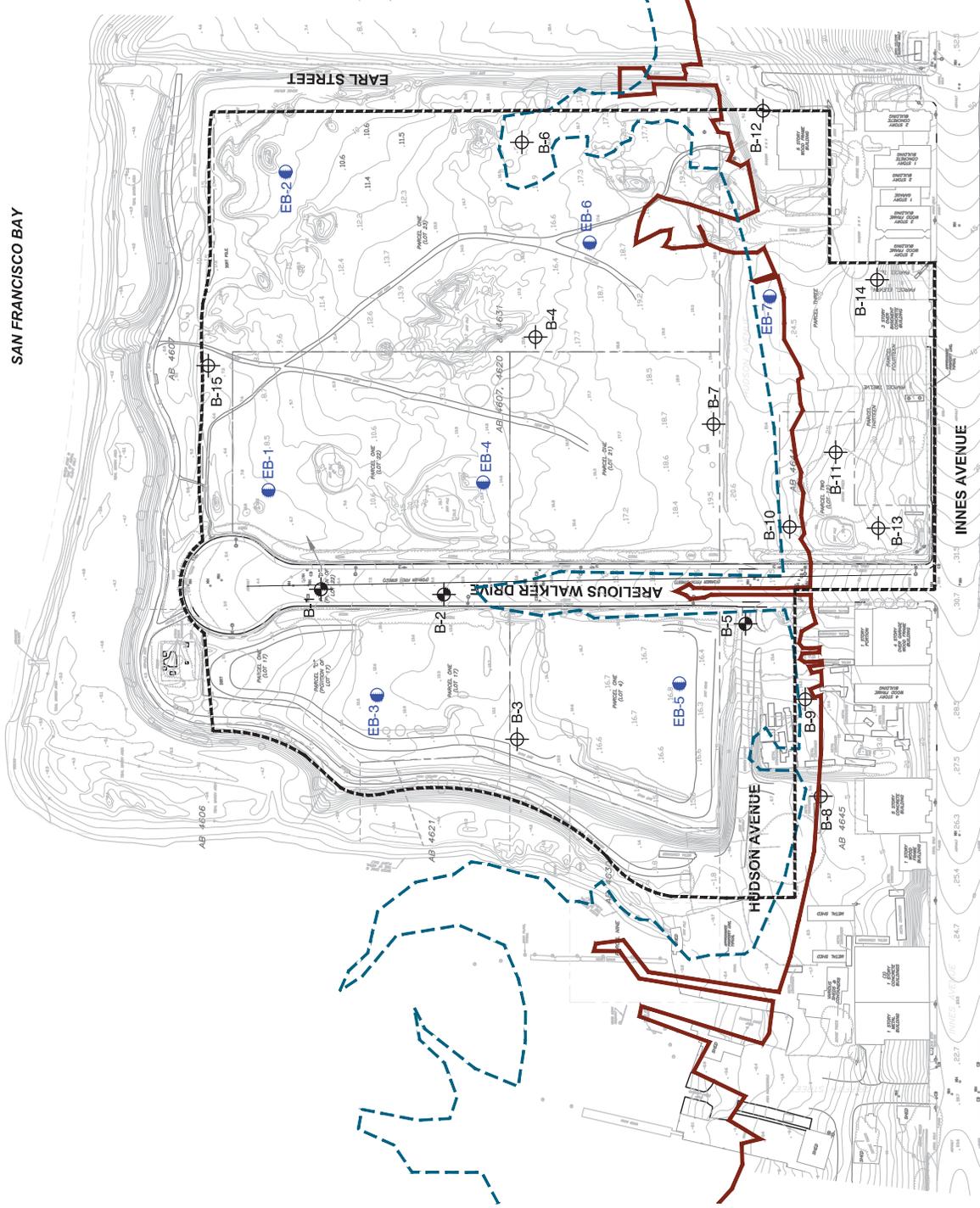
**LANGAN TREADWELL ROLLO**

Date 06/03/14

Project No. 731626701

Figure 1

SAN FRANCISCO BAY



**EXPLANATION**

- EB-1  Approximate location of environmental boring by Langan Treadwell Rollo, August 2014
- B-4  Approximate location of geotechnical boring by Langan Treadwell Rollo, 2014
- B-1  Approximate location of geotechnical boring by Treadwell & Rollo, 2013
-  Approximate location of 1938 Shoreline
-  Approximate location of 1946 Shoreline
-  Approximate site limits

**DRAFT**



0 140 Feet  
Approximate scale

Reference: "Preliminary Survey at East India Basin", by Martin M. Ron Associates Land Surveyors, dated 10-25-13.

**INDIA BASIN**  
San Francisco, California

**SITE PLAN**

Date 09/02/14 | Project No. 731626702 | Figure 2

**LANGAN TREADWELL ROLLO**

**APPENDIX A**  
**ENVIRONMENTAL EXPLORATORY BORING LOGS**

**DRAFT**

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-1**

Boring location: See Site Plan, Figure 2

Logged by: PDB

Date started: 11/1/13

Date finished: 11/1/13

Drilling method: Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)

**LABORATORY TEST DATA**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>								
Ground Surface Elevation: 5.5 feet <sup>2</sup>												
1						2 feet Asphalt Concrete (AC)						
2	GRAB	⊗				CLAYEY SAND with GRAVEL (SC) brown, medium dense, moist, fine to coarse, subangular to angular gravel						
3												
4	GRAB	⊗				brown, olive, and gray						
5												
6	S&H	■	7	20								
7			10									
8	SPT	▴	4	14	SC	brick debris						
9			6			loose to medium dense						
10			6									
11	SPT	▴	1	10								
12			2									
13			6			CLAYEY SAND (SC) brown and red-brown, medium dense, moist, with fine, subangular gravel						
14												
15						FILL						
16	S&H	■	8	15	SC					28.2	10.4	
17			11									
18			11									
19						CLAYEY SAND (SC) dark brown, loose, wet, trace coarse, subangular gravel						
20												
21	SPT	▴	1	7	SC				22.8	16.0		
22			3									
23			3			CLAYEY SAND with GRAVEL (SC) dark brown, loose, wet, fine to coarse, subangular to angular gravel @24' obstruction (large gravel, rip-rap) LL = 26, PI = 10, see Figure C-1						
24												
25						CLAY (CH) blue-gray, medium stiff, soft, wet Consolidation Test, see Figure C-31						
26	SPT	▴	4	10	SC					21.4	16.8	
27			4									
28			4									
29	ST	■	0-		CH		TxUU	2,700	830	57.8	61.6	
30			150									
			psi									

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-1a

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-1**

PAGE 2 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
31					CH	CLAY (CH) (continued)									
32															
33															
34															
35							no recovery, rock obstruction								
36	S&H	●	3 4 5	6											
37															
38	S&H	■	0 0 1	1		soft, trace shell fragments						53.2	70		
39															
40															
41															
42															
43															
44															
45															
46	S&H	■	0 0 0	0		LL = 56, PI = 27, see Figure C-1						56.3	67		
47															
48															
49															
50															
51															
52															
53															
54															
55															
56	S&H	■	0 0 0	0								57.3	64		
57															
58															
59															
60															

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

BAY MUD

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-1b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-1**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA							
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft		
61						CLAY (CH) (continued)								
62														
63														
64														
65														
66	S&H	[Sample]	0 0 1	1	CH	LL = 52, PI = 24, see Figure C-1						48.3	72	
67														
68														
69														
70														
71														
72														
73														
74						increased sand content								
75	S&H	[Sample]	5 13 19	22	CL	SANDY CLAY (CL) olive, very stiff, wet, very fine-grained sand	TxUU	6,200	3,000			18.7	114	
76														
77														
78														
79														
80	S&H	[Sample]	11 13 14	19	SC-SM	CLAYEY SILTY SAND (SC-SM) olive and blue-gray, medium dense, moist, fine-grained sand, trace organics LL = 22, PI = 7, see Figure C-1						33.2	18.8	
81														
82														
83														
84														
85														
86	SPT	[Sample]	0 6 7	16	CL	CLAY with SAND (CL) gray, very stiff, wet, fine- to medium-grained sand								
87														
88														
89					SM	SILTY SAND (SM)								
90														

BAY MUD

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-1c

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-1**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
91	SPT		11 17 25	50	SM	SILTY SAND (SM) (continued) gray, dense to very dense, wet, very fine- to fine-grained sand							
92													
93					CL	CLAY with SAND (CL) gray-brown, very stiff, wet, fine- to coarse-grained sand							
94													
95	SPT		7 7 12	23									
96													
97					MH	SILT (MH) gray, stiff, wet, trace organics, trace fine-grained sand							
98													
99													
100													
101													
102													
103					MH	SILT (MH) gray, stiff, wet, trace organics, trace fine-grained sand							
104													
105	SPT		0 4 7	13									
106													
107					MH	soft LL = 75, PI = 38, see Figure C-1							
108													
109													
110													
111													
112													
113					MH	soft LL = 75, PI = 38, see Figure C-1							
114													
115	SPT		0 0 0	0									65.6
116													
117													
118													
119													
120													

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-1d

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-1**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
121	S&H		0	13	MH	SILT (MH) (continued) stiff	TxUU PP	8,850	1,530 1,500		58.4	65
122			7									
123												
124												
125												
126				CL	SANDY CLAY (CL) blue-gray, very stiff, wet, very fine-grained sand to fine gravel and rock							
127												
128												
129												
130												
131	SPT		6									26
132			8									
133												
134												
135												
136												
137												
138												
139												
140												
141												
142												
143					?	?	?	?	RESIDUAL SOIL			
144												
145												
146												
147												
148												
149						SHALE black, intensely fractured, hard						
150												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-1e

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-1**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA							
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft		
151	SPT		29 32 36	82		SHALE (continued)								
152														
153														
154														
155														
156														
157														
158														
159														
160														
161														
162														
163														
164														
165														
166														
167														
168														
169														
170														
171														
172														
173														
174														
175														
176														
177														
178														
179														
180														

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 151.5 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater level obscured by rotary wash drilling method.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: <b>731626701</b>	Figure: <b>A-1f</b>
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PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-2**

Boring location: See Site Plan, Figure 2

Logged by: PDB

Date started: 11/2/13

Date finished: 11/2/13

Drilling method: Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>								
Ground Surface Elevation: 9 feet <sup>2</sup>												
1						2 feet Asphalt Concrete (AC)						
2												
3	GRAB					SILTY SAND with GRAVEL (SM) brown, medium dense, dry, fine to coarse, angular to subangular gravel						
4												
5	S&H		10	21	SM	brown and yellow-brown, moist						
6			15									
7			15									
8	S&H		14	21		red-brown, and yellow-brown, trace brick debris						
9			15									
10	SPT		6	26	SM	SILTY SAND (SM) dark brown, medium dense, moist, fine-grained sand						
11			10									
12			12									
13												
14						CLAYEY SAND (SC) brown and light brown, medium dense, moist, trace brick debris, trace fine subrounded to subangular gravel						
15												
16	SPT		3	19						31.5	13.7	
17			5									
18			11									
19												
20												
21	SPT		5	10	SC					37.5	16.0	
22			4									
23			4									
24												
25												
26	SPT		1	7		no recovery, spoils observed as yellow-brown, with fine, angular gravel						
27			2									
28	SPT		50/4"	60/4"		large obstruction at 27.5 feet						
29												
30												

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-2a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-2**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H	[Sample]	15	19	SC	CLAYEY SAND with GRAVEL (SC) gray-brown, medium dense, wet, fine to coarse, angular gravel	PP	500	25.8	14.0	FILL	
32			8									19
33												
34												
35	S&H	[Sample]	4	6	CH	CLAY (CH) blue-gray, medium stiff, wet, trace shell fragments	TxUU	4,000	1,400	51.0	71	BAY MUD
36			4									
37			4									
38												
39												
40	ST	[Sample]	150	150	CH	stiff Consolidation Test, see Figure C-32	TxUU	4,000	1,400	51.0	71	BAY MUD
41			psi									
42												
43												
44												
45												
46												
47												
48												
49												
50	S&H	[Sample]	0	3	CH		TxUU	4,800	1,110	53.3	68	BAY MUD
51			0									
52												
53												
54												
55												
56												
57												
58												
59												
60												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-2b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-2**

PAGE 3 OF 5

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
61	S&H		31 36 40	53	SP-SM	SAND with SILT (SP-SM) blue-gray with black inclusions, very dense, wet, fine-grained							
62	SPT		5 6 8	17		gray and blue-gray, medium dense			7.2	21.5			
63													
64													
65	S&H		4 11 15	18	SC	CLAYEY SAND (SC) yellow-brown, medium dense, wet, very fine- to fine-grained sand LL = 28, PI = 13, see Figure C-1			32.8	17.8			
66													
67													
68													
69													
70	SPT		6 9 16	30	medium dense to dense								
71													
72													
73													
74													
75	SPT		7 10 11	25	SC-SM	CLAYEY SILTY SAND (SC-SM) gray-brown, medium dense, wet, fine-grained sand			37.2	17.9			
76					SC-SM	CLAYEY SILTY SAND (SC-SM) increased clay content LL = 23, PI = 6, see Figure C-2							
77													
78													
79													
80	SPT		4 5 5	12	CL	CLAY (CL) gray-brown with green-gray mottling, stiff, wet, trace very fine- to coarse-grained sand			86.5	29.0			
81													
82													
83													
84													
85	SPT		0 4 5	11	gray-brown with blue-gray mottling								
86													
87													
88						shells in cuttings							
89													
90													

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-2c

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-2**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
91	S&H		6	7	CL	CLAY (CL) (continued) gray, medium stiff, wet	PP		1,500						
92			3												
93															
94															
95			0				trace shells								
96	S&H		4	6			stiff	TxUU	7,400	1,380		59.6	65		
97			5					PP		1,250					
98															
99															
100															
101															
102															
103															
104															
105							Consolidation Test, see Figure C-33					59.0	65		
106	ST		0-500					TxUU	10,500	1,500		58.4	65		
107															
108															
109															
110															
111															
112															
113															
114															
115			0			medium stiff, trace organics									
116	S&H		2	4			TxUU	8,550	1,700		60.9	65			
117			4				PP		1,500						
118															
119															
120															

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-2**

PAGE 5 OF 5

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
121					CL	CLAY (CL) (continued)									
122															
123						SANDY CLAY (CL) blue-gray, hard, wet, fine- to coarse-grained sand, fine gravel									
124															
125															
126	S&H		15 22 26	34											
127					CL										
128															
129															
130															
131															
132						SERPENTINITE green, intensely fractured, deeply weathered, plastic									
133	SPT		8 14 15	35											
134															
135															
136															
137															
138															
139															
140	SPT		50/4" 60/4"			hard, white seams									
141															
142															
143															
144															
145															
146															
147															
148															
149															
150															

RESIDUAL SOIL

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 140.5 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater level obscured by rotary wash drilling method.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-2e

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-3**

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 4/4/14

Date finished: 4/7/14

Drilling method: Mud Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>								
1						CLAYEY SAND with GRAVEL (SC) brown, medium dense, moist, fine to coarse-grained sand, fine to coarse subrounded to subangular gravel, trace brick debris						
2												
3	S&H		14	23						25.5	14.5	
4			16									
5			17									
6	S&H		14	20		gray, fine-grained sand, increase in clay content						
7			14		SC							
8	S&H		10	20								
9			12									
10			17									
11	SPT		10	29		trace brick debris, wood debris						
12			2									
13			17									
14												
15	S&H		15	19		SANDY CLAY with GRAVEL (CL) gray, very stiff, wet, fine-grained sand, fine to coarse subrounded to angular gravel, trace concrete, brick and wood debris						
16			12									
17			15		CL	(04/07/14; 700 AM) trace shell						
18												
19						less gravel, trace shells, wood debris						
20	S&H		5	35								
21			15									
22			35		SC	CLAYEY SAND with GRAVEL (SC) brown, dense, wet, fine to coarse-grained sand, fine subrounded to subangular gravel						
23												
24												
25												
26	SPT		2	26		SAND with SILT (SP-SM) gray brown, medium dense, wet, fine to coarse gavel, fine to coarse gravel LL = 31, PI = 7, see Figure C-2				10.3	24.3	
27			8		SP-SM							
28			14									
29												
30												

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-3a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-3**

PAGE 2 OF 5

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		14	22	SP-SC	SAND with CLAY and GRAVEL (SP-SC) grades to fine gravel, petroleum odor, trace brick debris LL = 27, PI = 12, see Figure C-2			9.4	26.2		
32			17									
33			14									
34					CH	CLAY (CH) gray, very soft, wet, trace shells, trace coarse gravel						
35												
36	S&H		2	1								
37			0									
38												
39												
40						Consolidation Test, see Figure C-34 blue-gray, stiff, trace shells	TxUU	4,000	1,350	55.5	67	
41	ST		0-85									
42			50									
43												
44												
45												
46												
47												
48												
49												
50						Consolidation Test, see Figure C-35	TxUU	5,000	1,570	56.8	67	
51	ST		25									
52			75									
53			75									
54												
55												
56												
57												
58												
59												
60												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-3b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-3**

PAGE 3 OF 5

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA												
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft							
61	ST		0		CH	CLAY (CH) (continued) Consolidation Test, see Figure C-36 medium stiff, increased sand content	TxUU	6,000	720		28.6	97							
62			0																
63					SP-SM	SAND with SILT (SP-SM) gray-brown, very dense to dense, wet, fine-grained sand				11.9	21.3								
64																			
65	S&H		27	35/2'															
66					SC	dense													
67	SPT		22	41															
68					SC	CLAYEY SAND (SC) blue-gray, dense, wet, fine-grained sand				42.6	20.9								
69																			
70	S&H		15	32															
71			22		SC	yellow-brown, increased sand content													
72			24																
73					SC	CLAYEY SAND (SC) yellow-brown, dense, wet, fine-grained sand				30.3	22.2								
74																			
75	SPT		4	35															
76			14		CL	SANDY CLAY (CL) yellow-brown with blue-gray mottling, hard, wet, fine-grained sand													
77			15																
78					CL	CLAY (CL) light-brown, medium stiff, wet, trace black inclusions Consolidation Test, see Figure C-37					77.2	53							
79																			
80	S&H		0	7															
81			5		CL	gray-brown with yellow-brown and blue-gray mottling, very stiff, trace fine to coarse-grained sand													
82			5																
83					CL	CLAY (CL) blue-gray, very stiff, wet, with shells													
84																			
85	S&H		14	28															
86			18																
87			22																
88																			
89																			
90																			

BAY MUD

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-3**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
91	S&H		11	17	CL	CLAY (CL) (continued)									
92			12												
93			12												
94															
95															
96															
97															
98															
99															
100															
101	S&H		2	7	CL	medium stiff									
102			4												
103			6												
104															
105															
106	ST		0-25			Consolidation Test, see Figure C-38						59.6	64		
107			50-125			very stiff	TxUU	10,500	2,880			57.0	66		
108			psi												
109															
110															
111															
112															
113															
114															
115															
116	S&H		0	14	CL	stiff									
117			8												
118			12												
119															
120															

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-3d

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-3**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
121					CL	CLAY (CL) (continued)									
122															
123					CL	hard, trace sand									
124															
125	S&H	[Sample]	17	43	CL	SANDY CLAY with GRAVEL (CL) blue-gray, hard, wet, fine to coarse, rock fragments									
126			29												
127	SPT	[Sample]	27	67	CL										
128			40												
129					CL										
130															
131	SPT	[Sample]	11	41	CL										
132			14												
133					CL										
134															
135	SPT	[Sample]	27	37	CL										
136			14												
137					CL										
138															
139					CL										
140															
141	SPT	[Sample]	50/6"	60/6"	CL	SERPENTINITE/SHALE black/green, intensely fractured, low hardness, low strength, deeply weathered									
142			60/6"												
143					CL										
144															
145	SPT	[Sample]	20	60/6"	CL										
146			50/6"												
147					CL										
148															
149					CL										
150															

RESIDUAL SOIL

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 146 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater encountered at 18 feet below ground surface during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-3e

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-4**

PAGE 1 OF 5

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 4/8/14

Date finished: 4/9/14

Drilling method: Mud Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)

**LABORATORY TEST DATA**

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"								
Ground Surface Elevation: 16 feet <sup>2</sup>											
1	GRAB	•			CLAYEY SAND with GRAVEL (SC) dark brown, medium dense, wet, fine-grained sand, fine to coarse subangular gravel, wood debris and brick debris	↑			31.6	17.5	
2				SC							
3	S&H	█	12	22	SC						
4			12								
5	S&H	█	10	24	GP						
6			14								
7			20	SC	CLAYEY SAND with GRAVEL (SC) dark brown, medium dense, moist, subangular to angular gravel, trace asphalt						
8											
9				SC	CLAYEY SAND (SC) dark brown, medium dense, wet, fine-grained sand, trace coarse-grained sand, trace brick fragments (04/09/14; 700 AM)				19.5	14.8	
10	S&H	█	4								
11			15	22	SC						
12			17								
13				SP-SM	SAND with SILT (SP-SM) dark brown, medium dense, fine-grained sand, trace subangular gravel	FILL			6.5	15.5	
15	S&H	█	2								
16			14	29							
17			27								
18				GC	concrete in cuttings from 18 to 23 feet bgs  CLAYEY GRAVEL (GC) dark brown, very dense, wet, subangular to angular gravel, trace concrete						
22	S&H	█	50/								
23			0.5"	35/							
24											
25	S&H	█	5	20	CLAYEY SAND with GRAVEL (SC) yellow-brown, medium dense, wet, fine-grained sand, subangular to angular gravel				29.4	11.5	
26			14								
27			15	SC							
28											
29				SC							
30											

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-4a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-4**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		4	11	SC	CLAYEY SAND (SC) red-yellow, medium dense, wet, fine-grained sand, trace subrounded gravel LL = 22, PI = 8, see Figure C-2			30.0	17.9		
32			8									
33			7									
34					SC	CLAYEY SAND (SC) red-brown, medium dense, wet, fine-grained sand, trace fine to coarse gravel, trace concrete debris LL = 27, PI = 12, see Figure C-2			40.5	16.0		
35	S&H		4									
36			4	13								
37			4									
38			14									
39					CH	CLAY (CH) blue-gray, stiff, wet, trace shells, trace fine-grained sand						
40	S&H		8	15								
41			10									
42			12									
43					CH	Consolidation Test, see Figure C-39	TxUU	4,500	1,700	37.5	82	
44	ST		0-									
45			25									
46			50-									
47			100									
48			psi									
49					SC	CLAYEY SAND (SC) green-gray, stiff, wet, fine-grained sand, trace coarse gravel, trace black inclusions LL = 26, PI = 10, see Figure C-2			31.3	24.0		
50	S&H		4	11								
51			4									
52			12									
53					SM	SILTY SAND (SM)						
54												
55												
56												
57												
58												
59												
60												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-4b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-4**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
61	SPT		17 20 18	46	SM	SILTY SAND (SM) (continued) yellow-brown with orange mottling, dense, wet, fine-grained sand  very dense				20.4	16.1		
62													
63													
64													
65	SPT		20 24 30	65									
66													
67													
68													
69													
70	S&H		50/3	35/3"									
71													
72													
73													
74						CLAY (CL) light brown, hard, very stiff, wet, trace fine-grained sand, black inclusions							
75	S&H		12 17 65	57									
76													
77													
78													
79													
80	S&H		10 10 15	18	CL	very stiff, olive-gray							
81													
82													
83													
84													
85	S&H		7 14 14	20		CLAY (CL) gray-brown with yellow-brown mottling, very stiff, wet							
86													
87													
88													
89													
90													

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-4c

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-4**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
91	S&H	[Sample]	4	13	CL	CLAY (CL) gray, stiff, wet							
92			5										
93													
94													
95	S&H	[Sample]	0	11	CL	trace black inclusions							
96			7										
97			9										
98													
99													
100			0-50		CL	Consolidation Test, see Figure B-40						47.9	73
101	ST	[Sample]	50-150				very stiff	TxUU	10,000	2,630			47.2
102			psi										
103													
104													
105													
106													
107													
108													
109													
110					CL	GRAVELLY CLAY (CL) blue-green, hard, wet, fine subangular, black rock fragments, some coarse-grained sand							
111	SPT	[Sample]	9	38									
112			12										
113			20										
114													
115	SPT	[Sample]	50/5"	60/5"		SHALE black deeply weathered, moderately fractured, low hardness, fractured							
116													
117													
118													
119													
120													

TEST GEOTECH LOG 731626701.GPJ TR:GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-4d

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-4**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA													
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft								
121	SPT		50/3"	60/3"																
122																				
123																				
124																				
125																				
126																				
127																				
128																				
129																				
130																				
131																				
132																				
133																				
134																				
135																				
136																				
137																				
138																				
139																				
140																				
141																				
142																				
143																				
144																				
145																				
146																				
147																				
148																				
149																				
150																				

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 120.5 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater encountered at 10 feet below ground surface during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: **731626701**      Figure: **A-4e**

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-5**

Boring location: See Site Plan, Figure 2

Logged by: EAB

Date started: 11/2/13

Date finished: 11/2/13

Drilling method: Mud Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>								
Ground Surface Elevation: 18 feet <sup>2</sup>												
1						2-inch Asphalt Concrete (AC) 22-inch Aggregate Base (AB)						
2												
3	BULK	☒				CLAYEY SAND with GRAVEL (SC) brown, dense, moist, fine sand, fine to coarse gravel, brick debris, trace silt						
4												
5						coarse gravel, no brick						
6	SPT	▴	17	34								
7												
8	BULK	☒			SC	dark brown, increased clay content, trace brick debris, wood debris						
9												
10	BULK	☒										
11	SPT	▴	8	29						25.6	7.5	
12			14			medium dense, increased silt content						
13						increased clay content						
14						with concrete debris, wood						
15												
16	SPT	▴	3	12		SAND (SP-SM) gray-brown, medium dense, moist, very fine- to fine-grained sand, trace silt				13.1	11.1	
17			5			some blue gray clay mottling						
18					SP-SM							
19						coarse sand and fine gravel						
20												
21	S&H	▬	10	15								
22			10			CLAYEY SAND with GRAVEL (SC) mottled red-brown and olive-gray, medium dense, moist, fine sand, fine, subangular to subrounded gravel LL = 27, PI = 12, see Figure C-3				27.0	14.0	
23					SC							
24												
25												
26	SPT	▴	8	22		GRAVEL (GP) green, medium dense, wet, serpentinite fragments, with fine- to medium-grained sand				3.8	3.2	
27			8			Non-plastic						
28					GP							
29												
30												

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-5a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-5**

PAGE 2 OF 4

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/6"			SPT N-Value <sup>1</sup>	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	SPT		10	13	GP	GRAVEL (GP) (continued) medium dense, with nails and debris						
32			5									
33			6									
34					CL	CLAY (CL) blue-gray, stiff, wet, some shells	TxUU	3,500	1,020	30.5	19.5	113
35	SPT		500									
36			psi									
37	SPT		6	25	SC	CLAYEY SAND (SC) yellow-brown, medium dense, wet, fine sand LL = 27, PI = 12, see Figure C-3				30.5	22.0	
38			9									
39			12									
40					SC-SM	CLAYEY SILTY SAND (SC-SM) red-brown and yellow-brown, dense, decreased fines content LL = 23, PI = 5, see Figure C-3				16.7	17.9	
41	SPT		7									
42			14									
43			15									
44					SM	SILTY SAND (SM) yellow-brown, very dense, wet, fine sand						
45			27									
46	SPT		29	79								
47			37									
48					SC	CLAYEY SAND (SC) yellow-brown and red-brown, medium dense, wet, very fine- to fine-grained sand LL = 27, PI = 11, see Figure C-3				26.0	20.8	
49												
50												
51	SPT		17	26								
52			10									
53			12									
54					SC	decreased clay content, increased silt content LL = 25, PI = 11, see Figure C-3				30.8	24.5	
55												
56	SPT		4	16								
57			8									
58			5									
59												
60												

FILL  
BAY MUD

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-5b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-5**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61	SPT		15 22 27	59	SM	SILTY SAND (SM) yellow-brown, dense, wet, very fine- to fine-sand, trace clay						
62												
63					SC	CLAYEY SAND (SC) yellow-brown, medium dense, wet, very fine- to fine sand LL = 32, PI = 16, see Figure C-3			45.6	20.7		
64												
65	SPT		7 8 12	24	CL	CLAY with SAND (CL) gray-brown, very stiff, wet, very fine sand, trace sand, trace silt						
66												
67					CL	CLAY with SAND (CL) gray-brown, very stiff, wet, very fine sand, trace sand, trace silt	PP		7,000			
68												
69	S&H		9 15 23	27	CL	CLAY with SAND (CL) gray-brown, very stiff, wet, very fine sand, trace sand, trace silt						
70												
71					CL	CLAY with SAND (CL) gray-brown, very stiff, wet, very fine sand, trace sand, trace silt	TxUU	6,250	3,260		33.4	89
72												
73					CL	CLAY with SAND (CL) gray-brown, very stiff, wet, very fine sand, trace sand, trace silt	PP		6,000			
74												
75	S&H		10 15 18	23	CL	CLAY with SAND (CL) gray-brown, very stiff, wet, very fine sand, trace sand, trace silt	TxUU	6,250	3,260		33.4	89
76												
77					CL	CLAY with SAND (CL) gray-brown, very stiff, wet, very fine sand, trace sand, trace silt	PP		6,000			
78												
79					CL	CLAY with SAND (CL) gray-brown, very stiff, wet, very fine sand, trace sand, trace silt	TxUU	6,550	1,880		48.2	74
80												
81	S&H		8 4 11	11	CL	CLAY (CL) gray with yellow mottling, stiff, wet, trace very fine sand, trace silt	TxUU	6,550	1,880		48.2	74
82												
83					CL	CLAY (CL) gray with yellow mottling, stiff, wet, trace very fine sand, trace silt	PP		4,000			
84												
85					CL	CLAY (CL) gray with yellow mottling, stiff, wet, trace very fine sand, trace silt						
86												
87					CL	CLAY (CL) gray with yellow mottling, stiff, wet, trace very fine sand, trace silt						
88												
89					CL	CLAY (CL) gray with yellow mottling, stiff, wet, trace very fine sand, trace silt						
90												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-5c

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-5**

PAGE 4 OF 4

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA													
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft								
91	S&H	[Sample]	19	64/	SC	CLAYEY SAND with GRAVEL (SC) dark gray and yellow-brown, very dense, wet, fine sand, fine angular to subangular gravel														
92			41	7.5"																
93																				
94																				
95	SPT	[Sample]	36	60/		with fine to coarse bedrock fragments														
96			50/	5.5"																
97																				
98						SHALE														
99						black, intensely fractured, hard, moderately strong														
100	SPT	[Sample]	50/	60/																
101			0.5"	0.5"																
102																				
103	SPT	[Sample]	50/	60/		no recovery														
104			0"	0"																
105																				
106																				
107																				
108																				
109																				
110																				
111																				
112																				
113																				
114																				
115																				
116																				
117																				
118																				
119																				
120																				

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 103 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater level obscured by rotary wash drilling method.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-5d

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-6**

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 3/31/14

Date finished: 4/1/14

Drilling method: Mud Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>								
Ground Surface Elevation: 16.5 feet <sup>2</sup>												
1					SM	SILTY SAND (SM) light brown, medium dense, dry to moist, large concrete debris (up to 6 inches in diameter) trace brick debris						
2												
3	S&H		10	18	CL	SANDY CLAY (CL) gray-brown, very stiff, moist, fine-grained sand, trace coarse gravel, brick, debris, wood debris						
4			14									
5			12									
6	S&H		15	26		CLAYEY SILTY SAND (SM) dark gray-brown, medium dense, moist, increase in sand, trace glass and brick debris LL = 18, PI = 5, see Figure C-3				21.0	10.6	
7			12									
8	S&H		16	23	SC-SM	trace brick and glass debris, trace coarse gravel						
9			17									
10			5									
11	S&H		2	10								
12			12									
13												
14												
15	S&H		6	15	SC-SM	CLAYEY SILTY SAND (SC-SM) gray-brown, medium dense, moist, fine-grained sand, trace shells, trace brick debris, trace glass debris LL = 17, PI = 4, see Figure C-3				18.7	12.3	
16			5									
17			17									
18	GRAB	⊗			SC	CLAYEY SAND with GRAVEL (SC) brown, medium dense, moist, fine-grained sand, subangular-fine gravel LL = 24, PI = 10, see Figure C-3				23.7	9.1	
19												
20												
21	S&H		4	8	CL	SANDY CLAY with GRAVEL (CL) brown, medium stiff, moist, fine-grained sand, rounded to subangular gravel						
22			5									
23			7									
24												
25												
26	S&H		2	6	SC	CLAYEY SAND with GRAVEL (SC) gray to blue-gray, loose, wet, increase in angular gravel (09/01/14; 04/14/14) LL = 33, PI = 16, see Figure C-3				35.3	16.3	
27			3									
28			7									
29												
30												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-6a

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-6**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		3	8	SC	CLAYEY SAND with GRAVEL (SC) wet, red-brown to brown LL = 33, PI = 17, see Figure C-3	TxUU	3,500	560	40.0	17.6	
32			4									
33			7									
34												
35					CH	CLAY (CH) blue-gray, medium stiff, wet, trace shells Consolidation Test, see Figure C-41	TxUU	3,500	560	29.3	31.8	
36	ST		25									
37			psi									
38												
39												
40												
41												
42												
43												
44					SP	SAND (SP) yellow-brown, very dense, wet, fine-grained sand				3.5	20.4	
45	S&H		30									
46			50/6"	35/6"								
47	SPT		10	26	SC	CLAYEY SAND (SC) yellow-brown, medium dense, wet						
48			10									
49			12									
50												
51	S&H		12	29		light brown with dark brown inclusions LL = 23, PI = 8, see Figure C-3				28.5	17.2	
52			18									
53			23									
54												
55	S&H		23	35/6"	SP	SAND with CLAY (SP) red-brown, very dense, wet				10.4	19.5	
56			50/6"									
57												
58												
59												
60												

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-6b

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-6**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61	S&H		12	50	SC	CLAYEY SAND (SC) lightly brown, hard, wet, fine-grained sand			37.8	16.8		
62			45									
63			27									
64												
65												
66												
67												
68												
69						SANDY CLAY with GRAVEL (CL) brown, hard, wet, coarse gravel						
70												
71	S&H		11	32	CL				51.2	21.9		
72			17									
73			28									
74												
75						gravel lens at 74 to 74.5 feet						
76	S&H		3	20	CL	CLAY with SAND (CL) light brown, very stiff, wet, fine-grained sand, trace coarse gravel						
77			14									
78			15									
79												
80												
81	S&H		10	28	CL	GRAVELLY CLAY (CL) light brown, very stiff, wet, grained sand, abundant shells						
82			20									
83			20									
84												
85												
86	S&H		13	20	CL	color change to blue-gray CLAY with GRAVEL (CL) gray, very stiff, wet, trace shells, coarse gravel						
87			13									
88			16									
89												
90												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-6c

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-6**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
91	ST		100	psi	CL	CLAY with GRAVEL (CL) (continued)						
92												
93					CL	CLAY with GRAVEL (CL) blue-gray, hard, wet, fine to coarse bedrock fragments						
94												
95	S&H		9	33	CL	CLAY with GRAVEL (CL) blue-gray, hard, wet, fine to coarse bedrock fragments						
96			23									
97												
98						SHALE black with green mottling, intensely fractured, hard, weak, deeply weathered						
99												
100	S&H		14	41								
101			34		25							
102												
103												
104												
105	SPT		17	60/6"								
106			50/6"									
107												
108												
109												
110												
111												
112												
113												
114												
115												
116												
117												
118												
119												
120												

RESIDUAL SOIL

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 106 feet below ground surface. Boring backfilled with cement grout. Groundwater encountered at 25 feet below ground surface during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-6d

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-7**

PAGE 1 OF 4

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 3/31/14

Date finished: 4/1/14

Drilling method: Mud Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)

**LABORATORY TEST DATA**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>								
Ground Surface Elevation: 19.5 feet <sup>2</sup>												
1	GRAB				SP	SAND with GRAVEL (SP) light brown, very dense, moist, trace brick and clay				4.2	7.8	
2												
3	S&H		9 50/3"	35/3"	SP	SAND (SP) yellow-brown, dense, moist, fine-grained, trace fine gravel						
4												
5	S&H		10 26	39	SP	SANDY CLAY with GRAVEL (CL) dark brown, hard, moist, fine to coarse-grained sand, fine gravel, trace brick debris, trace serpentinite						
6												
7	S&H		19 19	29	CL	SANDY CLAY with GRAVEL (CL) dark brown, hard, moist, fine to coarse-grained sand, fine gravel, trace brick debris, trace serpentinite  very stiff, trace coarse gravel, trace wood debris						
8												
9	S&H		10 12	19	CL	angular gravel 3" in diameter						
10												
11					CL	angular gravel 3" in diameter						
12												
13					CL	angular gravel 3" in diameter						
14												
15					CL	angular gravel 3" in diameter						
16												
15	S&H		4 5	8	SM	trace glass debris  SILTY SAND (SM) gray-brown, loose, moist trace fine gravel, trace fines Non-plastic				24.9	14.4	
16												
17					SM	SILTY SAND (SM) gray-brown, loose, moist trace fine gravel, trace fines Non-plastic						
18												
19					SM	SILTY SAND (SM) gray-brown, loose, moist trace fine gravel, trace fines Non-plastic						
20												
20	S&H		5 10	18	SP	SAND (SP) gray, medium dense, wet trace gravel				2.4	20.8	
21												
22	SPT		9 20	62	CL	SANDY CLAY with GRAVEL (CL) brown, hard, wet, angular gravel						
23												
24					CL	SANDY CLAY (CL) yellow-brown with red-brown mottling, soft, wet, fine-grained sand Consolidation Test, see Figure C-42						
25												
26	S&H		0 0	2	CL	SANDY CLAY (CL) yellow-brown with red-brown mottling, soft, wet, fine-grained sand Consolidation Test, see Figure C-42					18.8	111
27												
28					CL	SANDY CLAY (CL) yellow-brown with red-brown mottling, soft, wet, fine-grained sand Consolidation Test, see Figure C-42						
29												
30					CL	SANDY CLAY (CL) yellow-brown with red-brown mottling, soft, wet, fine-grained sand Consolidation Test, see Figure C-42						

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-7a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-7**

PAGE 2 OF 4

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		0	3	CL	SANDY CLAY (CL) (continued) medium stiff, blue-gray mottling, trace subangular gravel	TxUU	3,100	750		18.3	111
32			2									
33			2									
34												
35	ST	0-50 300-400 psi		59	CH	SANDY CLAY (CH) blue-gray, medium stiff, wet, fine-grained sand, trace shells Consolidation Test, see Figure C-43	TxUU	3,500	630		30.3	96
36					SC	CLAYEY SAND (SC) olive-gray, medium dense, fine-grained sand						
37												
38												
39												
40	SPT	20	21	59	SP-SC	SAND with CLAY (SP-SC) yellow-brown, very dense, wet, fine-grained sand				6.2	22.4	
41												
42												
43												
44												
45	SPT	19	28	74	SC	CLAYEY SAND (SC) yellow-brown, very dense, wet, fine-grained sand						
46												
47												
48												
49												
50	SPT	17	21	52	SC							
51												
52												
53												
54												
55	S&H	14	20	35		dense				21.8	18.8	
56												
57												
58												
59												
60												

FILL

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-7**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61	SPT		19 27 37	77	SC	CLAYEY SAND (SC) (continued) very dense						
62												
63												
64					CL	SANDY CLAY (CL) yellow-brown, very stiff, wet, fine-grained sand, trace fine gravel						
65	SPT		2 8 10	22								
66												
67												
68												
69					CL	CLAY (CL) olive-gray, hard, wet, trace fine-grained sand, trace fine gravel, trace orange inclusions						
70	S&H		14 24 25	34								
71												
72												
73						olive-gray with black inclusions						
74												
75					CL	CLAY with SAND (CL) brown with olive-gray mottling, very stiff, wet, fine-grained sand, trace coarse-grained sand						
76	S&H		8 11 14	18								
77												
78												
79												
80					CL	olive-gray						
81	S&H		8 12 13	18								
82												
83												
84												
85					CL	CLAY (CL) olive-gray with yellow mottling, very stiff, wet, trace black inclusions, trace fine-grained sand						
86	S&H		8 11 14	18								
87												
88					GC	CLAYEY GRAVEL (GC) gray-brown, very dense, wet, fine to coarse-grained sand, fine subangular gravel						
89												
90												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-7c

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-7**

PAGE 4 OF 4

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA							
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft		
91	SPT		50/0.5"	60/0.5"	GC	CLAYEY GRAVEL (GC) (continued)								
92														
93														
94						SHALE dark gray, intensely to closely fractured, low hardness, weak, moderately weathered								
95	SPT		50/2"	60/2"										
96														
97														
98														
99														
100														
101														
102														
103														
104														
105														
106														
107														
108														
109														
110														
111														
112														
113														
114														
115														
116														
117														
118														
119														
120														

RESIDUAL SOIL

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 95.5 feet below ground surface. Boring backfilled with cement grout. Groundwater encountered at 19 feet below ground surface during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-7d

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-8**

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 3/25/14

Date finished: 3/25/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

**LABORATORY TEST DATA**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>								
Ground Surface Elevation: 4 feet <sup>2</sup>												
1						Dirt Lot/Storage Yard						
2						CLAYEY SAND with GRAVEL (SC) brown, dense, moist, fine to coarse-grained sand, subrounded to angular gravel, large brick debris						
3	S&H		7	25							10.8	10.8
4			22									
5	S&H		25	30/5"		increased clay content red-brown, with concrete debris						
6			50/5"									
7						GRAVEL with SILT and SAND (GP-GP) red-brown, medium dense, wet, subrounded to angular, coarse gravel, with brick debris						
8	S&H		9	22								
9			15									
10	S&H		7	17	GP-GM	dark brown (0819, 3/25/14) non-plastic				7.8	14.7	
11			13			light brown						
12						SAND with CLAY (SP-SC) olive-brown, medium dense, wet, fine trace gravel, shells, trace clay						
13			9	25	SP-SC							
14	SPT		11			SAND (SP) yellow-brown, medium dense, wet, trace clay						
15			14									
16												
17						very dense						
18												
19	SPT		21	78	SP							
20			36									
21			42									
22						trace dark brown fillings						
23												
24	SPT		25	53								
25			27									
26			26									
27						CLAYEY SAND (SC) olive-brown with red lense, dense, wet						
28					SC							
29	S&H		17	30								
30			18									
			32									

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-8a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-8**

PAGE 2 OF 2

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
31						CLAYEY SAND (SC) (continued)									
32															
33															
34	SPT		16 26 29	55											
35							very dense								
36															
37															
38							SANDY CLAY (CL) olive-brown, very stiff, wet, trace red fragments								
39	SPT		9 10 11	21											
40															
41															
42						CL									
43							trace fine gravel								
44	S&H		12 13 15	17											
45															
46															
47															
48							SERPENTINITE dark gray-green, intensely fractured, moderately hard, moderately strong, wet								
49	S&H SPT		50/2" 50/1"	30/2" 50/1"											
50															
51															
52															
53															
54	S&H		23 26 27	32			with clay seams								
55															
56															
57															
58															
59	S&H		27 50/5"	30/5"			gray-green, intensely fractured, low hardness, friable								
60															

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 59.5 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater encountered at 10 feet below ground surface during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-8b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-9**

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 3/25/14

Date finished: 3/25/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

**LABORATORY TEST DATA**

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"								
1					Dirt Lot/Storage Yard						
2					SANDY CLAY with GRAVEL (CL) dark brown, very stiff, moist, fine-grained sand, fine to coarse gravel, some brick debris						
3	S&H		16	27							
4			19								
5			26								
6	S&H		15	27	CL	red-brown					
7			21			dark-brown					
8	S&H		7	21							
9			16			with cobbles					
10			19								
11	S&H		7	24					23.8	12.8	
12			11								
13			29								
14	SPT		16	39		brown					
15			18								
16			21								
17											
18											
19	SPT		7	57		CLAYEY SAND (SC) gray-brown, very dense, wet, with gravel (2:30, 03/25/14)				20.8	15.3
20			31								
21			26								
22											
23											
24	SPT		17	18		GRAVEL with SILT and SAND (GP-GM) gray-brown, medium dense, wet, coarse gravel non-plastic				5.6	13.5
25			11								
26			7								
27											
28											
29	SPT		13	46		SAND with CLAY (SP-SC) olive-brown, dense, wet					
30			17								
			29			SAND (SP)					

FILL

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-9a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-9**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA							
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft		
31						SAND (SP) (continued) yellow-brown, dense, wet								
32														
33														
34	SPT		17	39	89/10"	very dense								
35				50/4"										
36														
37					SP	olive-brown, mottled red-brown, dense, with clay								
38														
39	SPT		13	17	38									
40				21										
41														
42														
43														
44	SPT		7	11	24	medium dense				9.4	20.6			
45				13		SANDY CLAY (CL) olive-brown with red fillings, very stiff, wet								
46														
47														
48					CL									
49	SPT		7	11	24									
50				13										
51														
52						CLAYEY SAND (SC) yellow-brown, dense, wet								
53														
54	S&H		11	26	34	SC								
55				31										
56														
57														
58					CL	SANDY CLAY (CL) yellow-brown, hard, wet, trace fine, black gravel								
59	S&H		17	27	37	CL								
60				34										

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-9b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-9**

PAGE 3 OF 3

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
61					CL	SANDY CLAY (CL) blue-gray, hard, wet									
62						CLAY (CL) blue-gray, hard, wet, with angular rock fragments									
63															
64	S&H	[Sample]	21	45											
65			33												
66			42												
67															
68															
69	S&H	[Sample]	31	29											
70			27												
71			22												
72															
73						SANDSTONE									
74	S&H	[Sample]	50/2"	30/2"		intensely fractured, moderately hard, moderately strong, deeply weathered									
75	SPT	[Sample]	36	94											
76			44												
77			50/6"												
78	SPT	[Sample]	50/2"	50/2"											
79															
80															
81															
82															
83															
84															
85															
86															
87															
88															
89															
90															

RESIDUAL SOIL

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 77.5 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater encountered at 19.5 feet below ground surface during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-9c

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-10**

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 3/24/14

Date finished: 3/24/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>								
Ground Surface Elevation: 24 feet <sup>2</sup>												
1						Field, wild plants, sand with gravel						
2						CLAYEY SAND with GRAVEL (SC)						
3	S&H	█	11 50/6"	30/6"		brown, very dense, moist, fine-grained sand, fine to coarse gravel						
4												
5					SC							
6	S&H	█	13 15 16	19		medium dense, fine-gravel, trace brick						
7												
8	S&H	█	11 12 15	16								
9												
10												
11	S&H	█	22 47 33	48		CLAYEY SAND with GRAVEL (SC)						
12						dark brown, dense, moist, subangular to angular gravel, fine to coarse gravel, trace brick						
13												
14	S&H	█	27 38 44	49	SC							
15												
16												
17												
18												
19	S&H	█	6 9 15	14		CLAYEY SILTY SAND (SC-SM)				19.8	12.4	
20					SC - SM	gray-brown, medium dense, moist, with blue-gray clay mottling, trace coarse gravel LL = 20, PI = 5, see Figure C-4						
21												
22												
23												
24	SPT	█	50/1"	50/1"		concrete debris						
25												
26					SC	CLAYEY SAND (SC)						
27						gray-brown, medium dense, moist, with blue-gray clay mottling, trace coarse gravel						
28												
29												
30	SPT	█	50/4"	50/4"		concrete debris						
					SP	▽ (9:00, 03/24/14)						

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-10a

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-10**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31						SAND (SP) dark brown, very dense, wet, fine to coarse-grained sand, 1 to 2 inch fine gravel lenses, trace silt						
32					SP							
34	SPT		22 26 33	59								
35												
36						SAND with SILT (SP-SM) yellow-brown, very dense, wet, fine-grained sand, trace dark brown, clay mottling and trace gravel						
37					SP-SM							
38	SPT		19 32 34	66								
39												
40												
41												
42												
43												
44	SPT		20 37 40	77					9.6	17.8		
45												
46												
47												
48												
49	SPT		17 27 38	65								
50												
51												
52						CLAYEY SILTY SAND (SC-SM) yellow-brown, medium dense, wet LL = 18, PI = 4, see Figure C-4						
53					SC-SM							
54	SPT		5 7 8	15							25.6	19.7
55												
56												
57												
58												
59	S&H		16 21 26	28	CL	CLAY with SAND (CL) olive-brown, very stiff, wet, fine-grained sand, trace serpentine fragments						
60												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-10b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-10**

PAGE 3 OF 3

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
61						CLAY with SAND (CL) (continued)									
62															
63															
64	S&H		11 26 38	38	CL										
65															
66															
67															
68															
69	S&H		17 27 32	35											
70						CLAY with SAND and GRAVEL (CL) brown, hard, wet, angular to subangular gravel, with rock fragments greater than 3 inches in diameter									
71															
72															
73					CL										
74	S&H		13 19 26	27		dark brown, very stiff, fine-grained sand									
75															
76															
77															
78						CLAY (CL) green-blue with dark brown mottling, very stiff, wet, trace fine gravel									
79	S&H		7 11 15	16	CL										
80															
81															
82	SPT		50/3"	50/3"		SANDSTONE dark brown, intensely fractured, hard, moderately strong, with clay seams									
83															
84	SPT		40 50/2"	50/2"											
85															
86															
87															
88															
89															
90															

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 84.5 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater encountered at 30 feet below ground surface during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-10c

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-11**

PAGE 1 OF 2

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 3/26/14

Date finished: 3/26/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>								
Ground Surface Elevation: 26 feet <sup>2</sup>												
1						CLAYEY SAND (SC) brown, very dense, moist, trace brick debris, trace organics, rounded to subangular gravel						
2					SC							
3	S&H		8	44								
4			33									
5			41			increased in sand content						
6	S&H		19	36	CL	SANDY CLAY (CL) dark brown, hard, moist, trace fine to coarse gravel, trace brick debris						
7			29									
8			31									
9	S&H		50/4"	30/4"	SC	CLAYEY SAND (SC) dark brown, very dense, moist, trace subangular to angular gravel, trace concrete debris						
10												
11	S&H		11	26	CL	SANDY CLAY with GRAVEL (CL) dark brown, very stiff, moist, rounded to subangular gravel, increase in sand content						
12			19									
13			25									
14	SPT		13	35	CL	SANDY CLAY (CL) brown to red-brown, hard, moist, trace organics, trace gravel, trace brick debris						
15			19									
16			16									
17												
18												
19	SPT		4	9	CL	SANDY CLAY (CL) dark brown mottled blue-gray, medium stiff, moist, trace wood debris, trace coarse gravel						
20			4									
21			4									
22			5									
23						CLAY with SAND (CL) gray, stiff, moist, trace shells						
24	S&H		7	12	CL							
25			10									
26			10									
27												
28												
29	SPT		4	21	CL	CLAY with GRAVEL (CL) dark brown, very stiff, moist, subangular to angular gravel						
30			7									
			14									

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-11a

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-11**

PAGE 2 OF 2

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA									
	Sampler Type	Sample	Blows/6"			SPT N-Value <sup>1</sup>	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
31					CLAY with GRAVEL (CL) (continued)										
32					CL										
33					▽ (03/26/14)										
34	SPT		7 11 15	26	wood from 33.5 to 34 feet bgs										
35					SAND with SILT (SP) yellow-brown, dense, wet, fine-grained sand										
36															
37															
38					SP										
39	SPT		19 27 34	61	very dense, trace wood debris										
40															
41															
42					SANDY CLAY (CL) yellow-brown, very stiff, wet, trace fine gravel										
43															
44	SPT		5 7 11	18											
45															
46					CL										
47															
48															
49	S&H		11	30/6"	increase in fine and coarse gravel										
50															
51					SERPENTINITE intensely fractured, moderately hard, moderately strong, deeply weathered										
52															
53															
54	SPT		39	50/5"											
55															
56															
57															
58															
59	SPT		50/3	50/3"											

FILL

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 59 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater encountered at 33 feet below ground surface during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-11b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-12**

PAGE 1 OF 2

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 3/26/14

Date finished: 3/26/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES			SPT N-Value <sup>1</sup>	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"									
Ground Surface Elevation: 10 feet <sup>2</sup>												
1						Gravel						
2						SANDY CLAY with GRAVEL (CL) dark brown, medium stiff, moist fine to coarse-grained sand, fine to coarse gravel						
3	S&H		4	5	CL							
4			4									
5			4									
6	S&H		5	7	CL	SANDY CLAY (CL) yellow-brown, medium stiff, moist fine-grained sand						
7			5									
8	S&H		9	22	CL	SANDY CLAY (CL) brown, very stiff, fine-grained sand, trace charcoal						
9			4									
10			20									
11	S&H		10	20	CL	increased sand content						
12			15									
13			17									
14	SPT		4	25	SM	▽ SILTY SAND (SM) brown, medium dense, wet, fine-grained sand (03/26/14) Non-plastic				12.7	20.2	
15			12									
16			13									
17												
18						SANDY CLAY (CL) brown, very stiff, wet, fine-grained sand						
19	SPT		7	17								
20			8									
21			9									
22												
23												
24	SPT		7	20	CL	brown with yellow-brown mottling, trace coarse gravel						
25			9									
26			11									
27												
28												
29	S&H		9	17		trace angular gravel						
30			13									
			15									

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-12a

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-12**

PAGE 2 OF 2

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
31					SANDSTONE intensely fractured, moderately hard, moderately strong, deep weathered										
32															
34	SPT		17 31 50/6"	81											
35															
36															
37															
38															
39	SPT		15 23 31	54											
40															
41															
42															
43															
44	SPT		36 50/3"	50/3"											
45															
46															
47															
48															
49															
50															
51															
52															
53															
54															
55															
56															
57															
58															
59															
60															

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 44.5 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater encountered at 13 feet below ground surface during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.: 731626701      Figure: A-12b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-13**

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 3/25/14

Date finished: 3/25/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES			SPT N-Value <sup>1</sup>	LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/6"									
1						Brush and topsoil						
2						SAND with CLAY and GRAVEL (SC) brown, dense, dry to moist, fine to coarse sand, fine gravel						
3	S&H		16	44								
4			29									
5			44									
6	S&H		17	22		medium dense						
7			20									
8			17			loose						
9	S&H		7	7								
10			6									
11			5			trace brick debris						
12	S&H		4	8								
13			5									
14			9									
15	SPT		17	42		dense						
16			19									
17			23									
18												
19	SPT		8	6		GRAVEL with SAND and CLAY (GP) brown, loose, moist, subangular to angular, gravel greater than 2 inches						
20			3									
21			3									
22												
23						SANDY CLAY (CL) dark brown, hard, moist, fine to coarse-grained sand with serpentinite fragments						
24	SPT		9	36								
25			15									
26			21									
27												
28						CLAYEY SAND (SC) yellow-brown, medium dense, moist, fine-grained sand, some fine to coarse gravel						
29	S&H		12	20								
30			16									
			17									

FILL

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-13**

PAGE 2 OF 2

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA							
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft		
31					SC	CLAYEY SAND (SC) (continued)								
32														
33						SANDY CLAY (CL)								
34	SPT		6 6 7	13		yellow-brown, stiff, moist, fine-grained sand, fine gravel								
35														
36						trace gravel, some black fillings (03/25/14)								
37														
38														
39	S&H		8 11 14	15		Consolidation Test, see Figure C-44						24.7	101	
40					CL									
41														
42														
43														
44	SPT		9 11 15	26		with serpentinite fragments and fine to coarse sand lenses								
45														
46														
47														
48														
49	SPT		50/6"	50/6"		SERPENTINITE								
50						green-gray, intensely fractured, hard, friable to strong, deeply weathered								
51						(15 minutes drilling to advance 2 feet)								
52	SPT		50/6"	50/6"										
53														
54														
55														
56														
57														
58														
59														
60														

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 59.5 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater encountered at 36 feet below ground surface during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-13b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-14**

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 3/26/14

Date finished: 3/26/14

Drilling method: Hollow Stem Auger

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Wireline Down Hole Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT)

**LABORATORY TEST DATA**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>									
Ground Surface Elevation: 31 feet <sup>2</sup>													
1					CL	SANDY CLAY with GRAVEL (CL) gray-brown, stiff, moist, fine to coarse-grained sand, fine to coarse gravel, subrounded to angular gravel, trace brick debris							
2													
3	S&H		8	12									
4			9										
5			11										
6	S&H		4	15		trace brick and organics color change to brown							
7			11										
8	S&H		10	14		CLAYEY SAND (SC) brown, medium dense, moist, brick debris							
9			11										
10	GRAB												
11	S&H		50/3"	30/3"									
12					SC	brick debris							
13													
14	SPT		50/2"	50/2"									
15													
16					GP	GRAVEL with SAND (GP) gray-brown, very dense, moist							
17													
18													
19	SPT		50/4"	50/4"									
20													
21													
22													
23					SERPENTINITE	green-gray, intensely fractured, low hardness, friable, deeply weathered							
24	SPT		50/6"	50/6"									
25													
26													
27													
28													
29	SPT		50/6"	50/6"									
30													

FILL

RESIDUAL SOIL

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-14a

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-14**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31					SERPENTINITE (continued)							
32												
33												
34	SPT		50/3"	50/3"								
35												
36												
37												
38												
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

Boring terminated at a depth of 34 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater not encountered during drilling.

<sup>1</sup> S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.6 and 1.0, respectively to account for sampler type and hammer energy.  
<sup>2</sup> Elevations based on San Francisco City datum.

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-14b

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-15**

PAGE 1 OF 6

Boring location: See Site Plan, Figure 2

Logged by: KLW

Date started: 4/10/14

Date finished: 4/11/14

Drilling method: Mud Rotary Wash

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Automatic Safety Hammer

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Shelby Tube (ST)

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>								
Ground Surface Elevation: 7 feet <sup>2</sup>												
1					SC	CLAYEY SAND with GRAVEL (SC) yellow-brown, medium dense, moist, fine-grained sand, fine to coarse subrounded to subangular gravel, trace wood debris, trace brick debris						
2												
3	S&H		17	29								
4			20									
5			22									
6	S&H		20	31								
7			20									
8			24									
9	S&H		15	34								
10			18									
11			30									
12	S&H		5	25	CL	SANDY CLAY with GRAVEL (CL) brown, very stiff, wet, fine to medium grained sand, fine to coarse subangular gravel, trace wood debris, brick debris						
13			17									
14			19									
15					SM	SILTY SAND (SM) yellow-brown, medium dense, wet, fine-grained sand, trace fine gravel						
16	S&H		15	20								
17			15									
18			14									
19					CL	SANDY CLAY with GRAVEL (CL) brown, stiff, wet, fine to coarse-grained sand, fine subrounded to subangular gravel, trace brick						
20	S&H		7	12								
21			8									
22			9									
23					SC-SM	CLAYEY SILTY SAND (SC-SM) red-brown, medium dense, wet, fine-grained sand				28.4	13.0	
24												
25	S&H		1	1								
26			1									
27			0									
28					CH	CLAY (CH) blue-gray, soft, wet, trace shells				24.9	16.6	
29												
30												

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701

Figure: A-15a

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-15**

PAGE 2 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
31	S&H		2	3	CH	CLAY (CH) (continued)									
32			2												
33			2												
35															
36	ST		25			blue-gray, medium stiff Consolidation Test, see Figure C-45	TxUU	3,500	820		46.2	73			
37			psi												
38															
39															
40															
41															
42															
43															
44															
45															
46	S&H		0	1		gray, very soft									
47			0												
48			2												
49															
50															
51															
52															
53															
54															
55															
56	ST		50-			stiff Consolidation Test, see Figure C-46	TxUU	5,500	1,300		43.0	75			
57			200												
58			psi												
59															
60															

BAY MUD

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-15b

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-15**

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA								
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
61					CH	CLAY (CH) (continued)									
62															
63															
64															
65	S&H	[Sample]	0	4											
66							0								
67			5												
68															
69															
70															
71															
72															
73															
74															
75	ST	[Sample]	0-200			stiff Consolidation Test, see Figure C-47	TxUU	7,500	1,640		45.7	72			
76					psi										
77															
78															
79															
80															
81															
82															
83															
84						SANDY CLAY (CL) blue-gray, hard, wet, fine-grained sand									
85	S&H	[Sample]	14	56	CL							59.4	17.1		
86														30	
87			50/6"												
88															
89					SC	CLAYEY SAND (SC) olive-gray with yellow-brown mottling, very stiff, wet, fine-grained sand, trace black inclusions									
90															

BAY MUD

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.: 731626701 Figure: A-15c

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-15**

PAGE 4 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
91	S&H		8 14 15	20	SC	CLAYEY SAND (SC) (continued) LL = 28, PI = 12, see Figure C-5				49.7	19.5		
92													
93													
94													
95	S&H		7 17 41	41		yellow-brown and red-yellow increased sand content				21.5	22.4		
96													
97													
98													
99						SANDY CLAY (CL) blue-gray, very stiff, wet, fine-grained sand and trace orange inclusions							
100	S&H		8 15 19	24	CL					60.9	21.0		
101													
102													
103													
104													
105													
106						sand lense							
107													
108													
109													
110	S&H		3 10 10	14	CL	CLAY with SAND (CL) blue-gray, stiff, wet, fine-grained sand, some orange inclusions							
111													
112													
113													
114													
115													
116													
117													
118													
119													
120													

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-15d

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring B-15**

PAGE 5 OF 6

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA													
	Sampler Type	Sample	Blows/ 6"	SPT N-Value <sup>1</sup>			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft								
121	S&H	[shaded]	2	11	CL	CLAY (CL) gray, stiff, wet														
122			7																	
123																				
124																				
125																				
126																				
127																				
128																				
129																				
130	S&H	[shaded]	14	34	CL	CLAY with SAND (CL) blue-gray, hard, wet, fine-grained sand	RESIDUAL SOIL													
131		[white]	24										24							
132																				
133																				
134																				
135																				
136																				
137																				
138																				
139																				
140	SPT	[diagonal]	9	26		very stiff, trace angular gravel														
141			10		12															
142																				
143						SHALE BEDROCK gray-black, intensely fractured, low hardness, weak, moderately weathered														
144																				
145	SPT	[thin line]	60/2"	72/2"																
146																				
147																				
148																				
149						green-black														
150																				

TEST GEOTECH LOG 731626701.GPJ TR.GDT 7/16/14

**LANGAN TREADWELL ROLLO**

Project No.:  
731626701

Figure:  
A-15e



## UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions	Symbols	Typical Names
<b>Coarse-Grained Soils</b> (more than half of soil > no. 200 sieve size)	<b>Gravels</b> (More than half of coarse fraction > no. 4 sieve size)	<b>GW</b> Well-graded gravels or gravel-sand mixtures, little or no fines
		<b>GP</b> Poorly-graded gravels or gravel-sand mixtures, little or no fines
		<b>GM</b> Silty gravels, gravel-sand-silt mixtures
		<b>GC</b> Clayey gravels, gravel-sand-clay mixtures
	<b>Sands</b> (More than half of coarse fraction < no. 4 sieve size)	<b>SW</b> Well-graded sands or gravelly sands, little or no fines
		<b>SP</b> Poorly-graded sands or gravelly sands, little or no fines
		<b>SM</b> Silty sands, sand-silt mixtures
<b>Fine-Grained Soils</b> (more than half of soil < no. 200 sieve size)	<b>Silts and Clays</b> LL = < 50	<b>ML</b> Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		<b>CL</b> Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		<b>OL</b> Organic silts and organic silt-clays of low plasticity
	<b>Silts and Clays</b> LL = > 50	<b>MH</b> Inorganic silts of high plasticity
		<b>CH</b> Inorganic clays of high plasticity, fat clays
		<b>OH</b> Organic silts and clays of high plasticity
<b>Highly Organic Soils</b>	<b>PT</b>	Peat and other highly organic soils

### SAMPLE DESIGNATIONS/SYMBOLS

GRAIN SIZE CHART		
Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel coarse fine	3" to No. 4	76.2 to 4.76
	3" to 3/4" 3/4" to No. 4	76.2 to 19.1 19.1 to 4.76
Sand coarse medium fine	No. 4 to No. 200	4.76 to 0.075
	No. 4 to No. 10	4.76 to 2.00
	No. 10 to No. 40	2.00 to 0.420
	No. 40 to No. 200	0.420 to 0.075
Silt and Clay	Below No. 200	Below 0.075

- Sample taken with Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter. Darkened area indicates soil recovered
- Classification sample taken with Standard Penetration Test sampler
- Undisturbed sample taken with thin-walled tube
- Disturbed sample
- Sampling attempted with no recovery
- Core sample
- Analytical laboratory sample
- Sample taken with Direct Push or Drive sampler

# DRAFT

- Unstabilized groundwater level
- Stabilized groundwater level

### SAMPLER TYPE

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li><b>C</b> Core barrel</li> <li><b>CA</b> California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter</li> <li><b>D&amp;M</b> Dames &amp; Moore piston sampler using 2.5-inch outside diameter, thin-walled tube</li> <li><b>O</b> Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube</li> </ul> | <ul style="list-style-type: none"> <li><b>PT</b> Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube</li> <li><b>S&amp;H</b> Sprague &amp; Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter</li> <li><b>SPT</b> Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter</li> <li><b>ST</b> Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure</li> </ul> |
|---|--|

**INDIA BASIN**  
San Francisco, California

## CLASSIFICATION CHART

LANGAN TREADWELL ROLLO

Date 05/12/14    Project No. 731626701    Figure A-16

## I FRACTURING

Intensity	Size of Pieces in Feet
Very little fractured	Greater than 4.0
Occasionally fractured	1.0 to 4.0
Moderately fractured	0.5 to 1.0
Closely fractured	0.1 to 0.5
Intensely fractured	0.05 to 0.1
Crushed	Less than 0.05

## II HARDNESS

1. **Soft** - reserved for plastic material alone.
2. **Low hardness** - can be gouged deeply or carved easily with a knife blade.
3. **Moderately hard** - can be readily scratched by a knife blade; scratch leaves a heavy trace of dust and is readily visible after the powder has been blown away.
4. **Hard** - can be scratched with difficulty; scratch produced a little powder and is often faintly visible.
5. **Very hard** - cannot be scratched with knife blade; leaves a metallic streak.

## III STRENGTH

1. **Plastic** or very low strength.
2. **Friable** - crumbles easily by rubbing with fingers.
3. **Weak** - an unfractured specimen of such material will crumble under light hammer blows.
4. **Moderately strong** - specimen will withstand a few heavy hammer blows before breaking.
5. **Strong** - specimen will withstand a few heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.
6. **Very strong** - specimen will resist heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.

**IV WEATHERING** - The physical and chemical disintegration and decomposition of rocks and minerals by natural processes such as oxidation, reduction, hydration, solution, carbonation, and freezing and thawing.

- D. Deep** - moderate to complete mineral decomposition; extensive disintegration; deep and thorough discoloration; many fractures, all extensively coated or filled with oxides, carbonates and/or clay or silt.
- M. Moderate** - slight change or partial decomposition of minerals; little disintegration; cementation little to unaffected. Moderate to occasionally intense discoloration. Moderately coated fractures.
- L. Little** - no megascopic decomposition of minerals; little of no effect on normal cementation. Slight and intermittent, or localized discoloration. Few stains on fracture surfaces.
- F. Fresh** - unaffected by weathering agents. No disintegration or discoloration. Fractures usually less numerous than joints.

### ADDITIONAL COMMENTS:

**V CONSOLIDATION OF SEDIMENTARY ROCKS:** usually determined from unweathered samples. Largely dependent on cementation.

U = unconsolidated  
P = poorly consolidated  
M = moderately consolidated  
W = well consolidated

## VI BEDDING OF SEDIMENTARY ROCKS

Splitting Property	Thickness	Stratification
Massive	Greater than 4.0 ft.	very thick-bedded
Blocky	2.0 to 4.0 ft.	thick bedded
Slabby	0.2 to 2.0 ft.	thin bedded
Flaggy	0.05 to 0.2 ft.	very thin-bedded
Shaly or platy	0.01 to 0.05 ft.	laminated
Papery	less than 0.01	thinly laminated

**INDIA BASIN**  
San Francisco, California

## PHYSICAL PROPERTIES CRITERIA FOR ROCK DESCRIPTIONS

**LANGAN TREADWELL ROLLO**

Date 03/20/08 Project No. 731626701 Figure A-17

**APPENDIX B**  
**GEOTECHNICAL EXPLORATORY BORING LOGS**

**DRAFT**

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring EB-1**

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin  
Drilled By: Gregg

Date started: 8/6/14

Date finished: 8/6/14

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (inches)			
1		•				SM	SILTY SAND (SM) gray, dense, moist, no odor
2				48/48			burn layer with brick and wood debris
3		•					
4							
5		•					
6				32/48		CL	SANDY CLAY (CL) gray, stiff, moist, slight hydrocarbon odor, brick and wood debris
7		•					
8							
9							
10		•		32/48		SM	SILTY SAND (SM) black, moist, slight hydrocarbon odor, brick and wood debris
11							
12							
13							
14				36/48		CL	SANDY CLAY (CL) black, medium stiff to stiff, moist, weak hydrocarbon odor, brick, wood, and burn debris
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

FILL

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

Boring terminated at a depth of 16 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater not encountered during drilling.

**LANGAN TREADWELL ROLLO**

Project No.:  
731626702

Figure:  
B-1

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring EB-2**

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin  
Drilled By: Gregg

Date started: 8/6/14

Date finished: 8/6/14

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION	
	Sample Number	Sample	Blow Count	Recovery (Inches)				
1		•				SM	SILTY SAND (SM) gray, dense, moist, no odor, wood and brick debris  slight hydrocarbon odor	
2				42/48				
3		•						
4								
5		•						
6				38/48				
7						CL	SANDY CLAY (CL) dark gray, medium stiff to stiff, moist, plastic, slight hydrocarbon odor, wood and brick debris	
8		•						
9								
10		•		30/48				
11						SC	CLAYEY SAND (SC) dark gray brown, moderately dense, moist, no odor	
12								
13							SP	SAND (SP) dark gray, moderately dense, wet, no odor
14				42/48				
15		•						
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

FILL

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

Boring terminated at a depth of 16 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater encountered at a depth of 13 feet during drilling.

**LANGAN TREADWELL ROLLO**

Project No.:  
731626702

Figure:  
B-2

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring EB-3**

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin  
Drilled By: Gregg

Date started: 8/5/14

Date finished: 8/5/14

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1		•				SW	GRAVELLY SAND (SW) gray, loose, dry, subangular <1.0" diameter, no odor
2				38/48		CH	SILTY CLAY with GRAVEL (CH) yellow brown, soft to medium stiff, moist, subangular <1.0" diameter, no odor, brick and wood debris
3		•					
4						SM	SILTY SAND (SM) gray to brown, loose to moderately dense, moist, subangular <0.5" diameter, no odor, brick debris
5		•					
6				38/48		SC	CLAYEY SAND with GRAVEL (SC) brown, moderately dense, moist, subangular <1.0" diameter, wet, slight hydrocarbon odor, wood and brick debris
7		•					
8						CL	SANDY CLAY (CL) dark brown, medium stiff, moist, weak hydrocarbon odor, wood and brick debris
9							
10		•		48/48			
11							
12							
13							
14				36/36			
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

FILL

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

Boring terminated at a depth of 15 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater not encountered during drilling.

**LANGAN TREADWELL ROLLO**

Project No.: 731626702

Figure: B-3

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring EB-4**

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin  
Drilled By: Gregg

Date started: 8/5/14

Date finished: 8/5/14

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1		•				ML	SANDY SILT (ML) yellow brown, soft to medium stiff, dense
2				24/48			SILTY SAND (SM) gray to black, moderately dense, moist, wood and brick debris
3		•					
4							
5		•					slight hydrocarbon odor
6				12/48		SM	
7		•					
8							
9							
10		•		48/48			
11						SM	SILTY SAND (SM) light brown, loose, dry, no odor
12						SC	CLAYEY SAND (SC) gray, moderately dense, moist, weak hydrocarbon odor, brick and wood debris
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

FILL

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

Boring terminated at a depth of 12 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater not encountered during drilling.

**LANGAN TREADWELL ROLLO**

Project No.:  
731626702

Figure:  
B-4

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring EB-5**

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin  
Drilled By: Gregg

Date started: 8/5/14

Date finished: 8/5/14

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (inches)			
1		•				SM	SILTY SAND (SM) brown, loose, dry to moist, no odor
2						CL	SILTY CLAY (CL) gray brown, medium stiff, moist, no odor, brick debris  brown
3		•					
4							
5		•				SM	SILTY SAND (SM) black, moderately dense to dense, moist, slight hydrocarbon odor, brick and wood debris
6							
7		•		32/48			
8						SM	
9							
10		•		48/48			
11						SM	
12							
13							
14						SM	
15		•		36/36			
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

FILL

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

Boring terminated at a depth of 16 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater not encountered during drilling.

**LANGAN TREADWELL ROLLO**

Project No.:  
731626702

Figure:  
B-5

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring EB-6**

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin  
Drilled By: Gregg

Date started: 8/5/14

Date finished: 8/5/14

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1		•				CL	SANDY CLAY with GRAVEL (CL) brown to black, very stiff, moist, no odor, gravel up to 1" diameter, brick debris
2			48/48				
3		•					
4							
5		•					
6			48/48				
7		•					
8							
9							
10		•	48/48				
11					SM	SILTY SAND (SM) brown, dense, moist, no odor, brick debris	
12					CL	CLAY with GRAVEL (CL) brown to black, stiff, moist, no odor, gravel up to 1" diameter, brick debris	
13			36/36				
14							
15		•					
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

FILL

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

Boring terminated at a depth of 15 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater not encountered during drilling.

**LANGAN TREADWELL ROLLO**

Project No.:  
731626702

Figure:  
B-6

PROJECT:

**INDIA BASIN**  
San Francisco, California

**Log of Boring EB-7**

PAGE 1 OF 1

Boring location:

Logged by: K. Staehlin  
Drilled By: Gregg

Date started: 8/5/14

Date finished: 8/5/14

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler:

DEPTH (feet)	SAMPLES				OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample Number	Sample	Blow Count	Recovery (Inches)			
1		•				ML	SANDY SILT (ML) yellow brown, soft to medium stiff, dry, no odor
2				48/48			
3		•				CL	SILTY CLAY (CL) gray brown, medium stiff, moist, no odor, wood, brick and burn debris
4							
5		•				CL	SILTY CLAY with GRAVEL (CL) gray, medium stiff, moist, subangular <0.5" diameter, no odor, brick, wood and burn debris
6				48/48			
7		•				CL	Refusal at 12' - fractured serpentinite
8							
9							
10		•			48/48		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

FILL

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 9/2/14

Boring terminated at a depth of 12 feet below ground surface.  
Boring backfilled with cement grout.  
Groundwater not encountered during drilling.

**LANGAN TREADWELL ROLLO**

Project No.:  
731626702

Figure:  
B-7

**UNIFIED SOIL CLASSIFICATION SYSTEM**

Major Divisions		Symbols	Typical Names
Coarse-Grained Soils (more than half of soil > no. 200 sieve size)	<b>Gravels</b> (More than half of coarse fraction > no. 4 sieve size)	<b>GW</b>	Well-graded gravels or gravel-sand mixtures, little or no fines
		<b>GP</b>	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		<b>GM</b>	Silty gravels, gravel-sand-silt mixtures
		<b>GC</b>	Clayey gravels, gravel-sand-clay mixtures
	<b>Sands</b> (More than half of coarse fraction < no. 4 sieve size)	<b>SW</b>	Well-graded sands or gravelly sands, little or no fines
		<b>SP</b>	Poorly-graded sands or gravelly sands, little or no fines
		<b>SM</b>	Silty sands, sand-silt mixtures
		<b>SC</b>	Clayey sands, sand-clay mixtures
Fine-Grained Soils (more than half of soil < no. 200 sieve size)	<b>Silts and Clays</b> LL = < 50	<b>ML</b>	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		<b>CL</b>	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		<b>OL</b>	Organic silts and organic silt-clays of low plasticity
	<b>Silts and Clays</b> LL = > 50	<b>MH</b>	Inorganic silts of high plasticity
		<b>CH</b>	Inorganic clays of high plasticity, fat clays
		<b>OH</b>	Organic silts and clays of high plasticity
<b>Highly Organic Soils</b>	<b>PT</b>	Peat and other highly organic soils	

**SAMPLE DESIGNATIONS/SYMBOLS**

GRAIN SIZE CHART		
Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel coarse fine	3" to No. 4	76.2 to 4.76
	3" to 3/4"	76.2 to 19.1
Sand coarse medium fine	3/4" to No. 4	19.1 to 4.76
	No. 4 to No. 200	4.76 to 0.075
	No. 4 to No. 10	4.76 to 2.00
	No. 10 to No. 40	2.00 to 0.420
	No. 40 to No. 200	0.420 to 0.075
Silt and Clay	Below No. 200	Below 0.075

-  Sample taken with Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter. Darkened area indicates soil recovered
-  Classification sample taken with Standard Penetration Test sampler
-  Undisturbed sample taken with thin-walled tube
-  Disturbed sample
-  Sampling attempted with no recovery
-  Core sample
-  Analytical laboratory sample, grab groundwater
-  Sample taken with Direct Push sampler
-  Sonic

-  Unstabilized groundwater level
-  Stabilized groundwater level

**SAMPLER TYPE**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li><b>C</b> Core barrel</li> <li><b>CA</b> California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter</li> <li><b>D&amp;M</b> Dames &amp; Moore piston sampler using 2.5-inch outside diameter, thin-walled tube</li> <li><b>O</b> Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube</li> </ul> | <ul style="list-style-type: none"> <li><b>PT</b> Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube</li> <li><b>S&amp;H</b> Sprague &amp; Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter</li> <li><b>SPT</b> Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter</li> <li><b>ST</b> Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure</li> </ul> |
|---|--|

**INDIA BASIN**  
San Francisco, California

**CLASSIFICATION CHART**

**LANGAN TREADWELL ROLLO**

Date 09/02/14	Project No. 731626702	Figure B-8
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**APPENDIX C**  
**CERTIFIED ANALYTICAL RESULTS AND**  
**CHAIN-OF-CUSTODY RECORDS**

**DRAFT**



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1408242

**Report Created for:** Treadwell & Rollo  
555 Montgomery St., Suite 1300  
San Francisco, CA 94111

**Project Contact:** Peter Cusack  
**Project P.O.:**  
**Project Name:** #731626702; India Basin

**Project Received:** 08/07/2014

Analytical Report reviewed & approved for release on 08/21/2014 by:

*Question about  
your data?*

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**WorkOrder:** 1408242

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

### Analytical Qualifiers

S	spike recovery outside accepted recovery limits
a1	sample diluted due to matrix interference
a4	the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
h4	sulfuric acid permanganate (EPA 3665) cleanup



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg

### Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.050	1	08/09/2014 19:22
Aroclor1221	ND	0.050	1	08/09/2014 19:22
Aroclor1232	ND	0.050	1	08/09/2014 19:22
Aroclor1242	ND	0.050	1	08/09/2014 19:22
Aroclor1248	ND	0.050	1	08/09/2014 19:22
Aroclor1254	ND	0.050	1	08/09/2014 19:22
Aroclor1260	ND	0.050	1	08/09/2014 19:22
PCBs, total	ND	0.050	1	08/09/2014 19:22
Surrogates	REC (%)	Limits		Date Analyzed
Decachlorobiphenyl	103	70-130		08/09/2014 19:22

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.10	2	08/11/2014 14:37
Aroclor1221	ND	0.10	2	08/11/2014 14:37
Aroclor1232	ND	0.10	2	08/11/2014 14:37
Aroclor1242	ND	0.10	2	08/11/2014 14:37
Aroclor1248	ND	0.10	2	08/11/2014 14:37
Aroclor1254	ND	0.10	2	08/11/2014 14:37
Aroclor1260	ND	0.10	2	08/11/2014 14:37
PCBs, total	ND	0.10	2	08/11/2014 14:37
Surrogates	REC (%)	Limits	Analytical Comments: h4,a1	
Decachlorobiphenyl	105	70-130	08/11/2014 14:37	

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg

### Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.50	10	08/11/2014 13:59
Aroclor1221	ND	0.50	10	08/11/2014 13:59
Aroclor1232	ND	0.50	10	08/11/2014 13:59
Aroclor1242	ND	0.50	10	08/11/2014 13:59
Aroclor1248	ND	0.50	10	08/11/2014 13:59
Aroclor1254	ND	0.50	10	08/11/2014 13:59
Aroclor1260	ND	0.50	10	08/11/2014 13:59
PCBs, total	ND	0.50	10	08/11/2014 13:59
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: h4,a1	
Decachlorobiphenyl	71	70-130		08/11/2014 13:59

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.25	5	08/11/2014 12:43
Aroclor1221	ND	0.25	5	08/11/2014 12:43
Aroclor1232	ND	0.25	5	08/11/2014 12:43
Aroclor1242	ND	0.25	5	08/11/2014 12:43
Aroclor1248	ND	0.25	5	08/11/2014 12:43
Aroclor1254	ND	0.25	5	08/11/2014 12:43
Aroclor1260	ND	0.25	5	08/11/2014 12:43
PCBs, total	ND	0.25	5	08/11/2014 12:43
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: h4,a1	
Decachlorobiphenyl	114	70-130		08/11/2014 12:43

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg

### Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	2.5	50	08/11/2014 13:21
Aroclor1221	ND	2.5	50	08/11/2014 13:21
Aroclor1232	ND	2.5	50	08/11/2014 13:21
Aroclor1242	ND	2.5	50	08/11/2014 13:21
Aroclor1248	ND	2.5	50	08/11/2014 13:21
Aroclor1254	ND	2.5	50	08/11/2014 13:21
Aroclor1260	ND	2.5	50	08/11/2014 13:21
PCBs, total	ND	2.5	50	08/11/2014 13:21

Surrogates	REC (%)	Qualifiers	Limits	Analytical Comments: h4,a1,c4
Decachlorobiphenyl	136	S	70-130	08/11/2014 13:21

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC5A	93753

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.050	1	08/09/2014 14:59
Aroclor1221	ND	0.050	1	08/09/2014 14:59
Aroclor1232	ND	0.050	1	08/09/2014 14:59
Aroclor1242	ND	0.050	1	08/09/2014 14:59
Aroclor1248	ND	0.050	1	08/09/2014 14:59
Aroclor1254	ND	0.050	1	08/09/2014 14:59
Aroclor1260	ND	0.050	1	08/09/2014 14:59
PCBs, total	ND	0.050	1	08/09/2014 14:59

Surrogates	REC (%)	Limits	Analytical Comments: h4
Decachlorobiphenyl	95	70-130	08/09/2014 14:59



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC16	93720

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/12/2014 13:44
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/12/2014 13:44
Benzene	ND	0.0050	1	08/12/2014 13:44
Bromobenzene	ND	0.0050	1	08/12/2014 13:44
Bromochloromethane	ND	0.0050	1	08/12/2014 13:44
Bromodichloromethane	ND	0.0050	1	08/12/2014 13:44
Bromoform	ND	0.0050	1	08/12/2014 13:44
Bromomethane	ND	0.0050	1	08/12/2014 13:44
2-Butanone (MEK)	ND	0.020	1	08/12/2014 13:44
t-Butyl alcohol (TBA)	ND	0.050	1	08/12/2014 13:44
n-Butyl benzene	ND	0.0050	1	08/12/2014 13:44
sec-Butyl benzene	ND	0.0050	1	08/12/2014 13:44
tert-Butyl benzene	ND	0.0050	1	08/12/2014 13:44
Carbon Disulfide	ND	0.0050	1	08/12/2014 13:44
Carbon Tetrachloride	ND	0.0050	1	08/12/2014 13:44
Chlorobenzene	ND	0.0050	1	08/12/2014 13:44
Chloroethane	ND	0.0050	1	08/12/2014 13:44
Chloroform	ND	0.0050	1	08/12/2014 13:44
Chloromethane	ND	0.0050	1	08/12/2014 13:44
2-Chlorotoluene	ND	0.0050	1	08/12/2014 13:44
4-Chlorotoluene	ND	0.0050	1	08/12/2014 13:44
Dibromochloromethane	ND	0.0050	1	08/12/2014 13:44
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/12/2014 13:44
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/12/2014 13:44
Dibromomethane	ND	0.0050	1	08/12/2014 13:44
1,2-Dichlorobenzene	ND	0.0050	1	08/12/2014 13:44
1,3-Dichlorobenzene	ND	0.0050	1	08/12/2014 13:44
1,4-Dichlorobenzene	ND	0.0050	1	08/12/2014 13:44
Dichlorodifluoromethane	ND	0.0050	1	08/12/2014 13:44
1,1-Dichloroethane	ND	0.0050	1	08/12/2014 13:44
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/12/2014 13:44
1,1-Dichloroethene	ND	0.0050	1	08/12/2014 13:44
cis-1,2-Dichloroethene	ND	0.0050	1	08/12/2014 13:44
trans-1,2-Dichloroethene	ND	0.0050	1	08/12/2014 13:44
1,2-Dichloropropane	ND	0.0050	1	08/12/2014 13:44
1,3-Dichloropropane	ND	0.0050	1	08/12/2014 13:44
2,2-Dichloropropane	ND	0.0050	1	08/12/2014 13:44
1,1-Dichloropropene	ND	0.0050	1	08/12/2014 13:44

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC16	93720

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/12/2014 13:44
trans-1,3-Dichloropropene	ND	0.0050	1	08/12/2014 13:44
Diisopropyl ether (DIPE)	ND	0.0050	1	08/12/2014 13:44
Ethylbenzene	ND	0.0050	1	08/12/2014 13:44
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/12/2014 13:44
Freon 113	ND	0.10	1	08/12/2014 13:44
Hexachlorobutadiene	ND	0.0050	1	08/12/2014 13:44
Hexachloroethane	ND	0.0050	1	08/12/2014 13:44
2-Hexanone	ND	0.0050	1	08/12/2014 13:44
Isopropylbenzene	ND	0.0050	1	08/12/2014 13:44
4-Isopropyl toluene	ND	0.0050	1	08/12/2014 13:44
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/12/2014 13:44
Methylene chloride	ND	0.0050	1	08/12/2014 13:44
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/12/2014 13:44
Naphthalene	ND	0.0050	1	08/12/2014 13:44
n-Propyl benzene	ND	0.0050	1	08/12/2014 13:44
Styrene	ND	0.0050	1	08/12/2014 13:44
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/12/2014 13:44
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/12/2014 13:44
Tetrachloroethene	ND	0.0050	1	08/12/2014 13:44
Toluene	ND	0.0050	1	08/12/2014 13:44
1,2,3-Trichlorobenzene	ND	0.0050	1	08/12/2014 13:44
1,2,4-Trichlorobenzene	ND	0.0050	1	08/12/2014 13:44
1,1,1-Trichloroethane	ND	0.0050	1	08/12/2014 13:44
1,1,2-Trichloroethane	ND	0.0050	1	08/12/2014 13:44
Trichloroethene	ND	0.0050	1	08/12/2014 13:44
Trichlorofluoromethane	ND	0.0050	1	08/12/2014 13:44
1,2,3-Trichloropropane	ND	0.0050	1	08/12/2014 13:44
1,2,4-Trimethylbenzene	ND	0.0050	1	08/12/2014 13:44
1,3,5-Trimethylbenzene	ND	0.0050	1	08/12/2014 13:44
Vinyl Chloride	ND	0.0050	1	08/12/2014 13:44
Xylenes, Total	ND	0.0050	1	08/12/2014 13:44
<b>Surrogates</b>	<b>REC (%)</b>	<b>Limits</b>		
Dibromofluoromethane	91	70-130		08/12/2014 13:44
Toluene-d8	106	70-130		08/12/2014 13:44
4-BFB	81	70-130		08/12/2014 13:44

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC16	93720

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/12/2014 14:27
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/12/2014 14:27
Benzene	ND	0.0050	1	08/12/2014 14:27
Bromobenzene	ND	0.0050	1	08/12/2014 14:27
Bromochloromethane	ND	0.0050	1	08/12/2014 14:27
Bromodichloromethane	ND	0.0050	1	08/12/2014 14:27
Bromoform	ND	0.0050	1	08/12/2014 14:27
Bromomethane	ND	0.0050	1	08/12/2014 14:27
2-Butanone (MEK)	ND	0.020	1	08/12/2014 14:27
t-Butyl alcohol (TBA)	ND	0.050	1	08/12/2014 14:27
n-Butyl benzene	ND	0.0050	1	08/12/2014 14:27
sec-Butyl benzene	ND	0.0050	1	08/12/2014 14:27
tert-Butyl benzene	ND	0.0050	1	08/12/2014 14:27
Carbon Disulfide	ND	0.0050	1	08/12/2014 14:27
Carbon Tetrachloride	ND	0.0050	1	08/12/2014 14:27
Chlorobenzene	ND	0.0050	1	08/12/2014 14:27
Chloroethane	ND	0.0050	1	08/12/2014 14:27
Chloroform	ND	0.0050	1	08/12/2014 14:27
Chloromethane	ND	0.0050	1	08/12/2014 14:27
2-Chlorotoluene	ND	0.0050	1	08/12/2014 14:27
4-Chlorotoluene	ND	0.0050	1	08/12/2014 14:27
Dibromochloromethane	ND	0.0050	1	08/12/2014 14:27
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/12/2014 14:27
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/12/2014 14:27
Dibromomethane	ND	0.0050	1	08/12/2014 14:27
1,2-Dichlorobenzene	ND	0.0050	1	08/12/2014 14:27
1,3-Dichlorobenzene	ND	0.0050	1	08/12/2014 14:27
1,4-Dichlorobenzene	ND	0.0050	1	08/12/2014 14:27
Dichlorodifluoromethane	ND	0.0050	1	08/12/2014 14:27
1,1-Dichloroethane	ND	0.0050	1	08/12/2014 14:27
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/12/2014 14:27
1,1-Dichloroethene	ND	0.0050	1	08/12/2014 14:27
cis-1,2-Dichloroethene	ND	0.0050	1	08/12/2014 14:27
trans-1,2-Dichloroethene	ND	0.0050	1	08/12/2014 14:27
1,2-Dichloropropane	ND	0.0050	1	08/12/2014 14:27
1,3-Dichloropropane	ND	0.0050	1	08/12/2014 14:27
2,2-Dichloropropane	ND	0.0050	1	08/12/2014 14:27
1,1-Dichloropropene	ND	0.0050	1	08/12/2014 14:27

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC16	93720

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/12/2014 14:27
trans-1,3-Dichloropropene	ND	0.0050	1	08/12/2014 14:27
Diisopropyl ether (DIPE)	ND	0.0050	1	08/12/2014 14:27
Ethylbenzene	ND	0.0050	1	08/12/2014 14:27
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/12/2014 14:27
Freon 113	ND	0.10	1	08/12/2014 14:27
Hexachlorobutadiene	ND	0.0050	1	08/12/2014 14:27
Hexachloroethane	ND	0.0050	1	08/12/2014 14:27
2-Hexanone	ND	0.0050	1	08/12/2014 14:27
Isopropylbenzene	ND	0.0050	1	08/12/2014 14:27
4-Isopropyl toluene	ND	0.0050	1	08/12/2014 14:27
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/12/2014 14:27
Methylene chloride	ND	0.0050	1	08/12/2014 14:27
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/12/2014 14:27
Naphthalene	ND	0.0050	1	08/12/2014 14:27
n-Propyl benzene	ND	0.0050	1	08/12/2014 14:27
Styrene	ND	0.0050	1	08/12/2014 14:27
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/12/2014 14:27
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/12/2014 14:27
Tetrachloroethene	ND	0.0050	1	08/12/2014 14:27
Toluene	ND	0.0050	1	08/12/2014 14:27
1,2,3-Trichlorobenzene	ND	0.0050	1	08/12/2014 14:27
1,2,4-Trichlorobenzene	ND	0.0050	1	08/12/2014 14:27
1,1,1-Trichloroethane	ND	0.0050	1	08/12/2014 14:27
1,1,2-Trichloroethane	ND	0.0050	1	08/12/2014 14:27
Trichloroethene	<b>0.034</b>	0.0050	1	08/12/2014 14:27
Trichlorofluoromethane	ND	0.0050	1	08/12/2014 14:27
1,2,3-Trichloropropane	ND	0.0050	1	08/12/2014 14:27
1,2,4-Trimethylbenzene	ND	0.0050	1	08/12/2014 14:27
1,3,5-Trimethylbenzene	ND	0.0050	1	08/12/2014 14:27
Vinyl Chloride	ND	0.0050	1	08/12/2014 14:27
Xylenes, Total	ND	0.0050	1	08/12/2014 14:27
<b>Surrogates</b>	<b>REC (%)</b>	<b>Limits</b>		
Dibromofluoromethane	92	70-130		08/12/2014 14:27
Toluene-d8	105	70-130		08/12/2014 14:27
4-BFB	85	70-130		08/12/2014 14:27

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC16	93770

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/09/2014 02:40
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/09/2014 02:40
Benzene	ND	0.0050	1	08/09/2014 02:40
Bromobenzene	ND	0.0050	1	08/09/2014 02:40
Bromochloromethane	ND	0.0050	1	08/09/2014 02:40
Bromodichloromethane	ND	0.0050	1	08/09/2014 02:40
Bromoform	ND	0.0050	1	08/09/2014 02:40
Bromomethane	ND	0.0050	1	08/09/2014 02:40
2-Butanone (MEK)	ND	0.020	1	08/09/2014 02:40
t-Butyl alcohol (TBA)	ND	0.050	1	08/09/2014 02:40
n-Butyl benzene	ND	0.0050	1	08/09/2014 02:40
sec-Butyl benzene	ND	0.0050	1	08/09/2014 02:40
tert-Butyl benzene	ND	0.0050	1	08/09/2014 02:40
Carbon Disulfide	ND	0.0050	1	08/09/2014 02:40
Carbon Tetrachloride	ND	0.0050	1	08/09/2014 02:40
Chlorobenzene	ND	0.0050	1	08/09/2014 02:40
Chloroethane	ND	0.0050	1	08/09/2014 02:40
Chloroform	ND	0.0050	1	08/09/2014 02:40
Chloromethane	ND	0.0050	1	08/09/2014 02:40
2-Chlorotoluene	ND	0.0050	1	08/09/2014 02:40
4-Chlorotoluene	ND	0.0050	1	08/09/2014 02:40
Dibromochloromethane	ND	0.0050	1	08/09/2014 02:40
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/09/2014 02:40
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/09/2014 02:40
Dibromomethane	ND	0.0050	1	08/09/2014 02:40
1,2-Dichlorobenzene	ND	0.0050	1	08/09/2014 02:40
1,3-Dichlorobenzene	ND	0.0050	1	08/09/2014 02:40
1,4-Dichlorobenzene	ND	0.0050	1	08/09/2014 02:40
Dichlorodifluoromethane	ND	0.0050	1	08/09/2014 02:40
1,1-Dichloroethane	ND	0.0050	1	08/09/2014 02:40
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/09/2014 02:40
1,1-Dichloroethene	ND	0.0050	1	08/09/2014 02:40
cis-1,2-Dichloroethene	ND	0.0050	1	08/09/2014 02:40
trans-1,2-Dichloroethene	ND	0.0050	1	08/09/2014 02:40
1,2-Dichloropropane	ND	0.0050	1	08/09/2014 02:40
1,3-Dichloropropane	ND	0.0050	1	08/09/2014 02:40
2,2-Dichloropropane	ND	0.0050	1	08/09/2014 02:40
1,1-Dichloropropene	ND	0.0050	1	08/09/2014 02:40

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC16	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/09/2014 02:40
trans-1,3-Dichloropropene	ND	0.0050	1	08/09/2014 02:40
Diisopropyl ether (DIPE)	ND	0.0050	1	08/09/2014 02:40
Ethylbenzene	ND	0.0050	1	08/09/2014 02:40
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/09/2014 02:40
Freon 113	ND	0.10	1	08/09/2014 02:40
Hexachlorobutadiene	ND	0.0050	1	08/09/2014 02:40
Hexachloroethane	ND	0.0050	1	08/09/2014 02:40
2-Hexanone	ND	0.0050	1	08/09/2014 02:40
Isopropylbenzene	ND	0.0050	1	08/09/2014 02:40
4-Isopropyl toluene	ND	0.0050	1	08/09/2014 02:40
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/09/2014 02:40
Methylene chloride	ND	0.0050	1	08/09/2014 02:40
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/09/2014 02:40
Naphthalene	ND	0.0050	1	08/09/2014 02:40
n-Propyl benzene	ND	0.0050	1	08/09/2014 02:40
Styrene	ND	0.0050	1	08/09/2014 02:40
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/09/2014 02:40
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/09/2014 02:40
Tetrachloroethene	ND	0.0050	1	08/09/2014 02:40
Toluene	ND	0.0050	1	08/09/2014 02:40
1,2,3-Trichlorobenzene	ND	0.0050	1	08/09/2014 02:40
1,2,4-Trichlorobenzene	ND	0.0050	1	08/09/2014 02:40
1,1,1-Trichloroethane	ND	0.0050	1	08/09/2014 02:40
1,1,2-Trichloroethane	ND	0.0050	1	08/09/2014 02:40
Trichloroethene	ND	0.0050	1	08/09/2014 02:40
Trichlorofluoromethane	ND	0.0050	1	08/09/2014 02:40
1,2,3-Trichloropropane	ND	0.0050	1	08/09/2014 02:40
1,2,4-Trimethylbenzene	ND	0.0050	1	08/09/2014 02:40
1,3,5-Trimethylbenzene	ND	0.0050	1	08/09/2014 02:40
Vinyl Chloride	ND	0.0050	1	08/09/2014 02:40
Xylenes, Total	ND	0.0050	1	08/09/2014 02:40
<b>Surrogates</b>	<b>REC (%)</b>	<b>Limits</b>		
Dibromofluoromethane	94	70-130		08/09/2014 02:40
Toluene-d8	100	70-130		08/09/2014 02:40
4-BFB	88	70-130		08/09/2014 02:40

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/13/2014 10:26
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 10:26
Benzene	ND	0.0050	1	08/13/2014 10:26
Bromobenzene	ND	0.0050	1	08/13/2014 10:26
Bromochloromethane	ND	0.0050	1	08/13/2014 10:26
Bromodichloromethane	ND	0.0050	1	08/13/2014 10:26
Bromoform	ND	0.0050	1	08/13/2014 10:26
Bromomethane	ND	0.0050	1	08/13/2014 10:26
2-Butanone (MEK)	ND	0.020	1	08/13/2014 10:26
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 10:26
n-Butyl benzene	ND	0.0050	1	08/13/2014 10:26
sec-Butyl benzene	ND	0.0050	1	08/13/2014 10:26
tert-Butyl benzene	ND	0.0050	1	08/13/2014 10:26
Carbon Disulfide	ND	0.0050	1	08/13/2014 10:26
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 10:26
Chlorobenzene	ND	0.0050	1	08/13/2014 10:26
Chloroethane	ND	0.0050	1	08/13/2014 10:26
Chloroform	ND	0.0050	1	08/13/2014 10:26
Chloromethane	ND	0.0050	1	08/13/2014 10:26
2-Chlorotoluene	ND	0.0050	1	08/13/2014 10:26
4-Chlorotoluene	ND	0.0050	1	08/13/2014 10:26
Dibromochloromethane	ND	0.0050	1	08/13/2014 10:26
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 10:26
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 10:26
Dibromomethane	ND	0.0050	1	08/13/2014 10:26
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 10:26
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 10:26
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 10:26
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 10:26
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 10:26
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 10:26
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 10:26
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 10:26
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 10:26
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 10:26
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 10:26
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 10:26
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 10:26

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 10:26
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 10:26
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 10:26
Ethylbenzene	ND	0.0050	1	08/13/2014 10:26
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 10:26
Freon 113	ND	0.10	1	08/13/2014 10:26
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 10:26
Hexachloroethane	ND	0.0050	1	08/13/2014 10:26
2-Hexanone	ND	0.0050	1	08/13/2014 10:26
Isopropylbenzene	ND	0.0050	1	08/13/2014 10:26
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 10:26
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 10:26
Methylene chloride	ND	0.0050	1	08/13/2014 10:26
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 10:26
Naphthalene	ND	0.0050	1	08/13/2014 10:26
n-Propyl benzene	ND	0.0050	1	08/13/2014 10:26
Styrene	ND	0.0050	1	08/13/2014 10:26
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 10:26
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 10:26
Tetrachloroethene	ND	0.0050	1	08/13/2014 10:26
Toluene	ND	0.0050	1	08/13/2014 10:26
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 10:26
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 10:26
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 10:26
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 10:26
Trichloroethene	ND	0.0050	1	08/13/2014 10:26
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 10:26
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 10:26
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 10:26
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 10:26
Vinyl Chloride	ND	0.0050	1	08/13/2014 10:26
Xylenes, Total	ND	0.0050	1	08/13/2014 10:26
Surrogates	REC (%)	Limits		
Dibromofluoromethane	94	70-130		08/13/2014 10:26
Toluene-d8	103	70-130		08/13/2014 10:26
4-BFB	100	70-130		08/13/2014 10:26

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/13/2014 11:07
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 11:07
Benzene	ND	0.0050	1	08/13/2014 11:07
Bromobenzene	ND	0.0050	1	08/13/2014 11:07
Bromochloromethane	ND	0.0050	1	08/13/2014 11:07
Bromodichloromethane	ND	0.0050	1	08/13/2014 11:07
Bromoform	ND	0.0050	1	08/13/2014 11:07
Bromomethane	ND	0.0050	1	08/13/2014 11:07
2-Butanone (MEK)	ND	0.020	1	08/13/2014 11:07
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 11:07
n-Butyl benzene	ND	0.0050	1	08/13/2014 11:07
sec-Butyl benzene	ND	0.0050	1	08/13/2014 11:07
tert-Butyl benzene	ND	0.0050	1	08/13/2014 11:07
Carbon Disulfide	ND	0.0050	1	08/13/2014 11:07
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 11:07
Chlorobenzene	ND	0.0050	1	08/13/2014 11:07
Chloroethane	ND	0.0050	1	08/13/2014 11:07
Chloroform	ND	0.0050	1	08/13/2014 11:07
Chloromethane	ND	0.0050	1	08/13/2014 11:07
2-Chlorotoluene	ND	0.0050	1	08/13/2014 11:07
4-Chlorotoluene	ND	0.0050	1	08/13/2014 11:07
Dibromochloromethane	ND	0.0050	1	08/13/2014 11:07
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 11:07
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 11:07
Dibromomethane	ND	0.0050	1	08/13/2014 11:07
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 11:07
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 11:07
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 11:07
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 11:07
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 11:07
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 11:07
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 11:07
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 11:07
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 11:07
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 11:07
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 11:07
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 11:07
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 11:07

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 11:07
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 11:07
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 11:07
Ethylbenzene	ND	0.0050	1	08/13/2014 11:07
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 11:07
Freon 113	ND	0.10	1	08/13/2014 11:07
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 11:07
Hexachloroethane	ND	0.0050	1	08/13/2014 11:07
2-Hexanone	ND	0.0050	1	08/13/2014 11:07
Isopropylbenzene	ND	0.0050	1	08/13/2014 11:07
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 11:07
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 11:07
Methylene chloride	ND	0.0050	1	08/13/2014 11:07
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 11:07
Naphthalene	ND	0.0050	1	08/13/2014 11:07
n-Propyl benzene	ND	0.0050	1	08/13/2014 11:07
Styrene	ND	0.0050	1	08/13/2014 11:07
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 11:07
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 11:07
Tetrachloroethene	ND	0.0050	1	08/13/2014 11:07
Toluene	ND	0.0050	1	08/13/2014 11:07
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 11:07
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 11:07
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 11:07
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 11:07
Trichloroethene	ND	0.0050	1	08/13/2014 11:07
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 11:07
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 11:07
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 11:07
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 11:07
Vinyl Chloride	ND	0.0050	1	08/13/2014 11:07
Xylenes, Total	ND	0.0050	1	08/13/2014 11:07
Surrogates	REC (%)	Limits		
Dibromofluoromethane	94	70-130		08/13/2014 11:07
Toluene-d8	104	70-130		08/13/2014 11:07
4-BFB	104	70-130		08/13/2014 11:07

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC10	93996

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/13/2014 21:49
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 21:49
Benzene	ND	0.0050	1	08/13/2014 21:49
Bromobenzene	ND	0.0050	1	08/13/2014 21:49
Bromochloromethane	ND	0.0050	1	08/13/2014 21:49
Bromodichloromethane	ND	0.0050	1	08/13/2014 21:49
Bromoform	ND	0.0050	1	08/13/2014 21:49
Bromomethane	ND	0.0050	1	08/13/2014 21:49
2-Butanone (MEK)	ND	0.020	1	08/13/2014 21:49
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 21:49
n-Butyl benzene	ND	0.0050	1	08/13/2014 21:49
sec-Butyl benzene	ND	0.0050	1	08/13/2014 21:49
tert-Butyl benzene	ND	0.0050	1	08/13/2014 21:49
Carbon Disulfide	ND	0.0050	1	08/13/2014 21:49
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 21:49
Chlorobenzene	ND	0.0050	1	08/13/2014 21:49
Chloroethane	ND	0.0050	1	08/13/2014 21:49
Chloroform	ND	0.0050	1	08/13/2014 21:49
Chloromethane	ND	0.0050	1	08/13/2014 21:49
2-Chlorotoluene	ND	0.0050	1	08/13/2014 21:49
4-Chlorotoluene	ND	0.0050	1	08/13/2014 21:49
Dibromochloromethane	ND	0.0050	1	08/13/2014 21:49
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 21:49
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 21:49
Dibromomethane	ND	0.0050	1	08/13/2014 21:49
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 21:49
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 21:49
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 21:49
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 21:49
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 21:49
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 21:49
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 21:49
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 21:49
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 21:49
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 21:49
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 21:49
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 21:49
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 21:49

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC10	93996

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 21:49
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 21:49
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 21:49
Ethylbenzene	ND	0.0050	1	08/13/2014 21:49
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 21:49
Freon 113	ND	0.10	1	08/13/2014 21:49
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 21:49
Hexachloroethane	ND	0.0050	1	08/13/2014 21:49
2-Hexanone	ND	0.0050	1	08/13/2014 21:49
Isopropylbenzene	ND	0.0050	1	08/13/2014 21:49
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 21:49
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 21:49
Methylene chloride	ND	0.0050	1	08/13/2014 21:49
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 21:49
Naphthalene	ND	0.0050	1	08/13/2014 21:49
n-Propyl benzene	ND	0.0050	1	08/13/2014 21:49
Styrene	ND	0.0050	1	08/13/2014 21:49
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 21:49
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 21:49
Tetrachloroethene	ND	0.0050	1	08/13/2014 21:49
Toluene	ND	0.0050	1	08/13/2014 21:49
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 21:49
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 21:49
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 21:49
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 21:49
Trichloroethene	ND	0.0050	1	08/13/2014 21:49
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 21:49
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 21:49
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 21:49
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 21:49
Vinyl Chloride	ND	0.0050	1	08/13/2014 21:49
Xylenes, Total	ND	0.0050	1	08/13/2014 21:49
Surrogates	REC (%)	Limits		
Dibromofluoromethane	94	70-130		08/13/2014 21:49
Toluene-d8	103	70-130		08/13/2014 21:49
4-BFB	103	70-130		08/13/2014 21:49

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/13/2014 12:31
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 12:31
Benzene	ND	0.0050	1	08/13/2014 12:31
Bromobenzene	ND	0.0050	1	08/13/2014 12:31
Bromochloromethane	ND	0.0050	1	08/13/2014 12:31
Bromodichloromethane	ND	0.0050	1	08/13/2014 12:31
Bromoform	ND	0.0050	1	08/13/2014 12:31
Bromomethane	ND	0.0050	1	08/13/2014 12:31
2-Butanone (MEK)	ND	0.020	1	08/13/2014 12:31
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 12:31
n-Butyl benzene	ND	0.0050	1	08/13/2014 12:31
sec-Butyl benzene	ND	0.0050	1	08/13/2014 12:31
tert-Butyl benzene	ND	0.0050	1	08/13/2014 12:31
Carbon Disulfide	ND	0.0050	1	08/13/2014 12:31
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 12:31
Chlorobenzene	ND	0.0050	1	08/13/2014 12:31
Chloroethane	ND	0.0050	1	08/13/2014 12:31
Chloroform	ND	0.0050	1	08/13/2014 12:31
Chloromethane	ND	0.0050	1	08/13/2014 12:31
2-Chlorotoluene	ND	0.0050	1	08/13/2014 12:31
4-Chlorotoluene	ND	0.0050	1	08/13/2014 12:31
Dibromochloromethane	ND	0.0050	1	08/13/2014 12:31
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 12:31
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 12:31
Dibromomethane	ND	0.0050	1	08/13/2014 12:31
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 12:31
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 12:31
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 12:31
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 12:31
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 12:31
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 12:31
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 12:31
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 12:31
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 12:31
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 12:31
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 12:31
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 12:31
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 12:31

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 12:31
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 12:31
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 12:31
Ethylbenzene	ND	0.0050	1	08/13/2014 12:31
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 12:31
Freon 113	ND	0.10	1	08/13/2014 12:31
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 12:31
Hexachloroethane	ND	0.0050	1	08/13/2014 12:31
2-Hexanone	ND	0.0050	1	08/13/2014 12:31
Isopropylbenzene	ND	0.0050	1	08/13/2014 12:31
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 12:31
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 12:31
Methylene chloride	ND	0.0050	1	08/13/2014 12:31
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 12:31
Naphthalene	<b>0.060</b>	0.0050	1	08/13/2014 12:31
n-Propyl benzene	ND	0.0050	1	08/13/2014 12:31
Styrene	ND	0.0050	1	08/13/2014 12:31
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 12:31
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 12:31
Tetrachloroethene	ND	0.0050	1	08/13/2014 12:31
Toluene	ND	0.0050	1	08/13/2014 12:31
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 12:31
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 12:31
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 12:31
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 12:31
Trichloroethene	ND	0.0050	1	08/13/2014 12:31
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 12:31
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 12:31
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 12:31
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 12:31
Vinyl Chloride	ND	0.0050	1	08/13/2014 12:31
Xylenes, Total	ND	0.0050	1	08/13/2014 12:31
<b>Surrogates</b>	<b>REC (%)</b>	<b>Limits</b>		
Dibromofluoromethane	98	70-130		08/13/2014 12:31
Toluene-d8	104	70-130		08/13/2014 12:31
4-BFB	101	70-130		08/13/2014 12:31

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/13/2014 13:13
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 13:13
Benzene	ND	0.0050	1	08/13/2014 13:13
Bromobenzene	ND	0.0050	1	08/13/2014 13:13
Bromochloromethane	ND	0.0050	1	08/13/2014 13:13
Bromodichloromethane	ND	0.0050	1	08/13/2014 13:13
Bromoform	ND	0.0050	1	08/13/2014 13:13
Bromomethane	ND	0.0050	1	08/13/2014 13:13
2-Butanone (MEK)	ND	0.020	1	08/13/2014 13:13
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 13:13
n-Butyl benzene	ND	0.0050	1	08/13/2014 13:13
sec-Butyl benzene	ND	0.0050	1	08/13/2014 13:13
tert-Butyl benzene	ND	0.0050	1	08/13/2014 13:13
Carbon Disulfide	ND	0.0050	1	08/13/2014 13:13
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 13:13
Chlorobenzene	ND	0.0050	1	08/13/2014 13:13
Chloroethane	ND	0.0050	1	08/13/2014 13:13
Chloroform	ND	0.0050	1	08/13/2014 13:13
Chloromethane	ND	0.0050	1	08/13/2014 13:13
2-Chlorotoluene	ND	0.0050	1	08/13/2014 13:13
4-Chlorotoluene	ND	0.0050	1	08/13/2014 13:13
Dibromochloromethane	ND	0.0050	1	08/13/2014 13:13
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 13:13
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 13:13
Dibromomethane	ND	0.0050	1	08/13/2014 13:13
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:13
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:13
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:13
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 13:13
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 13:13
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 13:13
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 13:13
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 13:13
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 13:13
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 13:13
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 13:13
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 13:13
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 13:13

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 13:13
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 13:13
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 13:13
Ethylbenzene	ND	0.0050	1	08/13/2014 13:13
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 13:13
Freon 113	ND	0.10	1	08/13/2014 13:13
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 13:13
Hexachloroethane	ND	0.0050	1	08/13/2014 13:13
2-Hexanone	ND	0.0050	1	08/13/2014 13:13
Isopropylbenzene	ND	0.0050	1	08/13/2014 13:13
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 13:13
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 13:13
Methylene chloride	ND	0.0050	1	08/13/2014 13:13
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 13:13
Naphthalene	<b>0.014</b>	0.0050	1	08/13/2014 13:13
n-Propyl benzene	ND	0.0050	1	08/13/2014 13:13
Styrene	ND	0.0050	1	08/13/2014 13:13
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 13:13
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 13:13
Tetrachloroethene	ND	0.0050	1	08/13/2014 13:13
Toluene	ND	0.0050	1	08/13/2014 13:13
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 13:13
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 13:13
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 13:13
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 13:13
Trichloroethene	ND	0.0050	1	08/13/2014 13:13
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 13:13
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 13:13
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 13:13
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 13:13
Vinyl Chloride	ND	0.0050	1	08/13/2014 13:13
Xylenes, Total	ND	0.0050	1	08/13/2014 13:13
<b>Surrogates</b>	<b>REC (%)</b>	<b>Limits</b>		
Dibromofluoromethane	97	70-130		08/13/2014 13:13
Toluene-d8	105	70-130		08/13/2014 13:13
4-BFB	107	70-130		08/13/2014 13:13

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	08/13/2014 13:55
tert-Amyl methyl ether (TAME)	ND	0.0050	1	08/13/2014 13:55
Benzene	ND	0.0050	1	08/13/2014 13:55
Bromobenzene	ND	0.0050	1	08/13/2014 13:55
Bromochloromethane	ND	0.0050	1	08/13/2014 13:55
Bromodichloromethane	ND	0.0050	1	08/13/2014 13:55
Bromoform	ND	0.0050	1	08/13/2014 13:55
Bromomethane	ND	0.0050	1	08/13/2014 13:55
2-Butanone (MEK)	ND	0.020	1	08/13/2014 13:55
t-Butyl alcohol (TBA)	ND	0.050	1	08/13/2014 13:55
n-Butyl benzene	ND	0.0050	1	08/13/2014 13:55
sec-Butyl benzene	ND	0.0050	1	08/13/2014 13:55
tert-Butyl benzene	ND	0.0050	1	08/13/2014 13:55
Carbon Disulfide	ND	0.0050	1	08/13/2014 13:55
Carbon Tetrachloride	ND	0.0050	1	08/13/2014 13:55
Chlorobenzene	ND	0.0050	1	08/13/2014 13:55
Chloroethane	ND	0.0050	1	08/13/2014 13:55
Chloroform	ND	0.0050	1	08/13/2014 13:55
Chloromethane	ND	0.0050	1	08/13/2014 13:55
2-Chlorotoluene	ND	0.0050	1	08/13/2014 13:55
4-Chlorotoluene	ND	0.0050	1	08/13/2014 13:55
Dibromochloromethane	ND	0.0050	1	08/13/2014 13:55
1,2-Dibromo-3-chloropropane	ND	0.0040	1	08/13/2014 13:55
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/13/2014 13:55
Dibromomethane	ND	0.0050	1	08/13/2014 13:55
1,2-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:55
1,3-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:55
1,4-Dichlorobenzene	ND	0.0050	1	08/13/2014 13:55
Dichlorodifluoromethane	ND	0.0050	1	08/13/2014 13:55
1,1-Dichloroethane	ND	0.0050	1	08/13/2014 13:55
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/13/2014 13:55
1,1-Dichloroethene	ND	0.0050	1	08/13/2014 13:55
cis-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 13:55
trans-1,2-Dichloroethene	ND	0.0050	1	08/13/2014 13:55
1,2-Dichloropropane	ND	0.0050	1	08/13/2014 13:55
1,3-Dichloropropane	ND	0.0050	1	08/13/2014 13:55
2,2-Dichloropropane	ND	0.0050	1	08/13/2014 13:55
1,1-Dichloropropene	ND	0.0050	1	08/13/2014 13:55

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC10	93770

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 13:55
trans-1,3-Dichloropropene	ND	0.0050	1	08/13/2014 13:55
Diisopropyl ether (DIPE)	ND	0.0050	1	08/13/2014 13:55
Ethylbenzene	ND	0.0050	1	08/13/2014 13:55
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	08/13/2014 13:55
Freon 113	ND	0.10	1	08/13/2014 13:55
Hexachlorobutadiene	ND	0.0050	1	08/13/2014 13:55
Hexachloroethane	ND	0.0050	1	08/13/2014 13:55
2-Hexanone	ND	0.0050	1	08/13/2014 13:55
Isopropylbenzene	ND	0.0050	1	08/13/2014 13:55
4-Isopropyl toluene	ND	0.0050	1	08/13/2014 13:55
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	08/13/2014 13:55
Methylene chloride	ND	0.0050	1	08/13/2014 13:55
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	08/13/2014 13:55
Naphthalene	ND	0.0050	1	08/13/2014 13:55
n-Propyl benzene	ND	0.0050	1	08/13/2014 13:55
Styrene	ND	0.0050	1	08/13/2014 13:55
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 13:55
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/13/2014 13:55
Tetrachloroethene	ND	0.0050	1	08/13/2014 13:55
Toluene	ND	0.0050	1	08/13/2014 13:55
1,2,3-Trichlorobenzene	ND	0.0050	1	08/13/2014 13:55
1,2,4-Trichlorobenzene	ND	0.0050	1	08/13/2014 13:55
1,1,1-Trichloroethane	ND	0.0050	1	08/13/2014 13:55
1,1,2-Trichloroethane	ND	0.0050	1	08/13/2014 13:55
Trichloroethene	ND	0.0050	1	08/13/2014 13:55
Trichlorofluoromethane	ND	0.0050	1	08/13/2014 13:55
1,2,3-Trichloropropane	ND	0.0050	1	08/13/2014 13:55
1,2,4-Trimethylbenzene	ND	0.0050	1	08/13/2014 13:55
1,3,5-Trimethylbenzene	ND	0.0050	1	08/13/2014 13:55
Vinyl Chloride	ND	0.0050	1	08/13/2014 13:55
Xylenes, Total	ND	0.0050	1	08/13/2014 13:55
<b>Surrogates</b>	<b>REC (%)</b>	<b>Limits</b>		
Dibromofluoromethane	93	70-130		08/13/2014 13:55
Toluene-d8	105	70-130		08/13/2014 13:55
4-BFB	104	70-130		08/13/2014 13:55



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/12/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-GW	1408242-040B	Water	08/06/2014 10:15	GC10	93921

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	08/12/2014 02:59
tert-Amyl methyl ether (TAME)	ND	0.50	1	08/12/2014 02:59
Benzene	ND	0.50	1	08/12/2014 02:59
Bromobenzene	ND	0.50	1	08/12/2014 02:59
Bromochloromethane	ND	0.50	1	08/12/2014 02:59
Bromodichloromethane	ND	0.50	1	08/12/2014 02:59
Bromoform	ND	0.50	1	08/12/2014 02:59
Bromomethane	ND	0.50	1	08/12/2014 02:59
2-Butanone (MEK)	ND	2.0	1	08/12/2014 02:59
t-Butyl alcohol (TBA)	ND	2.0	1	08/12/2014 02:59
n-Butyl benzene	ND	0.50	1	08/12/2014 02:59
sec-Butyl benzene	ND	0.50	1	08/12/2014 02:59
tert-Butyl benzene	ND	0.50	1	08/12/2014 02:59
Carbon Disulfide	ND	0.50	1	08/12/2014 02:59
Carbon Tetrachloride	ND	0.50	1	08/12/2014 02:59
Chlorobenzene	ND	0.50	1	08/12/2014 02:59
Chloroethane	ND	0.50	1	08/12/2014 02:59
Chloroform	ND	0.50	1	08/12/2014 02:59
Chloromethane	ND	0.50	1	08/12/2014 02:59
2-Chlorotoluene	ND	0.50	1	08/12/2014 02:59
4-Chlorotoluene	ND	0.50	1	08/12/2014 02:59
Dibromochloromethane	ND	0.50	1	08/12/2014 02:59
1,2-Dibromo-3-chloropropane	ND	0.20	1	08/12/2014 02:59
1,2-Dibromoethane (EDB)	ND	0.50	1	08/12/2014 02:59
Dibromomethane	ND	0.50	1	08/12/2014 02:59
1,2-Dichlorobenzene	ND	0.50	1	08/12/2014 02:59
1,3-Dichlorobenzene	ND	0.50	1	08/12/2014 02:59
1,4-Dichlorobenzene	ND	0.50	1	08/12/2014 02:59
Dichlorodifluoromethane	ND	0.50	1	08/12/2014 02:59
1,1-Dichloroethane	ND	0.50	1	08/12/2014 02:59
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	08/12/2014 02:59
1,1-Dichloroethene	ND	0.50	1	08/12/2014 02:59
cis-1,2-Dichloroethene	ND	0.50	1	08/12/2014 02:59
trans-1,2-Dichloroethene	ND	0.50	1	08/12/2014 02:59
1,2-Dichloropropane	ND	0.50	1	08/12/2014 02:59
1,3-Dichloropropane	ND	0.50	1	08/12/2014 02:59
2,2-Dichloropropane	ND	0.50	1	08/12/2014 02:59
1,1-Dichloropropene	ND	0.50	1	08/12/2014 02:59

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# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/12/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-GW	1408242-040B	Water	08/06/2014 10:15	GC10	93921

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.50	1	08/12/2014 02:59
trans-1,3-Dichloropropene	ND	0.50	1	08/12/2014 02:59
Diisopropyl ether (DIPE)	ND	0.50	1	08/12/2014 02:59
Ethylbenzene	ND	0.50	1	08/12/2014 02:59
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	08/12/2014 02:59
Freon 113	ND	0.50	1	08/12/2014 02:59
Hexachlorobutadiene	ND	0.50	1	08/12/2014 02:59
Hexachloroethane	ND	0.50	1	08/12/2014 02:59
2-Hexanone	ND	0.50	1	08/12/2014 02:59
Isopropylbenzene	ND	0.50	1	08/12/2014 02:59
4-Isopropyl toluene	ND	0.50	1	08/12/2014 02:59
Methyl-t-butyl ether (MTBE)	ND	0.50	1	08/12/2014 02:59
Methylene chloride	ND	0.50	1	08/12/2014 02:59
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	08/12/2014 02:59
Naphthalene	ND	0.50	1	08/12/2014 02:59
n-Propyl benzene	ND	0.50	1	08/12/2014 02:59
Styrene	ND	0.50	1	08/12/2014 02:59
1,1,1,2-Tetrachloroethane	ND	0.50	1	08/12/2014 02:59
1,1,2,2-Tetrachloroethane	ND	0.50	1	08/12/2014 02:59
Tetrachloroethene	ND	0.50	1	08/12/2014 02:59
Toluene	ND	0.50	1	08/12/2014 02:59
1,2,3-Trichlorobenzene	ND	0.50	1	08/12/2014 02:59
1,2,4-Trichlorobenzene	ND	0.50	1	08/12/2014 02:59
1,1,1-Trichloroethane	ND	0.50	1	08/12/2014 02:59
1,1,2-Trichloroethane	ND	0.50	1	08/12/2014 02:59
Trichloroethene	ND	0.50	1	08/12/2014 02:59
Trichlorofluoromethane	ND	0.50	1	08/12/2014 02:59
1,2,3-Trichloropropane	ND	0.50	1	08/12/2014 02:59
1,2,4-Trimethylbenzene	ND	0.50	1	08/12/2014 02:59
1,3,5-Trimethylbenzene	ND	0.50	1	08/12/2014 02:59
Vinyl Chloride	ND	0.50	1	08/12/2014 02:59
Xylenes, Total	ND	0.50	1	08/12/2014 02:59
Surrogates	REC (%)	Limits		
Dibromofluoromethane	99	70-130		08/12/2014 02:59
Toluene-d8	99	70-130		08/12/2014 02:59
4-BFB	98	70-130		08/12/2014 02:59



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	4.0	2	08/08/2014 20:14
Acenaphthylene	ND	4.0	2	08/08/2014 20:14
Acetochlor	ND	4.0	2	08/08/2014 20:14
Anthracene	ND	4.0	2	08/08/2014 20:14
Benzidine	ND	21	2	08/08/2014 20:14
Benzo (a) anthracene	ND	4.0	2	08/08/2014 20:14
Benzo (b) fluoranthene	ND	4.0	2	08/08/2014 20:14
Benzo (k) fluoranthene	ND	4.0	2	08/08/2014 20:14
Benzo (g,h,i) perylene	ND	4.0	2	08/08/2014 20:14
Benzo (a) pyrene	ND	4.0	2	08/08/2014 20:14
Benzyl Alcohol	ND	21	2	08/08/2014 20:14
1,1-Biphenyl	ND	4.0	2	08/08/2014 20:14
Bis (2-chloroethoxy) Methane	ND	4.0	2	08/08/2014 20:14
Bis (2-chloroethyl) Ether	ND	4.0	2	08/08/2014 20:14
Bis (2-chloroisopropyl) Ether	ND	4.0	2	08/08/2014 20:14
Bis (2-ethylhexyl) Adipate	ND	4.0	2	08/08/2014 20:14
Bis (2-ethylhexyl) Phthalate	ND	4.0	2	08/08/2014 20:14
4-Bromophenyl Phenyl Ether	ND	4.0	2	08/08/2014 20:14
Butylbenzyl Phthalate	ND	4.0	2	08/08/2014 20:14
4-Chloroaniline	ND	4.0	2	08/08/2014 20:14
4-Chloro-3-methylphenol	ND	4.0	2	08/08/2014 20:14
2-Chloronaphthalene	ND	4.0	2	08/08/2014 20:14
2-Chlorophenol	ND	4.0	2	08/08/2014 20:14
4-Chlorophenyl Phenyl Ether	ND	4.0	2	08/08/2014 20:14
Chrysene	ND	4.0	2	08/08/2014 20:14
Dibenzo (a,h) anthracene	ND	4.0	2	08/08/2014 20:14
Dibenzofuran	ND	4.0	2	08/08/2014 20:14
Di-n-butyl Phthalate	ND	4.0	2	08/08/2014 20:14
1,2-Dichlorobenzene	ND	4.0	2	08/08/2014 20:14
1,3-Dichlorobenzene	ND	4.0	2	08/08/2014 20:14
1,4-Dichlorobenzene	ND	4.0	2	08/08/2014 20:14
3,3-Dichlorobenzidine	ND	8.0	2	08/08/2014 20:14
2,4-Dichlorophenol	ND	4.0	2	08/08/2014 20:14
Diethyl Phthalate	ND	4.0	2	08/08/2014 20:14
2,4-Dimethylphenol	ND	4.0	2	08/08/2014 20:14
Dimethyl Phthalate	ND	4.0	2	08/08/2014 20:14
4,6-Dinitro-2-methylphenol	ND	21	2	08/08/2014 20:14
2,4-Dinitrophenol	ND	100	2	08/08/2014 20:14

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrotoluene	ND	4.0	2	08/08/2014 20:14
2,6-Dinitrotoluene	ND	4.0	2	08/08/2014 20:14
Di-n-octyl Phthalate	ND	8.0	2	08/08/2014 20:14
1,2-Diphenylhydrazine	ND	4.0	2	08/08/2014 20:14
Fluoranthene	ND	4.0	2	08/08/2014 20:14
Fluorene	ND	4.0	2	08/08/2014 20:14
Hexachlorobenzene	ND	4.0	2	08/08/2014 20:14
Hexachlorobutadiene	ND	4.0	2	08/08/2014 20:14
Hexachlorocyclopentadiene	ND	21	2	08/08/2014 20:14
Hexachloroethane	ND	4.0	2	08/08/2014 20:14
Indeno (1,2,3-cd) pyrene	ND	4.0	2	08/08/2014 20:14
Isophorone	ND	4.0	2	08/08/2014 20:14
2-Methylnaphthalene	ND	4.0	2	08/08/2014 20:14
2-Methylphenol (o-Cresol)	ND	4.0	2	08/08/2014 20:14
3 &/or 4-Methylphenol (m,p-Cresol)	ND	4.0	2	08/08/2014 20:14
Naphthalene	ND	4.0	2	08/08/2014 20:14
2-Nitroaniline	ND	21	2	08/08/2014 20:14
3-Nitroaniline	ND	21	2	08/08/2014 20:14
4-Nitroaniline	ND	21	2	08/08/2014 20:14
Nitrobenzene	ND	4.0	2	08/08/2014 20:14
2-Nitrophenol	ND	21	2	08/08/2014 20:14
4-Nitrophenol	ND	21	2	08/08/2014 20:14
N-Nitrosodiphenylamine	ND	4.0	2	08/08/2014 20:14
N-Nitrosodi-n-propylamine	ND	4.0	2	08/08/2014 20:14
Pentachlorophenol	ND	21	2	08/08/2014 20:14
Phenanthrene	ND	4.0	2	08/08/2014 20:14
Phenol	ND	4.0	2	08/08/2014 20:14
Pyrene	ND	4.0	2	08/08/2014 20:14
1,2,4-Trichlorobenzene	ND	4.0	2	08/08/2014 20:14
2,4,5-Trichlorophenol	ND	4.0	2	08/08/2014 20:14
2,4,6-Trichlorophenol	ND	4.0	2	08/08/2014 20:14

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: a4	
2-Fluorophenol	107	30-130		08/08/2014 20:14
Phenol-d5	100	30-130		08/08/2014 20:14
Nitrobenzene-d5	99	30-130		08/08/2014 20:14
2-Fluorobiphenyl	93	30-130		08/08/2014 20:14
2,4,6-Tribromophenol	84	16-130		08/08/2014 20:14
4-Terphenyl-d14	103	30-130		08/08/2014 20:14

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	2.0	1	08/08/2014 17:55
Acenaphthylene	ND	2.0	1	08/08/2014 17:55
Acetochlor	ND	2.0	1	08/08/2014 17:55
Anthracene	ND	2.0	1	08/08/2014 17:55
Benzidine	ND	10	1	08/08/2014 17:55
Benzo (a) anthracene	ND	2.0	1	08/08/2014 17:55
Benzo (b) fluoranthene	ND	2.0	1	08/08/2014 17:55
Benzo (k) fluoranthene	ND	2.0	1	08/08/2014 17:55
Benzo (g,h,i) perylene	ND	2.0	1	08/08/2014 17:55
Benzo (a) pyrene	ND	2.0	1	08/08/2014 17:55
Benzyl Alcohol	ND	10	1	08/08/2014 17:55
1,1-Biphenyl	ND	2.0	1	08/08/2014 17:55
Bis (2-chloroethoxy) Methane	ND	2.0	1	08/08/2014 17:55
Bis (2-chloroethyl) Ether	ND	2.0	1	08/08/2014 17:55
Bis (2-chloroisopropyl) Ether	ND	2.0	1	08/08/2014 17:55
Bis (2-ethylhexyl) Adipate	ND	2.0	1	08/08/2014 17:55
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	08/08/2014 17:55
4-Bromophenyl Phenyl Ether	ND	2.0	1	08/08/2014 17:55
Butylbenzyl Phthalate	ND	2.0	1	08/08/2014 17:55
4-Chloroaniline	ND	2.0	1	08/08/2014 17:55
4-Chloro-3-methylphenol	ND	2.0	1	08/08/2014 17:55
2-Chloronaphthalene	ND	2.0	1	08/08/2014 17:55
2-Chlorophenol	ND	2.0	1	08/08/2014 17:55
4-Chlorophenyl Phenyl Ether	ND	2.0	1	08/08/2014 17:55
Chrysene	ND	2.0	1	08/08/2014 17:55
Dibenzo (a,h) anthracene	ND	2.0	1	08/08/2014 17:55
Dibenzofuran	ND	2.0	1	08/08/2014 17:55
Di-n-butyl Phthalate	ND	2.0	1	08/08/2014 17:55
1,2-Dichlorobenzene	ND	2.0	1	08/08/2014 17:55
1,3-Dichlorobenzene	ND	2.0	1	08/08/2014 17:55
1,4-Dichlorobenzene	ND	2.0	1	08/08/2014 17:55
3,3-Dichlorobenzidine	ND	4.0	1	08/08/2014 17:55
2,4-Dichlorophenol	ND	2.0	1	08/08/2014 17:55
Diethyl Phthalate	ND	2.0	1	08/08/2014 17:55
2,4-Dimethylphenol	ND	2.0	1	08/08/2014 17:55
Dimethyl Phthalate	ND	2.0	1	08/08/2014 17:55
4,6-Dinitro-2-methylphenol	ND	10	1	08/08/2014 17:55
2,4-Dinitrophenol	ND	50	1	08/08/2014 17:55

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC21	93771
Analytes	Result	RL	DF	Date Analyzed	
2,4-Dinitrotoluene	ND	2.0	1	08/08/2014 17:55	
2,6-Dinitrotoluene	ND	2.0	1	08/08/2014 17:55	
Di-n-octyl Phthalate	ND	4.0	1	08/08/2014 17:55	
1,2-Diphenylhydrazine	ND	2.0	1	08/08/2014 17:55	
Fluoranthene	ND	2.0	1	08/08/2014 17:55	
Fluorene	ND	2.0	1	08/08/2014 17:55	
Hexachlorobenzene	ND	2.0	1	08/08/2014 17:55	
Hexachlorobutadiene	ND	2.0	1	08/08/2014 17:55	
Hexachlorocyclopentadiene	ND	10	1	08/08/2014 17:55	
Hexachloroethane	ND	2.0	1	08/08/2014 17:55	
Indeno (1,2,3-cd) pyrene	ND	2.0	1	08/08/2014 17:55	
Isophorone	ND	2.0	1	08/08/2014 17:55	
2-Methylnaphthalene	ND	2.0	1	08/08/2014 17:55	
2-Methylphenol (o-Cresol)	ND	2.0	1	08/08/2014 17:55	
3 &/or 4-Methylphenol (m,p-Cresol)	ND	2.0	1	08/08/2014 17:55	
Naphthalene	ND	2.0	1	08/08/2014 17:55	
2-Nitroaniline	ND	10	1	08/08/2014 17:55	
3-Nitroaniline	ND	10	1	08/08/2014 17:55	
4-Nitroaniline	ND	10	1	08/08/2014 17:55	
Nitrobenzene	ND	2.0	1	08/08/2014 17:55	
2-Nitrophenol	ND	10	1	08/08/2014 17:55	
4-Nitrophenol	ND	10	1	08/08/2014 17:55	
N-Nitrosodiphenylamine	ND	2.0	1	08/08/2014 17:55	
N-Nitrosodi-n-propylamine	ND	2.0	1	08/08/2014 17:55	
Pentachlorophenol	ND	10	1	08/08/2014 17:55	
Phenanthrene	ND	2.0	1	08/08/2014 17:55	
Phenol	ND	2.0	1	08/08/2014 17:55	
Pyrene	ND	2.0	1	08/08/2014 17:55	
1,2,4-Trichlorobenzene	ND	2.0	1	08/08/2014 17:55	
2,4,5-Trichlorophenol	ND	2.0	1	08/08/2014 17:55	
2,4,6-Trichlorophenol	ND	2.0	1	08/08/2014 17:55	

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: a4	
2-Fluorophenol	104	30-130		08/08/2014 17:55
Phenol-d5	98	30-130		08/08/2014 17:55
Nitrobenzene-d5	93	30-130		08/08/2014 17:55
2-Fluorobiphenyl	87	30-130		08/08/2014 17:55
2,4,6-Tribromophenol	92	16-130		08/08/2014 17:55
4-Terphenyl-d14	91	30-130		08/08/2014 17:55

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	2.0	1	08/08/2014 18:23
Acenaphthylene	ND	2.0	1	08/08/2014 18:23
Acetochlor	ND	2.0	1	08/08/2014 18:23
Anthracene	ND	2.0	1	08/08/2014 18:23
Benzidine	ND	10	1	08/08/2014 18:23
Benzo (a) anthracene	ND	2.0	1	08/08/2014 18:23
Benzo (b) fluoranthene	ND	2.0	1	08/08/2014 18:23
Benzo (k) fluoranthene	ND	2.0	1	08/08/2014 18:23
Benzo (g,h,i) perylene	ND	2.0	1	08/08/2014 18:23
Benzo (a) pyrene	ND	2.0	1	08/08/2014 18:23
Benzyl Alcohol	ND	10	1	08/08/2014 18:23
1,1-Biphenyl	ND	2.0	1	08/08/2014 18:23
Bis (2-chloroethoxy) Methane	ND	2.0	1	08/08/2014 18:23
Bis (2-chloroethyl) Ether	ND	2.0	1	08/08/2014 18:23
Bis (2-chloroisopropyl) Ether	ND	2.0	1	08/08/2014 18:23
Bis (2-ethylhexyl) Adipate	ND	2.0	1	08/08/2014 18:23
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	08/08/2014 18:23
4-Bromophenyl Phenyl Ether	ND	2.0	1	08/08/2014 18:23
Butylbenzyl Phthalate	ND	2.0	1	08/08/2014 18:23
4-Chloroaniline	ND	2.0	1	08/08/2014 18:23
4-Chloro-3-methylphenol	ND	2.0	1	08/08/2014 18:23
2-Chloronaphthalene	ND	2.0	1	08/08/2014 18:23
2-Chlorophenol	ND	2.0	1	08/08/2014 18:23
4-Chlorophenyl Phenyl Ether	ND	2.0	1	08/08/2014 18:23
Chrysene	ND	2.0	1	08/08/2014 18:23
Dibenzo (a,h) anthracene	ND	2.0	1	08/08/2014 18:23
Dibenzofuran	ND	2.0	1	08/08/2014 18:23
Di-n-butyl Phthalate	ND	2.0	1	08/08/2014 18:23
1,2-Dichlorobenzene	ND	2.0	1	08/08/2014 18:23
1,3-Dichlorobenzene	ND	2.0	1	08/08/2014 18:23
1,4-Dichlorobenzene	ND	2.0	1	08/08/2014 18:23
3,3-Dichlorobenzidine	ND	4.0	1	08/08/2014 18:23
2,4-Dichlorophenol	ND	2.0	1	08/08/2014 18:23
Diethyl Phthalate	ND	2.0	1	08/08/2014 18:23
2,4-Dimethylphenol	ND	2.0	1	08/08/2014 18:23
Dimethyl Phthalate	ND	2.0	1	08/08/2014 18:23
4,6-Dinitro-2-methylphenol	ND	10	1	08/08/2014 18:23
2,4-Dinitrophenol	ND	50	1	08/08/2014 18:23

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC21	93771
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		2.0	1	08/08/2014 18:23
2,6-Dinitrotoluene	ND		2.0	1	08/08/2014 18:23
Di-n-octyl Phthalate	ND		4.0	1	08/08/2014 18:23
1,2-Diphenylhydrazine	ND		2.0	1	08/08/2014 18:23
Fluoranthene	ND		2.0	1	08/08/2014 18:23
Fluorene	ND		2.0	1	08/08/2014 18:23
Hexachlorobenzene	ND		2.0	1	08/08/2014 18:23
Hexachlorobutadiene	ND		2.0	1	08/08/2014 18:23
Hexachlorocyclopentadiene	ND		10	1	08/08/2014 18:23
Hexachloroethane	ND		2.0	1	08/08/2014 18:23
Indeno (1,2,3-cd) pyrene	ND		2.0	1	08/08/2014 18:23
Isophorone	ND		2.0	1	08/08/2014 18:23
2-Methylnaphthalene	ND		2.0	1	08/08/2014 18:23
2-Methylphenol (o-Cresol)	ND		2.0	1	08/08/2014 18:23
3 &/or 4-Methylphenol (m,p-Cresol)	ND		2.0	1	08/08/2014 18:23
Naphthalene	ND		2.0	1	08/08/2014 18:23
2-Nitroaniline	ND		10	1	08/08/2014 18:23
3-Nitroaniline	ND		10	1	08/08/2014 18:23
4-Nitroaniline	ND		10	1	08/08/2014 18:23
Nitrobenzene	ND		2.0	1	08/08/2014 18:23
2-Nitrophenol	ND		10	1	08/08/2014 18:23
4-Nitrophenol	ND		10	1	08/08/2014 18:23
N-Nitrosodiphenylamine	ND		2.0	1	08/08/2014 18:23
N-Nitrosodi-n-propylamine	ND		2.0	1	08/08/2014 18:23
Pentachlorophenol	ND		10	1	08/08/2014 18:23
Phenanthrene	ND		2.0	1	08/08/2014 18:23
Phenol	ND		2.0	1	08/08/2014 18:23
Pyrene	ND		2.0	1	08/08/2014 18:23
1,2,4-Trichlorobenzene	ND		2.0	1	08/08/2014 18:23
2,4,5-Trichlorophenol	ND		2.0	1	08/08/2014 18:23
2,4,6-Trichlorophenol	ND		2.0	1	08/08/2014 18:23

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: a4	
2-Fluorophenol	104	30-130		08/08/2014 18:23
Phenol-d5	100	30-130		08/08/2014 18:23
Nitrobenzene-d5	97	30-130		08/08/2014 18:23
2-Fluorobiphenyl	91	30-130		08/08/2014 18:23
2,4,6-Tribromophenol	89	16-130		08/08/2014 18:23
4-Terphenyl-d14	98	30-130		08/08/2014 18:23

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.25	1	08/08/2014 20:42
Acenaphthylene	ND	0.25	1	08/08/2014 20:42
Acetochlor	ND	0.25	1	08/08/2014 20:42
Anthracene	ND	0.25	1	08/08/2014 20:42
Benzidine	ND	1.3	1	08/08/2014 20:42
Benzo (a) anthracene	ND	0.25	1	08/08/2014 20:42
Benzo (b) fluoranthene	ND	0.25	1	08/08/2014 20:42
Benzo (k) fluoranthene	ND	0.25	1	08/08/2014 20:42
Benzo (g,h,i) perylene	ND	0.25	1	08/08/2014 20:42
Benzo (a) pyrene	ND	0.25	1	08/08/2014 20:42
Benzyl Alcohol	ND	1.3	1	08/08/2014 20:42
1,1-Biphenyl	ND	0.25	1	08/08/2014 20:42
Bis (2-chloroethoxy) Methane	ND	0.25	1	08/08/2014 20:42
Bis (2-chloroethyl) Ether	ND	0.25	1	08/08/2014 20:42
Bis (2-chloroisopropyl) Ether	ND	0.25	1	08/08/2014 20:42
Bis (2-ethylhexyl) Adipate	ND	0.25	1	08/08/2014 20:42
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	08/08/2014 20:42
4-Bromophenyl Phenyl Ether	ND	0.25	1	08/08/2014 20:42
Butylbenzyl Phthalate	ND	0.25	1	08/08/2014 20:42
4-Chloroaniline	ND	0.25	1	08/08/2014 20:42
4-Chloro-3-methylphenol	ND	0.25	1	08/08/2014 20:42
2-Chloronaphthalene	ND	0.25	1	08/08/2014 20:42
2-Chlorophenol	ND	0.25	1	08/08/2014 20:42
4-Chlorophenyl Phenyl Ether	ND	0.25	1	08/08/2014 20:42
Chrysene	ND	0.25	1	08/08/2014 20:42
Dibenzo (a,h) anthracene	ND	0.25	1	08/08/2014 20:42
Dibenzofuran	ND	0.25	1	08/08/2014 20:42
Di-n-butyl Phthalate	ND	0.25	1	08/08/2014 20:42
1,2-Dichlorobenzene	ND	0.25	1	08/08/2014 20:42
1,3-Dichlorobenzene	ND	0.25	1	08/08/2014 20:42
1,4-Dichlorobenzene	ND	0.25	1	08/08/2014 20:42
3,3-Dichlorobenzidine	ND	0.50	1	08/08/2014 20:42
2,4-Dichlorophenol	ND	0.25	1	08/08/2014 20:42
Diethyl Phthalate	ND	0.25	1	08/08/2014 20:42
2,4-Dimethylphenol	ND	0.25	1	08/08/2014 20:42
Dimethyl Phthalate	ND	0.25	1	08/08/2014 20:42
4,6-Dinitro-2-methylphenol	ND	1.3	1	08/08/2014 20:42
2,4-Dinitrophenol	ND	6.3	1	08/08/2014 20:42

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrotoluene	ND	0.25	1	08/08/2014 20:42
2,6-Dinitrotoluene	ND	0.25	1	08/08/2014 20:42
Di-n-octyl Phthalate	ND	0.50	1	08/08/2014 20:42
1,2-Diphenylhydrazine	ND	0.25	1	08/08/2014 20:42
Fluoranthene	ND	0.25	1	08/08/2014 20:42
Fluorene	ND	0.25	1	08/08/2014 20:42
Hexachlorobenzene	ND	0.25	1	08/08/2014 20:42
Hexachlorobutadiene	ND	0.25	1	08/08/2014 20:42
Hexachlorocyclopentadiene	ND	1.3	1	08/08/2014 20:42
Hexachloroethane	ND	0.25	1	08/08/2014 20:42
Indeno (1,2,3-cd) pyrene	ND	0.25	1	08/08/2014 20:42
Isophorone	ND	0.25	1	08/08/2014 20:42
2-Methylnaphthalene	ND	0.25	1	08/08/2014 20:42
2-Methylphenol (o-Cresol)	ND	0.25	1	08/08/2014 20:42
3 &/or 4-Methylphenol (m,p-Cresol)	ND	0.25	1	08/08/2014 20:42
Naphthalene	ND	0.25	1	08/08/2014 20:42
2-Nitroaniline	ND	1.3	1	08/08/2014 20:42
3-Nitroaniline	ND	1.3	1	08/08/2014 20:42
4-Nitroaniline	ND	1.3	1	08/08/2014 20:42
Nitrobenzene	ND	0.25	1	08/08/2014 20:42
2-Nitrophenol	ND	1.3	1	08/08/2014 20:42
4-Nitrophenol	ND	1.3	1	08/08/2014 20:42
N-Nitrosodiphenylamine	ND	0.25	1	08/08/2014 20:42
N-Nitrosodi-n-propylamine	ND	0.25	1	08/08/2014 20:42
Pentachlorophenol	ND	1.3	1	08/08/2014 20:42
Phenanthrene	ND	0.25	1	08/08/2014 20:42
Phenol	ND	0.25	1	08/08/2014 20:42
Pyrene	ND	0.25	1	08/08/2014 20:42
1,2,4-Trichlorobenzene	ND	0.25	1	08/08/2014 20:42
2,4,5-Trichlorophenol	ND	0.25	1	08/08/2014 20:42
2,4,6-Trichlorophenol	ND	0.25	1	08/08/2014 20:42

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
2-Fluorophenol	89		30-130	08/08/2014 20:42
Phenol-d5	84		30-130	08/08/2014 20:42
Nitrobenzene-d5	84		30-130	08/08/2014 20:42
2-Fluorobiphenyl	72		30-130	08/08/2014 20:42
2,4,6-Tribromophenol	80		16-130	08/08/2014 20:42
4-Terphenyl-d14	85		30-130	08/08/2014 20:42

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.25	1	08/08/2014 21:09
Acenaphthylene	ND	0.25	1	08/08/2014 21:09
Acetochlor	ND	0.25	1	08/08/2014 21:09
Anthracene	ND	0.25	1	08/08/2014 21:09
Benzidine	ND	1.3	1	08/08/2014 21:09
Benzo (a) anthracene	ND	0.25	1	08/08/2014 21:09
Benzo (b) fluoranthene	ND	0.25	1	08/08/2014 21:09
Benzo (k) fluoranthene	ND	0.25	1	08/08/2014 21:09
Benzo (g,h,i) perylene	ND	0.25	1	08/08/2014 21:09
Benzo (a) pyrene	ND	0.25	1	08/08/2014 21:09
Benzyl Alcohol	ND	1.3	1	08/08/2014 21:09
1,1-Biphenyl	ND	0.25	1	08/08/2014 21:09
Bis (2-chloroethoxy) Methane	ND	0.25	1	08/08/2014 21:09
Bis (2-chloroethyl) Ether	ND	0.25	1	08/08/2014 21:09
Bis (2-chloroisopropyl) Ether	ND	0.25	1	08/08/2014 21:09
Bis (2-ethylhexyl) Adipate	ND	0.25	1	08/08/2014 21:09
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	08/08/2014 21:09
4-Bromophenyl Phenyl Ether	ND	0.25	1	08/08/2014 21:09
Butylbenzyl Phthalate	ND	0.25	1	08/08/2014 21:09
4-Chloroaniline	ND	0.25	1	08/08/2014 21:09
4-Chloro-3-methylphenol	ND	0.25	1	08/08/2014 21:09
2-Chloronaphthalene	ND	0.25	1	08/08/2014 21:09
2-Chlorophenol	ND	0.25	1	08/08/2014 21:09
4-Chlorophenyl Phenyl Ether	ND	0.25	1	08/08/2014 21:09
Chrysene	ND	0.25	1	08/08/2014 21:09
Dibenzo (a,h) anthracene	ND	0.25	1	08/08/2014 21:09
Dibenzofuran	ND	0.25	1	08/08/2014 21:09
Di-n-butyl Phthalate	ND	0.25	1	08/08/2014 21:09
1,2-Dichlorobenzene	ND	0.25	1	08/08/2014 21:09
1,3-Dichlorobenzene	ND	0.25	1	08/08/2014 21:09
1,4-Dichlorobenzene	ND	0.25	1	08/08/2014 21:09
3,3-Dichlorobenzidine	ND	0.50	1	08/08/2014 21:09
2,4-Dichlorophenol	ND	0.25	1	08/08/2014 21:09
Diethyl Phthalate	ND	0.25	1	08/08/2014 21:09
2,4-Dimethylphenol	ND	0.25	1	08/08/2014 21:09
Dimethyl Phthalate	ND	0.25	1	08/08/2014 21:09
4,6-Dinitro-2-methylphenol	ND	1.3	1	08/08/2014 21:09
2,4-Dinitrophenol	ND	6.3	1	08/08/2014 21:09

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrotoluene	ND	0.25	1	08/08/2014 21:09
2,6-Dinitrotoluene	ND	0.25	1	08/08/2014 21:09
Di-n-octyl Phthalate	ND	0.50	1	08/08/2014 21:09
1,2-Diphenylhydrazine	ND	0.25	1	08/08/2014 21:09
Fluoranthene	ND	0.25	1	08/08/2014 21:09
Fluorene	ND	0.25	1	08/08/2014 21:09
Hexachlorobenzene	ND	0.25	1	08/08/2014 21:09
Hexachlorobutadiene	ND	0.25	1	08/08/2014 21:09
Hexachlorocyclopentadiene	ND	1.3	1	08/08/2014 21:09
Hexachloroethane	ND	0.25	1	08/08/2014 21:09
Indeno (1,2,3-cd) pyrene	ND	0.25	1	08/08/2014 21:09
Isophorone	ND	0.25	1	08/08/2014 21:09
2-Methylnaphthalene	ND	0.25	1	08/08/2014 21:09
2-Methylphenol (o-Cresol)	ND	0.25	1	08/08/2014 21:09
3 &/or 4-Methylphenol (m,p-Cresol)	ND	0.25	1	08/08/2014 21:09
Naphthalene	ND	0.25	1	08/08/2014 21:09
2-Nitroaniline	ND	1.3	1	08/08/2014 21:09
3-Nitroaniline	ND	1.3	1	08/08/2014 21:09
4-Nitroaniline	ND	1.3	1	08/08/2014 21:09
Nitrobenzene	ND	0.25	1	08/08/2014 21:09
2-Nitrophenol	ND	1.3	1	08/08/2014 21:09
4-Nitrophenol	ND	1.3	1	08/08/2014 21:09
N-Nitrosodiphenylamine	ND	0.25	1	08/08/2014 21:09
N-Nitrosodi-n-propylamine	ND	0.25	1	08/08/2014 21:09
Pentachlorophenol	ND	1.3	1	08/08/2014 21:09
Phenanthrene	ND	0.25	1	08/08/2014 21:09
Phenol	ND	0.25	1	08/08/2014 21:09
Pyrene	ND	0.25	1	08/08/2014 21:09
1,2,4-Trichlorobenzene	ND	0.25	1	08/08/2014 21:09
2,4,5-Trichlorophenol	ND	0.25	1	08/08/2014 21:09
2,4,6-Trichlorophenol	ND	0.25	1	08/08/2014 21:09

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
2-Fluorophenol	96		30-130	08/08/2014 21:09
Phenol-d5	91		30-130	08/08/2014 21:09
Nitrobenzene-d5	92		30-130	08/08/2014 21:09
2-Fluorobiphenyl	81		30-130	08/08/2014 21:09
2,4,6-Tribromophenol	81		16-130	08/08/2014 21:09
4-Terphenyl-d14	96		30-130	08/08/2014 21:09

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	2.0	1	08/08/2014 18:51
Acenaphthylene	ND	2.0	1	08/08/2014 18:51
Acetochlor	ND	2.0	1	08/08/2014 18:51
Anthracene	ND	2.0	1	08/08/2014 18:51
Benzidine	ND	10	1	08/08/2014 18:51
Benzo (a) anthracene	ND	2.0	1	08/08/2014 18:51
Benzo (b) fluoranthene	ND	2.0	1	08/08/2014 18:51
Benzo (k) fluoranthene	ND	2.0	1	08/08/2014 18:51
Benzo (g,h,i) perylene	ND	2.0	1	08/08/2014 18:51
Benzo (a) pyrene	ND	2.0	1	08/08/2014 18:51
Benzyl Alcohol	ND	10	1	08/08/2014 18:51
1,1-Biphenyl	ND	2.0	1	08/08/2014 18:51
Bis (2-chloroethoxy) Methane	ND	2.0	1	08/08/2014 18:51
Bis (2-chloroethyl) Ether	ND	2.0	1	08/08/2014 18:51
Bis (2-chloroisopropyl) Ether	ND	2.0	1	08/08/2014 18:51
Bis (2-ethylhexyl) Adipate	ND	2.0	1	08/08/2014 18:51
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	08/08/2014 18:51
4-Bromophenyl Phenyl Ether	ND	2.0	1	08/08/2014 18:51
Butylbenzyl Phthalate	ND	2.0	1	08/08/2014 18:51
4-Chloroaniline	ND	2.0	1	08/08/2014 18:51
4-Chloro-3-methylphenol	ND	2.0	1	08/08/2014 18:51
2-Chloronaphthalene	ND	2.0	1	08/08/2014 18:51
2-Chlorophenol	ND	2.0	1	08/08/2014 18:51
4-Chlorophenyl Phenyl Ether	ND	2.0	1	08/08/2014 18:51
Chrysene	ND	2.0	1	08/08/2014 18:51
Dibenzo (a,h) anthracene	ND	2.0	1	08/08/2014 18:51
Dibenzofuran	ND	2.0	1	08/08/2014 18:51
Di-n-butyl Phthalate	ND	2.0	1	08/08/2014 18:51
1,2-Dichlorobenzene	ND	2.0	1	08/08/2014 18:51
1,3-Dichlorobenzene	ND	2.0	1	08/08/2014 18:51
1,4-Dichlorobenzene	ND	2.0	1	08/08/2014 18:51
3,3-Dichlorobenzidine	ND	4.0	1	08/08/2014 18:51
2,4-Dichlorophenol	ND	2.0	1	08/08/2014 18:51
Diethyl Phthalate	ND	2.0	1	08/08/2014 18:51
2,4-Dimethylphenol	ND	2.0	1	08/08/2014 18:51
Dimethyl Phthalate	ND	2.0	1	08/08/2014 18:51
4,6-Dinitro-2-methylphenol	ND	10	1	08/08/2014 18:51
2,4-Dinitrophenol	ND	50	1	08/08/2014 18:51

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrotoluene	ND	2.0	1	08/08/2014 18:51
2,6-Dinitrotoluene	ND	2.0	1	08/08/2014 18:51
Di-n-octyl Phthalate	ND	4.0	1	08/08/2014 18:51
1,2-Diphenylhydrazine	ND	2.0	1	08/08/2014 18:51
Fluoranthene	ND	2.0	1	08/08/2014 18:51
Fluorene	ND	2.0	1	08/08/2014 18:51
Hexachlorobenzene	ND	2.0	1	08/08/2014 18:51
Hexachlorobutadiene	ND	2.0	1	08/08/2014 18:51
Hexachlorocyclopentadiene	ND	10	1	08/08/2014 18:51
Hexachloroethane	ND	2.0	1	08/08/2014 18:51
Indeno (1,2,3-cd) pyrene	ND	2.0	1	08/08/2014 18:51
Isophorone	ND	2.0	1	08/08/2014 18:51
2-Methylnaphthalene	ND	2.0	1	08/08/2014 18:51
2-Methylphenol (o-Cresol)	ND	2.0	1	08/08/2014 18:51
3 &/or 4-Methylphenol (m,p-Cresol)	ND	2.0	1	08/08/2014 18:51
Naphthalene	ND	2.0	1	08/08/2014 18:51
2-Nitroaniline	ND	10	1	08/08/2014 18:51
3-Nitroaniline	ND	10	1	08/08/2014 18:51
4-Nitroaniline	ND	10	1	08/08/2014 18:51
Nitrobenzene	ND	2.0	1	08/08/2014 18:51
2-Nitrophenol	ND	10	1	08/08/2014 18:51
4-Nitrophenol	ND	10	1	08/08/2014 18:51
N-Nitrosodiphenylamine	ND	2.0	1	08/08/2014 18:51
N-Nitrosodi-n-propylamine	ND	2.0	1	08/08/2014 18:51
Pentachlorophenol	ND	10	1	08/08/2014 18:51
Phenanthrene	ND	2.0	1	08/08/2014 18:51
Phenol	ND	2.0	1	08/08/2014 18:51
Pyrene	ND	2.0	1	08/08/2014 18:51
1,2,4-Trichlorobenzene	ND	2.0	1	08/08/2014 18:51
2,4,5-Trichlorophenol	ND	2.0	1	08/08/2014 18:51
2,4,6-Trichlorophenol	ND	2.0	1	08/08/2014 18:51

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: a4	
2-Fluorophenol	103	30-130		08/08/2014 18:51
Phenol-d5	94	30-130		08/08/2014 18:51
Nitrobenzene-d5	96	30-130		08/08/2014 18:51
2-Fluorobiphenyl	90	30-130		08/08/2014 18:51
2,4,6-Tribromophenol	87	16-130		08/08/2014 18:51
4-Terphenyl-d14	97	30-130		08/08/2014 18:51

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	2.0	1	08/08/2014 19:19
Acenaphthylene	ND	2.0	1	08/08/2014 19:19
Acetochlor	ND	2.0	1	08/08/2014 19:19
Anthracene	ND	2.0	1	08/08/2014 19:19
Benzidine	ND	10	1	08/08/2014 19:19
Benzo (a) anthracene	ND	2.0	1	08/08/2014 19:19
Benzo (b) fluoranthene	ND	2.0	1	08/08/2014 19:19
Benzo (k) fluoranthene	ND	2.0	1	08/08/2014 19:19
Benzo (g,h,i) perylene	ND	2.0	1	08/08/2014 19:19
Benzo (a) pyrene	ND	2.0	1	08/08/2014 19:19
Benzyl Alcohol	ND	10	1	08/08/2014 19:19
1,1-Biphenyl	ND	2.0	1	08/08/2014 19:19
Bis (2-chloroethoxy) Methane	ND	2.0	1	08/08/2014 19:19
Bis (2-chloroethyl) Ether	ND	2.0	1	08/08/2014 19:19
Bis (2-chloroisopropyl) Ether	ND	2.0	1	08/08/2014 19:19
Bis (2-ethylhexyl) Adipate	ND	2.0	1	08/08/2014 19:19
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	08/08/2014 19:19
4-Bromophenyl Phenyl Ether	ND	2.0	1	08/08/2014 19:19
Butylbenzyl Phthalate	ND	2.0	1	08/08/2014 19:19
4-Chloroaniline	ND	2.0	1	08/08/2014 19:19
4-Chloro-3-methylphenol	ND	2.0	1	08/08/2014 19:19
2-Chloronaphthalene	ND	2.0	1	08/08/2014 19:19
2-Chlorophenol	ND	2.0	1	08/08/2014 19:19
4-Chlorophenyl Phenyl Ether	ND	2.0	1	08/08/2014 19:19
Chrysene	ND	2.0	1	08/08/2014 19:19
Dibenzo (a,h) anthracene	ND	2.0	1	08/08/2014 19:19
Dibenzofuran	ND	2.0	1	08/08/2014 19:19
Di-n-butyl Phthalate	ND	2.0	1	08/08/2014 19:19
1,2-Dichlorobenzene	ND	2.0	1	08/08/2014 19:19
1,3-Dichlorobenzene	ND	2.0	1	08/08/2014 19:19
1,4-Dichlorobenzene	ND	2.0	1	08/08/2014 19:19
3,3-Dichlorobenzidine	ND	4.0	1	08/08/2014 19:19
2,4-Dichlorophenol	ND	2.0	1	08/08/2014 19:19
Diethyl Phthalate	ND	2.0	1	08/08/2014 19:19
2,4-Dimethylphenol	ND	2.0	1	08/08/2014 19:19
Dimethyl Phthalate	ND	2.0	1	08/08/2014 19:19
4,6-Dinitro-2-methylphenol	ND	10	1	08/08/2014 19:19
2,4-Dinitrophenol	ND	50	1	08/08/2014 19:19

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrotoluene	ND	2.0	1	08/08/2014 19:19
2,6-Dinitrotoluene	ND	2.0	1	08/08/2014 19:19
Di-n-octyl Phthalate	ND	4.0	1	08/08/2014 19:19
1,2-Diphenylhydrazine	ND	2.0	1	08/08/2014 19:19
Fluoranthene	ND	2.0	1	08/08/2014 19:19
Fluorene	ND	2.0	1	08/08/2014 19:19
Hexachlorobenzene	ND	2.0	1	08/08/2014 19:19
Hexachlorobutadiene	ND	2.0	1	08/08/2014 19:19
Hexachlorocyclopentadiene	ND	10	1	08/08/2014 19:19
Hexachloroethane	ND	2.0	1	08/08/2014 19:19
Indeno (1,2,3-cd) pyrene	ND	2.0	1	08/08/2014 19:19
Isophorone	ND	2.0	1	08/08/2014 19:19
2-Methylnaphthalene	ND	2.0	1	08/08/2014 19:19
2-Methylphenol (o-Cresol)	ND	2.0	1	08/08/2014 19:19
3 &/or 4-Methylphenol (m,p-Cresol)	ND	2.0	1	08/08/2014 19:19
Naphthalene	ND	2.0	1	08/08/2014 19:19
2-Nitroaniline	ND	10	1	08/08/2014 19:19
3-Nitroaniline	ND	10	1	08/08/2014 19:19
4-Nitroaniline	ND	10	1	08/08/2014 19:19
Nitrobenzene	ND	2.0	1	08/08/2014 19:19
2-Nitrophenol	ND	10	1	08/08/2014 19:19
4-Nitrophenol	ND	10	1	08/08/2014 19:19
N-Nitrosodiphenylamine	ND	2.0	1	08/08/2014 19:19
N-Nitrosodi-n-propylamine	ND	2.0	1	08/08/2014 19:19
Pentachlorophenol	ND	10	1	08/08/2014 19:19
Phenanthrene	ND	2.0	1	08/08/2014 19:19
Phenol	ND	2.0	1	08/08/2014 19:19
Pyrene	ND	2.0	1	08/08/2014 19:19
1,2,4-Trichlorobenzene	ND	2.0	1	08/08/2014 19:19
2,4,5-Trichlorophenol	ND	2.0	1	08/08/2014 19:19
2,4,6-Trichlorophenol	ND	2.0	1	08/08/2014 19:19

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: a4	
2-Fluorophenol	107	30-130		08/08/2014 19:19
Phenol-d5	101	30-130		08/08/2014 19:19
Nitrobenzene-d5	97	30-130		08/08/2014 19:19
2-Fluorobiphenyl	94	30-130		08/08/2014 19:19
2,4,6-Tribromophenol	71	16-130		08/08/2014 19:19
4-Terphenyl-d14	100	30-130		08/08/2014 19:19

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	2.0	1	08/08/2014 19:47
Acenaphthylene	ND	2.0	1	08/08/2014 19:47
Acetochlor	ND	2.0	1	08/08/2014 19:47
Anthracene	ND	2.0	1	08/08/2014 19:47
Benzdine	ND	10	1	08/08/2014 19:47
Benzo (a) anthracene	<b>2.2</b>	2.0	1	08/08/2014 19:47
Benzo (b) fluoranthene	ND	2.0	1	08/08/2014 19:47
Benzo (k) fluoranthene	ND	2.0	1	08/08/2014 19:47
Benzo (g,h,i) perylene	ND	2.0	1	08/08/2014 19:47
Benzo (a) pyrene	ND	2.0	1	08/08/2014 19:47
Benzyl Alcohol	ND	10	1	08/08/2014 19:47
1,1-Biphenyl	ND	2.0	1	08/08/2014 19:47
Bis (2-chloroethoxy) Methane	ND	2.0	1	08/08/2014 19:47
Bis (2-chloroethyl) Ether	ND	2.0	1	08/08/2014 19:47
Bis (2-chloroisopropyl) Ether	ND	2.0	1	08/08/2014 19:47
Bis (2-ethylhexyl) Adipate	ND	2.0	1	08/08/2014 19:47
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	08/08/2014 19:47
4-Bromophenyl Phenyl Ether	ND	2.0	1	08/08/2014 19:47
Butylbenzyl Phthalate	ND	2.0	1	08/08/2014 19:47
4-Chloroaniline	ND	2.0	1	08/08/2014 19:47
4-Chloro-3-methylphenol	ND	2.0	1	08/08/2014 19:47
2-Chloronaphthalene	ND	2.0	1	08/08/2014 19:47
2-Chlorophenol	ND	2.0	1	08/08/2014 19:47
4-Chlorophenyl Phenyl Ether	ND	2.0	1	08/08/2014 19:47
Chrysene	ND	2.0	1	08/08/2014 19:47
Dibenzo (a,h) anthracene	ND	2.0	1	08/08/2014 19:47
Dibenzofuran	ND	2.0	1	08/08/2014 19:47
Di-n-butyl Phthalate	ND	2.0	1	08/08/2014 19:47
1,2-Dichlorobenzene	ND	2.0	1	08/08/2014 19:47
1,3-Dichlorobenzene	ND	2.0	1	08/08/2014 19:47
1,4-Dichlorobenzene	ND	2.0	1	08/08/2014 19:47
3,3-Dichlorobenzidine	ND	4.0	1	08/08/2014 19:47
2,4-Dichlorophenol	ND	2.0	1	08/08/2014 19:47
Diethyl Phthalate	ND	2.0	1	08/08/2014 19:47
2,4-Dimethylphenol	ND	2.0	1	08/08/2014 19:47
Dimethyl Phthalate	ND	2.0	1	08/08/2014 19:47
4,6-Dinitro-2-methylphenol	ND	10	1	08/08/2014 19:47
2,4-Dinitrophenol	ND	50	1	08/08/2014 19:47

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrotoluene	ND	2.0	1	08/08/2014 19:47
2,6-Dinitrotoluene	ND	2.0	1	08/08/2014 19:47
Di-n-octyl Phthalate	ND	4.0	1	08/08/2014 19:47
1,2-Diphenylhydrazine	ND	2.0	1	08/08/2014 19:47
Fluoranthene	8.1	2.0	1	08/08/2014 19:47
Fluorene	ND	2.0	1	08/08/2014 19:47
Hexachlorobenzene	ND	2.0	1	08/08/2014 19:47
Hexachlorobutadiene	ND	2.0	1	08/08/2014 19:47
Hexachlorocyclopentadiene	ND	10	1	08/08/2014 19:47
Hexachloroethane	ND	2.0	1	08/08/2014 19:47
Indeno (1,2,3-cd) pyrene	ND	2.0	1	08/08/2014 19:47
Isophorone	ND	2.0	1	08/08/2014 19:47
2-Methylnaphthalene	ND	2.0	1	08/08/2014 19:47
2-Methylphenol (o-Cresol)	ND	2.0	1	08/08/2014 19:47
3 &/or 4-Methylphenol (m,p-Cresol)	ND	2.0	1	08/08/2014 19:47
Naphthalene	ND	2.0	1	08/08/2014 19:47
2-Nitroaniline	ND	10	1	08/08/2014 19:47
3-Nitroaniline	ND	10	1	08/08/2014 19:47
4-Nitroaniline	ND	10	1	08/08/2014 19:47
Nitrobenzene	ND	2.0	1	08/08/2014 19:47
2-Nitrophenol	ND	10	1	08/08/2014 19:47
4-Nitrophenol	ND	10	1	08/08/2014 19:47
N-Nitrosodiphenylamine	ND	2.0	1	08/08/2014 19:47
N-Nitrosodi-n-propylamine	ND	2.0	1	08/08/2014 19:47
Pentachlorophenol	ND	10	1	08/08/2014 19:47
Phenanthrene	2.4	2.0	1	08/08/2014 19:47
Phenol	ND	2.0	1	08/08/2014 19:47
Pyrene	6.7	2.0	1	08/08/2014 19:47
1,2,4-Trichlorobenzene	ND	2.0	1	08/08/2014 19:47
2,4,5-Trichlorophenol	ND	2.0	1	08/08/2014 19:47
2,4,6-Trichlorophenol	ND	2.0	1	08/08/2014 19:47

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# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

## Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
2-Fluorophenol	106		30-130	08/08/2014 19:47
Phenol-d5	98		30-130	08/08/2014 19:47
Nitrobenzene-d5	97		30-130	08/08/2014 19:47
2-Fluorobiphenyl	92		30-130	08/08/2014 19:47
2,4,6-Tribromophenol	96		16-130	08/08/2014 19:47
4-Terphenyl-d14	99		30-130	08/08/2014 19:47

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.25	1	08/08/2014 16:02
Acenaphthylene	ND	0.25	1	08/08/2014 16:02
Acetochlor	ND	0.25	1	08/08/2014 16:02
Anthracene	ND	0.25	1	08/08/2014 16:02
Benzidine	ND	1.3	1	08/08/2014 16:02
Benzo (a) anthracene	ND	0.25	1	08/08/2014 16:02
Benzo (b) fluoranthene	ND	0.25	1	08/08/2014 16:02
Benzo (k) fluoranthene	ND	0.25	1	08/08/2014 16:02
Benzo (g,h,i) perylene	ND	0.25	1	08/08/2014 16:02
Benzo (a) pyrene	ND	0.25	1	08/08/2014 16:02
Benzyl Alcohol	ND	1.3	1	08/08/2014 16:02
1,1-Biphenyl	ND	0.25	1	08/08/2014 16:02
Bis (2-chloroethoxy) Methane	ND	0.25	1	08/08/2014 16:02
Bis (2-chloroethyl) Ether	ND	0.25	1	08/08/2014 16:02
Bis (2-chloroisopropyl) Ether	ND	0.25	1	08/08/2014 16:02
Bis (2-ethylhexyl) Adipate	ND	0.25	1	08/08/2014 16:02
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	08/08/2014 16:02
4-Bromophenyl Phenyl Ether	ND	0.25	1	08/08/2014 16:02
Butylbenzyl Phthalate	ND	0.25	1	08/08/2014 16:02
4-Chloroaniline	ND	0.25	1	08/08/2014 16:02
4-Chloro-3-methylphenol	ND	0.25	1	08/08/2014 16:02
2-Chloronaphthalene	ND	0.25	1	08/08/2014 16:02
2-Chlorophenol	ND	0.25	1	08/08/2014 16:02
4-Chlorophenyl Phenyl Ether	ND	0.25	1	08/08/2014 16:02
Chrysene	ND	0.25	1	08/08/2014 16:02
Dibenzo (a,h) anthracene	ND	0.25	1	08/08/2014 16:02
Dibenzofuran	ND	0.25	1	08/08/2014 16:02
Di-n-butyl Phthalate	ND	0.25	1	08/08/2014 16:02
1,2-Dichlorobenzene	ND	0.25	1	08/08/2014 16:02
1,3-Dichlorobenzene	ND	0.25	1	08/08/2014 16:02
1,4-Dichlorobenzene	ND	0.25	1	08/08/2014 16:02
3,3-Dichlorobenzidine	ND	0.50	1	08/08/2014 16:02
2,4-Dichlorophenol	ND	0.25	1	08/08/2014 16:02
Diethyl Phthalate	ND	0.25	1	08/08/2014 16:02
2,4-Dimethylphenol	ND	0.25	1	08/08/2014 16:02
Dimethyl Phthalate	ND	0.25	1	08/08/2014 16:02
4,6-Dinitro-2-methylphenol	ND	1.3	1	08/08/2014 16:02
2,4-Dinitrophenol	ND	6.3	1	08/08/2014 16:02

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
2,4-Dinitrotoluene	ND	0.25	1	08/08/2014 16:02
2,6-Dinitrotoluene	ND	0.25	1	08/08/2014 16:02
Di-n-octyl Phthalate	ND	0.50	1	08/08/2014 16:02
1,2-Diphenylhydrazine	ND	0.25	1	08/08/2014 16:02
Fluoranthene	ND	0.25	1	08/08/2014 16:02
Fluorene	ND	0.25	1	08/08/2014 16:02
Hexachlorobenzene	ND	0.25	1	08/08/2014 16:02
Hexachlorobutadiene	ND	0.25	1	08/08/2014 16:02
Hexachlorocyclopentadiene	ND	1.3	1	08/08/2014 16:02
Hexachloroethane	ND	0.25	1	08/08/2014 16:02
Indeno (1,2,3-cd) pyrene	ND	0.25	1	08/08/2014 16:02
Isophorone	ND	0.25	1	08/08/2014 16:02
2-Methylnaphthalene	ND	0.25	1	08/08/2014 16:02
2-Methylphenol (o-Cresol)	ND	0.25	1	08/08/2014 16:02
3 &/or 4-Methylphenol (m,p-Cresol)	ND	0.25	1	08/08/2014 16:02
Naphthalene	ND	0.25	1	08/08/2014 16:02
2-Nitroaniline	ND	1.3	1	08/08/2014 16:02
3-Nitroaniline	ND	1.3	1	08/08/2014 16:02
4-Nitroaniline	ND	1.3	1	08/08/2014 16:02
Nitrobenzene	ND	0.25	1	08/08/2014 16:02
2-Nitrophenol	ND	1.3	1	08/08/2014 16:02
4-Nitrophenol	ND	1.3	1	08/08/2014 16:02
N-Nitrosodiphenylamine	ND	0.25	1	08/08/2014 16:02
N-Nitrosodi-n-propylamine	ND	0.25	1	08/08/2014 16:02
Pentachlorophenol	ND	1.3	1	08/08/2014 16:02
Phenanthrene	ND	0.25	1	08/08/2014 16:02
Phenol	ND	0.25	1	08/08/2014 16:02
Pyrene	ND	0.25	1	08/08/2014 16:02
1,2,4-Trichlorobenzene	ND	0.25	1	08/08/2014 16:02
2,4,5-Trichlorophenol	ND	0.25	1	08/08/2014 16:02
2,4,6-Trichlorophenol	ND	0.25	1	08/08/2014 16:02

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
2-Fluorophenol	83		30-130	08/08/2014 16:02
Phenol-d5	77		30-130	08/08/2014 16:02
Nitrobenzene-d5	80		30-130	08/08/2014 16:02
2-Fluorobiphenyl	70		30-130	08/08/2014 16:02
2,4,6-Tribromophenol	79		16-130	08/08/2014 16:02
4-Terphenyl-d14	78		30-130	08/08/2014 16:02



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-GW	1408242-040C	Water/TOTAL	08/06/2014 10:15	ICP-MS2	93732

Analytes	Result	RL	DF	Date Analyzed
Antimony	1.3	0.50	1	08/09/2014 01:01
Arsenic	9.1	0.50	1	08/09/2014 01:01
Barium	340	5.0	1	08/09/2014 01:01
Beryllium	ND	0.50	1	08/09/2014 01:01
Cadmium	ND	0.25	1	08/09/2014 01:01
Chromium	ND	1.0	1	08/09/2014 01:01
Cobalt	6.7	0.50	1	08/09/2014 01:01
Copper	ND	2.0	1	08/09/2014 01:01
Lead	ND	0.50	1	08/09/2014 01:01
Mercury	ND	0.025	1	08/09/2014 01:01
Molybdenum	9.8	0.50	1	08/09/2014 01:01
Nickel	12	0.50	1	08/09/2014 01:01
Selenium	ND	0.50	1	08/09/2014 01:01
Silver	ND	0.19	1	08/09/2014 01:01
Thallium	ND	0.50	1	08/09/2014 01:01
Vanadium	0.73	0.50	1	08/09/2014 01:01
Zinc	58	15	1	08/09/2014 01:01
Surrogates	REC (%)	Limits		
Tb 350.917	101	70-130		08/09/2014 01:01



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-1.5	1408242-001A	Soil/TOTAL	08/06/2014 08:20	ICP-MS2	93752

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.50	0.50	1	08/09/2014 03:05
Arsenic	4.8	0.50	1	08/09/2014 03:05
Barium	180	5.0	1	08/09/2014 03:05
Beryllium	ND	0.50	1	08/09/2014 03:05
Cadmium	ND	0.25	1	08/09/2014 03:05
Chromium	75	0.50	1	08/09/2014 03:05
Cobalt	9.9	0.50	1	08/09/2014 03:05
Copper	18	0.50	1	08/09/2014 03:05
Lead	35	0.50	1	08/09/2014 03:05
Mercury	0.084	0.050	1	08/09/2014 03:05
Molybdenum	ND	0.50	1	08/09/2014 03:05
Nickel	63	0.50	1	08/09/2014 03:05
Selenium	ND	0.50	1	08/09/2014 03:05
Silver	ND	0.50	1	08/09/2014 03:05
Thallium	ND	0.50	1	08/09/2014 03:05
Vanadium	55	0.50	1	08/09/2014 03:05
Zinc	56	5.0	1	08/09/2014 03:05
Surrogates	REC (%)	Limits		
Tb 350.917	100	70-130		08/09/2014 03:05

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil/TOTAL	08/06/2014 09:20	ICP-MS2	93752

Analytes	Result	RL	DF	Date Analyzed
Antimony	2.9	0.50	1	08/09/2014 03:11
Arsenic	6.8	0.50	1	08/09/2014 03:11
Barium	98	5.0	1	08/09/2014 03:11
Beryllium	ND	0.50	1	08/09/2014 03:11
Cadmium	3.9	0.25	1	08/09/2014 03:11
Chromium	88	0.50	1	08/09/2014 03:11
Cobalt	9.0	0.50	1	08/09/2014 03:11
Copper	110	5.0	10	08/12/2014 23:35
Lead	160	5.0	10	08/12/2014 23:35
Mercury	4.0	0.50	10	08/12/2014 23:35
Molybdenum	0.74	0.50	1	08/09/2014 03:11
Nickel	86	0.50	1	08/09/2014 03:11
Selenium	ND	0.50	1	08/09/2014 03:11
Silver	1.4	0.50	1	08/09/2014 03:11
Thallium	ND	0.50	1	08/09/2014 03:11
Vanadium	50	0.50	1	08/09/2014 03:11
Zinc	220	5.0	1	08/09/2014 03:11
Surrogates	REC (%)	Limits		
Tb 350.917	97	70-130		08/09/2014 03:11

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-3.0	1408242-013A	Soil/TOTAL	08/05/2014 11:55	ICP-MS2	93752

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.57	0.50	1	08/09/2014 03:23
Arsenic	5.1	0.50	1	08/09/2014 03:23
Barium	170	5.0	1	08/09/2014 03:23
Beryllium	ND	0.50	1	08/09/2014 03:23
Cadmium	ND	0.25	1	08/09/2014 03:23
Chromium	200	10	20	08/15/2014 02:41
Cobalt	51	0.50	1	08/09/2014 03:23
Copper	33	0.50	1	08/09/2014 03:23
Lead	25	0.50	1	08/09/2014 03:23
Mercury	24	1.0	20	08/15/2014 02:41
Molybdenum	ND	0.50	1	08/09/2014 03:23
Nickel	1400	0.50	1	08/09/2014 03:23
Selenium	ND	0.50	1	08/09/2014 03:23
Silver	ND	0.50	1	08/09/2014 03:23
Thallium	ND	0.50	1	08/09/2014 03:23
Vanadium	42	0.50	1	08/09/2014 03:23
Zinc	190	5.0	1	08/09/2014 03:23
Surrogates	REC (%)	Limits		
Tb 350.917	98	70-130		08/09/2014 03:23

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-3.0	1408242-018A	Soil/TOTAL	08/05/2014 10:50	ICP-MS2	93752

Analytes	Result	RL	DF	Date Analyzed
Antimony	1.5	0.50	1	08/09/2014 03:29
Arsenic	4.8	0.50	1	08/09/2014 03:29
Barium	110	5.0	1	08/09/2014 03:29
Beryllium	ND	0.50	1	08/09/2014 03:29
Cadmium	0.45	0.25	1	08/09/2014 03:29
Chromium	110	5.0	10	08/13/2014 00:06
Cobalt	13	0.50	1	08/09/2014 03:29
Copper	37	0.50	1	08/09/2014 03:29
Lead	87	0.50	1	08/09/2014 03:29
Mercury	0.54	0.050	1	08/09/2014 03:29
Molybdenum	0.62	0.50	1	08/09/2014 03:29
Nickel	150	0.50	1	08/09/2014 03:29
Selenium	ND	0.50	1	08/09/2014 03:29
Silver	ND	0.50	1	08/09/2014 03:29
Thallium	ND	0.50	1	08/09/2014 03:29
Vanadium	54	0.50	1	08/09/2014 03:29
Zinc	110	5.0	1	08/09/2014 03:29
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	98	70-130		08/09/2014 03:29

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil/TOTAL	08/05/2014 14:40	ICP-MS1	93769

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.99	0.50	1	08/12/2014 22:07
Arsenic	5.7	0.50	1	08/12/2014 22:07
Barium	77	5.0	1	08/12/2014 22:07
Beryllium	ND	0.50	1	08/12/2014 22:07
Cadmium	ND	0.25	1	08/12/2014 22:07
Chromium	72	0.50	1	08/12/2014 22:07
Cobalt	9.1	0.50	1	08/12/2014 22:07
Copper	25	0.50	1	08/12/2014 22:07
Lead	72	0.50	1	08/12/2014 22:07
Mercury	0.38	0.050	1	08/12/2014 22:07
Molybdenum	ND	0.50	1	08/12/2014 22:07
Nickel	54	0.50	1	08/12/2014 22:07
Selenium	ND	0.50	1	08/12/2014 22:07
Silver	ND	0.50	1	08/12/2014 22:07
Thallium	ND	0.50	1	08/12/2014 22:07
Vanadium	48	0.50	1	08/12/2014 22:07
Zinc	93	5.0	1	08/12/2014 22:07
Surrogates	REC (%)	Limits		
Tb 350.917	101	70-130		08/12/2014 22:07

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil/TOTAL	08/05/2014 09:00	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Antimony	1.7	0.50	1	08/09/2014 04:18
Arsenic	5.4	0.50	1	08/09/2014 04:18
Barium	75	5.0	1	08/09/2014 04:18
Beryllium	ND	0.50	1	08/09/2014 04:18
Cadmium	0.97	0.25	1	08/09/2014 04:18
Chromium	83	0.50	1	08/09/2014 04:18
Cobalt	9.8	0.50	1	08/09/2014 04:18
Copper	50	0.50	1	08/09/2014 04:18
Lead	88	0.50	1	08/09/2014 04:18
Mercury	0.65	0.050	1	08/09/2014 04:18
Molybdenum	0.56	0.50	1	08/09/2014 04:18
Nickel	74	0.50	1	08/09/2014 04:18
Selenium	ND	0.50	1	08/09/2014 04:18
Silver	ND	0.50	1	08/09/2014 04:18
Thallium	ND	0.50	1	08/09/2014 04:18
Vanadium	59	0.50	1	08/09/2014 04:18
Zinc	110	5.0	1	08/09/2014 04:18
Surrogates	REC (%)	Limits		
Tb 350.917	102	70-130		08/09/2014 04:18

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-3.0	1408242-035A	Soil/TOTAL	08/05/2014 10:00	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Antimony	2.7	0.50	1	08/09/2014 04:24
Arsenic	5.4	0.50	1	08/09/2014 04:24
Barium	110	5.0	1	08/09/2014 04:24
Beryllium	ND	0.50	1	08/09/2014 04:24
Cadmium	0.26	0.25	1	08/09/2014 04:24
Chromium	70	0.50	1	08/09/2014 04:24
Cobalt	9.6	0.50	1	08/09/2014 04:24
Copper	25	0.50	1	08/09/2014 04:24
Lead	490	5.0	10	08/12/2014 00:42
Mercury	0.38	0.050	1	08/09/2014 04:24
Molybdenum	ND	0.50	1	08/09/2014 04:24
Nickel	35	0.50	1	08/09/2014 04:24
Selenium	ND	0.50	1	08/09/2014 04:24
Silver	ND	0.50	1	08/09/2014 04:24
Thallium	ND	0.50	1	08/09/2014 04:24
Vanadium	69	0.50	1	08/09/2014 04:24
Zinc	150	5.0	1	08/09/2014 04:24
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	106	70-130		08/09/2014 04:24

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil/TOTAL	08/05/2014 10:15	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Antimony	ND	0.50	1	08/09/2014 04:37
Arsenic	ND	0.50	1	08/09/2014 04:37
Barium	<b>6.1</b>	5.0	1	08/09/2014 04:37
Beryllium	ND	0.50	1	08/09/2014 04:37
Cadmium	ND	0.25	1	08/09/2014 04:37
Chromium	<b>120</b>	5.0	10	08/12/2014 00:48
Cobalt	<b>82</b>	0.50	1	08/09/2014 04:37
Copper	<b>2.4</b>	0.50	1	08/09/2014 04:37
Lead	<b>2.0</b>	0.50	1	08/09/2014 04:37
Mercury	ND	0.050	1	08/09/2014 04:37
Molybdenum	ND	0.50	1	08/09/2014 04:37
Nickel	<b>1900</b>	50	100	08/12/2014 00:54
Selenium	ND	0.50	1	08/09/2014 04:37
Silver	ND	0.50	1	08/09/2014 04:37
Thallium	ND	0.50	1	08/09/2014 04:37
Vanadium	<b>4.2</b>	0.50	1	08/09/2014 04:37
Zinc	<b>25</b>	5.0	1	08/09/2014 04:37
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	121	70-130		08/09/2014 04:37



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/11/14

**WorkOrder:** 1408242  
**Extraction Method:** SM4500-CN<sup>-</sup> E  
**Analytical Method:** SM4500-CN<sup>-</sup> ABCE  
**Unit:** mg/Kg

## Cyanide, Total

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	SKALAR	93874

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	0.21	0.10	1	08/11/2014 15:16

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	SKALAR	93874

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	ND	0.10	1	08/11/2014 15:20

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	SKALAR	93874

Analytes	Result	RL	DF	Date Analyzed
Total Cyanide	0.24	0.10	1	08/11/2014 15:24



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-1.5	1408242-001A	Soil	08/06/2014 08:20	GC7	93890

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/11/2014 21:58
MTBE	---	0.050	1	08/11/2014 21:58
Benzene	---	0.0050	1	08/11/2014 21:58
Toluene	---	0.0050	1	08/11/2014 21:58
Ethylbenzene	---	0.0050	1	08/11/2014 21:58
Xylenes	---	0.0050	1	08/11/2014 21:58
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	104	70-130		08/11/2014 21:58

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/08/2014 19:44
MTBE	---	0.050	1	08/08/2014 19:44
Benzene	---	0.0050	1	08/08/2014 19:44
Toluene	---	0.0050	1	08/08/2014 19:44
Ethylbenzene	---	0.0050	1	08/08/2014 19:44
Xylenes	---	0.0050	1	08/08/2014 19:44
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	109	70-130		08/08/2014 19:44

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-10	1408242-005A	Soil	08/06/2014 08:40	GC19	93890

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	3.8	1.0	1	08/12/2014 15:10
MTBE	---	0.050	1	08/12/2014 15:10
Benzene	---	0.0050	1	08/12/2014 15:10
Toluene	---	0.0050	1	08/12/2014 15:10
Ethylbenzene	---	0.0050	1	08/12/2014 15:10
Xylenes	---	0.0050	1	08/12/2014 15:10
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: d1	
2-Fluorotoluene	95	70-130		08/12/2014 15:10

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC7	93890

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/11/2014 22:28
MTBE	---	0.050	1	08/11/2014 22:28
Benzene	---	0.0050	1	08/11/2014 22:28
Toluene	---	0.0050	1	08/11/2014 22:28
Ethylbenzene	---	0.0050	1	08/11/2014 22:28
Xylenes	---	0.0050	1	08/11/2014 22:28
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	103	70-130		08/11/2014 22:28

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/08/2014 22:18
MTBE	---	0.050	1	08/08/2014 22:18
Benzene	---	0.0050	1	08/08/2014 22:18
Toluene	---	0.0050	1	08/08/2014 22:18
Ethylbenzene	---	0.0050	1	08/08/2014 22:18
Xylenes	---	0.0050	1	08/08/2014 22:18
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	91	70-130		08/08/2014 22:18

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-1.5	1408242-012A	Soil	08/05/2014 11:50	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/08/2014 22:48
MTBE	---	0.050	1	08/08/2014 22:48
Benzene	---	0.0050	1	08/08/2014 22:48
Toluene	---	0.0050	1	08/08/2014 22:48
Ethylbenzene	---	0.0050	1	08/08/2014 22:48
Xylenes	---	0.0050	1	08/08/2014 22:48
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	99	70-130		08/08/2014 22:48

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-3.0	1408242-013A	Soil	08/05/2014 11:55	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/08/2014 23:49
MTBE	---	0.050	1	08/08/2014 23:49
Benzene	---	0.0050	1	08/08/2014 23:49
Toluene	---	0.0050	1	08/08/2014 23:49
Ethylbenzene	---	0.0050	1	08/08/2014 23:49
Xylenes	---	0.0050	1	08/08/2014 23:49
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	98	70-130		08/08/2014 23:49

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 00:19
MTBE	---	0.050	1	08/09/2014 00:19
Benzene	---	0.0050	1	08/09/2014 00:19
Toluene	---	0.0050	1	08/09/2014 00:19
Ethylbenzene	---	0.0050	1	08/09/2014 00:19
Xylenes	---	0.0050	1	08/09/2014 00:19
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	102	70-130		08/09/2014 00:19

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-1.5	1408242-017A	Soil	08/05/2014 10:45	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 01:50
MTBE	---	0.050	1	08/09/2014 01:50
Benzene	---	0.0050	1	08/09/2014 01:50
Toluene	---	0.0050	1	08/09/2014 01:50
Ethylbenzene	---	0.0050	1	08/09/2014 01:50
Xylenes	---	0.0050	1	08/09/2014 01:50
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	101	70-130		08/09/2014 01:50

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# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

## Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-3.0	1408242-018A	Soil	08/05/2014 10:50	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	4.3	1.0	1	08/11/2014 15:19
MTBE	---	0.050	1	08/11/2014 15:19
Benzene	---	0.0050	1	08/11/2014 15:19
Toluene	---	0.0050	1	08/11/2014 15:19
Ethylbenzene	---	0.0050	1	08/11/2014 15:19
Xylenes	---	0.0050	1	08/11/2014 15:19
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: d1	
2-Fluorotoluene	98	70-130		08/11/2014 15:19

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC7	93890

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/11/2014 22:58
MTBE	---	0.050	1	08/11/2014 22:58
Benzene	---	0.0050	1	08/11/2014 22:58
Toluene	---	0.0050	1	08/11/2014 22:58
Ethylbenzene	---	0.0050	1	08/11/2014 22:58
Xylenes	---	0.0050	1	08/11/2014 22:58
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	104	70-130		08/11/2014 22:58

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-1.5	1408242-022A	Soil	08/05/2014 13:25	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 03:20
MTBE	---	0.050	1	08/09/2014 03:20
Benzene	---	0.0050	1	08/09/2014 03:20
Toluene	---	0.0050	1	08/09/2014 03:20
Ethylbenzene	---	0.0050	1	08/09/2014 03:20
Xylenes	---	0.0050	1	08/09/2014 03:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	98	70-130		08/09/2014 03:20

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-5.0	1408242-024A	Soil	08/05/2014 14:15	GC19	93744

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 03:50
MTBE	---	0.050	1	08/09/2014 03:50
Benzene	---	0.0050	1	08/09/2014 03:50
Toluene	---	0.0050	1	08/09/2014 03:50
Ethylbenzene	---	0.0050	1	08/09/2014 03:50
Xylenes	---	0.0050	1	08/09/2014 03:50
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	101	70-130		08/09/2014 03:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-10	1408242-026A	Soil	08/05/2014 14:35	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/08/2014 12:07
MTBE	---	0.050	1	08/08/2014 12:07
Benzene	---	0.0050	1	08/08/2014 12:07
Toluene	---	0.0050	1	08/08/2014 12:07
Ethylbenzene	---	0.0050	1	08/08/2014 12:07
Xylenes	---	0.0050	1	08/08/2014 12:07
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	96	70-130		08/08/2014 12:07

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 05:20
MTBE	---	0.050	1	08/09/2014 05:20
Benzene	---	0.0050	1	08/09/2014 05:20
Toluene	---	0.0050	1	08/09/2014 05:20
Ethylbenzene	---	0.0050	1	08/09/2014 05:20
Xylenes	---	0.0050	1	08/09/2014 05:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	97	70-130		08/09/2014 05:20

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-3.0	1408242-029A	Soil	08/05/2014 08:45	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 05:50
MTBE	---	0.050	1	08/09/2014 05:50
Benzene	---	0.0050	1	08/09/2014 05:50
Toluene	---	0.0050	1	08/09/2014 05:50
Ethylbenzene	---	0.0050	1	08/09/2014 05:50
Xylenes	---	0.0050	1	08/09/2014 05:50
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	92	70-130		08/09/2014 05:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-5.0	1408242-030A	Soil	08/05/2014 08:50	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 06:20
MTBE	---	0.050	1	08/09/2014 06:20
Benzene	---	0.0050	1	08/09/2014 06:20
Toluene	---	0.0050	1	08/09/2014 06:20
Ethylbenzene	---	0.0050	1	08/09/2014 06:20
Xylenes	---	0.0050	1	08/09/2014 06:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	97	70-130		08/09/2014 06:20

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 06:50
MTBE	---	0.050	1	08/09/2014 06:50
Benzene	---	0.0050	1	08/09/2014 06:50
Toluene	---	0.0050	1	08/09/2014 06:50
Ethylbenzene	---	0.0050	1	08/09/2014 06:50
Xylenes	---	0.0050	1	08/09/2014 06:50
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	97	70-130		08/09/2014 06:50

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/13/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-3.0	1408242-035A	Soil	08/05/2014 10:00	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 07:20
MTBE	---	0.050	1	08/09/2014 07:20
Benzene	---	0.0050	1	08/09/2014 07:20
Toluene	---	0.0050	1	08/09/2014 07:20
Ethylbenzene	---	0.0050	1	08/09/2014 07:20
Xylenes	---	0.0050	1	08/09/2014 07:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	103	70-130		08/09/2014 07:20

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-5.0	1408242-036A	Soil	08/05/2014 10:05	GC7	93966

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/14/2014 13:09
MTBE	---	0.050	1	08/14/2014 13:09
Benzene	---	0.0050	1	08/14/2014 13:09
Toluene	---	0.0050	1	08/14/2014 13:09
Ethylbenzene	---	0.0050	1	08/14/2014 13:09
Xylenes	---	0.0050	1	08/14/2014 13:09
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	116	70-130		08/14/2014 13:09

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC19	93768

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	08/09/2014 08:20
MTBE	---	0.050	1	08/09/2014 08:20
Benzene	---	0.0050	1	08/09/2014 08:20
Toluene	---	0.0050	1	08/09/2014 08:20
Ethylbenzene	---	0.0050	1	08/09/2014 08:20
Xylenes	---	0.0050	1	08/09/2014 08:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	83	70-130		08/09/2014 08:20



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408242  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-GW	1408242-040A	Water	08/06/2014 10:15	GC3	93866

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	08/08/2014 18:55
MTBE	---	5.0	1	08/08/2014 18:55
Benzene	---	0.50	1	08/08/2014 18:55
Toluene	---	0.50	1	08/08/2014 18:55
Ethylbenzene	---	0.50	1	08/08/2014 18:55
Xylenes	---	0.50	1	08/08/2014 18:55
<b>Surrogates</b>	<b>REC (%)</b>	<b>Limits</b>		
aaa-TFT_2	99	70-130		08/08/2014 18:55



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil/TOTAL	08/06/2014 08:25	ICP-MS1	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/12/2014 21:22
Chromium	<b>1300</b>	50	100	08/14/2014 16:07
Lead	<b>0.65</b>	0.50	1	08/12/2014 21:22
Nickel	<b>2600</b>	50	100	08/14/2014 16:07
Zinc	<b>87</b>	5.0	1	08/12/2014 21:22
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	113	70-130		08/12/2014 21:22

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil/TOTAL	08/06/2014 09:35	ICP-MS1	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/12/2014 21:28
Chromium	<b>69</b>	0.50	1	08/12/2014 21:28
Lead	<b>97</b>	5.0	10	08/14/2014 16:20
Nickel	<b>67</b>	0.50	1	08/12/2014 21:28
Zinc	<b>140</b>	5.0	1	08/12/2014 21:28
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	112	70-130		08/12/2014 21:28

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil/TOTAL	08/06/2014 09:55	ICP-MS1	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/12/2014 21:34
Chromium	<b>85</b>	0.50	1	08/12/2014 21:34
Lead	<b>6.3</b>	0.50	1	08/12/2014 21:34
Nickel	<b>56</b>	0.50	1	08/12/2014 21:34
Zinc	<b>60</b>	5.0	1	08/12/2014 21:34
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	103	70-130		08/12/2014 21:34

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-1.5	1408242-012A	Soil/TOTAL	08/05/2014 11:50	ICP-MS2	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/09/2014 03:17
Chromium	<b>62</b>	0.50	1	08/09/2014 03:17
Lead	<b>25</b>	0.50	1	08/09/2014 03:17
Nickel	<b>180</b>	5.0	10	08/20/2014 17:42
Zinc	<b>53</b>	5.0	1	08/09/2014 03:17
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	97	70-130		08/09/2014 03:17

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil/TOTAL	08/05/2014 12:00	ICP-MS1	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/12/2014 21:41
Chromium	<b>49</b>	0.50	1	08/12/2014 21:41
Lead	<b>19</b>	0.50	1	08/12/2014 21:41
Nickel	<b>180</b>	5.0	10	08/14/2014 16:26
Zinc	<b>81</b>	5.0	1	08/12/2014 21:41
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	107	70-130		08/12/2014 21:41

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-1.5	1408242-017A	Soil/TOTAL	08/05/2014 10:45	ICP-MS1	93752

Analytes	Result	RL	DF	Date Analyzed
Cadmium	<b>0.37</b>	0.25	1	08/12/2014 22:01
Chromium	<b>82</b>	0.50	1	08/12/2014 22:01
Lead	<b>120</b>	5.0	10	08/14/2014 16:32
Nickel	<b>110</b>	5.0	10	08/14/2014 16:32
Zinc	<b>130</b>	5.0	1	08/12/2014 22:01
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	99	70-130		08/12/2014 22:01

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil/TOTAL	08/05/2014 11:05	ICP-MS1	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	6.0	0.25	1	08/12/2014 22:13
Chromium	85	0.50	1	08/12/2014 22:13
Lead	180	5.0	10	08/14/2014 16:38
Nickel	110	5.0	10	08/14/2014 16:38
Zinc	270	5.0	1	08/12/2014 22:13
Surrogates	REC (%)	Limits		
Tb 350.917	106	70-130		08/12/2014 22:13

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-5.0	1408242-024A	Soil/TOTAL	08/05/2014 14:15	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/09/2014 03:35
Chromium	51	0.50	1	08/09/2014 03:35
Lead	26	0.50	1	08/09/2014 03:35
Nickel	66	0.50	1	08/09/2014 03:35
Zinc	83	5.0	1	08/09/2014 03:35
Surrogates	REC (%)	Limits		
Tb 350.917	106	70-130		08/09/2014 03:35

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-10	1408242-026A	Soil/TOTAL	08/05/2014 14:35	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/09/2014 03:41
Chromium	78	0.50	1	08/09/2014 03:41
Lead	150	5.0	10	08/12/2014 00:30
Nickel	67	0.50	1	08/09/2014 03:41
Zinc	110	5.0	1	08/09/2014 03:41
Surrogates	REC (%)	Limits		
Tb 350.917	105	70-130		08/09/2014 03:41

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-3.0	1408242-029A	Soil/TOTAL	08/05/2014 08:45	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.28	0.25	1	08/09/2014 04:06
Chromium	97	5.0	10	08/20/2014 17:48
Lead	14	0.50	1	08/09/2014 04:06
Nickel	150	5.0	10	08/20/2014 17:48
Zinc	48	5.0	1	08/09/2014 04:06
Surrogates	REC (%)	Limits		
Tb 350.917	105	70-130		08/09/2014 04:06

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-5.0	1408242-030A	Soil/TOTAL	08/05/2014 08:50	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/09/2014 04:12
Chromium	96	5.0	10	08/12/2014 00:36
Lead	18	0.50	1	08/09/2014 04:12
Nickel	71	0.50	1	08/09/2014 04:12
Zinc	52	5.0	1	08/09/2014 04:12
Surrogates	REC (%)	Limits		
Tb 350.917	103	70-130		08/09/2014 04:12

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-5.0	1408242-036A	Soil/TOTAL	08/05/2014 10:05	ICP-MS2	93769

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	08/09/2014 04:31
Chromium	54	0.50	1	08/09/2014 04:31
Lead	87	0.50	1	08/09/2014 04:31
Nickel	84	0.50	1	08/09/2014 04:31
Zinc	96	5.0	1	08/09/2014 04:31
Surrogates	REC (%)	Limits		
Tb 350.917	106	70-130		08/09/2014 04:31



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/Kg

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-10	1408242-005A	Soil/TOTAL	08/06/2014 08:40	ICP-JY	93772

Analytes	Result	RL	DF	Date Analyzed
Lead	90	5.0	1	08/08/2014 13:52
Surrogates	REC (%)	Limits		
Tb 350.917	102	70-130		08/08/2014 13:52

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-1.5	1408242-022A	Soil/TOTAL	08/05/2014 13:25	ICP-JY	93772

Analytes	Result	RL	DF	Date Analyzed
Lead	63	5.0	1	08/08/2014 14:00
Surrogates	REC (%)	Limits		
Tb 350.917	102	70-130		08/08/2014 14:00



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/14/14

**WorkOrder:** 1408242  
**Extraction Method:** SW9045D  
**Analytical Method:** SW9045D  
**Unit:** ±, pH units @ 25°C

### pH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	WetChem	93997

Analytes	Result	Accuracy	DF	Date Analyzed
pH	8.79	0.1	1	08/14/2014 15:33

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	WetChem	93997

Analytes	Result	Accuracy	DF	Date Analyzed
pH	9.45	0.1	1	08/14/2014 15:39

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	WetChem	93997

Analytes	Result	Accuracy	DF	Date Analyzed
pH	8.02	0.1	1	08/14/2014 15:42



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/12/14

**WorkOrder:** 1408242  
**Extraction Method:** SW9030A/E376.2  
**Analytical Method:** SW9030A/E376.2  
**Unit:** mg/Kg

### Acid Soluble Sulfide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	SPECTROPHOTOMETER	93929

Analytes	Result	RL	DF	Date Analyzed
Sulfide	ND	10	1	08/12/2014 15:00

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	SPECTROPHOTOMETER	93929

Analytes	Result	RL	DF	Date Analyzed
Sulfide	ND	10	1	08/12/2014 14:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	SPECTROPHOTOMETER	93929

Analytes	Result	RL	DF	Date Analyzed
Sulfide	ND	10	1	08/12/2014 14:40



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/11/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-1.5	1408242-001A	Soil	08/06/2014 08:20	GC9b	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	6.6	2.0	2	08/13/2014 18:35
TPH-Motor Oil (C18-C36)	67	10	2	08/13/2014 18:35

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	90	70-130	08/13/2014 18:35

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-3.0	1408242-002A	Soil	08/06/2014 08:25	GC9b	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	12	5.0	5	08/14/2014 22:11
TPH-Motor Oil (C18-C36)	100	25	5	08/14/2014 22:11

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	93	70-130	08/14/2014 22:11

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-10	1408242-005A	Soil	08/06/2014 08:40	GC9b	93882

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	71	5.0	5	08/15/2014 05:17
TPH-Motor Oil (C18-C36)	190	25	5	08/15/2014 05:17

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	89	70-130	08/15/2014 05:17

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil	08/06/2014 09:20	GC11A	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	86	10	10	08/11/2014 21:50
TPH-Motor Oil (C18-C36)	260	50	10	08/11/2014 21:50

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	104	70-130	08/11/2014 21:50

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/11/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil	08/06/2014 09:55	GC6A	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2.5	1.0	1	08/11/2014 20:58
TPH-Motor Oil (C18-C36)	8.9	5.0	1	08/11/2014 20:58

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	86	70-130	08/11/2014 20:58

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-1.5	1408242-012A	Soil	08/05/2014 11:50	GC9b	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	21	5.0	5	08/08/2014 20:13
TPH-Motor Oil (C18-C36)	180	25	5	08/08/2014 20:13

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	103	70-130	08/08/2014 20:13

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-3.0	1408242-013A	Soil	08/05/2014 11:55	GC9a	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	20	5.0	5	08/08/2014 20:13
TPH-Motor Oil (C18-C36)	120	25	5	08/08/2014 20:13

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	106	70-130	08/08/2014 20:13

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-5.0	1408242-014A	Soil	08/05/2014 12:00	GC11A	93721

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	7.2	2.0	2	08/13/2014 22:02
TPH-Motor Oil (C18-C36)	32	10	2	08/13/2014 22:02

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	99	70-130	08/13/2014 22:02

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/11/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-1.5	1408242-017A	Soil	08/05/2014 10:45	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	20	5.0	5	08/10/2014 15:14
TPH-Motor Oil (C18-C36)	110	25	5	08/10/2014 15:14

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	108	70-130	08/10/2014 15:14

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-3.0	1408242-018A	Soil	08/05/2014 10:50	GC9b	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	56	5.0	5	08/10/2014 06:36
TPH-Motor Oil (C18-C36)	220	25	5	08/10/2014 06:36

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	91	70-130	08/10/2014 06:36

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil	08/05/2014 11:05	GC9a	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	55	2.0	2	08/10/2014 11:20
TPH-Motor Oil (C18-C36)	170	10	2	08/10/2014 11:20

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	100	70-130	08/10/2014 11:20

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-1.5	1408242-022A	Soil	08/05/2014 13:25	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	17	10	10	08/10/2014 09:31
TPH-Motor Oil (C18-C36)	200	50	10	08/10/2014 09:31

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	108	70-130	08/10/2014 09:31

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/11/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-5.0	1408242-024A	Soil	08/05/2014 14:15	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	6.1	1.0	1	08/09/2014 08:23
TPH-Motor Oil (C18-C36)	23	5.0	1	08/09/2014 08:23

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	108	70-130	08/09/2014 08:23

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-10	1408242-026A	Soil	08/05/2014 14:35	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	48	10	10	08/10/2014 19:48
TPH-Motor Oil (C18-C36)	210	50	10	08/10/2014 19:48

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	109	70-130	08/10/2014 19:48

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil	08/05/2014 14:40	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	34	5.0	5	08/12/2014 02:24
TPH-Motor Oil (C18-C36)	150	25	5	08/12/2014 02:24

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	109	70-130	08/12/2014 02:24

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-3.0	1408242-029A	Soil	08/05/2014 08:45	GC11B	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	9.2	5.0	5	08/14/2014 15:07
TPH-Motor Oil (C18-C36)	75	25	5	08/14/2014 15:07

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	106	70-130	08/14/2014 15:07

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/11/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>EB-6-5.0</b>	<b>1408242-030A</b>	<b>Soil</b>	<b>08/05/2014 08:50</b>	<b>GC11B</b>	<b>93767</b>

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>17</b>	2.0	2	08/08/2014 23:15
TPH-Motor Oil (C18-C36)	<b>54</b>	10	2	08/08/2014 23:15

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: e7,e2
C9	100	70-130	08/08/2014 23:15

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>EB-6-10</b>	<b>1408242-032A</b>	<b>Soil</b>	<b>08/05/2014 09:00</b>	<b>GC11B</b>	<b>93767</b>

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>120</b>	5.0	5	08/09/2014 12:57
TPH-Motor Oil (C18-C36)	<b>270</b>	25	5	08/09/2014 12:57

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: e7,e2
C9	107	70-130	08/09/2014 12:57

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>EB-7-3.0</b>	<b>1408242-035A</b>	<b>Soil</b>	<b>08/05/2014 10:00</b>	<b>GC9a</b>	<b>93767</b>

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>15</b>	10	10	08/10/2014 07:47
TPH-Motor Oil (C18-C36)	<b>130</b>	50	10	08/10/2014 07:47

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: e7,e2
C9	90	70-130	08/10/2014 07:47

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>EB-7-5.0</b>	<b>1408242-036A</b>	<b>Soil</b>	<b>08/05/2014 10:05</b>	<b>GC11B</b>	<b>93767</b>

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>48</b>	20	20	08/10/2014 04:57
TPH-Motor Oil (C18-C36)	<b>410</b>	100	20	08/10/2014 04:57

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: e7,e2
C9	106	70-130	08/10/2014 04:57

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14-8/11/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil	08/05/2014 10:15	GC6A	93767

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1.9	1.0	1	08/09/2014 18:16
TPH-Motor Oil (C18-C36)	7.1	5.0	1	08/09/2014 18:16

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2
C9	90	70-130	08/09/2014 18:16



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/7/14

**WorkOrder:** 1408242  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-GW	1408242-040A	Water	08/06/2014 10:15	GC11A	93764

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	510	200	2	08/12/2014 01:16
TPH-Motor Oil (C18-C36)	4200	1000	2	08/12/2014 01:16

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: e7,e2
C9	93	70-130	08/12/2014 01:16



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/7/14  
**Instrument:** GC5A  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93753  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-93753  
 1408222-001AMS/MSD

### QC Summary Report for SW8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	0.181	0.050	0.15	-	121	70-130
PCBs, total	ND	-	0.050	-	-	-	-

**Surrogate Recovery**

Decachlorobiphenyl	0.0554	0.0567		0.050	111	113	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aroclor1260	0.168	0.168	0.15	ND	112	112	70-130	0	30

**Surrogate Recovery**

Decachlorobiphenyl	0.0562	0.0558	0.050		112	112	70-130	0	30
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# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/6/14  
**Date Analyzed:** 8/8/14  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93720  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93720  
 1408188-002AMS/MSD

## QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0391	0.0050	0.050	-	78.2	61-115
Benzene	ND	0.0448	0.0050	0.050	-	89.6	75-126
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.206	0.050	0.20	-	103	63-125
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0467	0.0050	0.050	-	93.4	80-118
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0409	0.0040	0.050	-	81.8	74-121
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0515	0.0040	0.050	-	103	68-122
1,1-Dichloroethene	ND	0.0553	0.0050	0.050	-	111	65-138
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/6/14  
**Date Analyzed:** 8/8/14  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93720  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93720  
 1408188-002AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0465	0.0050	0.050	-	93.1	68-117
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0456	0.0050	0.050	-	91.1	67-116
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0413	0.0050	0.050	-	82.6	66-118
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0458	0.0050	0.050	-	91.6	84-129
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0484	0.0050	0.050	-	96.8	82-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.116	0.122		0.12	93	97	80-120
Toluene-d8	0.129	0.124		0.12	103	99	80-120
4-BFB	0.0114	0.0110		0.012	92	88	80-120

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/6/14  
**Date Analyzed:** 8/8/14  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93720  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93720  
 1408188-002AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0320	0.0329	0.050	ND	64.1,F1	65.8,F1	70-130	2.62	30
Benzene	0.0319	0.0334	0.050	ND	63.8,F1	66.8,F1	70-130	4.71	30
t-Butyl alcohol (TBA)	0.144	0.154	0.20	ND	72.2	76.8	70-130	6.30	30
Chlorobenzene	0.0337	0.0344	0.050	ND	67.5,F1	68.9,F1	70-130	2.04	30
1,2-Dibromoethane (EDB)	0.0334	0.0342	0.050	ND	66.9,F1	68.4,F1	70-130	2.31	30
1,2-Dichloroethane (1,2-DCA)	0.0320	0.0331	0.050	ND	63.9,F1	66.2,F1	70-130	3.50	30
1,1-Dichloroethene	0.0345	0.0359	0.050	ND	69,F1	71.9	70-130	4.12	30
Diisopropyl ether (DIPE)	0.0330	0.0342	0.050	ND	66,F1	68.4,F1	70-130	3.61	30
Ethyl tert-butyl ether (ETBE)	0.0327	0.0338	0.050	ND	65.5,F1	67.7,F1	70-130	3.32	30
Methyl-t-butyl ether (MTBE)	0.0323	0.0340	0.050	ND	64.6,F1	67.9,F1	70-130	4.94	30
Toluene	0.0343	0.0351	0.050	ND	68.7,F1	70.2	70-130	2.24	30
Trichloroethene	0.0386	0.0400	0.050	ND	77.2	79.9	70-130	3.44	30
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.115	0.114	0.12		92	91	70-130	0.559	30
Toluene-d8	0.110	0.110	0.12		88	88	70-130	0	30
4-BFB	0.0112	0.0106	0.012		89	84	70-130	5.49	30

(Cont.)



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/8/14 - 8/9/14  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93770  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93770  
 1408242-008AMS/MSD

## QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0397	0.0050	0.050	-	79.4	61-115
Benzene	ND	0.0464	0.0050	0.050	-	92.8	75-126
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.203	0.050	0.20	-	102	63-125
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0480	0.0050	0.050	-	96.1	80-118
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0408	0.0040	0.050	-	81.6	74-121
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0505	0.0040	0.050	-	101	68-122
1,1-Dichloroethene	ND	0.0559	0.0050	0.050	-	112	65-138
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/8/14 - 8/9/14  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93770  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93770  
 1408242-008AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0477	0.0050	0.050	-	95.4	68-117
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0463	0.0050	0.050	-	92.6	67-116
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0418	0.0050	0.050	-	83.7	66-118
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0478	0.0050	0.050	-	95.6	84-129
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0490	0.0050	0.050	-	98	82-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.118	0.119		0.12	94	95	80-120
Toluene-d8	0.127	0.125		0.12	101	100	80-120
4-BFB	0.0111	0.0112		0.012	89	89	80-120

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/8/14 - 8/9/14  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93770  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93770  
 1408242-008AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0345	0.0354	0.050	ND	69.1	70.8	70-130	2.60	30
Benzene	0.0391	0.0407	0.050	ND	78.3	81.3	70-130	3.82	30
t-Butyl alcohol (TBA)	0.173	0.180	0.20	ND	86.4	89.8	70-130	3.86	30
Chlorobenzene	0.0407	0.0429	0.050	ND	81.5	85.7	70-130	5.11	30
1,2-Dibromoethane (EDB)	0.0356	0.0362	0.050	ND	71.1	72.4	70-130	1.69	30
1,2-Dichloroethane (1,2-DCA)	0.0432	0.0443	0.050	ND	86.4	88.7	70-130	2.63	30
1,1-Dichloroethene	0.0474	0.0488	0.050	ND	94.9	97.5	70-130	2.78	30
Diisopropyl ether (DIPE)	0.0416	0.0429	0.050	ND	83.3	85.8	70-130	2.93	30
Ethyl tert-butyl ether (ETBE)	0.0402	0.0409	0.050	ND	80.4	81.9	70-130	1.75	30
Methyl-t-butyl ether (MTBE)	0.0361	0.0368	0.050	ND	72.2	73.7	70-130	2.08	30
Toluene	0.0394	0.0412	0.050	ND	78.7	82.3	70-130	4.48	30
Trichloroethene	0.0399	0.0419	0.050	ND	79.8	83.8	70-130	4.89	30
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.118	0.117	0.12		95	93	70-130	1.42	30
Toluene-d8	0.122	0.123	0.12		98	98	70-130	0	30
4-BFB	0.0113	0.0115	0.012		90	92	70-130	2.17	30

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/13/14  
**Date Analyzed:** 8/13/14  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93996  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93996  
 1408456-016AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0411	0.0050	0.050	-	82.2	61-115
Benzene	ND	0.0466	0.0050	0.050	-	93.1	75-126
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.177	0.050	0.20	-	88.6	63-125
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0472	0.0050	0.050	-	94.5	80-118
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0456	0.0040	0.050	-	91.2	74-121
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0470	0.0040	0.050	-	93.9	68-122
1,1-Dichloroethene	ND	0.0426	0.0050	0.050	-	85.3	65-138
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/13/14  
**Date Analyzed:** 8/13/14  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93996  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93996  
 1408456-016AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0448	0.0050	0.050	-	89.7	68-117
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0437	0.0050	0.050	-	87.4	67-116
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0429	0.0050	0.050	-	85.9	66-118
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0508	0.0050	0.050	-	102	84-129
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0487	0.0050	0.050	-	97.4	82-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.116	0.119		0.12	93	95	80-120
Toluene-d8	0.134	0.133		0.12	107	107	80-120
4-BFB	0.0128	0.0125		0.012	102	100	80-120

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/13/14  
**Date Analyzed:** 8/13/14  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93996  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93996  
 1408456-016AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0385	0.0385	0.050	ND	77.1	76.9	70-130	0.196	30
Benzene	0.0423	0.0427	0.050	ND	84.6	85.4	70-130	0.918	30
t-Butyl alcohol (TBA)	0.159	0.164	0.20	ND	79.7	82	70-130	2.91	30
Chlorobenzene	0.0422	0.0428	0.050	ND	84.3	85.6	70-130	1.47	30
1,2-Dibromoethane (EDB)	0.0424	0.0416	0.050	ND	84.7	83.2	70-130	1.84	30
1,2-Dichloroethane (1,2-DCA)	0.0434	0.0438	0.050	ND	86.8	87.7	70-130	0.964	30
1,1-Dichloroethene	0.0377	0.0381	0.050	ND	75.4	76.2	70-130	0.985	30
Diisopropyl ether (DIPE)	0.0424	0.0422	0.050	ND	84.7	84.4	70-130	0.357	30
Ethyl tert-butyl ether (ETBE)	0.0415	0.0414	0.050	ND	82.9	82.9	70-130	0	30
Methyl-t-butyl ether (MTBE)	0.0404	0.0408	0.050	ND	80.8	81.6	70-130	1.01	30
Toluene	0.0440	0.0444	0.050	ND	88	88.9	70-130	1.04	30
Trichloroethene	0.0440	0.0436	0.050	ND	88.1	87.2	70-130	1.06	30
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.122	0.120	0.12		98	96	70-130	1.58	30
Toluene-d8	0.131	0.130	0.12		105	104	70-130	0.634	30
4-BFB	0.0128	0.0128	0.012		102	103	70-130	0.729	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/12/14  
**Date Analyzed:** 8/11/14  
**Instrument:** GC10  
**Matrix:** Water  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93921  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-93921  
 1408330-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	21.0	0.50	20	-	105	70-130
Benzene	ND	18.5	0.50	20	-	92.7	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	78.7	2.0	80	-	98.4	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	18.9	0.50	20	-	94.5	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	20.6	0.50	20	-	103	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	20.7	0.50	20	-	103	70-130
1,1-Dichloroethene	ND	18.0	0.50	20	-	89.9	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/12/14  
**Date Analyzed:** 8/11/14  
**Instrument:** GC10  
**Matrix:** Water  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93921  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-93921  
 1408330-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	20.2	0.50	20	-	101	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	20.7	0.50	20	-	104	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	19.5	0.50	20	-	97.7	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	20.2	0.50	20	-	101	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	18.8	0.50	20	-	94.1	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	24.2	25.3		25	97	101	70-130
Toluene-d8	24.7	26.4		25	99	106	70-130
4-BFB	2.57	2.69		2.5	103	108	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/12/14  
**Date Analyzed:** 8/11/14  
**Instrument:** GC10  
**Matrix:** Water  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93921  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-93921  
 1408330-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	21.1	22.9	20	ND	105	114	70-130	8.22	20
Benzene	19.0	18.3	20	ND	94.8	91.4	70-130	3.69	20
t-Butyl alcohol (TBA)	77.3	99.7	80	ND	96.6	125	70-130	25.3,F1	20
Chlorobenzene	19.7	18.3	20	ND	98.6	91.4	70-130	7.58	20
1,2-Dibromoethane (EDB)	22.0	21.8	20	ND	110	109	70-130	1.02	20
1,2-Dichloroethane (1,2-DCA)	20.4	21.5	20	ND	102	108	70-130	5.17	20
1,1-Dichloroethene	18.8	17.7	20	ND	93.9	88.6	70-130	5.86	20
Diisopropyl ether (DIPE)	20.4	21.1	20	ND	102	106	70-130	3.21	20
Ethyl tert-butyl ether (ETBE)	21.1	22.6	20	ND	106	113	70-130	6.57	20
Methyl-t-butyl ether (MTBE)	20.2	22.9	20	ND	101	114	70-130	12.7	20
Toluene	20.1	18.8	20	ND	100	93.8	70-130	6.84	20
Trichloroethene	19.4	17.7	20	ND	97.3	88.5	70-130	9.45	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	25.6	26.1	25		103	104	70-130	1.67	20
Toluene-d8	25.2	25.5	25		101	102	70-130	1.14	20
4-BFB	2.37	2.42	2.5		95	97	70-130	1.71	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/7/14 - 8/8/14  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93771  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93771  
 1408231-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.65	0.25	5	-	73	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	4.69	0.25	5	-	93.7	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.56	0.25	5	-	91.1	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.67	0.25	5	-	73.5	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	4.45	0.25	5	-	89	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/7/14 - 8/8/14  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93771  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93771  
 1408231-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	3.58	1.3	5	-	71.6	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	3.67	0.25	5	-	73.4	30-130
Pentachlorophenol	ND	3.35	1.3	5	-	67	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.31	0.25	5	-	86.2	30-130
Pyrene	ND	3.92	0.25	5	-	78.4	30-130
1,2,4-Trichlorobenzene	ND	4.25	0.25	5	-	84.9	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

#### Surrogate Recovery

2-Fluorophenol	4.66	3.62		5	93	72	30-130
Phenol-d5	4.46	3.44		5	89	69	30-130
Nitrobenzene-d5	4.56	3.72		5	91	74	30-130
2-Fluorobiphenyl	3.77	3.13		5	75	63	30-130
2,4,6-Tribromophenol	3.82	3.44		5	76	69	16-130
4-Terphenyl-d14	4.33	3.55		5	87	71	30-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/7/14 - 8/8/14  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93771  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93771  
 1408231-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<10	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<10	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<52	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<10	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<52	NR	NR	-	NR	
Phenol	NR	NR	0	ND<10	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<10	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	

#### Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/8/14 - 8/11/14  
**Instrument:** ICP-MS1, ICP-MS2  
**Matrix:** Water  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93732  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L  
**Sample ID:** MB/LCS-93732  
 1408210-001AMS/MSD

### QC Summary Report for E200.8

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	46.8	0.50	50	-	93.5	85-115
Arsenic	ND	51.7	0.50	50	-	103	85-115
Barium	ND	461	5.0	500	-	92.3	85-115
Beryllium	ND	48.3	0.50	50	-	96.7	85-115
Cadmium	ND	47.3	0.25	50	-	94.7	85-115
Chromium	ND	51.6	0.50	50	-	103	85-115
Cobalt	ND	49.8	0.50	50	-	99.6	85-115
Copper	ND	54.6	2.0	50	-	109	85-115
Lead	ND	48.4	0.50	50	-	96.8	85-115
Mercury	ND	1.27	0.025	1.25	-	101	85-115
Molybdenum	ND	47.0	0.50	50	-	93.9	85-115
Nickel	ND	54.1	0.50	50	-	108	85-115
Selenium	ND	51.2	0.50	50	-	102	85-115
Silver	ND	47.7	0.19	50	-	95.4	85-115
Thallium	ND	45.8	0.50	50	-	91.7	85-115
Vanadium	ND	50.8	0.50	50	-	102	85-115
Zinc	ND	540	15	500	-	108	85-115
<b>Surrogate Recovery</b>							
Tb 350.917	680	688		750	91	92	70-130



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/8/14 - 8/11/14  
**Instrument:** ICP-MS1, ICP-MS2  
**Matrix:** Water  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93732  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L  
**Sample ID:** MB/LCS-93732  
 1408210-001AMS/MSD

### QC Summary Report for E200.8

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	51.4	50.6	50	ND	103	101	70-130	1.71	20
Arsenic	53.4	53.6	50	1.427	104	104	70-130	0	20
Barium	522	512	500	12.90	102	99.8	70-130	1.88	20
Beryllium	47.3	48.0	50	ND	94.7	96.1	70-130	1.45	20
Cadmium	50.1	48.8	50	ND	100	97.6	70-130	2.69	20
Chromium	47.3	48.5	50	ND	94.6	97	70-130	2.49	20
Cobalt	46.6	46.7	50	0.5068	92.2	92.4	70-130	0.214	20
Copper	56.6	56.1	50	5.421	102	101	70-130	0.745	20
Lead	51.6	50.6	50	ND	103	101	70-130	2.00	20
Mercury	1.40	1.38	1.25	ND	112	110	70-130	1.87	20
Molybdenum	57.8	57.8	50	5.749	104	104	70-130	0	20
Nickel	53.8	54.3	50	3.676	100	101	70-130	0.999	20
Selenium	52.4	51.4	50	0.5935	104	102	70-130	1.97	20
Silver	50.2	48.8	50	ND	100	97.5	70-130	2.89	20
Thallium	49.9	49.0	50	ND	99.8	98	70-130	1.90	20
Vanadium	48.7	50.2	50	0.6160	96.2	99.1	70-130	2.95	20
Zinc	543	534	500	42.56	100	98.3	70-130	1.74	20
<b>Surrogate Recovery</b>									
Tb 350.917	744	837	750		99	112	70-130	11.8	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/8/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93752  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93752  
 1408222-001AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	47.2	0.50	50	-	94.3	75-125
Arsenic	ND	55.1	0.50	50	-	110	75-125
Barium	ND	491	5.0	500	-	98.3	75-125
Beryllium	ND	47.1	0.50	50	-	94.2	75-125
Cadmium	ND	50.2	0.25	50	-	100	75-125
Chromium	ND	54.8	0.50	50	-	110	75-125
Cobalt	ND	53.6	0.50	50	-	107	75-125
Copper	ND	57.4	0.50	50	-	115	75-125
Lead	ND	50.7	0.50	50	-	101	75-125
Mercury	ND	1.05	0.050	1.25	-	83.9	75-125
Molybdenum	ND	48.0	0.50	50	-	95.9	75-125
Nickel	ND	58.0	0.50	50	-	116	75-125
Selenium	ND	61.3	0.50	50	-	123	75-125
Silver	ND	41.5	0.50	50	-	83	75-125
Thallium	ND	47.5	0.50	50	-	95	75-125
Vanadium	ND	54.7	0.50	50	-	109	75-125
Zinc	ND	559	5.0	500	-	112	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	567	479		500	113	96	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/8/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93752  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93752  
 1408222-001AMS/MSD

### QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	56.2	53.2	50	ND	112	106	75-125	5.52	20
Arsenic	56.8	54.8	50	1.908	110	106	75-125	3.66	20
Barium	941	860	500	241.7	140,F1	124	75-125	9.01	20
Beryllium	56.9	56.0	50	ND	114	112	75-125	1.43	20
Cadmium	57.5	54.8	50	ND	115	110	75-125	4.81	20
Chromium	63.4	58.6	50	7.832	111	102	75-125	7.79	20
Cobalt	91.3	96.3	50	28.62	125	135,F1	75-125	5.32	20
Copper	83.9	78.1	50	16.52	135,F1	123	75-125	7.16	20
Lead	61.3	59.1	50	3.348	116	112	75-125	3.54	20
Mercury	1.23	1.15	1.25	ND	98.1	91.8	75-125	6.66	20
Molybdenum	56.9	55.0	50	ND	114	110	75-125	3.47	20
Nickel	71.3	67.2	50	7.668	127,F1	119	75-125	6.01	20
Selenium	57.6	55.2	50	ND	115	110	75-125	4.26	20
Silver	46.2	44.3	50	ND	92.4	88.6	75-125	4.24	20
Thallium	55.3	52.6	50	ND	111	105	75-125	5.02	20
Vanadium	NR	NR	50	79.77	NR	NR	75-125	NR	20
Zinc	648	609	500	ND	126,F1	118	75-125	6.24	20
<b>Surrogate Recovery</b>									
Tb 350.917	574	536	500		115	107	70-130	6.77	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/11/14  
**Instrument:** ICP-MS2  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93769  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93769  
 1408242-020AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	48.8	0.50	50	-	97.5	75-125
Arsenic	ND	52.3	0.50	50	-	105	75-125
Barium	ND	494	5.0	500	-	98.8	75-125
Beryllium	ND	51.9	0.50	50	-	104	75-125
Cadmium	ND	50.7	0.25	50	-	101	75-125
Chromium	ND	51.4	0.50	50	-	103	75-125
Cobalt	ND	52.6	0.50	50	-	105	75-125
Copper	ND	53.0	0.50	50	-	106	75-125
Lead	ND	52.0	0.50	50	-	104	75-125
Mercury	ND	1.10	0.050	1.25	-	88.1	75-125
Molybdenum	ND	47.9	0.50	50	-	95.9	75-125
Nickel	ND	52.9	0.50	50	-	106	75-125
Selenium	ND	51.1	0.50	50	-	102	75-125
Silver	ND	41.3	0.50	50	-	82.5	75-125
Thallium	ND	50.9	0.50	50	-	102	75-125
Vanadium	ND	52.3	0.50	50	-	105	75-125
Zinc	ND	525	5.0	500	-	105	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	512	491		500	102	98	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/11/14  
**Instrument:** ICP-MS2  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93769  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93769  
 1408242-020AMS/MSD

### QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	52.4	48.6	50	3.6	97.6	90	75-125	7.53	20
Arsenic	54.3	54.2	50	6.4	95.7	95.6	75-125	0.147	20
Barium	571	559	500	90	96.3	93.9	75-125	2.16	20
Beryllium	52.6	50.4	50	ND	105	101	75-125	4.14	20
Cadmium	52.1	51.8	50	6.035	92.2	91.5	75-125	0.635	20
Chromium	NR	NR	50	85.46	NR	NR	75-125	NR	20
Cobalt	55.6	57.6	50	11	89.8	93.8	75-125	3.55	20
Copper	NR	NR	50	110	NR	NR	75-125	NR	20
Lead	NR	NR	50	179.5	NR	NR	75-125	NR	20
Mercury	NR	NR	1.25	2.2	NR	NR	75-125	NR	20
Molybdenum	50.2	46.8	50	0.69	99.1	92.3	75-125	6.98	20
Nickel	NR	NR	50	111.2	NR	NR	75-125	NR	20
Selenium	50.4	51.4	50	ND	101	103	75-125	2.02	20
Silver	39.8	39.0	50	1.3	77.1	75.4	75-125	2.18	20
Thallium	47.2	46.5	50	ND	94.4	92.9	75-125	1.54	20
Vanadium	NR	NR	50	59	NR	NR	75-125	NR	20
Zinc	684	708	500	269.1	83	87.9	75-125	3.52	20
<b>Surrogate Recovery</b>									
Tb 350.917	469	462	500		94	92	70-130	1.61	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/11/14  
**Date Analyzed:** 8/11/14  
**Instrument:** SKALAR  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93874  
**Extraction Method:** SM4500-CN<sup>-</sup> E  
**Analytical Method:** SM4500-CN<sup>-</sup> ABCE  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93874  
 1408242-002AMS/MSD

### QC Summary Report for SM4500-CN<sup>-</sup> ABCE

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Total Cyanide	ND	0.741	0.10	0.80	-	92.7	85-115

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Cyanide	0.869	0.751	0.80	0.2130	82	67.2,F1	80-120	14.6	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/7/14  
**Instrument:** GC19  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93744  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93744  
 1408214-001AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.543	0.40	0.60	-	90.6	70-130
MTBE	ND	0.0929	0.050	0.10	-	92.9	70-130
Benzene	ND	0.106	0.0050	0.10	-	106	70-130
Toluene	ND	0.106	0.0050	0.10	-	106	70-130
Ethylbenzene	ND	0.104	0.0050	0.10	-	104	70-130
Xylenes	ND	0.326	0.0050	0.30	-	109	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.0993	0.102		0.10	99	102	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.516	0.514	0.60	ND	85.9	85.7	70-130	0.238	20
MTBE	0.0870	0.0870	0.10	ND	87	86.9	70-130	0.0444	20
Benzene	0.0910	0.0961	0.10	ND	91	96.1	70-130	5.53	20
Toluene	0.0930	0.0971	0.10	ND	93	97.1	70-130	4.37	20
Ethylbenzene	0.0934	0.0958	0.10	ND	93.4	95.9	70-130	2.63	20
Xylenes	0.296	0.301	0.30	ND	98.7	100	70-130	1.51	20

**Surrogate Recovery**

2-Fluorotoluene	0.0901	0.0961	0.10		90	96	70-130	6.37	20
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# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/8/14  
**Instrument:** GC19  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93768  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93768  
 1408242-026AMS/MSD

## QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.546	0.40	0.60	-	90.9	70-130
MTBE	ND	0.0912	0.050	0.10	-	91.2	70-130
Benzene	ND	0.104	0.0050	0.10	-	104	70-130
Toluene	ND	0.105	0.0050	0.10	-	105	70-130
Ethylbenzene	ND	0.104	0.0050	0.10	-	104	70-130
Xylenes	ND	0.330	0.0050	0.30	-	110	70-130

### Surrogate Recovery

2-Fluorotoluene	0.106	0.103		0.10	106	103	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.506	0.519	0.60	ND	84.3	86.6	70-130	2.63	20
MTBE	0.0893	0.0876	0.10	ND	89.3	87.6	70-130	1.95	20
Benzene	0.0926	0.0929	0.10	ND	92.6	92.9	70-130	0.398	20
Toluene	0.0938	0.0952	0.10	ND	93.8	95.2	70-130	1.57	20
Ethylbenzene	0.0939	0.0937	0.10	ND	93.9	93.7	70-130	0.163	20
Xylenes	0.295	0.294	0.30	ND	98.4	97.9	70-130	0.470	20

### Surrogate Recovery

2-Fluorotoluene	0.0918	0.0927	0.10		92	93	70-130	1.01	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/11/14  
**Date Analyzed:** 8/12/14  
**Instrument:** GC19  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93890  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93890  
 1408315-075AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.567	0.40	0.60	-	94.5	70-130
MTBE	ND	0.0868	0.050	0.10	-	86.8	70-130
Benzene	ND	0.103	0.0050	0.10	-	103	70-130
Toluene	ND	0.104	0.0050	0.10	-	104	70-130
Ethylbenzene	ND	0.102	0.0050	0.10	-	102	70-130
Xylenes	ND	0.323	0.0050	0.30	-	108	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.104	0.103		0.10	105	103	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.502	0.523	0.60	ND	83.7	87.1	70-130	3.96	20
MTBE	0.0767	0.0823	0.10	ND	76.7	82.3	70-130	7.01	20
Benzene	0.0940	0.0954	0.10	ND	94	95.4	70-130	1.49	20
Toluene	0.0956	0.0967	0.10	ND	95.6	96.7	70-130	1.12	20
Ethylbenzene	0.0951	0.0960	0.10	ND	95.1	96.1	70-130	0.985	20
Xylenes	0.302	0.306	0.30	ND	101	102	70-130	1.59	20

**Surrogate Recovery**

2-Fluorotoluene	0.0950	0.0955	0.10		95	96	70-130	0.487	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/13/14  
**Date Analyzed:** 8/13/14 - 8/14/14  
**Instrument:** GC19  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93966  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93966  
 1408389-002AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.563	0.40	0.60	-	93.8	70-130
MTBE	ND	0.0882	0.050	0.10	-	88.2	70-130
Benzene	ND	0.108	0.0050	0.10	-	108	70-130
Toluene	ND	0.107	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.105	0.0050	0.10	-	105	70-130
Xylenes	ND	0.329	0.0050	0.30	-	110	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.104	0.106		0.10	104	106	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.488	0.516	0.60	ND	81.3	86.1	70-130	5.76	20
MTBE	0.0839	0.0838	0.10	ND	83.9	83.8	70-130	0.0871	20
Benzene	0.0966	0.0985	0.10	ND	96.7	98.5	70-130	1.87	20
Toluene	0.0968	0.0995	0.10	ND	96.8	99.5	70-130	2.77	20
Ethylbenzene	0.0957	0.0988	0.10	ND	95.7	98.8	70-130	3.20	20
Xylenes	0.300	0.310	0.30	ND	100	103	70-130	3.26	20

**Surrogate Recovery**

2-Fluorotoluene	0.0957	0.0985	0.10		96	98	70-130	2.85	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/11/14  
**Date Analyzed:** 8/8/14  
**Instrument:** GC3  
**Matrix:** Water  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93866  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L  
**Sample ID:** MB/LCS-93866  
 1408257-001EMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	62.2	40	60	-	104	70-130
MTBE	ND	11.2	5.0	10	-	111	70-130
Benzene	ND	9.99	0.50	10	-	99.9	70-130
Toluene	ND	10.1	0.50	10	-	101	70-130
Ethylbenzene	ND	10.3	0.50	10	-	103	70-130
Xylenes	ND	31.2	0.50	30	-	104	70-130

**Surrogate Recovery**

aaa-TFT_2	9.52	9.36		10	95	94	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	61.4	62.9	60	ND	102	105	70-130	2.38	20
MTBE	10.9	10.9	10	ND	109	109	70-130	0	20
Benzene	9.74	9.91	10	ND	97.4	99.1	70-130	1.67	20
Toluene	9.89	9.94	10	ND	98.9	99.3	70-130	0.432	20
Ethylbenzene	9.88	10.0	10	ND	98.8	100	70-130	1.44	20
Xylenes	30.1	30.5	30	ND	100	102	70-130	1.28	20

**Surrogate Recovery**

aaa-TFT_2	9.38	9.34	10		94	93	70-130	0.392	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/8/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93772  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93772  
 1408242-005AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	51.2	5.0	50	-	102	75-125

**Surrogate Recovery**

Tb 350.917	576	522		500	115	104	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	132	135	50	90.25	84.5	89.7	75-125	1.94	25

**Surrogate Recovery**

Tb 350.917	509	531	500		102	106	70-130	4.28	20
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# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/13/14 - 8/14/14  
**Date Analyzed:** 8/13/14 - 8/14/14  
**Instrument:** WetChem  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93997  
**Extraction Method:** SW9045D  
**Analytical Method:** SW9045D  
**Test Method:** SW9045D (pH)

## QC Summary Report for pH

Lab ID	Analyte	Reporting Units	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1408242-002A	pH	±, pH units @ 25°C	8.79	1	8.80	1	0.01	0.1



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/12/14  
**Date Analyzed:** 8/12/14  
**Instrument:** SPECTROPHOTOMETER  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93929  
**Extraction Method:** SW9030A/E376.2  
**Analytical Method:** SW9030A/E376.2  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93929  
 1408242-002AMS/MSD

### QC Summary Report for SW9030A/E376.2

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Sulfide	ND	50.4	10	50	-	101	80-120

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Sulfide	ND	ND	50	ND	87.2	87.3	75-125	0.0737	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/6/14  
**Date Analyzed:** 8/7/14  
**Instrument:** GC6B  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93721  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93721  
 1408188-012AMS/MSD

### QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	48.0	1.0	40	-	120	70-130

**Surrogate Recovery**

C9	29.9	29.4		25	120	117	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	57.5	70.7	40	26.03	78.6,F1	112,F1	70-130	20.6	30

**Surrogate Recovery**

C9	25.3	24.9	25		101	100	70-130	1.60	30
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/9/14  
**Instrument:** GC6B  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93767  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93767  
 1408242-017AMS/MSD

### QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	47.9	1.0	40	-	120	70-130

**Surrogate Recovery**

C9	29.0	29.2		25	116	117	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	NR	NR	0	20	NR	NR	-	NR	

**Surrogate Recovery**

C9	NR	NR	0		NR	NR	-	NR	
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/11/14  
**Date Analyzed:** 8/12/14  
**Instrument:** GC6A  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93882  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-93882  
 1408316-002AMS/MSD

### QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.5	1.0	40	-	104	70-130
<b>Surrogate Recovery</b>							
C9	24.7	20.0		25	99	80	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	NR	NR	0	12	NR	NR	-	NR	
<b>Surrogate Recovery</b>									
C9	NR	NR	0		NR	NR	-	NR	



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/7/14  
**Date Analyzed:** 8/8/14 - 8/9/14  
**Instrument:** GC6B, GC9a  
**Matrix:** Water  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 93764  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-93764

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### QC Summary Report for SW8015B

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1240	50	1000	-	125	70-130
<b>Surrogate Recovery</b>							
C9	621	764		625	99	122	70-130

---

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408242 ClientCode: TWRWF

WaterTrax  WriteOn  EDF  Excel  EQulS  Email  HardCopy  ThirdParty  J-flag

**Report to:** Peter Cusack Accounts Payable  
 Treadwell & Rollo Treadwell & Rollo  
 555 Montgomery St., Suite 1300 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111 San Francisco, CA 94111  
 (415) 955-5200 FAX: (415) 955-9041  
 Email: pcusack@langan.com  
 cc/3rd Party: PO: ProjectNo: #731626702; India Basin  
**Requested TAT:** 5 days

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)																		
					1	2	3	4	5	6	7	8	9	10	11	12							
1408242-001	EB-1-1.5	Soil	8/6/2014 8:20	<input type="checkbox"/>								A											
1408242-002	EB-1-3.0	Soil	8/6/2014 8:25	<input type="checkbox"/>	A		A						A										
1408242-005	EB-1-10	Soil	8/6/2014 8:40	<input type="checkbox"/>																			
1408242-006	EB-2-1.5	Soil	8/6/2014 9:20	<input type="checkbox"/>	A		A						A										A
1408242-008	EB-2-5.0	Soil	8/6/2014 9:35	<input type="checkbox"/>			A																
1408242-011	EB-2-15	Soil	8/6/2014 9:55	<input type="checkbox"/>			A																
1408242-012	EB-3-1.5	Soil	8/5/2014 11:50	<input type="checkbox"/>																			
1408242-013	EB-3-3.0	Soil	8/5/2014 11:55	<input type="checkbox"/>																			
1408242-014	EB-3-5.0	Soil	8/5/2014 12:00	<input type="checkbox"/>									A										
1408242-017	EB-4-1.5	Soil	8/5/2014 10:45	<input type="checkbox"/>																			
1408242-018	EB-4-3.0	Soil	8/5/2014 10:50	<input type="checkbox"/>																			
1408242-020	EB-4-7.5	Soil	8/5/2014 11:05	<input type="checkbox"/>	A		A																
1408242-022	EB-5-1.5	Soil	8/5/2014 13:25	<input type="checkbox"/>																			
1408242-024	EB-5-5.0	Soil	8/5/2014 14:15	<input type="checkbox"/>																			
1408242-026	EB-5-10	Soil	8/5/2014 14:35	<input type="checkbox"/>																			
1408242-027	EB-5-15	Soil	8/5/2014 14:40	<input type="checkbox"/>	A		A						A										

**Test Legend:**

1	8082A_PCB_S	2	8260B_S	3	8260B_W	4	8270D_S	5	ASBESTOS_E600PLM_S
6	CAM17(T)MS_W	7	CAM17MS_S	8	CN_TOTAL_S	9	G-MBTEX_S	10	G-MBTEX_W
11	LUFTMS_S	12	PB_S						

The following SampleIDs: 001A, 002A, 005A, 006A, 011A, 012A, 013A, 014A, 017A, 018A, 020A, 022A, 024A, 026A, 027A, 029A, 030A, 032A, 035A, 036A, 038A, 040A contain testgroup.

**Comments:** SEND HARD COPY

**Prepared by:** Jena Alfaro

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408242 ClientCode: TWRF

WaterTrax  WriteOn  EDF  Excel  Email  HardCopy  ThirdParty  J-flag  
 EQulS  EQulS

**Report to:** Peter Cusack Accounts Payable  
 Treadwell & Rollo Treadwell & Rollo  
 555 Montgomery St., Suite 1300 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111 San Francisco, CA 94111  
 (415) 955-5200 FAX: (415) 955-9041  
 Email: pcusack@langan.com  
 cc/3rd Party: PO: ProjectNo: #731626702; India Basin  
**Requested TAT:** 5 days

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)																			
					13	14	15	16	17	18	19	20	21	22	23	24								
1408242-001	EB-1-1.5	Soil	8/6/2014 8:20	<input type="checkbox"/>																				
1408242-002	EB-1-3.0	Soil	8/6/2014 8:25	<input type="checkbox"/>	A																			
1408242-005	EB-1-10	Soil	8/6/2014 8:40	<input type="checkbox"/>																				
1408242-006	EB-2-1.5	Soil	8/6/2014 9:20	<input type="checkbox"/>																				
1408242-008	EB-2-5.0	Soil	8/6/2014 9:35	<input type="checkbox"/>																				
1408242-011	EB-2-15	Soil	8/6/2014 9:55	<input type="checkbox"/>																				
1408242-012	EB-3-1.5	Soil	8/5/2014 11:50	<input type="checkbox"/>																				
1408242-013	EB-3-3.0	Soil	8/5/2014 11:55	<input type="checkbox"/>																				
1408242-014	EB-3-5.0	Soil	8/5/2014 12:00	<input type="checkbox"/>	A																			
1408242-017	EB-4-1.5	Soil	8/5/2014 10:45	<input type="checkbox"/>																				
1408242-018	EB-4-3.0	Soil	8/5/2014 10:50	<input type="checkbox"/>																				
1408242-020	EB-4-7.5	Soil	8/5/2014 11:05	<input type="checkbox"/>																				
1408242-022	EB-5-1.5	Soil	8/5/2014 13:25	<input type="checkbox"/>																				
1408242-024	EB-5-5.0	Soil	8/5/2014 14:15	<input type="checkbox"/>																				
1408242-026	EB-5-10	Soil	8/5/2014 14:35	<input type="checkbox"/>																				
1408242-027	EB-5-15	Soil	8/5/2014 14:40	<input type="checkbox"/>																				

**Test Legend:**

13	PH_S		15	16	17
18		SULFIDE_S	20	21	22
23					

The following SampleIDs: 001A, 002A, 005A, 006A, 011A, 012A, 013A, 014A, 017A, 018A, 020A, 022A, 024A, 026A, 027A, 029A, 030A, 032A, 035A, 036A, 038A, 040A contain testgroup.

Prepared by: Jena Alfaro

**Comments:** SEND HARD COPY

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408242 ClientCode: TWRF

WaterTrax  
  WriteOn  
  EDF  
  Excel  
  Email  
  HardCopy  
  ThirdParty  
  J-flag

**Report to:** Peter Cusack  
 Accounts Payable  
 Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111  
 (415) 955-5200  
 FAX: (415) 955-9041  
 Email: pcusack@langan.com  
 cc/3rd Party: Treadwell & Rollo  
 PO: 555 Montgomery St., Suite 1300  
 ProjectNo: #731626702; India Basin  
 San Francisco, CA 94111

**Requested TAT:** 5 days  
**Date Received:** 08/07/2014  
**Date Printed:** 08/21/2014

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)																			
					13	14	15	16	17	18	19	20	21	22	23	24								
1408242-029	EB-6-3.0	Soil	8/5/2014 8:45	<input type="checkbox"/>																				
1408242-030	EB-6-5.0	Soil	8/5/2014 8:50	<input type="checkbox"/>																				
1408242-032	EB-6-10	Soil	8/5/2014 9:00	<input type="checkbox"/>	A																			
1408242-035	EB-7-3.0	Soil	8/5/2014 10:00	<input type="checkbox"/>																				
1408242-036	EB-7-5.0	Soil	8/5/2014 10:05	<input type="checkbox"/>																				
1408242-038	EB-7-10	Soil	8/5/2014 10:15	<input type="checkbox"/>																				
1408242-040	EB-2-GW	Water	8/6/2014 10:15	<input type="checkbox"/>																				

**Test Legend:**

13	PH_S	14	SULFIDE_S	15		16		17	
18		19		20		21		22	
23		24							

The following SampleIDs: 001A, 002A, 005A, 006A, 011A, 012A, 013A, 014A, 017A, 018A, 020A, 022A, 024A, 026A, 027A, 029A, 030A, 032A, 035A, 036A, 038A, 040A contain testgroup.

**Comments:** SEND HARD COPY      **Prepared by:** Jena Alfaro

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



**McC Campbell Analytical, Inc.**  
*"When Quality Counts"*

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626702; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1408242  
**Date Received:** 8/7/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-001A	EB-1-1.5	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17)	1	Acetate Liner	<input type="checkbox"/>	8/6/2014 8:20	5 days		<input type="checkbox"/>	
1408242-002A	EB-1-3.0	Soil	SW9030A/E376.2 (Sulfide) SW9045D (pH) SW6020 (LUFT) Multi-Range TPH(g,d,mo) Cyanide, Total Asbestos - PLM SW8270C (SVOCs) SW8260B (VOCs) SW8082 (PCBs Only)	1	Acetate Liner	<input type="checkbox"/>	8/6/2014 8:25	5 days		<input type="checkbox"/>	SubOut
1408242-003A	EB-1-5.0	Soil		1	Acetate Liner	<input type="checkbox"/>	8/6/2014 8:35			<input checked="" type="checkbox"/>	
1408242-004A	EB-1-7.5	Soil		1	Acetate Liner	<input type="checkbox"/>	8/6/2014 8:35			<input checked="" type="checkbox"/>	
1408242-005A	EB-1-10	Soil	SW6010B (Lead) Multi-Range TPH(g,d,mo)	1	Acetate Liner	<input type="checkbox"/>	8/6/2014 8:40	5 days		<input type="checkbox"/>	
1408242-006A	EB-2-1.5	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17)	1	Acetate Liner	<input type="checkbox"/>	8/6/2014 9:20	5 days		<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3  
 Acetate Liner = Acetate Liner  
 Short Stainless Tube =

VOA w/ HCl = 43mL VOA w/ HCl



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**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1408242  
**Date Received:** 8/7/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-006A	EB-2-1.5	Soil	SW8270C (SVOCs)	1	Acetate Liner	<input type="checkbox"/>	8/6/2014 9:20	5 days	<input type="checkbox"/>		
			SW8260B (VOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
			SW8082 (PCBs Only)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
1408242-007A	EB-2-3.0	Soil		1	Acetate Liner	<input type="checkbox"/>	8/6/2014 9:25		<input checked="" type="checkbox"/>		
1408242-008A	EB-2-5.0	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	8/6/2014 9:35	5 days	<input type="checkbox"/>		
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
			SW8260B (VOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
1408242-009A	EB-2-7.5	Soil		1	Acetate Liner	<input type="checkbox"/>	8/6/2014 9:40		<input checked="" type="checkbox"/>		
1408242-010A	EB-2-10	Soil		1	Acetate Liner	<input type="checkbox"/>	8/6/2014 9:50		<input checked="" type="checkbox"/>		
1408242-011A	EB-2-15	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	8/6/2014 9:55	5 days	<input type="checkbox"/>		
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
			SW8260B (VOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
1408242-012A	EB-3-1.5	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 11:50	5 days	<input type="checkbox"/>		
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
1408242-013A	EB-3-3.0	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 11:55	5 days	<input type="checkbox"/>		
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

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 Acetate Liner = Acetate Liner  
 Short Stainless Tube =

VOA w/ HCl = 43mL VOA w/ HCl



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## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626702; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1408242  
**Date Received:** 8/7/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-014A	EB-3-5.0	Soil	SW9030A/E376.2 (Sulfide)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 12:00	5 days	<input type="checkbox"/>		
			SW9045D (pH)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
			SW6020 (LUFT)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
			Cyanide, Total			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
			Asbestos - PLM			<input type="checkbox"/>		5 days	<input type="checkbox"/>		SubOut
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
			SW8260B (VOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
1408242-015A	EB-3-7.5	Soil		1	Acetate Liner	<input type="checkbox"/>	8/5/2014 12:05		<input checked="" type="checkbox"/>		
1408242-016A	EB-3-10	Soil		1	Acetate Liner	<input type="checkbox"/>	8/5/2014 12:10		<input checked="" type="checkbox"/>		
1408242-017A	EB-4-1.5	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 10:45	5 days	<input type="checkbox"/>		
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
1408242-018A	EB-4-3.0	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 10:50	5 days	<input type="checkbox"/>		
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		
1408242-019A	EB-4-5.0	Soil		1	Acetate Liner	<input type="checkbox"/>	8/5/2014 11:00		<input checked="" type="checkbox"/>		
1408242-020A	EB-4-7.5	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 11:05	5 days	<input type="checkbox"/>		
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days	<input type="checkbox"/>		

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

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 Acetate Liner = Acetate Liner  
 Short Stainless Tube =

VOA w/ HCl = 43mL VOA w/ HCl



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## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626702; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1408242  
**Date Received:** 8/7/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-020A	EB-4-7.5	Soil	SW8270C (SVOCs)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 11:05	5 days	<input type="checkbox"/>	<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	
			SW8082 (PCBs Only)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	
1408242-021A	EB-4-10	Soil		1	Acetate Liner	<input type="checkbox"/>	8/5/2014 11:10		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1408242-022A	EB-5-1.5	Soil	Multi-Range TPH(g,d,mo)	1	Short Stainless Tube	<input type="checkbox"/>	8/5/2014 13:25	5 days	<input type="checkbox"/>	<input type="checkbox"/>	
			SW6010B (Lead)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	
1408242-023A	EB-5-3.0	Soil		1	Short Stainless Tube	<input type="checkbox"/>	8/5/2014 13:55		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1408242-024A	EB-5-5.0	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 14:15	5 days	<input type="checkbox"/>	<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	
1408242-025A	EB-5-7.5	Soil		1	Acetate Liner	<input type="checkbox"/>	8/5/2014 14:25		<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1408242-026A	EB-5-10	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 14:35	5 days	<input type="checkbox"/>	<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	
1408242-027A	EB-5-15	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 14:40	5 days	<input type="checkbox"/>	<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	
			SW8082 (PCBs Only)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3  
 Acetate Liner = Acetate Liner  
 Short Stainless Tube =

VOA w/ HCl = 43mL VOA w/ HCl



**WORK ORDER SUMMARY**

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626702; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1408242  
**Date Received:** 8/7/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-028A	EB-6-1.5	Soil		1	Acetate Liner	<input type="checkbox"/>	8/5/2014 8:40				<input checked="" type="checkbox"/>
1408242-029A	EB-6-3.0	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 8:45	5 days			<input type="checkbox"/>
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days			<input type="checkbox"/>
1408242-030A	EB-6-5.0	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 8:50	5 days			<input type="checkbox"/>
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days			<input type="checkbox"/>
1408242-031A	EB-6-7.5	Soil		1	Acetate Liner	<input type="checkbox"/>	8/5/2014 8:55				<input checked="" type="checkbox"/>
1408242-032A	EB-6-10	Soil	Multi-Range TPH(g,d,mo)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 9:00	5 days			<input type="checkbox"/>
			SW9030A/E376.2 (Sulfide)			<input type="checkbox"/>		5 days			<input type="checkbox"/>
			SW9045D (pH)			<input type="checkbox"/>		5 days			<input type="checkbox"/>
			Cyanide, Total			<input type="checkbox"/>		5 days			<input type="checkbox"/>
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days			<input type="checkbox"/>
			Asbestos - PLM			<input type="checkbox"/>		5 days			<input type="checkbox"/>
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days			<input type="checkbox"/>
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			<input type="checkbox"/>
			SW8082 (PCBs Only)			<input type="checkbox"/>		5 days			<input type="checkbox"/>
1408242-033A	EB-6-15	Soil		1	Acetate Liner	<input type="checkbox"/>	8/5/2014 9:05				<input checked="" type="checkbox"/>
1408242-034A	EB-7-1.5	Soil		1	Acetate Liner	<input type="checkbox"/>	8/5/2014 9:55				<input checked="" type="checkbox"/>

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3  
 Acetate Liner = Acetate Liner  
 Short Stainless Tube =

VOA w/ HCl = 43mL VOA w/ HCl



**McC Campbell Analytical, Inc.**  
 "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626702; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1408242  
**Date Received:** 8/7/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-035A	EB-7-3.0	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 10:00	5 days	<input type="checkbox"/>		
1408242-036A	EB-7-5.0	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 10:05	5 days	<input type="checkbox"/>		
1408242-037A	EB-7-7.5	Soil		1	Acetate Liner	<input type="checkbox"/>	8/5/2014 10:10	5 days	<input type="checkbox"/>		
1408242-038A	EB-7-10	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17) SW8270C (SVOCs) SW8260B (VOCs) SW8082 (PCBs Only)	1	Acetate Liner	<input type="checkbox"/>	8/5/2014 10:15	5 days	<input type="checkbox"/>		
1408242-039A	EB-7-12	Soil		1	Acetate Liner	<input type="checkbox"/>	8/7/2014	5 days	<input checked="" type="checkbox"/>		
1408242-040A	EB-2-GW	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	<input type="checkbox"/>	8/6/2014 10:15	5 days	<input type="checkbox"/>		Present
1408242-040B	EB-2-GW	Water	SW8260B (VOCs)	2	VOA w/ HCl	<input type="checkbox"/>	8/6/2014 10:15	5 days	<input type="checkbox"/>		Present
1408242-040C	EB-2-GW	Water	E200.8 (CAM 17)	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	8/6/2014 10:15	5 days	<input type="checkbox"/>		Present

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3  
 Acetate Liner = Acetate Liner  
 Short Stainless Tube =

VOA w/ HCl = 43mL VOA w/ HCl





## CHAIN OF CUSTODY RECORD

555 Montgomery Street, Suite 1300, San Francisco, CA 94111 Ph: 415.955.9040/Fax: 415.955.9041  
 501 14th Street, Third Floor, Oakland CA 94612 Ph: 510.874.4500/Fax: 510.874.4507  
 777 Campus Commons Rd., Suite 200, Sacramento, CA 95825 Ph: 916.565.7412/Fax: 916.565.7412

Site Name: INDIA BASIN  
 Job Number: 731046702  
 Project Manager/Contact: PETER CUSACK  
 Samplers: KSS; RNM  
 Recorder (Signature Required): [Signature]

Turnaround Time

Normal

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative							Analysis Requested	Hold	Remarks			
				Soil	Water	Other	HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	Ice	Other	Silica gel clean-up							
EB-6-3.0	8/5/14	0845		X															
EB-6-5.0		0850		X															
EB-6-7.5		0855		X															
EB-6-10		0900		X															
EB-6-15		0905		X															
EB-7-1.5		0955		X															
EB-7-3.0		1000		X															
EB-7-5.0		1005		X															
EB-7-7.5		1010		X															
EB-7-10	9/5/14	1015		X															
EB-7-12				X															
EB-2-GW	8/4/14	1015		X					6	1									
Relinquished by: (Signature)				Date	8/7/14	Time	1400								Received by: (Signature)	Date	8/7/14	Time	1460
Relinquished by: (Signature)				Date	8/7/14	Time	1545								Received by: (Signature)	Date	8/7/14	Time	1545
Relinquished by: (Signature)				Date		Time									Received by Lab: (Signature)	Date		Time	

Sent to Laboratory (Name): McCAMPBELL ANALYTICAL  
 Laboratory Comments/Notes: NO unpreserved container rec'd.

White Copy - Original      Yellow Copy - Laboratory      Pink Copy - Field      COC Number: **005751**



### Sample Receipt Checklist

Client Name: **Treadwell & Rollo** Date and Time Received: **8/7/2014 6:11:37 PM**  
 Project Name: **#731626702; India Basin** Login Reviewed by: **Jena Alfaro**  
 WorkOrder No: **1408242** Matrix: Soil/Water Carrier: Rob Pringle (MAI Courier)

**Chain of Custody (COC) Information**

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time? Yes  No   
 Container/Temp Blank temperature Cooler Temp: 5.5°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  NA   
 Sample labels checked for correct preservation? Yes  No   
 pH acceptable upon receipt (Metal: pH<2; 522: pH<4)? Yes  No  NA   
 Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1408242 A

**Report Created for:** Treadwell & Rollo  
555 Montgomery St., Suite 1300  
San Francisco, CA 94111

**Project Contact:** Peter Cusack  
**Project P.O.:**  
**Project Name:** #731626702; India Basin

**Project Received:** 08/07/2014

Analytical Report reviewed & approved for release on 08/29/2014 by:

*Question about  
your data?*

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**WorkOrder:** 1408242

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

### Analytical Qualifiers

S	spike recovery outside accepted recovery limits
a1	sample diluted due to matrix interference
a4	the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
h4	sulfuric acid permanganate (EPA 3665) cleanup

### Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD was out of acceptance criteria; LCS validated the prep batch.
----	--



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/23/14

**WorkOrder:** 1408242  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-15	1408242-011A	Soil/WET	08/06/2014 09:55	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.50	0.050	1	08/25/2014 18:43

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-1.5	1408242-012A	Soil/WET	08/05/2014 11:50	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.58	0.050	1	08/25/2014 18:46

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-3.0	1408242-013A	Soil/WET	08/05/2014 11:55	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.27	0.050	1	08/25/2014 18:49

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-5.0	1408242-024A	Soil/WET	08/05/2014 14:15	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.067	0.050	1	08/25/2014 19:01

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/23/14

**WorkOrder:** 1408242  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-3.0	1408242-029A	Soil/WET	08/05/2014 08:45	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.75	0.050	1	08/25/2014 19:16

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-5.0	1408242-030A	Soil/WET	08/05/2014 08:50	ICP-JY	94394

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.37	0.050	1	08/25/2014 15:48

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-10	1408242-038A	Soil/WET	08/05/2014 10:15	ICP-JY	94394

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.38	0.050	1	08/25/2014 19:22



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/22/14-8/23/14

**WorkOrder:** 1408242  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Lead & Chromium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil/WET	08/06/2014 09:20	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.99	0.050	1	08/25/2014 18:37
Lead	12	0.20	1	08/25/2014 18:37

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil/WET	08/06/2014 09:35	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.38	0.050	1	08/25/2014 18:40
Lead	5.5	0.20	1	08/25/2014 18:40

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-1.5	1408242-017A	Soil/WET	08/05/2014 10:45	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.29	0.050	1	08/29/2014 10:30
Lead	4.1	0.20	1	08/29/2014 10:30

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-3.0	1408242-018A	Soil/WET	08/05/2014 10:50	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.82	0.050	1	08/25/2014 18:52
Lead	6.3	0.20	1	08/25/2014 18:52

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/22/14-8/23/14

**WorkOrder:** 1408242  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Lead & Chromium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil/WET	08/05/2014 11:05	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.96	0.050	1	08/25/2014 18:55
Lead	10	0.20	1	08/25/2014 18:55

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-10	1408242-026A	Soil/WET	08/05/2014 14:35	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.34	0.050	1	08/25/2014 19:04
Lead	4.0	0.20	1	08/25/2014 19:04

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil/WET	08/05/2014 14:40	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.44	0.050	1	08/25/2014 19:13
Lead	4.4	0.20	1	08/25/2014 19:13

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil/WET	08/05/2014 09:00	ICP-JY	94394

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.56	0.050	1	08/29/2014 10:32
Lead	6.3	0.20	1	08/29/2014 10:32

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/22/14-8/23/14

**WorkOrder:** 1408242  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

## Lead & Chromium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-3.0	1408242-035A	Soil/WET	08/05/2014 10:00	ICP-JY	94394

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.16	0.050	1	08/25/2014 19:19
Lead	11	0.20	1	08/25/2014 19:19



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/22/14-8/23/14

**WorkOrder:** 1408242  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

## Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-10	1408242-005A	Soil/WET	08/06/2014 08:40	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Lead	12	0.20	1	08/29/2014 10:27

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-1.5	1408242-022A	Soil/WET	08/05/2014 13:25	ICP-JY	94369

Analytes	Result	RL	DF	Date Analyzed
Lead	2.0	0.20	1	08/25/2014 18:58



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/22/14

**WorkOrder:** 1408242  
**Extraction Method:** SW1311/SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-1-10	1408242-005A	Soil/TCLP	08/06/2014 08:40	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	08/27/2014 10:37

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-1.5	1408242-006A	Soil/TCLP	08/06/2014 09:20	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	08/27/2014 10:40

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-2-5.0	1408242-008A	Soil/TCLP	08/06/2014 09:35	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	08/27/2014 10:42

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-1.5	1408242-017A	Soil/TCLP	08/05/2014 10:45	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	08/27/2014 10:48

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/22/14

**WorkOrder:** 1408242  
**Extraction Method:** SW1311/SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-3.0	1408242-018A	Soil/TCLP	08/05/2014 10:50	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	08/27/2014 10:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-7.5	1408242-020A	Soil/TCLP	08/05/2014 11:05	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	0.58	0.20	1	08/27/2014 10:53

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-1.5	1408242-022A	Soil/TCLP	08/05/2014 13:25	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	08/27/2014 10:55

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-10	1408242-026A	Soil/TCLP	08/05/2014 14:35	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	08/27/2014 10:57

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 18:11  
**Date Prepared:** 8/22/14

**WorkOrder:** 1408242  
**Extraction Method:** SW1311/SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/L

## Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-5-15	1408242-027A	Soil/TCLP	08/05/2014 14:40	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	08/27/2014 10:59

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-10	1408242-032A	Soil/TCLP	08/05/2014 09:00	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	0.30	0.20	1	08/27/2014 11:01

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-3.0	1408242-035A	Soil/TCLP	08/05/2014 10:00	ICP-JY	94350

Analytes	Result	RL	DF	Date Analyzed
Lead	1.2	0.20	1	08/27/2014 11:03



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/22/14  
**Date Analyzed:** 8/25/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 94369  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L  
**Sample ID:** MB/LCS-94369  
 1408514-003AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	1.01	0.050	1	-	101	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	1.11	1.06	1	0.07612	103	98.4	70-130	4.70	30

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/22/14  
**Date Analyzed:** 8/25/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 94394  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L  
**Sample ID:** MB/LCS-94394  
 1408242-030AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	1.01	0.050	1	-	101	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	1.40	1.37	1	0.3707	103	99.6	70-130	2.31	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/22/14  
**Date Analyzed:** 8/25/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 94369  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L  
**Sample ID:** MB/LCS-94369  
 1408514-003AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	1.01	0.050	1	-	101	75-125
Lead	ND	1.17	0.20	1	-	117	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	1.11	1.06	1	0.07612	103	98.4	70-130	4.70	30
Lead	1.49	1.42	1	0.2711	122	115	70-130	4.66	30

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/22/14  
**Date Analyzed:** 8/25/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 94394  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L  
**Sample ID:** MB/LCS-94394  
 1408242-030AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	1.01	0.050	1	-	101	75-125
Lead	ND	1.08	0.20	1	-	108	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	1.40	1.37	1	0.3707	103	99.6	70-130	2.31	30
Lead	2.34	2.20	1	1.2	109	95.5	70-130	6.03	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/22/14  
**Date Analyzed:** 8/25/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 94369  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L  
**Sample ID:** MB/LCS-94369  
 1408514-003AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	1.17	0.20	1	-	117	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	1.49	1.42	1	0.2711	122	115	70-130	4.66	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/21/14  
**Date Analyzed:** 8/25/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626702; India Basin

**WorkOrder:** 1408242  
**BatchID:** 94350  
**Extraction Method:** SW1311/SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/L  
**Sample ID:** MB/LCS-94350  
 1407927-002AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	1.09	0.20	1	-	109	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	1.18	1.08	1	ND	118	108	70-130	8.30	30

# CHAIN-OF-CUSTODY RECORD

**WorkOrder:** 1408242 **A**    **ClientCode:** TWRF

WaterTrax     WriteOn     EDF     Excel     Email     HardCopy     ThirdParty     J-flag

**Report to:** Peter Cusack    Accounts Payable    **Requested TAT:** 5 days  
 Treadwell & Rollo    Treadwell & Rollo    **Date Received:** 08/07/2014  
 555 Montgomery St., Suite 1300    555 Montgomery St., Suite 1300    **Date Add-On:** 08/22/2014  
 San Francisco, CA 94111    San Francisco, CA 94111    **Date Printed:** 08/29/2014

**Bill to:**

Email: pcusack@langan.com  
 cc/3rd Party:  
 PO: ProjectNo: #731626702; India Basin

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12			
1408242-005	EB-1-10	Soil	8/6/2014 8:40	<input type="checkbox"/>		A													
1408242-006	EB-2-1.5	Soil	8/6/2014 9:20	<input type="checkbox"/>			A												
1408242-008	EB-2-5.0	Soil	8/6/2014 9:35	<input type="checkbox"/>			A												
1408242-011	EB-2-15	Soil	8/6/2014 9:55	<input type="checkbox"/>	A														
1408242-012	EB-3-1.5	Soil	8/5/2014 11:50	<input type="checkbox"/>	A														
1408242-013	EB-3-3.0	Soil	8/5/2014 11:55	<input type="checkbox"/>	A														
1408242-017	EB-4-1.5	Soil	8/5/2014 10:45	<input type="checkbox"/>			A												
1408242-018	EB-4-3.0	Soil	8/5/2014 10:50	<input type="checkbox"/>			A												
1408242-020	EB-4-7.5	Soil	8/5/2014 11:05	<input type="checkbox"/>			A												
1408242-022	EB-5-1.5	Soil	8/5/2014 13:25	<input type="checkbox"/>				A											
1408242-024	EB-5-5.0	Soil	8/5/2014 14:15	<input type="checkbox"/>	A														
1408242-026	EB-5-10	Soil	8/5/2014 14:35	<input type="checkbox"/>			A												
1408242-027	EB-5-15	Soil	8/5/2014 14:40	<input type="checkbox"/>			A												
1408242-029	EB-6-3.0	Soil	8/5/2014 8:45	<input type="checkbox"/>	A														
1408242-030	EB-6-5.0	Soil	8/5/2014 8:50	<input type="checkbox"/>	A														

**Test Legend:**

1	STLC_METALS_S	2	STLC_PB_S	3	STLC_PBCR_S	4	TCLP_PB_S	5	
6		7		8		9		10	
11		12							

**Prepared by:** Jena Alfaro  
**Add-On Prepared By:** Jena Alfaro

**Comments:** SEND HARD COPY. STLCs added 8/22/14 5D TAT

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408242 A ClientCode: TWRF

WaterTrax  
  WriteOn  
  EDF  
  Excel  
  Email  
  HardCopy  
  ThirdParty  
  J-flag

**Report to:** Peter Cusack      Accounts Payable      Requested TAT: 5 days  
 Treadwell & Rollo      Treadwell & Rollo      Date Received: 08/07/2014  
 555 Montgomery St., Suite 1300      555 Montgomery St., Suite 1300      Date Add-On: 08/22/2014  
 San Francisco, CA 94111      San Francisco, CA 94111      Date Printed: 08/29/2014  
 (415) 955-5244      ProjectNo: #731626702; India Basin

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)													
					1	2	3	4	5	6	7	8	9	10	11	12		
1408242-032	EB-6-10	Soil	8/5/2014 9:00	<input type="checkbox"/>			A	A										
1408242-035	EB-7-3.0	Soil	8/5/2014 10:00	<input type="checkbox"/>			A	A										
1408242-038	EB-7-10	Soil	8/5/2014 10:15	<input type="checkbox"/>	A													

**Test Legend:**

1	STLC_METALS_S	2	STLC_PB_S	3	STLC_PBCR_S	4	TCLP_PB_S	5	
6		7		8		9		10	
11		12							

Prepared by: Jena Alfaro  
 Add-On Prepared By: Jena Alfaro

**Comments:** SEND HARD COPY. STLCs added 8/22/14 5D TAT

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.



**McC Campbell Analytical, Inc.**  
 "When Quality Counts"

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 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO **QC Level:** LEVEL 2 **Work Order:** 1408242  
**Project:** #731626702; India Basin **Client Contact:** Peter Cusack **Date Received:** 8/7/2014  
**Comments:** SEND HARD COPY. STLCs added 8/22/14 5D TAT **Contact's Email:** pcusack@langan.com **Date Add-On:** 8/22/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-005A	EB-1-10	Soil	SW6010B (Lead) (TCLP)	1	Acetate Liner	8/6/2014 8:40	5 days*		<input type="checkbox"/>	
			SW6010B (Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-006A	EB-2-1.5	Soil	SW6010B (Lead) (TCLP)	1	Acetate Liner	8/6/2014 9:20	5 days*		<input type="checkbox"/>	
			SW6010B (Chromium & Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-008A	EB-2-5.0	Soil	SW6010B (Lead) (TCLP)	1	Acetate Liner	8/6/2014 9:35	5 days*		<input type="checkbox"/>	
			SW6010B (Chromium & Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-011A	EB-2-15	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/6/2014 9:55	5 days*		<input type="checkbox"/>	
1408242-012A	EB-3-1.5	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 11:50	5 days*		<input type="checkbox"/>	
1408242-013A	EB-3-3.0	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 11:55	5 days*		<input type="checkbox"/>	
1408242-017A	EB-4-1.5	Soil	SW6010B (Lead) (TCLP)	1	Acetate Liner	8/5/2014 10:45	5 days*		<input type="checkbox"/>	
			SW6010B (Chromium & Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-018A	EB-4-3.0	Soil	SW6010B (Lead) (TCLP)	1	Acetate Liner	8/5/2014 10:50	5 days*		<input type="checkbox"/>	
			SW6010B (Chromium & Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-020A	EB-4-7.5	Soil	SW6010B (Lead) (TCLP)	1	Acetate Liner	8/5/2014 11:05	5 days*		<input type="checkbox"/>	
			SW6010B (Chromium & Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-022A	EB-5-1.5	Soil	SW6010B (Lead) (TCLP)	1	Short Stainless Tube	8/5/2014 13:25	5 days*		<input type="checkbox"/>	
			SW6010B (Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-024A	EB-5-5.0	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 14:15	5 days*		<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

Acetate Liner = Acetate Liner  
 Short Stainless Tube =



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## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO      **QC Level:** LEVEL 2      **Work Order:** 1408242  
**Project:** #731626702; India Basin      **Client Contact:** Peter Cusack      **Date Received:** 8/7/2014  
**Comments:** SEND HARD COPY. STLCs added 8/22/14 5D TAT      **Contact's Email:** pcusack@langan.com      **Date Add-On:** 8/22/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408242-026A	EB-5-10	Soil	SW6010B (Lead) (TCLP)	1	Acetate Liner	8/5/2014 14:35	5 days*		<input type="checkbox"/>	
			SW6010B (Chromium & Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-027A	EB-5-15	Soil	SW6010B (Lead) (TCLP)	1	Acetate Liner	8/5/2014 14:40	5 days*		<input type="checkbox"/>	
			SW6010B (Chromium & Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-029A	EB-6-3.0	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 8:45	5 days*		<input type="checkbox"/>	
1408242-030A	EB-6-5.0	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 8:50	5 days*		<input type="checkbox"/>	
1408242-032A	EB-6-10	Soil	SW6010B (Lead) (TCLP)	1	Acetate Liner	8/5/2014 9:00	5 days*		<input type="checkbox"/>	
			SW6010B (Chromium & Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-035A	EB-7-3.0	Soil	SW6010B (Lead) (TCLP)	1	Acetate Liner	8/5/2014 10:00	5 days*		<input type="checkbox"/>	
			SW6010B (Chromium & Lead) (STLC)				5 days*		<input type="checkbox"/>	
1408242-038A	EB-7-10	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Acetate Liner	8/5/2014 10:15	5 days*		<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

Acetate Liner = Acetate Liner  
 Short Stainless Tube =



555 Montgomery Street, Suite 1300, San Francisco, CA 94111 Ph: 415.955.9040/Fax: 415.955.9041  
501 14th Street, Third Floor, Oakland CA 94612 Ph: 510.874.4500/Fax: 510.874.4507  
777 Campus Commons Rd., Suite 200, Sacramento, CA 95825 Ph: 916.565.7412/Fax: 916.565.7412

Site Name: INDIA BASIN  
Job Number: 731vale702  
Project Manager/Contact: PETER CUSACK  
Samplers: KSS & RNM  
Recorder (Signature Required): [Signature]

Turnaround Time  
Normal

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative							Analysis Requested	Remarks													
				Soil	Water	Other	HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	Ice	Other	TPH & d.m.o	VOCS			SVOCs	PCBS	CAMIT	LMFTS	TOTAL PB	ASBESTOS	PH	CYANIDE	TOTAL SULFIDES	SIC Pb	Office get clean up	Hold	
EB-3-7.5	8/5/14	1205		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-3-10		1210		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-4-1.5		1045		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-4-3.0		1050		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-4-5.0		1100		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-4-7.5		1105		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-4-10		1110		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-5-1.5		1325		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-5-3.0		1355		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-5-5.0		1415		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-5-7.5		1425		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-5-10		1435		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-5-15		1440		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EB-6-1.5	8/5/14	0840		X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Relinquished by: (Signature)																												
Relinquished by: (Signature)																												
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Received by: (Signature)																												
Received by: (Signature)																												
Received by Lab: (Signature)																												
Method of Shipment																												
Hand Carried																												
Lab courier																												
Fed Ex																												
Airborne																												
UPS																												

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Laboratory Comments/Notes:

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# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1408250

**Report Created for:** Treadwell & Rollo  
555 Montgomery St., Suite 1300  
San Francisco, CA 94111

**Project Contact:** Peter Cusack  
**Project P.O.:**  
**Project Name:** #731626702; India Basin

**Project Received:** 08/07/2014

Analytical Report reviewed & approved for release on 08/13/2014 by:

Question about  
your data?

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**WorkOrder:** 1408250

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

### Analytical Qualifiers

a2	sample diluted due to cluttered chromatogram
a3	sample diluted due to high organic content.
a21	reporting limit raised due to insufficient pressure in canister

### Quality Control Qualifiers

F2	LCS recovery for this compound is outside of acceptance limits.
----	---



## Case Narrative

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin

**Work Order:** 1408250  
August 12, 2014

### TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408250  
**Extraction Method:** ASTM D 1946-90  
**Analytical Method:** ASTM D 1946-90  
**Unit:** %

### Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-SG	1408250-001A	Soil Gas	08/06/2014 13:52	GC26	93871

**Initial Pressure (psia)**                      **Final Pressure (psia)**

7.12	20.02
------	-------

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0070	1	08/08/2014 13:25

Analytical Comments: a21

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-SG	1408250-002A	Soil Gas	08/06/2014 13:10	GC26	93871

**Initial Pressure (psia)**                      **Final Pressure (psia)**

12.61	25.14
-------	-------

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	08/08/2014 13:38

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-SG	1408250-003A	Soil Gas	08/06/2014 11:30	GC26	93871

**Initial Pressure (psia)**                      **Final Pressure (psia)**

12.46	24.83
-------	-------

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	08/08/2014 13:51

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14

**WorkOrder:** 1408250  
**Extraction Method:** ASTM D 1946-90  
**Analytical Method:** ASTM D 1946-90  
**Unit:** %

### Helium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-SG	1408250-004A	Soil Gas	08/06/2014 12:25	GC26	93871

Initial Pressure (psia)	Final Pressure (psia)
12.77	25.44

Analytes	Result	RL	DF	Date Analyzed
Helium	ND	0.0050	1	08/08/2014 14:04



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-SG	1408250-001A	Soil Gas	08/06/2014 13:52	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
7.12	20.02

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	84	1	08/08/2014 23:09
Acrolein	ND	1.6	1	08/08/2014 23:09
Acrylonitrile	ND	1.5	1	08/08/2014 23:09
tert-Amyl methyl ether (TAME)	ND	3.0	1	08/08/2014 23:09
Benzene	<b>26</b>	2.2	1	08/08/2014 23:09
Benzyl chloride	ND	3.7	1	08/08/2014 23:09
Bromodichloromethane	ND	4.9	1	08/08/2014 23:09
Bromoform	ND	7.4	1	08/08/2014 23:09
Bromomethane	ND	2.7	1	08/08/2014 23:09
1,3-Butadiene	<b>21</b>	1.5	1	08/08/2014 23:09
2-Butanone (MEK)	ND	110	1	08/08/2014 23:09
t-Butyl alcohol (TBA)	ND	44	1	08/08/2014 23:09
Carbon Disulfide	<b>130</b>	2.2	1	08/08/2014 23:09
Carbon Tetrachloride	ND	4.5	1	08/08/2014 23:09
Chlorobenzene	ND	3.3	1	08/08/2014 23:09
Chloroethane	ND	1.9	1	08/08/2014 23:09
Chloroform	ND	3.4	1	08/08/2014 23:09
Chloromethane	ND	1.5	1	08/08/2014 23:09
Cyclohexane	<b>44</b>	25	1	08/08/2014 23:09
Dibromochloromethane	ND	6.1	1	08/08/2014 23:09
1,2-Dibromo-3-chloropropane	ND	0.17	1	08/08/2014 23:09
1,2-Dibromoethane (EDB)	ND	5.5	1	08/08/2014 23:09
1,2-Dichlorobenzene	ND	4.3	1	08/08/2014 23:09
1,3-Dichlorobenzene	ND	4.3	1	08/08/2014 23:09
1,4-Dichlorobenzene	ND	4.3	1	08/08/2014 23:09
Dichlorodifluoromethane	ND	3.5	1	08/08/2014 23:09
1,1-Dichloroethane	ND	2.9	1	08/08/2014 23:09
1,2-Dichloroethane (1,2-DCA)	ND	2.9	1	08/08/2014 23:09
1,1-Dichloroethene	ND	2.8	1	08/08/2014 23:09
cis-1,2-Dichloroethene	ND	2.8	1	08/08/2014 23:09
trans-1,2-Dichloroethene	ND	2.8	1	08/08/2014 23:09
1,2-Dichloropropane	ND	3.3	1	08/08/2014 23:09
cis-1,3-Dichloropropene	ND	3.2	1	08/08/2014 23:09
trans-1,3-Dichloropropene	ND	3.2	1	08/08/2014 23:09

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-SG	1408250-001A	Soil Gas	08/06/2014 13:52	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
7.12	20.02

Analytes	Result	RL	DF	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	5.0	1	08/08/2014 23:09
Diisopropyl ether (DIPE)	ND	3.0	1	08/08/2014 23:09
1,4-Dioxane	ND	2.6	1	08/08/2014 23:09
Ethanol	ND	130	1	08/08/2014 23:09
Ethyl acetate	ND	2.6	1	08/08/2014 23:09
Ethyl tert-butyl ether (ETBE)	ND	3.0	1	08/08/2014 23:09
Ethylbenzene	ND	3.1	1	08/08/2014 23:09
4-Ethyltoluene	ND	3.5	1	08/08/2014 23:09
Freon 113	ND	5.5	1	08/08/2014 23:09
Heptane	<b>33</b>	30	1	08/08/2014 23:09
Hexachlorobutadiene	ND	7.6	1	08/08/2014 23:09
Hexane	<b>48</b>	25	1	08/08/2014 23:09
2-Hexanone	ND	3.0	1	08/08/2014 23:09
4-Methyl-2-pentanone (MIBK)	ND	3.0	1	08/08/2014 23:09
Methyl-t-butyl ether (MTBE)	ND	2.6	1	08/08/2014 23:09
Methylene chloride	ND	2.5	1	08/08/2014 23:09
Methyl methacrylate	ND	2.9	1	08/08/2014 23:09
Naphthalene	ND	7.5	1	08/08/2014 23:09
Propene	ND	120	1	08/08/2014 23:09
Styrene	ND	3.0	1	08/08/2014 23:09
1,1,1,2-Tetrachloroethane	ND	4.9	1	08/08/2014 23:09
1,1,2,2-Tetrachloroethane	ND	4.9	1	08/08/2014 23:09
Tetrachloroethene	<b>27</b>	4.9	1	08/08/2014 23:09
Tetrahydrofuran	ND	2.1	1	08/08/2014 23:09
Toluene	<b>49</b>	2.7	1	08/08/2014 23:09
1,2,4-Trichlorobenzene	ND	5.3	1	08/08/2014 23:09
1,1,1-Trichloroethane	ND	3.9	1	08/08/2014 23:09
1,1,2-Trichloroethane	ND	3.9	1	08/08/2014 23:09
Trichloroethene	<b>5.3</b>	3.9	1	08/08/2014 23:09
Trichlorofluoromethane	ND	4.0	1	08/08/2014 23:09
1,2,4-Trimethylbenzene	ND	3.5	1	08/08/2014 23:09
1,3,5-Trimethylbenzene	ND	3.5	1	08/08/2014 23:09
Vinyl Acetate	ND	2.5	1	08/08/2014 23:09
Vinyl Chloride	ND	1.8	1	08/08/2014 23:09

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-3-SG	1408250-001A	Soil Gas	08/06/2014 13:52	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
7.12	20.02

Analytes	Result	RL	DF	Date Analyzed
Xylenes, Total	10	9.3	1	08/08/2014 23:09

Surrogates	REC (%)	Limits	Analytical Comments: a21
1,2-DCA-d4	95	70-130	08/08/2014 23:09
Toluene-d8	104	70-130	08/08/2014 23:09
4-BFB	101	70-130	08/08/2014 23:09

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-SG	1408250-002A	Soil Gas	08/06/2014 13:10	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
12.61	25.14

Analytes	Result	RL	DF	Date Analyzed
Acetone	210	120	2	08/08/2014 23:56
Acrolein	ND	2.3	2	08/08/2014 23:56
Acrylonitrile	ND	2.2	2	08/08/2014 23:56
tert-Amyl methyl ether (TAME)	ND	4.2	2	08/08/2014 23:56
Benzene	67	3.2	2	08/08/2014 23:56
Benzyl chloride	ND	5.3	2	08/08/2014 23:56
Bromodichloromethane	25	7.0	2	08/08/2014 23:56
Bromoform	ND	10	2	08/08/2014 23:56
Bromomethane	ND	3.9	2	08/08/2014 23:56
1,3-Butadiene	ND	2.2	2	08/08/2014 23:56
2-Butanone (MEK)	ND	150	2	08/08/2014 23:56
t-Butyl alcohol (TBA)	ND	62	2	08/08/2014 23:56
Carbon Disulfide	190	3.2	2	08/08/2014 23:56
Carbon Tetrachloride	ND	6.4	2	08/08/2014 23:56
Chlorobenzene	ND	4.7	2	08/08/2014 23:56
Chloroethane	ND	2.7	2	08/08/2014 23:56
Chloroform	ND	4.9	2	08/08/2014 23:56
Chloromethane	ND	2.1	2	08/08/2014 23:56
Cyclohexane	180	35	2	08/08/2014 23:56
Dibromochloromethane	ND	8.7	2	08/08/2014 23:56
1,2-Dibromo-3-chloropropane	ND	0.25	2	08/08/2014 23:56
1,2-Dibromoethane (EDB)	ND	7.8	2	08/08/2014 23:56
1,2-Dichlorobenzene	ND	6.1	2	08/08/2014 23:56
1,3-Dichlorobenzene	ND	6.1	2	08/08/2014 23:56
1,4-Dichlorobenzene	ND	6.1	2	08/08/2014 23:56
Dichlorodifluoromethane	ND	5.0	2	08/08/2014 23:56
1,1-Dichloroethane	ND	4.1	2	08/08/2014 23:56
1,2-Dichloroethane (1,2-DCA)	ND	4.1	2	08/08/2014 23:56
1,1-Dichloroethene	ND	4.0	2	08/08/2014 23:56
cis-1,2-Dichloroethene	32	4.0	2	08/08/2014 23:56
trans-1,2-Dichloroethene	ND	4.0	2	08/08/2014 23:56
1,2-Dichloropropane	ND	4.7	2	08/08/2014 23:56
cis-1,3-Dichloropropene	ND	4.6	2	08/08/2014 23:56
trans-1,3-Dichloropropene	ND	4.6	2	08/08/2014 23:56

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-SG	1408250-002A	Soil Gas	08/06/2014 13:10	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
12.61	25.14

Analytes	Result	RL	DF	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	7.1	2	08/08/2014 23:56
Diisopropyl ether (DIPE)	ND	4.2	2	08/08/2014 23:56
1,4-Dioxane	ND	3.7	2	08/08/2014 23:56
Ethanol	ND	190	2	08/08/2014 23:56
Ethyl acetate	ND	3.7	2	08/08/2014 23:56
Ethyl tert-butyl ether (ETBE)	ND	4.2	2	08/08/2014 23:56
Ethylbenzene	<b>5.4</b>	4.4	2	08/08/2014 23:56
4-Ethyltoluene	ND	5.0	2	08/08/2014 23:56
Freon 113	ND	7.8	2	08/08/2014 23:56
Heptane	<b>280</b>	42	2	08/08/2014 23:56
Hexachlorobutadiene	ND	11	2	08/08/2014 23:56
Hexane	<b>850</b>	36	2	08/08/2014 23:56
2-Hexanone	<b>9.9</b>	4.2	2	08/08/2014 23:56
4-Methyl-2-pentanone (MIBK)	ND	4.2	2	08/08/2014 23:56
Methyl-t-butyl ether (MTBE)	ND	3.7	2	08/08/2014 23:56
Methylene chloride	ND	3.5	2	08/08/2014 23:56
Methyl methacrylate	<b>18</b>	4.2	2	08/08/2014 23:56
Naphthalene	ND	11	2	08/08/2014 23:56
Propene	ND	180	2	08/08/2014 23:56
Styrene	ND	4.3	2	08/08/2014 23:56
1,1,1,2-Tetrachloroethane	ND	7.0	2	08/08/2014 23:56
1,1,1,2,2-Tetrachloroethane	ND	7.0	2	08/08/2014 23:56
Tetrachloroethene	ND	6.9	2	08/08/2014 23:56
Tetrahydrofuran	ND	3.0	2	08/08/2014 23:56
Toluene	<b>26</b>	3.8	2	08/08/2014 23:56
1,2,4-Trichlorobenzene	ND	7.5	2	08/08/2014 23:56
1,1,1-Trichloroethane	ND	5.5	2	08/08/2014 23:56
1,1,2-Trichloroethane	<b>9.3</b>	5.5	2	08/08/2014 23:56
Trichloroethene	<b>34</b>	5.5	2	08/08/2014 23:56
Trichlorofluoromethane	ND	5.7	2	08/08/2014 23:56
1,2,4-Trimethylbenzene	ND	5.0	2	08/08/2014 23:56
1,3,5-Trimethylbenzene	ND	5.0	2	08/08/2014 23:56
Vinyl Acetate	ND	3.6	2	08/08/2014 23:56
Vinyl Chloride	ND	2.6	2	08/08/2014 23:56

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-4-SG	1408250-002A	Soil Gas	08/06/2014 13:10	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
12.61	25.14

Analytes	Result	RL	DF	Date Analyzed
Xylenes, Total	ND	13	2	08/08/2014 23:56

Surrogates	REC (%)	Limits	Analytical Comments: a2,a3
1,2-DCA-d4	109	70-130	08/08/2014 23:56
Toluene-d8	103	70-130	08/08/2014 23:56
4-BFB	102	70-130	08/08/2014 23:56

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-SG	1408250-003A	Soil Gas	08/06/2014 11:30	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
12.46	24.83

Analytes	Result	RL	DF	Date Analyzed
Acetone	260	120	2	08/09/2014 00:35
Acrolein	ND	2.3	2	08/09/2014 00:35
Acrylonitrile	ND	2.2	2	08/09/2014 00:35
tert-Amyl methyl ether (TAME)	ND	4.2	2	08/09/2014 00:35
Benzene	50	3.2	2	08/09/2014 00:35
Benzyl chloride	ND	5.3	2	08/09/2014 00:35
Bromodichloromethane	ND	7.0	2	08/09/2014 00:35
Bromoform	ND	10	2	08/09/2014 00:35
Bromomethane	ND	3.9	2	08/09/2014 00:35
1,3-Butadiene	ND	2.2	2	08/09/2014 00:35
2-Butanone (MEK)	ND	150	2	08/09/2014 00:35
t-Butyl alcohol (TBA)	ND	62	2	08/09/2014 00:35
Carbon Disulfide	70	3.2	2	08/09/2014 00:35
Carbon Tetrachloride	ND	6.4	2	08/09/2014 00:35
Chlorobenzene	ND	4.7	2	08/09/2014 00:35
Chloroethane	ND	2.7	2	08/09/2014 00:35
Chloroform	ND	4.9	2	08/09/2014 00:35
Chloromethane	ND	2.1	2	08/09/2014 00:35
Cyclohexane	ND	35	2	08/09/2014 00:35
Dibromochloromethane	ND	8.7	2	08/09/2014 00:35
1,2-Dibromo-3-chloropropane	ND	0.25	2	08/09/2014 00:35
1,2-Dibromoethane (EDB)	ND	7.8	2	08/09/2014 00:35
1,2-Dichlorobenzene	ND	6.1	2	08/09/2014 00:35
1,3-Dichlorobenzene	ND	6.1	2	08/09/2014 00:35
1,4-Dichlorobenzene	ND	6.1	2	08/09/2014 00:35
Dichlorodifluoromethane	ND	5.0	2	08/09/2014 00:35
1,1-Dichloroethane	ND	4.1	2	08/09/2014 00:35
1,2-Dichloroethane (1,2-DCA)	ND	4.1	2	08/09/2014 00:35
1,1-Dichloroethene	ND	4.0	2	08/09/2014 00:35
cis-1,2-Dichloroethene	21	4.0	2	08/09/2014 00:35
trans-1,2-Dichloroethene	ND	4.0	2	08/09/2014 00:35
1,2-Dichloropropane	ND	4.7	2	08/09/2014 00:35
cis-1,3-Dichloropropene	ND	4.6	2	08/09/2014 00:35
trans-1,3-Dichloropropene	ND	4.6	2	08/09/2014 00:35

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-SG	1408250-003A	Soil Gas	08/06/2014 11:30	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
12.46	24.83

Analytes	Result	RL	DF	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	7.1	2	08/09/2014 00:35
Diisopropyl ether (DIPE)	ND	4.2	2	08/09/2014 00:35
1,4-Dioxane	ND	3.7	2	08/09/2014 00:35
Ethanol	<b>320</b>	190	2	08/09/2014 00:35
Ethyl acetate	ND	3.7	2	08/09/2014 00:35
Ethyl tert-butyl ether (ETBE)	ND	4.2	2	08/09/2014 00:35
Ethylbenzene	<b>4.9</b>	4.4	2	08/09/2014 00:35
4-Ethyltoluene	ND	5.0	2	08/09/2014 00:35
Freon 113	ND	7.8	2	08/09/2014 00:35
Heptane	<b>100</b>	42	2	08/09/2014 00:35
Hexachlorobutadiene	ND	11	2	08/09/2014 00:35
Hexane	<b>250</b>	36	2	08/09/2014 00:35
2-Hexanone	ND	4.2	2	08/09/2014 00:35
4-Methyl-2-pentanone (MIBK)	<b>7.3</b>	4.2	2	08/09/2014 00:35
Methyl-t-butyl ether (MTBE)	ND	3.7	2	08/09/2014 00:35
Methylene chloride	ND	3.5	2	08/09/2014 00:35
Methyl methacrylate	ND	4.2	2	08/09/2014 00:35
Naphthalene	ND	11	2	08/09/2014 00:35
Propene	ND	180	2	08/09/2014 00:35
Styrene	ND	4.3	2	08/09/2014 00:35
1,1,1,2-Tetrachloroethane	ND	7.0	2	08/09/2014 00:35
1,1,2,2-Tetrachloroethane	ND	7.0	2	08/09/2014 00:35
Tetrachloroethene	ND	6.9	2	08/09/2014 00:35
Tetrahydrofuran	ND	3.0	2	08/09/2014 00:35
Toluene	<b>32</b>	3.8	2	08/09/2014 00:35
1,2,4-Trichlorobenzene	ND	7.5	2	08/09/2014 00:35
1,1,1-Trichloroethane	ND	5.5	2	08/09/2014 00:35
1,1,2-Trichloroethane	ND	5.5	2	08/09/2014 00:35
Trichloroethene	<b>18</b>	5.5	2	08/09/2014 00:35
Trichlorofluoromethane	ND	5.7	2	08/09/2014 00:35
1,2,4-Trimethylbenzene	ND	5.0	2	08/09/2014 00:35
1,3,5-Trimethylbenzene	ND	5.0	2	08/09/2014 00:35
Vinyl Acetate	ND	3.6	2	08/09/2014 00:35
Vinyl Chloride	ND	2.6	2	08/09/2014 00:35

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-6-SG	1408250-003A	Soil Gas	08/06/2014 11:30	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
12.46	24.83

Analytes	Result	RL	DF	Date Analyzed
Xylenes, Total	14	13	2	08/09/2014 00:35

Surrogates	REC (%)	Limits	Analytical Comments: a2,a3
1,2-DCA-d4	107	70-130	08/09/2014 00:35
Toluene-d8	102	70-130	08/09/2014 00:35
4-BFB	102	70-130	08/09/2014 00:35

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-SG	1408250-004A	Soil Gas	08/06/2014 12:25	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
12.77	25.44

Analytes	Result	RL	DF	Date Analyzed
Acetone	84	60	1	08/09/2014 01:20
Acrolein	ND	1.2	1	08/09/2014 01:20
Acrylonitrile	ND	1.1	1	08/09/2014 01:20
tert-Amyl methyl ether (TAME)	ND	2.1	1	08/09/2014 01:20
Benzene	35	1.6	1	08/09/2014 01:20
Benzyl chloride	ND	2.6	1	08/09/2014 01:20
Bromodichloromethane	ND	3.5	1	08/09/2014 01:20
Bromoform	ND	5.2	1	08/09/2014 01:20
Bromomethane	ND	2.0	1	08/09/2014 01:20
1,3-Butadiene	7.8	1.1	1	08/09/2014 01:20
2-Butanone (MEK)	ND	75	1	08/09/2014 01:20
t-Butyl alcohol (TBA)	ND	31	1	08/09/2014 01:20
Carbon Disulfide	36	1.6	1	08/09/2014 01:20
Carbon Tetrachloride	ND	3.2	1	08/09/2014 01:20
Chlorobenzene	ND	2.4	1	08/09/2014 01:20
Chloroethane	ND	1.3	1	08/09/2014 01:20
Chloroform	8.2	2.4	1	08/09/2014 01:20
Chloromethane	11	1.0	1	08/09/2014 01:20
Cyclohexane	ND	18	1	08/09/2014 01:20
Dibromochloromethane	ND	4.4	1	08/09/2014 01:20
1,2-Dibromo-3-chloropropane	ND	0.12	1	08/09/2014 01:20
1,2-Dibromoethane (EDB)	ND	3.9	1	08/09/2014 01:20
1,2-Dichlorobenzene	ND	3.0	1	08/09/2014 01:20
1,3-Dichlorobenzene	ND	3.0	1	08/09/2014 01:20
1,4-Dichlorobenzene	ND	3.0	1	08/09/2014 01:20
Dichlorodifluoromethane	ND	2.5	1	08/09/2014 01:20
1,1-Dichloroethane	ND	2.0	1	08/09/2014 01:20
1,2-Dichloroethane (1,2-DCA)	ND	2.0	1	08/09/2014 01:20
1,1-Dichloroethene	ND	2.0	1	08/09/2014 01:20
cis-1,2-Dichloroethene	ND	2.0	1	08/09/2014 01:20
trans-1,2-Dichloroethene	ND	2.0	1	08/09/2014 01:20
1,2-Dichloropropane	ND	2.4	1	08/09/2014 01:20
cis-1,3-Dichloropropene	ND	2.3	1	08/09/2014 01:20
trans-1,3-Dichloropropene	ND	2.3	1	08/09/2014 01:20

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-SG	1408250-004A	Soil Gas	08/06/2014 12:25	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
12.77	25.44

Analytes	Result	RL	DF	Date Analyzed
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	3.6	1	08/09/2014 01:20
Diisopropyl ether (DIPE)	ND	2.1	1	08/09/2014 01:20
1,4-Dioxane	ND	1.8	1	08/09/2014 01:20
Ethanol	ND	96	1	08/09/2014 01:20
Ethyl acetate	ND	1.8	1	08/09/2014 01:20
Ethyl tert-butyl ether (ETBE)	ND	2.1	1	08/09/2014 01:20
Ethylbenzene	<b>8.3</b>	2.2	1	08/09/2014 01:20
4-Ethyltoluene	ND	2.5	1	08/09/2014 01:20
Freon 113	ND	3.9	1	08/09/2014 01:20
Heptane	<b>27</b>	21	1	08/09/2014 01:20
Hexachlorobutadiene	ND	5.4	1	08/09/2014 01:20
Hexane	<b>30</b>	18	1	08/09/2014 01:20
2-Hexanone	ND	2.1	1	08/09/2014 01:20
4-Methyl-2-pentanone (MIBK)	ND	2.1	1	08/09/2014 01:20
Methyl-t-butyl ether (MTBE)	ND	1.8	1	08/09/2014 01:20
Methylene chloride	ND	1.8	1	08/09/2014 01:20
Methyl methacrylate	ND	2.1	1	08/09/2014 01:20
Naphthalene	ND	5.3	1	08/09/2014 01:20
Propene	ND	88	1	08/09/2014 01:20
Styrene	ND	2.2	1	08/09/2014 01:20
1,1,1,2-Tetrachloroethane	ND	3.5	1	08/09/2014 01:20
1,1,2,2-Tetrachloroethane	ND	3.5	1	08/09/2014 01:20
Tetrachloroethene	<b>8.5</b>	3.4	1	08/09/2014 01:20
Tetrahydrofuran	<b>28</b>	1.5	1	08/09/2014 01:20
Toluene	<b>430</b>	1.9	1	08/09/2014 01:20
1,2,4-Trichlorobenzene	ND	3.8	1	08/09/2014 01:20
1,1,1-Trichloroethane	ND	2.8	1	08/09/2014 01:20
1,1,2-Trichloroethane	ND	2.8	1	08/09/2014 01:20
Trichloroethene	ND	2.8	1	08/09/2014 01:20
Trichlorofluoromethane	<b>22</b>	2.8	1	08/09/2014 01:20
1,2,4-Trimethylbenzene	ND	2.5	1	08/09/2014 01:20
1,3,5-Trimethylbenzene	ND	2.5	1	08/09/2014 01:20
Vinyl Acetate	ND	1.8	1	08/09/2014 01:20
Vinyl Chloride	ND	1.3	1	08/09/2014 01:20

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626702; India Basin  
**Date Received:** 8/7/14 21:01  
**Date Prepared:** 8/8/14-8/9/14

**WorkOrder:** 1408250  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** µg/m<sup>3</sup>

### Volatile Organic Compounds in µg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
EB-7-SG	1408250-004A	Soil Gas	08/06/2014 12:25	GC24	93865

Initial Pressure (psia)	Final Pressure (psia)
12.77	25.44

Analytes	Result	RL	DF	Date Analyzed
Xylenes, Total	27	6.6	1	08/09/2014 01:20

Surrogates	REC (%)	Limits	Date Analyzed
1,2-DCA-d4	95	70-130	08/09/2014 01:20
Toluene-d8	103	70-130	08/09/2014 01:20
4-BFB	101	70-130	08/09/2014 01:20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/11/14  
**Date Analyzed:** 8/8/14  
**Instrument:** GC26  
**Matrix:** Soilgas  
**Project:** #731626702; India Basin

**WorkOrder:** 1408250  
**BatchID:** 93871  
**Extraction Method:** ASTM D 1946-90  
**Analytical Method:** ASTM D 1946-90  
**Unit:** %  
**Sample ID:** MB/LCS-93871

### QC Summary Report for ASTM D1946-90

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Helium	ND	0.0113	0.0050	0.010	-	113	60-140



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/11/14  
**Date Analyzed:** 8/8/14  
**Instrument:** GC24  
**Matrix:** Soilgas  
**Project:** #731626702; India Basin

**WorkOrder:** 1408250  
**BatchID:** 93865  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** nL/L  
**Sample ID:** MB/LCS-93865

### QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	25	-	-	-	-
Acrolein	ND	30.6	0.50	25	-	123	60-140
Acrylonitrile	ND	28.1	0.50	25	-	112	60-140
tert-Amyl methyl ether (TAME)	ND	27.0	0.50	25	-	108	60-140
Benzene	ND	22.8	0.50	25	-	91	60-140
Benzyl chloride	ND	28.2	0.50	25	-	113	60-140
Bromodichloromethane	ND	24.8	0.50	25	-	99.3	60-140
Bromoform	ND	36.3	0.50	25	-	145, F2	60-140
Bromomethane	ND	-	0.50	-	-	-	-
1,3-Butadiene	ND	27.3	0.50	25	-	109	60-140
2-Butanone (MEK)	ND	-	25	-	-	-	-
t-Butyl alcohol (TBA)	ND	26.3	10	25	-	105	60-140
Carbon Disulfide	ND	24.4	0.50	25	-	97.4	60-140
Carbon Tetrachloride	ND	24.3	0.50	25	-	97.1	60-140
Chlorobenzene	ND	24.0	0.50	25	-	96.1	60-140
Chloroethane	ND	25.0	0.50	25	-	100	60-140
Chloroform	ND	20.0	0.50	25	-	80	60-140
Chloromethane	ND	25.7	0.50	25	-	103	60-140
Cyclohexane	ND	-	5.0	-	-	-	-
Dibromochloromethane	ND	27.5	0.50	25	-	110	60-140
1,2-Dibromo-3-chloropropane	ND	35.0	0.012	25	-	140	60-140
1,2-Dibromoethane (EDB)	ND	24.0	0.50	25	-	95.9	60-140
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	24.8	0.50	25	-	99.3	60-140
1,4-Dichlorobenzene	ND	23.8	0.50	25	-	95	60-140
Dichlorodifluoromethane	ND	22.3	0.50	25	-	89.3	60-140
1,1-Dichloroethane	ND	24.9	0.50	25	-	99.4	60-140
1,2-Dichloroethane (1,2-DCA)	ND	22.8	0.50	25	-	91.2	60-140
1,1-Dichloroethene	ND	-	0.50	-	-	-	-
cis-1,2-Dichloroethene	ND	24.2	0.50	25	-	97	60-140
trans-1,2-Dichloroethene	ND	23.8	0.50	25	-	95.2	60-140
1,2-Dichloropropane	ND	25.4	0.50	25	-	102	60-140
cis-1,3-Dichloropropene	ND	26.6	0.50	25	-	106	60-140
trans-1,3-Dichloropropene	ND	25.0	0.50	25	-	100	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	22.8	0.50	25	-	91.2	60-140
Diisopropyl ether (DIPE)	ND	27.0	0.50	25	-	108	60-140
1,4-Dioxane	ND	24.8	0.50	25	-	99.1	60-140
Ethanol	ND	-	50	-	-	-	-
Ethyl acetate	ND	26.3	0.50	25	-	105	60-140
Ethyl tert-butyl ether (ETBE)	ND	26.0	0.50	25	-	104	60-140

(Cont.)



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 8/11/14  
**Date Analyzed:** 8/8/14  
**Instrument:** GC24  
**Matrix:** Soilgas  
**Project:** #731626702; India Basin

**WorkOrder:** 1408250  
**BatchID:** 93865  
**Extraction Method:** TO15  
**Analytical Method:** TO15  
**Unit:** nL/L  
**Sample ID:** MB/LCS-93865

## QC Summary Report for TO15

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Ethylbenzene	ND	25.0	0.50	25	-	100	60-140
4-Ethyltoluene	ND	25.0	0.50	25	-	99.9	60-140
Freon 113	ND	21.7	0.50	25	-	86.9	60-140
Heptane	ND	-	5.0	-	-	-	-
Hexachlorobutadiene	ND	22.2	0.50	25	-	88.9	60-140
Hexane	ND	-	5.0	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	32.1	0.50	25	-	128	60-140
Methyl-t-butyl ether (MTBE)	ND	24.8	0.50	25	-	99	60-140
Methylene chloride	ND	20.9	0.50	25	-	83.7	60-140
Methyl methacrylate	ND	28.9	0.50	25	-	116	60-140
Naphthalene	ND	63.4	1.0	50	-	127	60-140
Propene	ND	-	50	-	-	-	-
Styrene	ND	27.5	0.50	25	-	110	60-140
1,1,1,2-Tetrachloroethane	ND	26.0	0.50	25	-	104	60-140
1,1,2,2-Tetrachloroethane	ND	23.5	0.50	25	-	94	60-140
Tetrachloroethene	ND	25.3	0.50	25	-	101	60-140
Tetrahydrofuran	ND	23.1	0.50	25	-	92.3	60-140
Toluene	ND	24.4	0.50	25	-	97.4	60-140
1,2,4-Trichlorobenzene	ND	26.7	0.50	25	-	107	60-140
1,1,1-Trichloroethane	ND	26.1	0.50	25	-	105	60-140
1,1,2-Trichloroethane	ND	21.4	0.50	25	-	85.4	60-140
Trichloroethene	ND	22.7	0.50	25	-	90.8	60-140
Trichlorofluoromethane	ND	28.5	0.50	25	-	114	60-140
1,2,4-Trimethylbenzene	ND	23.1	0.50	25	-	92.5	60-140
1,3,5-Trimethylbenzene	ND	21.9	0.50	25	-	87.6	60-140
Vinyl Acetate	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	24.9	0.50	25	-	99.6	60-140
Xylenes, Total	ND	70.1	1.5	75	-	93.5	60-140

### Surrogate Recovery

1,2-DCA-d4	492	485		500	99	97	60-140
Toluene-d8	520	521		500	104	104	60-140
4-BFB	497	522		500	99	104	60-140

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1408250 ClientCode: TWRF

WaterTrax     WriteOn     EDF     Excel     Email     HardCopy     ThirdParty     J-flag  
 EQulS     EQulS

**Report to:** Peter Cusack    Accounts Payable  
 Treadwell & Rollo    Treadwell & Rollo  
 555 Montgomery St., Suite 1300    555 Montgomery St., Suite 1300    **Date Received:** 08/07/2014  
 San Francisco, CA 94111    San Francisco, CA 94111    **Date Printed:** 08/08/2014  
 (415) 955-5244    FAX: (415) 955-9041  
**Email:** pcusack@langan.com    **Requested TAT:** 5 days  
**cc/3rd Party:** PO: ProjectNo: #731626702; India Basin

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)													
					1	2	3	4	5	6	7	8	9	10	11	12		
1408250-001	EB-3-SG	Soil Gas	8/6/2014 13:52	<input type="checkbox"/>	A													
1408250-002	EB-4-SG	Soil Gas	8/6/2014 13:10	<input type="checkbox"/>	A													
1408250-003	EB-6-SG	Soil Gas	8/6/2014 11:30	<input type="checkbox"/>	A													
1408250-004	EB-7-SG	Soil Gas	8/6/2014 12:25	<input type="checkbox"/>	A													
1408250-005	Unused Summa 1	Soil Gas	8/7/2014	<input type="checkbox"/>														
1408250-006	Unused Summa 2	Soil Gas	8/7/2014	<input type="checkbox"/>														

**Test Legend:**

1	PRHERegulator		3	015_Scan-SIM_SOIL(UG/M)		4		5	
6			8			9		10	
11									
2	PRUNUSEDSUMMA								
7									
12									

The following SampleIDs: 001A, 002A, 003A, 004A contain testgroup.

Prepared by: Jena Alfaro

**Comments:** SEND HARD COPY

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.



**McC Campbell Analytical, Inc.**  
*"When Quality Counts"*

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626702; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1408250  
**Date Received:** 8/7/2014

WaterTrax  WriteOn  EDF

Excel

Fax

Email

HardCopy

ThirdParty

J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1408250-001A	EB-3-SG	Soil Gas	TO15 w/ Helium	1	1L Summa	<input type="checkbox"/>	8/6/2014 13:52	5 days	<input type="checkbox"/>		
1408250-002A	EB-4-SG	Soil Gas	TO15 w/ Helium	1	1L Summa	<input type="checkbox"/>	8/6/2014 13:10	5 days	<input type="checkbox"/>		
1408250-003A	EB-6-SG	Soil Gas	TO15 w/ Helium	1	1L Summa	<input type="checkbox"/>	8/6/2014 11:30	5 days	<input type="checkbox"/>		
1408250-004A	EB-7-SG	Soil Gas	TO15 w/ Helium	1	1L Summa	<input type="checkbox"/>	8/6/2014 12:25	5 days	<input type="checkbox"/>		

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

1L Summa = 1L Summa Canister





### Sample Receipt Checklist

Client Name: **Treadwell & Rollo** Date and Time Received: **8/7/2014 9:01:22 PM**  
 Project Name: **#731626702; India Basin** LogIn Reviewed by: **Jena Alfaro**  
 WorkOrder No: **1408250** Matrix: Soil Gas Carrier: Rob Pringle (MAI Courier)

**Chain of Custody (COC) Information**

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time? Yes  No   
 Container/Temp Blank temperature Cooler Temp: NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  NA   
 Sample labels checked for correct preservation? Yes  No   
 pH acceptable upon receipt (Metal: pH<2; 522: pH<4)? Yes  No  NA   
 Samples Received on Ice? Yes  No

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1311112

**Report Created for:** Treadwell & Rollo  
555 Montgomery St., Suite 1300  
San Francisco, CA 94111

**Project Contact:** Maria Flessas  
**Project P.O.:**  
**Project Name:** India Basin

**Project Received:** 11/05/2013

Analytical Report reviewed & approved for release on 11/08/2013 by:

*Question about  
your data?*

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**WorkOrder:** 1311112

<u>Glossary Abbreviation</u>	<u>Description</u>
95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit
RPD	Relative Percent Deviation
SPK Val	Spike Value
SPKRef Val	Spike Reference Value

### Analytical Qualifier

e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
h4	sulfuric acid permanganate (EPA 3665) cleanup

### Quality Control Qualifier

F1	MS/MSD recovery was out of acceptance criteria; LCS validated the prep batch.
F2	LCS recovery for this compound is outside of acceptance limits.



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (8080 Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC22	83679
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0010	1	11/06/2013 18:22
a-BHC	ND		0.0010	1	11/06/2013 18:22
b-BHC	ND		0.0010	1	11/06/2013 18:22
d-BHC	ND		0.0010	1	11/06/2013 18:22
g-BHC	ND		0.0010	1	11/06/2013 18:22
Chlordane (Technical)	ND		0.025	1	11/06/2013 18:22
a-Chlordane	ND		0.0010	1	11/06/2013 18:22
g-Chlordane	ND		0.0010	1	11/06/2013 18:22
p,p-DDD	ND		0.0010	1	11/06/2013 18:22
p,p-DDE	ND		0.0010	1	11/06/2013 18:22
p,p-DDT	ND		0.0010	1	11/06/2013 18:22
Dieldrin	ND		0.0010	1	11/06/2013 18:22
Endosulfan I	ND		0.0010	1	11/06/2013 18:22
Endosulfan II	ND		0.0010	1	11/06/2013 18:22
Endosulfan sulfate	ND		0.0010	1	11/06/2013 18:22
Endrin	ND		0.0010	1	11/06/2013 18:22
Endrin aldehyde	ND		0.0010	1	11/06/2013 18:22
Endrin ketone	ND		0.0010	1	11/06/2013 18:22
Heptachlor	ND		0.0010	1	11/06/2013 18:22
Heptachlor epoxide	ND		0.0010	1	11/06/2013 18:22
Hexachlorobenzene	ND		0.010	1	11/06/2013 18:22
Hexachlorocyclopentadiene	ND		0.020	1	11/06/2013 18:22
Methoxychlor	ND		0.0010	1	11/06/2013 18:22
Toxaphene	ND		0.050	1	11/06/2013 18:22
Aroclor1016	ND		0.050	1	11/06/2013 18:22
Aroclor1221	ND		0.050	1	11/06/2013 18:22
Aroclor1232	ND		0.050	1	11/06/2013 18:22
Aroclor1242	ND		0.050	1	11/06/2013 18:22
Aroclor1248	ND		0.050	1	11/06/2013 18:22
Aroclor1254	ND		0.050	1	11/06/2013 18:22
Aroclor1260	ND		0.050	1	11/06/2013 18:22
PCBs, total	ND		0.050	1	11/06/2013 18:22
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	101		70-130		11/06/2013 18:22



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg

### Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC5A	83697
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aroclor1016	ND		0.050	1	11/06/2013 12:13
Aroclor1221	ND		0.050	1	11/06/2013 12:13
Aroclor1232	ND		0.050	1	11/06/2013 12:13
Aroclor1242	ND		0.050	1	11/06/2013 12:13
Aroclor1248	ND		0.050	1	11/06/2013 12:13
Aroclor1254	ND		0.050	1	11/06/2013 12:13
Aroclor1260	ND		0.050	1	11/06/2013 12:13
PCBs, total	ND		0.050	1	11/06/2013 12:13
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	<u>Analytical Comments:</u> h4	
Decachlorobiphenyl	106		70-130	11/06/2013 12:13	



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	11/06/2013 17:46
tert-Amyl methyl ether (TAME)	ND		0.0050	1	11/06/2013 17:46
Benzene	ND		0.0050	1	11/06/2013 17:46
Bromobenzene	ND		0.0050	1	11/06/2013 17:46
Bromochloromethane	ND		0.0050	1	11/06/2013 17:46
Bromodichloromethane	ND		0.0050	1	11/06/2013 17:46
Bromoform	ND		0.0050	1	11/06/2013 17:46
Bromomethane	ND		0.0050	1	11/06/2013 17:46
2-Butanone (MEK)	ND		0.020	1	11/06/2013 17:46
t-Butyl alcohol (TBA)	ND		0.050	1	11/06/2013 17:46
n-Butyl benzene	ND		0.0050	1	11/06/2013 17:46
sec-Butyl benzene	ND		0.0050	1	11/06/2013 17:46
tert-Butyl benzene	ND		0.0050	1	11/06/2013 17:46
Carbon Disulfide	ND		0.0050	1	11/06/2013 17:46
Carbon Tetrachloride	ND		0.0050	1	11/06/2013 17:46
Chlorobenzene	ND		0.0050	1	11/06/2013 17:46
Chloroethane	ND		0.0050	1	11/06/2013 17:46
Chloroform	ND		0.0050	1	11/06/2013 17:46
Chloromethane	ND		0.0050	1	11/06/2013 17:46
2-Chlorotoluene	ND		0.0050	1	11/06/2013 17:46
4-Chlorotoluene	ND		0.0050	1	11/06/2013 17:46
Dibromochloromethane	ND		0.0050	1	11/06/2013 17:46
1,2-Dibromo-3-chloropropane	ND		0.0040	1	11/06/2013 17:46
1,2-Dibromoethane (EDB)	ND		0.0040	1	11/06/2013 17:46
Dibromomethane	ND		0.0050	1	11/06/2013 17:46
1,2-Dichlorobenzene	ND		0.0050	1	11/06/2013 17:46
1,3-Dichlorobenzene	ND		0.0050	1	11/06/2013 17:46
1,4-Dichlorobenzene	ND		0.0050	1	11/06/2013 17:46
Dichlorodifluoromethane	ND		0.0050	1	11/06/2013 17:46
1,1-Dichloroethane	ND		0.0050	1	11/06/2013 17:46
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	11/06/2013 17:46
1,1-Dichloroethene	ND		0.0050	1	11/06/2013 17:46
cis-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 17:46
trans-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 17:46
1,2-Dichloropropane	ND		0.0050	1	11/06/2013 17:46
1,3-Dichloropropane	ND		0.0050	1	11/06/2013 17:46
2,2-Dichloropropane	ND		0.0050	1	11/06/2013 17:46
1,1-Dichloropropene	ND		0.0050	1	11/06/2013 17:46

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-1-2.5</b>	<b>1311112-001A</b>	<b>Soil</b>	<b>11/01/2013 08:00</b>	<b>GC16</b>	<b>83658</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 17:46
trans-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 17:46
Diisopropyl ether (DIPE)	ND		0.0050	1	11/06/2013 17:46
Ethylbenzene	ND		0.0050	1	11/06/2013 17:46
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	11/06/2013 17:46
Freon 113	ND		0.10	1	11/06/2013 17:46
Hexachlorobutadiene	ND		0.0050	1	11/06/2013 17:46
Hexachloroethane	ND		0.0050	1	11/06/2013 17:46
2-Hexanone	ND		0.0050	1	11/06/2013 17:46
Isopropylbenzene	ND		0.0050	1	11/06/2013 17:46
4-Isopropyl toluene	ND		0.0050	1	11/06/2013 17:46
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	11/06/2013 17:46
Methylene chloride	ND		0.0050	1	11/06/2013 17:46
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	11/06/2013 17:46
Naphthalene	ND		0.0050	1	11/06/2013 17:46
n-Propyl benzene	ND		0.0050	1	11/06/2013 17:46
Styrene	ND		0.0050	1	11/06/2013 17:46
1,1,1,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 17:46
1,1,2,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 17:46
Tetrachloroethene	ND		0.0050	1	11/06/2013 17:46
Toluene	ND		0.0050	1	11/06/2013 17:46
1,2,3-Trichlorobenzene	ND		0.0050	1	11/06/2013 17:46
1,2,4-Trichlorobenzene	ND		0.0050	1	11/06/2013 17:46
1,1,1-Trichloroethane	ND		0.0050	1	11/06/2013 17:46
1,1,2-Trichloroethane	ND		0.0050	1	11/06/2013 17:46
Trichloroethene	ND		0.0050	1	11/06/2013 17:46
Trichlorofluoromethane	ND		0.0050	1	11/06/2013 17:46
1,2,3-Trichloropropane	ND		0.0050	1	11/06/2013 17:46
1,2,4-Trimethylbenzene	ND		0.0050	1	11/06/2013 17:46
1,3,5-Trimethylbenzene	ND		0.0050	1	11/06/2013 17:46
Vinyl Chloride	ND		0.0050	1	11/06/2013 17:46
Xylenes, Total	ND		0.0050	1	11/06/2013 17:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	96		70-130		11/06/2013 17:46
Toluene-d8	100		70-130		11/06/2013 17:46
4-BFB	103		70-130		11/06/2013 17:46

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	11/06/2013 18:29
tert-Amyl methyl ether (TAME)	ND		0.0050	1	11/06/2013 18:29
Benzene	ND		0.0050	1	11/06/2013 18:29
Bromobenzene	ND		0.0050	1	11/06/2013 18:29
Bromochloromethane	ND		0.0050	1	11/06/2013 18:29
Bromodichloromethane	ND		0.0050	1	11/06/2013 18:29
Bromoform	ND		0.0050	1	11/06/2013 18:29
Bromomethane	ND		0.0050	1	11/06/2013 18:29
2-Butanone (MEK)	ND		0.020	1	11/06/2013 18:29
t-Butyl alcohol (TBA)	ND		0.050	1	11/06/2013 18:29
n-Butyl benzene	ND		0.0050	1	11/06/2013 18:29
sec-Butyl benzene	ND		0.0050	1	11/06/2013 18:29
tert-Butyl benzene	ND		0.0050	1	11/06/2013 18:29
Carbon Disulfide	ND		0.0050	1	11/06/2013 18:29
Carbon Tetrachloride	ND		0.0050	1	11/06/2013 18:29
Chlorobenzene	ND		0.0050	1	11/06/2013 18:29
Chloroethane	ND		0.0050	1	11/06/2013 18:29
Chloroform	ND		0.0050	1	11/06/2013 18:29
Chloromethane	ND		0.0050	1	11/06/2013 18:29
2-Chlorotoluene	ND		0.0050	1	11/06/2013 18:29
4-Chlorotoluene	ND		0.0050	1	11/06/2013 18:29
Dibromochloromethane	ND		0.0050	1	11/06/2013 18:29
1,2-Dibromo-3-chloropropane	ND		0.0040	1	11/06/2013 18:29
1,2-Dibromoethane (EDB)	ND		0.0040	1	11/06/2013 18:29
Dibromomethane	ND		0.0050	1	11/06/2013 18:29
1,2-Dichlorobenzene	ND		0.0050	1	11/06/2013 18:29
1,3-Dichlorobenzene	ND		0.0050	1	11/06/2013 18:29
1,4-Dichlorobenzene	ND		0.0050	1	11/06/2013 18:29
Dichlorodifluoromethane	ND		0.0050	1	11/06/2013 18:29
1,1-Dichloroethane	ND		0.0050	1	11/06/2013 18:29
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	11/06/2013 18:29
1,1-Dichloroethene	ND		0.0050	1	11/06/2013 18:29
cis-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 18:29
trans-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 18:29
1,2-Dichloropropane	ND		0.0050	1	11/06/2013 18:29
1,3-Dichloropropane	ND		0.0050	1	11/06/2013 18:29
2,2-Dichloropropane	ND		0.0050	1	11/06/2013 18:29
1,1-Dichloropropene	ND		0.0050	1	11/06/2013 18:29

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 18:29
trans-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 18:29
Diisopropyl ether (DIPE)	ND		0.0050	1	11/06/2013 18:29
Ethylbenzene	ND		0.0050	1	11/06/2013 18:29
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	11/06/2013 18:29
Freon 113	ND		0.10	1	11/06/2013 18:29
Hexachlorobutadiene	ND		0.0050	1	11/06/2013 18:29
Hexachloroethane	ND		0.0050	1	11/06/2013 18:29
2-Hexanone	ND		0.0050	1	11/06/2013 18:29
Isopropylbenzene	ND		0.0050	1	11/06/2013 18:29
4-Isopropyl toluene	ND		0.0050	1	11/06/2013 18:29
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	11/06/2013 18:29
Methylene chloride	ND		0.0050	1	11/06/2013 18:29
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	11/06/2013 18:29
Naphthalene	ND		0.0050	1	11/06/2013 18:29
n-Propyl benzene	ND		0.0050	1	11/06/2013 18:29
Styrene	ND		0.0050	1	11/06/2013 18:29
1,1,1,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 18:29
1,1,2,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 18:29
Tetrachloroethene	ND		0.0050	1	11/06/2013 18:29
Toluene	ND		0.0050	1	11/06/2013 18:29
1,2,3-Trichlorobenzene	ND		0.0050	1	11/06/2013 18:29
1,2,4-Trichlorobenzene	ND		0.0050	1	11/06/2013 18:29
1,1,1-Trichloroethane	ND		0.0050	1	11/06/2013 18:29
1,1,2-Trichloroethane	ND		0.0050	1	11/06/2013 18:29
Trichloroethene	ND		0.0050	1	11/06/2013 18:29
Trichlorofluoromethane	ND		0.0050	1	11/06/2013 18:29
1,2,3-Trichloropropane	ND		0.0050	1	11/06/2013 18:29
1,2,4-Trimethylbenzene	ND		0.0050	1	11/06/2013 18:29
1,3,5-Trimethylbenzene	ND		0.0050	1	11/06/2013 18:29
Vinyl Chloride	ND		0.0050	1	11/06/2013 18:29
Xylenes, Total	ND		0.0050	1	11/06/2013 18:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	96		70-130		11/06/2013 18:29
Toluene-d8	99		70-130		11/06/2013 18:29
4-BFB	108		70-130		11/06/2013 18:29



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	11/06/2013 21:35
Acenaphthylene	ND		0.25	1	11/06/2013 21:35
Acetochlor	ND		0.25	1	11/06/2013 21:35
Anthracene	ND		0.25	1	11/06/2013 21:35
Benzidine	ND		1.3	1	11/06/2013 21:35
Benzo (a) anthracene	ND		0.25	1	11/06/2013 21:35
Benzo (b) fluoranthene	ND		0.25	1	11/06/2013 21:35
Benzo (k) fluoranthene	ND		0.25	1	11/06/2013 21:35
Benzo (g,h,i) perylene	ND		0.25	1	11/06/2013 21:35
Benzo (a) pyrene	ND		0.25	1	11/06/2013 21:35
Benzyl Alcohol	ND		1.3	1	11/06/2013 21:35
1,1-Biphenyl	ND		0.25	1	11/06/2013 21:35
Bis (2-chloroethoxy) Methane	ND		0.25	1	11/06/2013 21:35
Bis (2-chloroethyl) Ether	ND		0.25	1	11/06/2013 21:35
Bis (2-chloroisopropyl) Ether	ND		0.25	1	11/06/2013 21:35
Bis (2-ethylhexyl) Adipate	ND		0.25	1	11/06/2013 21:35
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	11/06/2013 21:35
4-Bromophenyl Phenyl Ether	ND		0.25	1	11/06/2013 21:35
Butylbenzyl Phthalate	ND		0.25	1	11/06/2013 21:35
4-Chloroaniline	ND		0.25	1	11/06/2013 21:35
4-Chloro-3-methylphenol	ND		0.25	1	11/06/2013 21:35
2-Chloronaphthalene	ND		0.25	1	11/06/2013 21:35
2-Chlorophenol	ND		0.25	1	11/06/2013 21:35
4-Chlorophenyl Phenyl Ether	ND		0.25	1	11/06/2013 21:35
Chrysene	ND		0.25	1	11/06/2013 21:35
Dibenzo (a,h) anthracene	ND		0.25	1	11/06/2013 21:35
Dibenzofuran	ND		0.25	1	11/06/2013 21:35
Di-n-butyl Phthalate	ND		0.25	1	11/06/2013 21:35
1,2-Dichlorobenzene	ND		0.25	1	11/06/2013 21:35
1,3-Dichlorobenzene	ND		0.25	1	11/06/2013 21:35
1,4-Dichlorobenzene	ND		0.25	1	11/06/2013 21:35
3,3-Dichlorobenzidine	ND		0.50	1	11/06/2013 21:35
2,4-Dichlorophenol	ND		0.25	1	11/06/2013 21:35
Diethyl Phthalate	ND		0.25	1	11/06/2013 21:35
2,4-Dimethylphenol	ND		0.25	1	11/06/2013 21:35
Dimethyl Phthalate	ND		0.25	1	11/06/2013 21:35
4,6-Dinitro-2-methylphenol	ND		1.3	1	11/06/2013 21:35
2,4-Dinitrophenol	ND		6.3	1	11/06/2013 21:35

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.25	1	11/06/2013 21:35
2,6-Dinitrotoluene	ND		0.25	1	11/06/2013 21:35
Di-n-octyl Phthalate	ND		0.50	1	11/06/2013 21:35
1,2-Diphenylhydrazine	ND		0.25	1	11/06/2013 21:35
Fluoranthene	ND		0.25	1	11/06/2013 21:35
Fluorene	ND		0.25	1	11/06/2013 21:35
Hexachlorobenzene	ND		0.25	1	11/06/2013 21:35
Hexachlorobutadiene	ND		0.25	1	11/06/2013 21:35
Hexachlorocyclopentadiene	ND		1.3	1	11/06/2013 21:35
Hexachloroethane	ND		0.25	1	11/06/2013 21:35
Indeno (1,2,3-cd) pyrene	ND		0.25	1	11/06/2013 21:35
Isophorone	ND		0.25	1	11/06/2013 21:35
2-Methylnaphthalene	ND		0.25	1	11/06/2013 21:35
2-Methylphenol (o-Cresol)	ND		0.25	1	11/06/2013 21:35
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.25	1	11/06/2013 21:35
Naphthalene	ND		0.25	1	11/06/2013 21:35
2-Nitroaniline	ND		1.3	1	11/06/2013 21:35
3-Nitroaniline	ND		1.3	1	11/06/2013 21:35
4-Nitroaniline	ND		1.3	1	11/06/2013 21:35
Nitrobenzene	ND		0.25	1	11/06/2013 21:35
2-Nitrophenol	ND		1.3	1	11/06/2013 21:35
4-Nitrophenol	ND		1.3	1	11/06/2013 21:35
N-Nitrosodiphenylamine	ND		0.25	1	11/06/2013 21:35
N-Nitrosodi-n-propylamine	ND		0.25	1	11/06/2013 21:35
Pentachlorophenol	ND		1.3	1	11/06/2013 21:35
Phenanthrene	ND		0.25	1	11/06/2013 21:35
Phenol	ND		0.25	1	11/06/2013 21:35
Pyrene	ND		0.25	1	11/06/2013 21:35
1,2,4-Trichlorobenzene	ND		0.25	1	11/06/2013 21:35
2,4,5-Trichlorophenol	ND		0.25	1	11/06/2013 21:35
2,4,6-Trichlorophenol	ND		0.25	1	11/06/2013 21:35

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC21	83748
Analytes	Result		RL	DF	Date Analyzed
Surrogates	REC (%)		Limits		
2-Fluorophenol	95		30-130		11/06/2013 21:35
Phenol-d5	90		30-130		11/06/2013 21:35
Nitrobenzene-d5	75		30-130		11/06/2013 21:35
2-Fluorobiphenyl	68		30-130		11/06/2013 21:35
2,4,6-Tribromophenol	72		30-130		11/06/2013 21:35
4-Terphenyl-d14	76		30-130		11/06/2013 21:35

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.50	2	11/06/2013 22:57
Acenaphthylene	ND		0.50	2	11/06/2013 22:57
Acetochlor	ND		0.50	2	11/06/2013 22:57
Anthracene	ND		0.50	2	11/06/2013 22:57
Benzidine	ND		2.6	2	11/06/2013 22:57
Benzo (a) anthracene	ND		0.50	2	11/06/2013 22:57
Benzo (b) fluoranthene	ND		0.50	2	11/06/2013 22:57
Benzo (k) fluoranthene	ND		0.50	2	11/06/2013 22:57
Benzo (g,h,i) perylene	ND		0.50	2	11/06/2013 22:57
Benzo (a) pyrene	ND		0.50	2	11/06/2013 22:57
Benzyl Alcohol	ND		2.6	2	11/06/2013 22:57
1,1-Biphenyl	ND		0.50	2	11/06/2013 22:57
Bis (2-chloroethoxy) Methane	ND		0.50	2	11/06/2013 22:57
Bis (2-chloroethyl) Ether	ND		0.50	2	11/06/2013 22:57
Bis (2-chloroisopropyl) Ether	ND		0.50	2	11/06/2013 22:57
Bis (2-ethylhexyl) Adipate	ND		0.50	2	11/06/2013 22:57
Bis (2-ethylhexyl) Phthalate	ND		0.50	2	11/06/2013 22:57
4-Bromophenyl Phenyl Ether	ND		0.50	2	11/06/2013 22:57
Butylbenzyl Phthalate	ND		0.50	2	11/06/2013 22:57
4-Chloroaniline	ND		0.50	2	11/06/2013 22:57
4-Chloro-3-methylphenol	ND		0.50	2	11/06/2013 22:57
2-Chloronaphthalene	ND		0.50	2	11/06/2013 22:57
2-Chlorophenol	ND		0.50	2	11/06/2013 22:57
4-Chlorophenyl Phenyl Ether	ND		0.50	2	11/06/2013 22:57
Chrysene	ND		0.50	2	11/06/2013 22:57
Dibenzo (a,h) anthracene	ND		0.50	2	11/06/2013 22:57
Dibenzofuran	ND		0.50	2	11/06/2013 22:57
Di-n-butyl Phthalate	ND		0.50	2	11/06/2013 22:57
1,2-Dichlorobenzene	ND		0.50	2	11/06/2013 22:57
1,3-Dichlorobenzene	ND		0.50	2	11/06/2013 22:57
1,4-Dichlorobenzene	ND		0.50	2	11/06/2013 22:57
3,3-Dichlorobenzidine	ND		1.0	2	11/06/2013 22:57
2,4-Dichlorophenol	ND		0.50	2	11/06/2013 22:57
Diethyl Phthalate	ND		0.50	2	11/06/2013 22:57
2,4-Dimethylphenol	ND		0.50	2	11/06/2013 22:57
Dimethyl Phthalate	ND		0.50	2	11/06/2013 22:57
4,6-Dinitro-2-methylphenol	ND		2.6	2	11/06/2013 22:57
2,4-Dinitrophenol	ND		13	2	11/06/2013 22:57

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.50	2	11/06/2013 22:57
2,6-Dinitrotoluene	ND		0.50	2	11/06/2013 22:57
Di-n-octyl Phthalate	ND		1.0	2	11/06/2013 22:57
1,2-Diphenylhydrazine	ND		0.50	2	11/06/2013 22:57
Fluoranthene	ND		0.50	2	11/06/2013 22:57
Fluorene	ND		0.50	2	11/06/2013 22:57
Hexachlorobenzene	ND		0.50	2	11/06/2013 22:57
Hexachlorobutadiene	ND		0.50	2	11/06/2013 22:57
Hexachlorocyclopentadiene	ND		2.6	2	11/06/2013 22:57
Hexachloroethane	ND		0.50	2	11/06/2013 22:57
Indeno (1,2,3-cd) pyrene	ND		0.50	2	11/06/2013 22:57
Isophorone	ND		0.50	2	11/06/2013 22:57
2-Methylnaphthalene	ND		0.50	2	11/06/2013 22:57
2-Methylphenol (o-Cresol)	ND		0.50	2	11/06/2013 22:57
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.50	2	11/06/2013 22:57
Naphthalene	ND		0.50	2	11/06/2013 22:57
2-Nitroaniline	ND		2.6	2	11/06/2013 22:57
3-Nitroaniline	ND		2.6	2	11/06/2013 22:57
4-Nitroaniline	ND		2.6	2	11/06/2013 22:57
Nitrobenzene	ND		0.50	2	11/06/2013 22:57
2-Nitrophenol	ND		2.6	2	11/06/2013 22:57
4-Nitrophenol	ND		2.6	2	11/06/2013 22:57
N-Nitrosodiphenylamine	ND		0.50	2	11/06/2013 22:57
N-Nitrosodi-n-propylamine	ND		0.50	2	11/06/2013 22:57
Pentachlorophenol	ND		2.6	2	11/06/2013 22:57
Phenanthrene	ND		0.50	2	11/06/2013 22:57
Phenol	ND		0.50	2	11/06/2013 22:57
Pyrene	ND		0.50	2	11/06/2013 22:57
1,2,4-Trichlorobenzene	ND		0.50	2	11/06/2013 22:57
2,4,5-Trichlorophenol	ND		0.50	2	11/06/2013 22:57
2,4,6-Trichlorophenol	ND		0.50	2	11/06/2013 22:57

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC21	83748
Analytes	Result	RL	DF	Date Analyzed	
Surrogates	REC (%)	Limits			
2-Fluorophenol	88	30-130	11/06/2013 22:57		
Phenol-d5	85	30-130	11/06/2013 22:57		
Nitrobenzene-d5	72	30-130	11/06/2013 22:57		
2-Fluorobiphenyl	66	30-130	11/06/2013 22:57		
2,4,6-Tribromophenol	72	30-130	11/06/2013 22:57		
4-Terphenyl-d14	76	30-130	11/06/2013 22:57		



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-1-2.5</b>	<b>1311112-001A</b>	<b>Soil/TOTAL</b>	<b>11/01/2013 08:00</b>	<b>ICP-MS1</b>	<b>83696</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	11/06/2013 15:03
Arsenic	<b>11</b>		0.50	1	11/06/2013 15:03
Barium	<b>290</b>		5.0	1	11/06/2013 15:03
Beryllium	<b>0.70</b>		0.50	1	11/06/2013 15:03
Cadmium	ND		0.25	1	11/06/2013 15:03
Chromium	<b>28</b>		0.50	1	11/06/2013 15:03
Cobalt	<b>15</b>		0.50	1	11/06/2013 15:03
Copper	<b>36</b>		0.50	1	11/06/2013 15:03
Lead	<b>15</b>		0.50	1	11/06/2013 15:03
Mercury	<b>0.058</b>		0.050	1	11/06/2013 15:03
Molybdenum	<b>0.72</b>		0.50	1	11/06/2013 15:03
Nickel	<b>43</b>		0.50	1	11/06/2013 15:03
Selenium	ND		0.50	1	11/06/2013 15:03
Silver	ND		0.50	1	11/06/2013 15:03
Thallium	ND		0.50	1	11/06/2013 15:03
Vanadium	<b>34</b>		0.50	1	11/06/2013 15:03
Zinc	<b>83</b>		5.0	1	11/06/2013 15:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	100		70-130		11/06/2013 15:03

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-5	1311112-002A	Soil/TOTAL	11/01/2013 08:08	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	13		0.50	1	11/06/2013 15:09
Arsenic	37		0.50	1	11/06/2013 15:09
Barium	390		5.0	1	11/06/2013 15:09
Beryllium	0.63		0.50	1	11/06/2013 15:09
Cadmium	0.37		0.25	1	11/06/2013 15:09
Chromium	64		0.50	1	11/06/2013 15:09
Cobalt	22		0.50	1	11/06/2013 15:09
Copper	920		10	20	11/07/2013 22:53
Lead	340		10	20	11/07/2013 22:53
Mercury	3.6		0.50	10	11/08/2013 14:47
Molybdenum	1.7		0.50	1	11/06/2013 15:09
Nickel	82		0.50	1	11/06/2013 15:09
Selenium	ND		0.50	1	11/06/2013 15:09
Silver	4.4		0.50	1	11/06/2013 15:09
Thallium	ND		0.50	1	11/06/2013 15:09
Vanadium	77		0.50	1	11/06/2013 15:09
Zinc	340		5.0	1	11/06/2013 15:09
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		11/06/2013 15:09



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13-11/7/13

**WorkOrder:** 1311112  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-1-2.5</b>	<b>1311112-001A</b>	<b>Soil</b>	<b>11/01/2013 08:00</b>	<b>GC19</b>	<b>83695</b>

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/07/2013 02:59
MTBE	---	0.050	1	11/07/2013 02:59
Benzene	---	0.0050	1	11/07/2013 02:59
Toluene	---	0.0050	1	11/07/2013 02:59
Ethylbenzene	---	0.0050	1	11/07/2013 02:59
Xylenes	---	0.0050	1	11/07/2013 02:59
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	106	70-130		11/07/2013 02:59

<b>B-1-5</b>	<b>1311112-002A</b>	<b>Soil</b>	<b>11/01/2013 08:08</b>	<b>GC19</b>	<b>83764</b>
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/08/2013 02:51
MTBE	---	0.050	1	11/08/2013 02:51
Benzene	---	0.0050	1	11/08/2013 02:51
Toluene	---	0.0050	1	11/08/2013 02:51
Ethylbenzene	---	0.0050	1	11/08/2013 02:51
Xylenes	---	0.0050	1	11/08/2013 02:51
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	100	70-130		11/08/2013 02:51

<b>B-1-7.5</b>	<b>1311112-003A</b>	<b>Soil</b>	<b>11/01/2013 08:30</b>	<b>GC19</b>	<b>83695</b>
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/07/2013 03:58
MTBE	---	0.050	1	11/07/2013 03:58
Benzene	---	0.0050	1	11/07/2013 03:58
Toluene	---	0.0050	1	11/07/2013 03:58
Ethylbenzene	---	0.0050	1	11/07/2013 03:58
Xylenes	---	0.0050	1	11/07/2013 03:58
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	99	70-130		11/07/2013 03:58

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13-11/7/13

**WorkOrder:** 1311112  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-10	1311112-004A	Soil	11/01/2013 08:40	GC19	83695
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	11/07/2013 04:57
MTBE	---		0.050	1	11/07/2013 04:57
Benzene	---		0.0050	1	11/07/2013 04:57
Toluene	---		0.0050	1	11/07/2013 04:57
Ethylbenzene	---		0.0050	1	11/07/2013 04:57
Xylenes	---		0.0050	1	11/07/2013 04:57
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	105		70-130		11/07/2013 04:57



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-7.5	1311112-003A	Soil/TOTAL	11/01/2013 08:30	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.29		0.25	1	11/06/2013 15:15
Chromium	52		0.50	1	11/06/2013 15:15
Lead	160		5.0	10	11/07/2013 22:59
Nickel	54		0.50	1	11/06/2013 15:15
Zinc	240		5.0	1	11/06/2013 15:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		11/06/2013 15:15



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/Kg

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1-10	1311112-004A	Soil/TOTAL	11/01/2013 08:40	ICP-JY	83675
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	35		5.0	1	11/06/2013 13:05
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	111		70-130		11/06/2013 13:05



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** India Basin  
**Date Received:** 11/5/13 19:44  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311112  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-1-2.5</b>	<b>1311112-001A</b>	<b>Soil</b>	<b>11/01/2013 08:00</b>	<b>GC11A</b>	<b>83651</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>2.3</b>		1.0	1	11/06/2013 16:50
TPH-Motor Oil (C18-C36)	<b>10</b>		5.0	1	11/06/2013 16:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	103		70-130		11/06/2013 16:50
<b>B-1-5</b>	<b>1311112-002A</b>	<b>Soil</b>	<b>11/01/2013 08:08</b>	<b>GC11A</b>	<b>83700</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>21</b>		1.0	1	11/07/2013 05:24
TPH-Motor Oil (C18-C36)	<b>76</b>		5.0	1	11/07/2013 05:24
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	109		70-130		11/07/2013 05:24
<b>B-1-7.5</b>	<b>1311112-003A</b>	<b>Soil</b>	<b>11/01/2013 08:30</b>	<b>GC2A</b>	<b>83700</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>18</b>		2.0	2	11/06/2013 21:45
TPH-Motor Oil (C18-C36)	<b>75</b>		10	2	11/06/2013 21:45
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	94		70-130		11/06/2013 21:45
<b>B-1-10</b>	<b>1311112-004A</b>	<b>Soil</b>	<b>11/01/2013 08:40</b>	<b>GC2A</b>	<b>83700</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>11</b>		1.0	1	11/07/2013 09:05
TPH-Motor Oil (C18-C36)	<b>38</b>		5.0	1	11/07/2013 09:05
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	92		70-130		11/07/2013 09:05



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC22  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83679  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-83679  
 1311094-042AMS/MSD

### QC SUMMARY REPORT FOR SW8081A/8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.04901	0.0010	0.050	-	98	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.05253	0.0010	0.050	-	105	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.04269	0.0010	0.050	-	85.4	70-130
Dieldrin	ND	-	0.0010	-	-	-	-
Dieldrin	ND	0.06078	0.0010	0.050	-	122	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	-	0.0010	-	-	-	-
Endrin	ND	0.05975	0.0010	0.050	-	119	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.05865	0.0010	0.050	-	117	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-
<b>Surrogate Recovery</b>							
Decachlorobiphenyl	0.05017	0.05225		0.050	100	105	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC22  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83679  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-83679  
 1311094-042AMS/MSD

### QC SUMMARY REPORT FOR SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	0.04816	0.04805	0.050	ND	96.3	96.1	70-130	0.218	30
g-BHC	0.05257	0.05262	0.050	ND	105	105	70-130	0	30
p,p-DDT	0.04306	0.04315	0.050	ND	86.1	86.3	70-130	0.205	30
Dieldrin	0.07643	0.07412	0.050	0.01327	126	122	70-130	3.07	30
Endrin	0.05881	0.05899	0.050	ND	118	118	70-130	0	30
Heptachlor	0.05915	0.05904	0.050	ND	118	118	70-130	0	30
<b>Surrogate Recovery</b>									
Decachlorobiphenyl	0.04971	0.04978	0.050		99	100	70-130	0.147	30



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC5A  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83697  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-83697  
 1311110-002AMS/MSD

## QC SUMMARY REPORT FOR SW8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	0.1905	0.050	0.15	-	127	70-130
PCBs, total	ND	-	0.050	-	-	-	-

**Surrogate Recovery**

Decachlorobiphenyl	0.05596	0.05652		0.050	112	113	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aroclor1260	0.1842	0.1852	0.15	ND	123	123	70-130	0	30

**Surrogate Recovery**

Decachlorobiphenyl	0.05413	0.05428	0.050		108	109	70-130	0.265	30
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# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83658  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83658  
 1311078-001AMS/MSD

## QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0543	0.0050	0.050	-	109	70-130
Benzene	ND	0.05051	0.0050	0.050	-	101	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.2638	0.050	0.20	-	132, F2	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.05295	0.0050	0.050	-	106	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.05487	0.0040	0.050	-	110	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.05423	0.0040	0.050	-	108	70-130
1,1-Dichloroethene	ND	0.05143	0.0050	0.050	-	103	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83658  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83658  
 1311078-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.05298	0.0050	0.050	-	106	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.05306	0.0050	0.050	-	106	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.05513	0.0050	0.050	-	110	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.05411	0.0050	0.050	-	108	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.05475	0.0050	0.050	-	110	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.1216	0.1689		0.18	97	97	70-130
Toluene-d8	0.142	0.2011		0.18	114	115	70-130
4-BFB	0.01341	0.01767		0.018	107	101	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83658  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83658  
 1311078-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.05008	0.0505	0.050	ND	100,F1	101,F1	56-94	0.829	30
Benzene	0.04516	0.04516	0.050	ND	90.3	90.3	60-106	0	30
t-Butyl alcohol (TBA)	0.2398	0.2351	0.20	ND	120	118	56-140	1.95	30
Chlorobenzene	0.04667	0.04689	0.050	ND	93.3	93.8	61-108	0.477	30
1,2-Dibromoethane (EDB)	0.04983	0.04894	0.050	ND	99.7	97.9	54-119	1.81	30
1,2-Dichloroethane (1,2-DCA)	0.0486	0.04934	0.050	ND	97.2	98.7	48-115	1.50	30
1,1-Dichloroethene	0.0449	0.04541	0.050	ND	89.8	90.8	46-111	1.13	30
Diisopropyl ether (DIPE)	0.04789	0.04832	0.050	ND	95.8	96.6	53-111	0.888	30
Ethyl tert-butyl ether (ETBE)	0.0484	0.04862	0.050	ND	96.8	97.2	61-104	0.438	30
Methyl-t-butyl ether (MTBE)	0.05017	0.05082	0.050	ND	100	102	58-107	1.30	30
Toluene	0.04743	0.04734	0.050	ND	94.9	94.7	64-114	0.184	30
Trichloroethene	0.04903	0.04905	0.050	ND	98.1	98.1	60-116	0	30
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.1655	0.1653	0.18		95	94	70-130	0.148	30
Toluene-d8	0.1885	0.1871	0.18		108	107	70-130	0.748	30
4-BFB	0.01709	0.01671	0.018		98	95	70-130	2.23	30



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83748  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83748  
 1311111-001AMS/MSD

## QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.559	0.25	5	-	71.2	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	3.967	0.25	5	-	79.3	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.084	0.25	5	-	81.7	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.421	0.25	5	-	68.4	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	3.853	0.25	5	-	77.1	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83748  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83748  
 1311111-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	2.947	1.3	5	-	58.9	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	4.009	0.25	5	-	80.2	30-130
Pentachlorophenol	ND	2.654	1.3	5	-	53.1	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.099	0.25	5	-	82	30-130
Pyrene	ND	3.999	0.25	5	-	80	30-130
1,2,4-Trichlorobenzene	ND	3.427	0.25	5	-	68.5	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

#### Surrogate Recovery

2-Fluorophenol	5.863	3.765		5	117	75	30-130
Phenol-d5	5.664	3.676		5	113	74	30-130
Nitrobenzene-d5	5.064	3.427		5	101	69	30-130
2-Fluorobiphenyl	4.527	2.953		5	91	59	30-130
2,4,6-Tribromophenol	4.342	3.464		5	87	69	30-130
4-Terphenyl-d14	5.09	3.43		5	102	69	30-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83748  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83748  
 1311111-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<4	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<4	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<21	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<4	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<21	NR	NR	-	NR	
Phenol	NR	NR	0	ND<4	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<4	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	

#### Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83696  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83696  
 1311110-004AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	50.85	0.50	50	-	102	75-125
Arsenic	ND	51.94	0.50	50	-	104	75-125
Barium	ND	492.6	5.0	500	-	98.5	75-125
Beryllium	ND	48.2	0.50	50	-	96.4	75-125
Cadmium	ND	51.49	0.25	50	-	103	75-125
Chromium	ND	48.83	0.50	50	-	97.7	75-125
Cobalt	ND	53.61	0.50	50	-	107	75-125
Copper	ND	50.9	0.50	50	-	102	75-125
Lead	ND	51.07	0.50	50	-	102	75-125
Mercury	ND	1.267	0.050	1.25	-	101	75-125
Molybdenum	ND	50.64	0.50	50	-	101	75-125
Nickel	ND	50.82	0.50	50	-	102	75-125
Selenium	ND	55.58	0.50	50	-	111	75-125
Silver	ND	49.76	0.50	50	-	99.5	75-125
Thallium	ND	49.2	0.50	50	-	98.4	75-125
Vanadium	ND	50.48	0.50	50	-	101	75-125
Zinc	ND	518.3	5.0	500	-	104	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	498.5	494.5		500	100	99	70-130



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83696  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83696  
 1311110-004AMS/MSD

### QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	51.43	50.87	50	ND	103	102	75-125	1.09	20
Arsenic	55.2	56.81	50	2.597	105	108	75-125	2.87	20
Barium	567.6	568.4	500	43.42	105	105	75-125	0	20
Beryllium	46	45.7	50	ND	92	91.4	75-125	0.654	20
Cadmium	52.59	52.18	50	ND	105	104	75-125	0.783	20
Chromium	106.5	105.9	50	47.30	118	117	75-125	0.565	20
Cobalt	59.73	59.25	50	7.129	105	104	75-125	0.807	20
Copper	60.89	64.59	50	8.012	106	113	75-125	5.90	20
Lead	58.25	58.45	50	6.213	104	104	75-125	0	20
Mercury	1.303	1.28	1.25	ND	104	102	75-125	1.78	20
Molybdenum	52.49	53.03	50	ND	105	106	75-125	1.02	20
Nickel	86.72	88.87	50	31.27	111	115	75-125	2.45	20
Selenium	53.1	53.92	50	ND	106	108	75-125	1.53	20
Silver	51.95	50.89	50	ND	104	102	75-125	2.06	20
Thallium	49.81	50.21	50	ND	99.6	100	75-125	0.800	20
Vanadium	100	100.7	50	40.45	119	120	75-125	0.698	20
Zinc	550.4	553.5	500	25.62	105	106	75-125	0.562	20
<b>Surrogate Recovery</b>									
Tb 350.917	504.9	497.7	500		101	100	70-130	1.44	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83695  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83695  
 1311110-004AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.6236	0.40	0.60	-	104	70-130
MTBE	ND	0.09828	0.050	0.10	-	98.3	70-130
Benzene	ND	0.116	0.0050	0.10	-	116	70-130
Toluene	ND	0.1073	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.1187	0.0050	0.10	-	119	70-130
Xylenes	ND	0.3547	0.0050	0.30	-	118	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.1152	0.1139		0.10	115	114	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.5743	0.586	0.60	ND	95.7	97.7	70-130	2.02	20
MTBE	0.08996	0.08427	0.10	ND	90	84.3	70-130	6.53	20
Benzene	0.1075	0.1058	0.10	ND	107	106	70-130	1.63	20
Toluene	0.1002	0.09834	0.10	ND	100	98.3	70-130	1.83	20
Ethylbenzene	0.1112	0.1095	0.10	ND	111	110	70-130	1.51	20
Xylenes	0.328	0.3264	0.30	ND	109	109	70-130	0	20

**Surrogate Recovery**

2-Fluorotoluene	0.107	0.1058	0.10		107	106	70-130	1.06	20
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(Cont.)



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/7/13  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83764  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83764  
 1311063-021AMS/MSD

## QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.7538	0.40	0.60	-	126	70-130
MTBE	ND	0.09589	0.050	0.10	-	95.9	70-130
Benzene	ND	0.1093	0.0050	0.10	-	109	70-130
Toluene	ND	0.1061	0.0050	0.10	-	106	70-130
Ethylbenzene	ND	0.1179	0.0050	0.10	-	118	70-130
Xylenes	ND	0.3581	0.0050	0.30	-	119	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.1119	0.114		0.10	112	114	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.5838	0.587	0.60	ND	97.3	97.8	70-130	0.540	20
MTBE	0.08746	0.09279	0.10	ND	87.5	92.8	70-130	5.91	20
Benzene	0.1039	0.1003	0.10	ND	104	100	70-130	3.56	20
Toluene	0.09872	0.09638	0.10	ND	98.7	96.4	70-130	2.40	20
Ethylbenzene	0.1119	0.1101	0.10	ND	112	110	70-130	1.59	20
Xylenes	0.3337	0.3266	0.30	ND	111	109	70-130	2.14	20

**Surrogate Recovery**

2-Fluorotoluene	0.1092	0.1056	0.10		109	106	70-130	3.28	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83675  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83675  
 1310948-004BMS/MSD

### QC SUMMARY REPORT FOR 6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	52.25	5.0	50	-	104	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	567.2	557.5		500	113	112	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	NR	NR	50	1244	NR	NR	75-125	NR	25
<b>Surrogate Recovery</b>									
Tb 350.917	565.2	581	500		113	116	70-130	2.75	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/4/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC9b  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83651  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83651

### QC SUMMARY REPORT FOR SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	40.61	1.0	40	-	102	70-130
<b>Surrogate Recovery</b>							
C9	20.6	20.63		25	82	83	70-130



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC6B  
**Matrix:** Soil  
**Project:** India Basin

**WorkOrder:** 1311112  
**BatchID:** 83700  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83700

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### QC SUMMARY REPORT FOR SW8015B

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Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.3	1.0	40	-	103	70-130
<b>Surrogate Recovery</b>							
C9	25.52	24.89		25	102	100	70-130

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WorkOrder: 1311112 ClientCode: TWRF

WaterTrax  
  WriteOn  
  EDF  
  Excel  
  EQulS  
  Email  
  HardCopy  
  ThirdParty  
  J-flag

Report to: Maria Flessas  
 Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111  
 (415) 955-9040 FAX: (415) 955-9041

Bill to: Accounts Payable  
 Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111

Requested TAT: 3 days

Date Received: 11/05/2013  
 Date Printed: 11/05/2013

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12			
131112-001	B-1-2.5	Soil	11/1/2013 8:00	<input type="checkbox"/>	A		A	A	A	A	A	A							
131112-002	B-1-5	Soil	11/1/2013 8:08	<input type="checkbox"/>						A									
131112-003	B-1-7.5	Soil	11/1/2013 8:30	<input type="checkbox"/>		A	A	A											
131112-004	B-1-10	Soil	11/1/2013 8:40	<input type="checkbox"/>									A	A					

**Test Legend:**

1	8081PCB_S	3	8260B_S	4	8270D_S	5	ASBESTOS_S
6	CAM17MS_S	8	LUFTMS_S	9	PB_S	10	
11							
2	8082A_PCB_S						
7	G-MBTEX_S						
12							

The following SampleIDs: 001A, 002A, 003A, 004A contain testgroup.

Prepared by: Zoraida Cortez

Comments: Off hold 11/5/13.

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.





### Sample Receipt Checklist

Client Name: **Treadwell & Rollo**

Date and Time Received: **11/5/2013 7:44:40 PM**

Project Name: **India Basin**

LogIn Reviewed by: **Zoraida Cortez**

WorkOrder N°: **1311112** Matrix: Soil

Carrier: Rob Pringle (MAI Courier)

#### Chain of Custody (COC) Information

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

#### Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes  No
- Container/Temp Blank temperature Cooler Temp: 3.4°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  NA
- Sample labels checked for correct preservation? Yes  No
- Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
- Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1311111

**Report Created for:** Treadwell & Rollo  
555 Montgomery St., Suite 1300  
San Francisco, CA 94111

**Project Contact:** Maria Flessas  
**Project P.O.:**  
**Project Name:** #731626701; India Basin

**Project Received:** 11/05/2013

Analytical Report reviewed & approved for release on 11/08/2013 by:

*Question about  
your data?*

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**WorkOrder:** 1311111

### Glossary Abbreviation

### Description

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit
RPD	Relative Percent Deviation
SPK Val	Spike Value
SPKRef Val	Spike Reference Value

### Analytical Qualifier

e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant

### Quality Control Qualifier

F1	MS/MSD recovery was out of acceptance criteria; LCS validated the prep batch.
F2	LCS recovery for this compound is outside of acceptance limits.



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (8080 Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC22	83679
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.010	10	11/06/2013 18:56
a-BHC	ND		0.010	10	11/06/2013 18:56
b-BHC	ND		0.010	10	11/06/2013 18:56
d-BHC	ND		0.010	10	11/06/2013 18:56
g-BHC	ND		0.010	10	11/06/2013 18:56
Chlordane (Technical)	ND		0.25	10	11/06/2013 18:56
a-Chlordane	ND		0.010	10	11/06/2013 18:56
g-Chlordane	ND		0.010	10	11/06/2013 18:56
p,p-DDD	ND		0.010	10	11/06/2013 18:56
p,p-DDE	ND		0.010	10	11/06/2013 18:56
p,p-DDT	ND		0.010	10	11/06/2013 18:56
Dieldrin	ND		0.010	10	11/06/2013 18:56
Endosulfan I	ND		0.010	10	11/06/2013 18:56
Endosulfan II	ND		0.010	10	11/06/2013 18:56
Endosulfan sulfate	ND		0.010	10	11/06/2013 18:56
Endrin	ND		0.010	10	11/06/2013 18:56
Endrin aldehyde	ND		0.010	10	11/06/2013 18:56
Endrin ketone	ND		0.010	10	11/06/2013 18:56
Heptachlor	ND		0.010	10	11/06/2013 18:56
Heptachlor epoxide	ND		0.010	10	11/06/2013 18:56
Hexachlorobenzene	ND		0.10	10	11/06/2013 18:56
Hexachlorocyclopentadiene	ND		0.20	10	11/06/2013 18:56
Methoxychlor	ND		0.010	10	11/06/2013 18:56
Toxaphene	ND		0.50	10	11/06/2013 18:56
Aroclor1016	ND		0.50	10	11/06/2013 18:56
Aroclor1221	ND		0.50	10	11/06/2013 18:56
Aroclor1232	ND		0.50	10	11/06/2013 18:56
Aroclor1242	ND		0.50	10	11/06/2013 18:56
Aroclor1248	ND		0.50	10	11/06/2013 18:56
Aroclor1254	ND		0.50	10	11/06/2013 18:56
Aroclor1260	ND		0.50	10	11/06/2013 18:56
PCBs, total	ND		0.50	10	11/06/2013 18:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	88		70-130		11/06/2013 18:56



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/5/13-11/6/13

**WorkOrder:** 1311111  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	11/06/2013 16:20
tert-Amyl methyl ether (TAME)	ND		0.0050	1	11/06/2013 16:20
Benzene	ND		0.0050	1	11/06/2013 16:20
Bromobenzene	ND		0.0050	1	11/06/2013 16:20
Bromochloromethane	ND		0.0050	1	11/06/2013 16:20
Bromodichloromethane	ND		0.0050	1	11/06/2013 16:20
Bromoform	ND		0.0050	1	11/06/2013 16:20
Bromomethane	ND		0.0050	1	11/06/2013 16:20
2-Butanone (MEK)	ND		0.020	1	11/06/2013 16:20
t-Butyl alcohol (TBA)	ND		0.050	1	11/06/2013 16:20
n-Butyl benzene	ND		0.0050	1	11/06/2013 16:20
sec-Butyl benzene	ND		0.0050	1	11/06/2013 16:20
tert-Butyl benzene	ND		0.0050	1	11/06/2013 16:20
Carbon Disulfide	ND		0.0050	1	11/06/2013 16:20
Carbon Tetrachloride	ND		0.0050	1	11/06/2013 16:20
Chlorobenzene	ND		0.0050	1	11/06/2013 16:20
Chloroethane	ND		0.0050	1	11/06/2013 16:20
Chloroform	ND		0.0050	1	11/06/2013 16:20
Chloromethane	ND		0.0050	1	11/06/2013 16:20
2-Chlorotoluene	ND		0.0050	1	11/06/2013 16:20
4-Chlorotoluene	ND		0.0050	1	11/06/2013 16:20
Dibromochloromethane	ND		0.0050	1	11/06/2013 16:20
1,2-Dibromo-3-chloropropane	ND		0.0040	1	11/06/2013 16:20
1,2-Dibromoethane (EDB)	ND		0.0040	1	11/06/2013 16:20
Dibromomethane	ND		0.0050	1	11/06/2013 16:20
1,2-Dichlorobenzene	ND		0.0050	1	11/06/2013 16:20
1,3-Dichlorobenzene	ND		0.0050	1	11/06/2013 16:20
1,4-Dichlorobenzene	ND		0.0050	1	11/06/2013 16:20
Dichlorodifluoromethane	ND		0.0050	1	11/06/2013 16:20
1,1-Dichloroethane	ND		0.0050	1	11/06/2013 16:20
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	11/06/2013 16:20
1,1-Dichloroethene	ND		0.0050	1	11/06/2013 16:20
cis-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 16:20
trans-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 16:20
1,2-Dichloropropane	ND		0.0050	1	11/06/2013 16:20
1,3-Dichloropropane	ND		0.0050	1	11/06/2013 16:20
2,2-Dichloropropane	ND		0.0050	1	11/06/2013 16:20
1,1-Dichloropropene	ND		0.0050	1	11/06/2013 16:20

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/5/13-11/6/13

**WorkOrder:** 1311111  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 16:20
trans-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 16:20
Diisopropyl ether (DIPE)	ND		0.0050	1	11/06/2013 16:20
Ethylbenzene	ND		0.0050	1	11/06/2013 16:20
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	11/06/2013 16:20
Freon 113	ND		0.10	1	11/06/2013 16:20
Hexachlorobutadiene	ND		0.0050	1	11/06/2013 16:20
Hexachloroethane	ND		0.0050	1	11/06/2013 16:20
2-Hexanone	ND		0.0050	1	11/06/2013 16:20
Isopropylbenzene	ND		0.0050	1	11/06/2013 16:20
4-Isopropyl toluene	ND		0.0050	1	11/06/2013 16:20
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	11/06/2013 16:20
Methylene chloride	ND		0.0050	1	11/06/2013 16:20
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	11/06/2013 16:20
Naphthalene	ND		0.0050	1	11/06/2013 16:20
n-Propyl benzene	ND		0.0050	1	11/06/2013 16:20
Styrene	ND		0.0050	1	11/06/2013 16:20
1,1,1,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 16:20
1,1,2,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 16:20
Tetrachloroethene	ND		0.0050	1	11/06/2013 16:20
Toluene	ND		0.0050	1	11/06/2013 16:20
1,2,3-Trichlorobenzene	ND		0.0050	1	11/06/2013 16:20
1,2,4-Trichlorobenzene	ND		0.0050	1	11/06/2013 16:20
1,1,1-Trichloroethane	ND		0.0050	1	11/06/2013 16:20
1,1,2-Trichloroethane	ND		0.0050	1	11/06/2013 16:20
Trichloroethene	ND		0.0050	1	11/06/2013 16:20
Trichlorofluoromethane	ND		0.0050	1	11/06/2013 16:20
1,2,3-Trichloropropane	ND		0.0050	1	11/06/2013 16:20
1,2,4-Trimethylbenzene	ND		0.0050	1	11/06/2013 16:20
1,3,5-Trimethylbenzene	ND		0.0050	1	11/06/2013 16:20
Vinyl Chloride	ND		0.0050	1	11/06/2013 16:20
Xylenes, Total	ND		0.0050	1	11/06/2013 16:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	96		70-130		11/06/2013 16:20
Toluene-d8	100		70-130		11/06/2013 16:20
4-BFB	104		70-130		11/06/2013 16:20

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/5/13-11/6/13

**WorkOrder:** 1311111  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC16	83734
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	11/06/2013 17:03
tert-Amyl methyl ether (TAME)	ND		0.0050	1	11/06/2013 17:03
Benzene	ND		0.0050	1	11/06/2013 17:03
Bromobenzene	ND		0.0050	1	11/06/2013 17:03
Bromochloromethane	ND		0.0050	1	11/06/2013 17:03
Bromodichloromethane	ND		0.0050	1	11/06/2013 17:03
Bromoform	ND		0.0050	1	11/06/2013 17:03
Bromomethane	ND		0.0050	1	11/06/2013 17:03
2-Butanone (MEK)	ND		0.020	1	11/06/2013 17:03
t-Butyl alcohol (TBA)	ND		0.050	1	11/06/2013 17:03
n-Butyl benzene	ND		0.0050	1	11/06/2013 17:03
sec-Butyl benzene	ND		0.0050	1	11/06/2013 17:03
tert-Butyl benzene	ND		0.0050	1	11/06/2013 17:03
Carbon Disulfide	ND		0.0050	1	11/06/2013 17:03
Carbon Tetrachloride	ND		0.0050	1	11/06/2013 17:03
Chlorobenzene	ND		0.0050	1	11/06/2013 17:03
Chloroethane	ND		0.0050	1	11/06/2013 17:03
Chloroform	ND		0.0050	1	11/06/2013 17:03
Chloromethane	ND		0.0050	1	11/06/2013 17:03
2-Chlorotoluene	ND		0.0050	1	11/06/2013 17:03
4-Chlorotoluene	ND		0.0050	1	11/06/2013 17:03
Dibromochloromethane	ND		0.0050	1	11/06/2013 17:03
1,2-Dibromo-3-chloropropane	ND		0.0040	1	11/06/2013 17:03
1,2-Dibromoethane (EDB)	ND		0.0040	1	11/06/2013 17:03
Dibromomethane	ND		0.0050	1	11/06/2013 17:03
1,2-Dichlorobenzene	ND		0.0050	1	11/06/2013 17:03
1,3-Dichlorobenzene	ND		0.0050	1	11/06/2013 17:03
1,4-Dichlorobenzene	ND		0.0050	1	11/06/2013 17:03
Dichlorodifluoromethane	ND		0.0050	1	11/06/2013 17:03
1,1-Dichloroethane	ND		0.0050	1	11/06/2013 17:03
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	11/06/2013 17:03
1,1-Dichloroethene	ND		0.0050	1	11/06/2013 17:03
cis-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 17:03
trans-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 17:03
1,2-Dichloropropane	ND		0.0050	1	11/06/2013 17:03
1,3-Dichloropropane	ND		0.0050	1	11/06/2013 17:03
2,2-Dichloropropane	ND		0.0050	1	11/06/2013 17:03
1,1-Dichloropropene	ND		0.0050	1	11/06/2013 17:03

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/5/13-11/6/13

**WorkOrder:** 1311111  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC16	83734
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 17:03
trans-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 17:03
Diisopropyl ether (DIPE)	ND		0.0050	1	11/06/2013 17:03
Ethylbenzene	ND		0.0050	1	11/06/2013 17:03
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	11/06/2013 17:03
Freon 113	ND		0.10	1	11/06/2013 17:03
Hexachlorobutadiene	ND		0.0050	1	11/06/2013 17:03
Hexachloroethane	ND		0.0050	1	11/06/2013 17:03
2-Hexanone	ND		0.0050	1	11/06/2013 17:03
Isopropylbenzene	ND		0.0050	1	11/06/2013 17:03
4-Isopropyl toluene	ND		0.0050	1	11/06/2013 17:03
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	11/06/2013 17:03
Methylene chloride	ND		0.0050	1	11/06/2013 17:03
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	11/06/2013 17:03
Naphthalene	<b>0.0090</b>		0.0050	1	11/06/2013 17:03
n-Propyl benzene	ND		0.0050	1	11/06/2013 17:03
Styrene	ND		0.0050	1	11/06/2013 17:03
1,1,1,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 17:03
1,1,2,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 17:03
Tetrachloroethene	ND		0.0050	1	11/06/2013 17:03
Toluene	ND		0.0050	1	11/06/2013 17:03
1,2,3-Trichlorobenzene	ND		0.0050	1	11/06/2013 17:03
1,2,4-Trichlorobenzene	ND		0.0050	1	11/06/2013 17:03
1,1,1-Trichloroethane	ND		0.0050	1	11/06/2013 17:03
1,1,2-Trichloroethane	ND		0.0050	1	11/06/2013 17:03
Trichloroethene	ND		0.0050	1	11/06/2013 17:03
Trichlorofluoromethane	ND		0.0050	1	11/06/2013 17:03
1,2,3-Trichloropropane	ND		0.0050	1	11/06/2013 17:03
1,2,4-Trimethylbenzene	ND		0.0050	1	11/06/2013 17:03
1,3,5-Trimethylbenzene	ND		0.0050	1	11/06/2013 17:03
Vinyl Chloride	ND		0.0050	1	11/06/2013 17:03
Xylenes, Total	ND		0.0050	1	11/06/2013 17:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	96		70-130		11/06/2013 17:03
Toluene-d8	100		70-130		11/06/2013 17:03
4-BFB	102		70-130		11/06/2013 17:03



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		4.0	2	11/06/2013 22:30
Acenaphthylene	ND		4.0	2	11/06/2013 22:30
Acetochlor	ND		4.0	2	11/06/2013 22:30
Anthracene	ND		4.0	2	11/06/2013 22:30
Benzidine	ND		21	2	11/06/2013 22:30
Benzo (a) anthracene	ND		4.0	2	11/06/2013 22:30
Benzo (b) fluoranthene	ND		4.0	2	11/06/2013 22:30
Benzo (k) fluoranthene	ND		4.0	2	11/06/2013 22:30
Benzo (g,h,i) perylene	ND		4.0	2	11/06/2013 22:30
Benzo (a) pyrene	ND		4.0	2	11/06/2013 22:30
Benzyl Alcohol	ND		21	2	11/06/2013 22:30
1,1-Biphenyl	ND		4.0	2	11/06/2013 22:30
Bis (2-chloroethoxy) Methane	ND		4.0	2	11/06/2013 22:30
Bis (2-chloroethyl) Ether	ND		4.0	2	11/06/2013 22:30
Bis (2-chloroisopropyl) Ether	ND		4.0	2	11/06/2013 22:30
Bis (2-ethylhexyl) Adipate	ND		4.0	2	11/06/2013 22:30
Bis (2-ethylhexyl) Phthalate	ND		4.0	2	11/06/2013 22:30
4-Bromophenyl Phenyl Ether	ND		4.0	2	11/06/2013 22:30
Butylbenzyl Phthalate	ND		4.0	2	11/06/2013 22:30
4-Chloroaniline	ND		4.0	2	11/06/2013 22:30
4-Chloro-3-methylphenol	ND		4.0	2	11/06/2013 22:30
2-Chloronaphthalene	ND		4.0	2	11/06/2013 22:30
2-Chlorophenol	ND		4.0	2	11/06/2013 22:30
4-Chlorophenyl Phenyl Ether	ND		4.0	2	11/06/2013 22:30
Chrysene	ND		4.0	2	11/06/2013 22:30
Dibenzo (a,h) anthracene	ND		4.0	2	11/06/2013 22:30
Dibenzofuran	ND		4.0	2	11/06/2013 22:30
Di-n-butyl Phthalate	ND		4.0	2	11/06/2013 22:30
1,2-Dichlorobenzene	ND		4.0	2	11/06/2013 22:30
1,3-Dichlorobenzene	ND		4.0	2	11/06/2013 22:30
1,4-Dichlorobenzene	ND		4.0	2	11/06/2013 22:30
3,3-Dichlorobenzidine	ND		8.0	2	11/06/2013 22:30
2,4-Dichlorophenol	ND		4.0	2	11/06/2013 22:30
Diethyl Phthalate	ND		4.0	2	11/06/2013 22:30
2,4-Dimethylphenol	ND		4.0	2	11/06/2013 22:30
Dimethyl Phthalate	ND		4.0	2	11/06/2013 22:30
4,6-Dinitro-2-methylphenol	ND		21	2	11/06/2013 22:30
2,4-Dinitrophenol	ND		100	2	11/06/2013 22:30

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		4.0	2	11/06/2013 22:30
2,6-Dinitrotoluene	ND		4.0	2	11/06/2013 22:30
Di-n-octyl Phthalate	ND		8.0	2	11/06/2013 22:30
1,2-Diphenylhydrazine	ND		4.0	2	11/06/2013 22:30
Fluoranthene	ND		4.0	2	11/06/2013 22:30
Fluorene	ND		4.0	2	11/06/2013 22:30
Hexachlorobenzene	ND		4.0	2	11/06/2013 22:30
Hexachlorobutadiene	ND		4.0	2	11/06/2013 22:30
Hexachlorocyclopentadiene	ND		21	2	11/06/2013 22:30
Hexachloroethane	ND		4.0	2	11/06/2013 22:30
Indeno (1,2,3-cd) pyrene	ND		4.0	2	11/06/2013 22:30
Isophorone	ND		4.0	2	11/06/2013 22:30
2-Methylnaphthalene	ND		4.0	2	11/06/2013 22:30
2-Methylphenol (o-Cresol)	ND		4.0	2	11/06/2013 22:30
3 &/or 4-Methylphenol (m,p-Cresol)	ND		4.0	2	11/06/2013 22:30
Naphthalene	ND		4.0	2	11/06/2013 22:30
2-Nitroaniline	ND		21	2	11/06/2013 22:30
3-Nitroaniline	ND		21	2	11/06/2013 22:30
4-Nitroaniline	ND		21	2	11/06/2013 22:30
Nitrobenzene	ND		4.0	2	11/06/2013 22:30
2-Nitrophenol	ND		21	2	11/06/2013 22:30
4-Nitrophenol	ND		21	2	11/06/2013 22:30
N-Nitrosodiphenylamine	ND		4.0	2	11/06/2013 22:30
N-Nitrosodi-n-propylamine	ND		4.0	2	11/06/2013 22:30
Pentachlorophenol	ND		21	2	11/06/2013 22:30
Phenanthrene	ND		4.0	2	11/06/2013 22:30
Phenol	ND		4.0	2	11/06/2013 22:30
Pyrene	ND		4.0	2	11/06/2013 22:30
1,2,4-Trichlorobenzene	ND		4.0	2	11/06/2013 22:30
2,4,5-Trichlorophenol	ND		4.0	2	11/06/2013 22:30
2,4,6-Trichlorophenol	ND		4.0	2	11/06/2013 22:30

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC21	83748
Analytes	Result	RL	DF	Date Analyzed	
Surrogates	REC (%)	Limits			
2-Fluorophenol	87	30-130	11/06/2013 22:30		
Phenol-d5	82	30-130	11/06/2013 22:30		
Nitrobenzene-d5	68	30-130	11/06/2013 22:30		
2-Fluorobiphenyl	66	30-130	11/06/2013 22:30		
2,4,6-Tribromophenol	50	30-130	11/06/2013 22:30		
4-Terphenyl-d14	69	30-130	11/06/2013 22:30		

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		4.0	2	11/06/2013 22:02
Acenaphthylene	ND		4.0	2	11/06/2013 22:02
Acetochlor	ND		4.0	2	11/06/2013 22:02
Anthracene	ND		4.0	2	11/06/2013 22:02
Benzidine	ND		21	2	11/06/2013 22:02
Benzo (a) anthracene	ND		4.0	2	11/06/2013 22:02
Benzo (b) fluoranthene	ND		4.0	2	11/06/2013 22:02
Benzo (k) fluoranthene	ND		4.0	2	11/06/2013 22:02
Benzo (g,h,i) perylene	ND		4.0	2	11/06/2013 22:02
Benzo (a) pyrene	ND		4.0	2	11/06/2013 22:02
Benzyl Alcohol	ND		21	2	11/06/2013 22:02
1,1-Biphenyl	ND		4.0	2	11/06/2013 22:02
Bis (2-chloroethoxy) Methane	ND		4.0	2	11/06/2013 22:02
Bis (2-chloroethyl) Ether	ND		4.0	2	11/06/2013 22:02
Bis (2-chloroisopropyl) Ether	ND		4.0	2	11/06/2013 22:02
Bis (2-ethylhexyl) Adipate	ND		4.0	2	11/06/2013 22:02
Bis (2-ethylhexyl) Phthalate	ND		4.0	2	11/06/2013 22:02
4-Bromophenyl Phenyl Ether	ND		4.0	2	11/06/2013 22:02
Butylbenzyl Phthalate	ND		4.0	2	11/06/2013 22:02
4-Chloroaniline	ND		4.0	2	11/06/2013 22:02
4-Chloro-3-methylphenol	ND		4.0	2	11/06/2013 22:02
2-Chloronaphthalene	ND		4.0	2	11/06/2013 22:02
2-Chlorophenol	ND		4.0	2	11/06/2013 22:02
4-Chlorophenyl Phenyl Ether	ND		4.0	2	11/06/2013 22:02
Chrysene	ND		4.0	2	11/06/2013 22:02
Dibenzo (a,h) anthracene	ND		4.0	2	11/06/2013 22:02
Dibenzofuran	ND		4.0	2	11/06/2013 22:02
Di-n-butyl Phthalate	ND		4.0	2	11/06/2013 22:02
1,2-Dichlorobenzene	ND		4.0	2	11/06/2013 22:02
1,3-Dichlorobenzene	ND		4.0	2	11/06/2013 22:02
1,4-Dichlorobenzene	ND		4.0	2	11/06/2013 22:02
3,3-Dichlorobenzidine	ND		8.0	2	11/06/2013 22:02
2,4-Dichlorophenol	ND		4.0	2	11/06/2013 22:02
Diethyl Phthalate	ND		4.0	2	11/06/2013 22:02
2,4-Dimethylphenol	ND		4.0	2	11/06/2013 22:02
Dimethyl Phthalate	ND		4.0	2	11/06/2013 22:02
4,6-Dinitro-2-methylphenol	ND		21	2	11/06/2013 22:02
2,4-Dinitrophenol	ND		100	2	11/06/2013 22:02

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		4.0	2	11/06/2013 22:02
2,6-Dinitrotoluene	ND		4.0	2	11/06/2013 22:02
Di-n-octyl Phthalate	ND		8.0	2	11/06/2013 22:02
1,2-Diphenylhydrazine	ND		4.0	2	11/06/2013 22:02
Fluoranthene	ND		4.0	2	11/06/2013 22:02
Fluorene	ND		4.0	2	11/06/2013 22:02
Hexachlorobenzene	ND		4.0	2	11/06/2013 22:02
Hexachlorobutadiene	ND		4.0	2	11/06/2013 22:02
Hexachlorocyclopentadiene	ND		21	2	11/06/2013 22:02
Hexachloroethane	ND		4.0	2	11/06/2013 22:02
Indeno (1,2,3-cd) pyrene	ND		4.0	2	11/06/2013 22:02
Isophorone	ND		4.0	2	11/06/2013 22:02
2-Methylnaphthalene	ND		4.0	2	11/06/2013 22:02
2-Methylphenol (o-Cresol)	ND		4.0	2	11/06/2013 22:02
3 &/or 4-Methylphenol (m,p-Cresol)	ND		4.0	2	11/06/2013 22:02
Naphthalene	ND		4.0	2	11/06/2013 22:02
2-Nitroaniline	ND		21	2	11/06/2013 22:02
3-Nitroaniline	ND		21	2	11/06/2013 22:02
4-Nitroaniline	ND		21	2	11/06/2013 22:02
Nitrobenzene	ND		4.0	2	11/06/2013 22:02
2-Nitrophenol	ND		21	2	11/06/2013 22:02
4-Nitrophenol	ND		21	2	11/06/2013 22:02
N-Nitrosodiphenylamine	ND		4.0	2	11/06/2013 22:02
N-Nitrosodi-n-propylamine	ND		4.0	2	11/06/2013 22:02
Pentachlorophenol	ND		21	2	11/06/2013 22:02
Phenanthrene	ND		4.0	2	11/06/2013 22:02
Phenol	ND		4.0	2	11/06/2013 22:02
Pyrene	ND		4.0	2	11/06/2013 22:02
1,2,4-Trichlorobenzene	ND		4.0	2	11/06/2013 22:02
2,4,5-Trichlorophenol	ND		4.0	2	11/06/2013 22:02
2,4,6-Trichlorophenol	ND		4.0	2	11/06/2013 22:02

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC21	83748
Analytes	Result	RL	DF	Date Analyzed	
Surrogates	REC (%)	Limits			
2-Fluorophenol	101	30-130		11/06/2013 22:02	
Phenol-d5	91	30-130		11/06/2013 22:02	
Nitrobenzene-d5	82	30-130		11/06/2013 22:02	
2-Fluorobiphenyl	77	30-130		11/06/2013 22:02	
2,4,6-Tribromophenol	64	30-130		11/06/2013 22:02	
4-Terphenyl-d14	79	30-130		11/06/2013 22:02	



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-2.5	1311111-001A	Soil/TOTAL	11/02/2013 07:59	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.4		0.50	1	11/06/2013 15:21
Arsenic	10		0.50	1	11/06/2013 15:21
Barium	220		5.0	1	11/06/2013 15:21
Beryllium	0.54		0.50	1	11/06/2013 15:21
Cadmium	ND		0.25	1	11/06/2013 15:21
Chromium	55		0.50	1	11/06/2013 15:21
Cobalt	15		0.50	1	11/06/2013 15:21
Copper	59		0.50	1	11/06/2013 15:21
Lead	59		0.50	1	11/06/2013 15:21
Mercury	0.42		0.050	1	11/06/2013 15:21
Molybdenum	0.64		0.50	1	11/06/2013 15:21
Nickel	61		0.50	1	11/06/2013 15:21
Selenium	ND		0.50	1	11/06/2013 15:21
Silver	ND		0.50	1	11/06/2013 15:21
Thallium	ND		0.50	1	11/06/2013 15:21
Vanadium	53		0.50	1	11/06/2013 15:21
Zinc	110		5.0	1	11/06/2013 15:21
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		11/06/2013 15:21



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/5/13-11/7/13

**WorkOrder:** 1311111  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-5-2.5</b>	<b>1311111-001A</b>	<b>Soil</b>	<b>11/02/2013 07:59</b>	<b>GC19</b>	<b>83695</b>

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/06/2013 14:27
MTBE	---	0.050	1	11/06/2013 14:27
Benzene	---	0.0050	1	11/06/2013 14:27
Toluene	---	0.0050	1	11/06/2013 14:27
Ethylbenzene	---	0.0050	1	11/06/2013 14:27
Xylenes	---	0.0050	1	11/06/2013 14:27
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	110	70-130		11/06/2013 14:27

<b>B-5-5</b>	<b>1311111-002A</b>	<b>Soil</b>	<b>11/02/2013 08:25</b>	<b>GC19</b>	<b>83764</b>
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/08/2013 00:22
MTBE	---	0.050	1	11/08/2013 00:22
Benzene	---	0.0050	1	11/08/2013 00:22
Toluene	---	0.0050	1	11/08/2013 00:22
Ethylbenzene	---	0.0050	1	11/08/2013 00:22
Xylenes	---	0.0050	1	11/08/2013 00:22
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	103	70-130		11/08/2013 00:22

<b>B-5-7.5</b>	<b>1311111-003A</b>	<b>Soil</b>	<b>11/02/2013 08:40</b>	<b>GC19</b>	<b>83764</b>
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	11/08/2013 00:52
MTBE	---	0.050	1	11/08/2013 00:52
Benzene	---	0.0050	1	11/08/2013 00:52
Toluene	---	0.0050	1	11/08/2013 00:52
Ethylbenzene	---	0.0050	1	11/08/2013 00:52
Xylenes	---	0.0050	1	11/08/2013 00:52
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	105	70-130		11/08/2013 00:52

(Cont.)



## Analytical Report

<b>Client:</b> Treadwell & Rollo	<b>WorkOrder:</b> 1311111
<b>Project:</b> #731626701; India Basin	<b>Extraction Method:</b> SW5030B
<b>Date Received:</b> 11/5/13 19:22	<b>Analytical Method:</b> SW8021B/8015Bm
<b>Date Prepared:</b> 11/5/13-11/7/13	<b>Unit:</b> mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-10	1311111-004A	Soil	11/02/2013 08:50	GC19	83764
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	11/08/2013 02:21
MTBE	---		0.050	1	11/08/2013 02:21
Benzene	---		0.0050	1	11/08/2013 02:21
Toluene	---		0.0050	1	11/08/2013 02:21
Ethylbenzene	---		0.0050	1	11/08/2013 02:21
Xylenes	---		0.0050	1	11/08/2013 02:21
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	102		70-130		11/08/2013 02:21



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-5	1311111-002A	Soil/TOTAL	11/02/2013 08:25	ICP-MS1	83696

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.38	0.25	1	11/06/2013 15:28
Chromium	32	0.50	1	11/06/2013 15:28
Lead	120	5.0	10	11/07/2013 23:05
Nickel	45	0.50	1	11/06/2013 15:28
Zinc	120	5.0	1	11/06/2013 15:28

Surrogates	REC (%)	Limits	Date Analyzed
Tb 350.917	95	70-130	11/06/2013 15:28

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-7.5	1311111-003A	Soil/TOTAL	11/02/2013 08:40	ICP-MS1	83696

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	11/06/2013 15:34
Chromium	48	0.50	1	11/06/2013 15:34
Lead	41	0.50	1	11/06/2013 15:34
Nickel	73	0.50	1	11/06/2013 15:34
Zinc	130	5.0	1	11/06/2013 15:34

Surrogates	REC (%)	Limits	Date Analyzed
Tb 350.917	97	70-130	11/06/2013 15:34



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/Kg

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5-10	1311111-004A	Soil/TOTAL	11/02/2013 08:50	ICP-JY	83675
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	62		5.0	1	11/06/2013 13:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	114		70-130		11/06/2013 13:03



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:22  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311111  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-5-2.5</b>	<b>1311111-001A</b>	<b>Soil</b>	<b>11/02/2013 07:59</b>	<b>GC2A</b>	<b>83651</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>24</b>		2.0	2	11/06/2013 17:58
TPH-Motor Oil (C18-C36)	<b>95</b>		10	2	11/06/2013 17:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	92		70-130		11/06/2013 17:58
<b>B-5-5</b>	<b>1311111-002A</b>	<b>Soil</b>	<b>11/02/2013 08:25</b>	<b>GC11A</b>	<b>83651</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>84</b>		10	10	11/07/2013 07:41
TPH-Motor Oil (C18-C36)	<b>390</b>		50	10	11/07/2013 07:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	102		70-130		11/07/2013 07:41
<b>B-5-7.5</b>	<b>1311111-003A</b>	<b>Soil</b>	<b>11/02/2013 08:40</b>	<b>GC2A</b>	<b>83651</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>26</b>		5.0	5	11/07/2013 01:32
TPH-Motor Oil (C18-C36)	<b>120</b>		25	5	11/07/2013 01:32
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	95		70-130		11/07/2013 01:32
<b>B-5-10</b>	<b>1311111-004A</b>	<b>Soil</b>	<b>11/02/2013 08:50</b>	<b>GC11A</b>	<b>83651</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>12</b>		2.0	2	11/07/2013 00:50
TPH-Motor Oil (C18-C36)	<b>60</b>		10	2	11/07/2013 00:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	108		70-130		11/07/2013 00:50



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC22  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83679  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-83679  
 1311094-042AMS/MSD

### QC SUMMARY REPORT FOR SW8081A/8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.04901	0.0010	0.050	-	98	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.05253	0.0010	0.050	-	105	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.04269	0.0010	0.050	-	85.4	70-130
Dieldrin	ND	-	0.0010	-	-	-	-
Dieldrin	ND	0.06078	0.0010	0.050	-	122	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	-	0.0010	-	-	-	-
Endrin	ND	0.05975	0.0010	0.050	-	119	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.05865	0.0010	0.050	-	117	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-
<b>Surrogate Recovery</b>							
Decachlorobiphenyl	0.05017	0.05225		0.050	100	105	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC22  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83679  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-83679  
 1311094-042AMS/MSD

### QC SUMMARY REPORT FOR SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	0.04816	0.04805	0.050	ND	96.3	96.1	70-130	0.218	30
g-BHC	0.05257	0.05262	0.050	ND	105	105	70-130	0	30
p,p-DDT	0.04306	0.04315	0.050	ND	86.1	86.3	70-130	0.205	30
Dieldrin	0.07643	0.07412	0.050	0.01327	126	122	70-130	3.07	30
Endrin	0.05881	0.05899	0.050	ND	118	118	70-130	0	30
Heptachlor	0.05915	0.05904	0.050	ND	118	118	70-130	0	30
<b>Surrogate Recovery</b>									
Decachlorobiphenyl	0.04971	0.04978	0.050		99	100	70-130	0.147	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83658  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83658  
 1311078-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0543	0.0050	0.050	-	109	70-130
Benzene	ND	0.05051	0.0050	0.050	-	101	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.2638	0.050	0.20	-	132, F2	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.05295	0.0050	0.050	-	106	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.05487	0.0040	0.050	-	110	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.05423	0.0040	0.050	-	108	70-130
1,1-Dichloroethene	ND	0.05143	0.0050	0.050	-	103	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83658  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83658  
 1311078-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.05298	0.0050	0.050	-	106	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.05306	0.0050	0.050	-	106	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.05513	0.0050	0.050	-	110	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.05411	0.0050	0.050	-	108	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.05475	0.0050	0.050	-	110	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.1216	0.1689		0.18	97	97	70-130
Toluene-d8	0.142	0.2011		0.18	114	115	70-130
4-BFB	0.01341	0.01767		0.018	107	101	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83658  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83658  
 1311078-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.05008	0.0505	0.050	ND	100,F1	101,F1	56-94	0.829	30
Benzene	0.04516	0.04516	0.050	ND	90.3	90.3	60-106	0	30
t-Butyl alcohol (TBA)	0.2398	0.2351	0.20	ND	120	118	56-140	1.95	30
Chlorobenzene	0.04667	0.04689	0.050	ND	93.3	93.8	61-108	0.477	30
1,2-Dibromoethane (EDB)	0.04983	0.04894	0.050	ND	99.7	97.9	54-119	1.81	30
1,2-Dichloroethane (1,2-DCA)	0.0486	0.04934	0.050	ND	97.2	98.7	48-115	1.50	30
1,1-Dichloroethene	0.0449	0.04541	0.050	ND	89.8	90.8	46-111	1.13	30
Diisopropyl ether (DIPE)	0.04789	0.04832	0.050	ND	95.8	96.6	53-111	0.888	30
Ethyl tert-butyl ether (ETBE)	0.0484	0.04862	0.050	ND	96.8	97.2	61-104	0.438	30
Methyl-t-butyl ether (MTBE)	0.05017	0.05082	0.050	ND	100	102	58-107	1.30	30
Toluene	0.04743	0.04734	0.050	ND	94.9	94.7	64-114	0.184	30
Trichloroethene	0.04903	0.04905	0.050	ND	98.1	98.1	60-116	0	30
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.1655	0.1653	0.18		95	94	70-130	0.148	30
Toluene-d8	0.1885	0.1871	0.18		108	107	70-130	0.748	30
4-BFB	0.01709	0.01671	0.018		98	95	70-130	2.23	30



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/7/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83734  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83734  
 1311146-022AMS/MSD

## QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.04857	0.0050	0.050	-	97.1	70-130
Benzene	ND	0.04526	0.0050	0.050	-	90.5	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.2476	0.050	0.20	-	124	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04816	0.0050	0.050	-	96.3	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.05009	0.0040	0.050	-	100	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04955	0.0040	0.050	-	99.1	70-130
1,1-Dichloroethene	ND	0.04584	0.0050	0.050	-	91.7	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/7/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83734  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83734  
 1311146-022AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0472	0.0050	0.050	-	94.4	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.04744	0.0050	0.050	-	94.9	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.04928	0.0050	0.050	-	98.6	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.04982	0.0050	0.050	-	99.6	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04907	0.0050	0.050	-	98.1	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.1218	0.1612		0.18	97	92	70-130
Toluene-d8	0.1375	0.1941		0.18	110	111	70-130
4-BFB	0.01302	0.01736		0.018	104	99	70-130

(Cont.)



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/7/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83734  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83734  
 1311146-022AMS/MSD

## QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.05009	0.04843	0.050	ND	100,F1	96.9,F1	56-94	3.36	30
Benzene	0.04498	0.04325	0.050	ND	90	86.5	60-106	3.90	30
t-Butyl alcohol (TBA)	0.2465	0.2395	0.20	ND	123	120	56-140	2.89	30
Chlorobenzene	0.04843	0.04615	0.050	ND	96.9	92.3	61-108	4.83	30
1,2-Dibromoethane (EDB)	0.04991	0.04841	0.050	ND	99.8	96.8	54-119	3.05	30
1,2-Dichloroethane (1,2-DCA)	0.04905	0.04748	0.050	ND	98.1	95	48-115	3.25	30
1,1-Dichloroethene	0.04576	0.04447	0.050	ND	91.5	88.9	46-111	2.86	30
Diisopropyl ether (DIPE)	0.04755	0.0458	0.050	ND	95.1	91.6	53-111	3.74	30
Ethyl tert-butyl ether (ETBE)	0.04782	0.04659	0.050	ND	95.6	93.2	61-104	2.60	30
Methyl-t-butyl ether (MTBE)	0.0497	0.04874	0.050	ND	99.4	97.5	58-107	1.93	30
Toluene	0.04894	0.04707	0.050	ND	97.9	94.1	64-114	3.88	30
Trichloroethene	0.05009	0.04832	0.050	ND	100	96.6	60-116	3.59	30
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.1623	0.1625	0.18		93	93	70-130	0	30
Toluene-d8	0.1921	0.1897	0.18		110	108	70-130	1.26	30
4-BFB	0.01734	0.01692	0.018		99	97	70-130	2.41	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83748  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83748  
 1311111-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.559	0.25	5	-	71.2	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	3.967	0.25	5	-	79.3	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.084	0.25	5	-	81.7	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.421	0.25	5	-	68.4	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	3.853	0.25	5	-	77.1	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83748  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83748  
 1311111-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	2.947	1.3	5	-	58.9	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	4.009	0.25	5	-	80.2	30-130
Pentachlorophenol	ND	2.654	1.3	5	-	53.1	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.099	0.25	5	-	82	30-130
Pyrene	ND	3.999	0.25	5	-	80	30-130
1,2,4-Trichlorobenzene	ND	3.427	0.25	5	-	68.5	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

#### Surrogate Recovery

2-Fluorophenol	5.863	3.765		5	117	75	30-130
Phenol-d5	5.664	3.676		5	113	74	30-130
Nitrobenzene-d5	5.064	3.427		5	101	69	30-130
2-Fluorobiphenyl	4.527	2.953		5	91	59	30-130
2,4,6-Tribromophenol	4.342	3.464		5	87	69	30-130
4-Terphenyl-d14	5.09	3.43		5	102	69	30-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83748  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83748  
 1311111-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<4	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<4	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<21	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<4	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<21	NR	NR	-	NR	
Phenol	NR	NR	0	ND<4	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<4	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	

#### Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83696  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83696  
 1311110-004AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	50.85	0.50	50	-	102	75-125
Arsenic	ND	51.94	0.50	50	-	104	75-125
Barium	ND	492.6	5.0	500	-	98.5	75-125
Beryllium	ND	48.2	0.50	50	-	96.4	75-125
Cadmium	ND	51.49	0.25	50	-	103	75-125
Chromium	ND	48.83	0.50	50	-	97.7	75-125
Cobalt	ND	53.61	0.50	50	-	107	75-125
Copper	ND	50.9	0.50	50	-	102	75-125
Lead	ND	51.07	0.50	50	-	102	75-125
Mercury	ND	1.267	0.050	1.25	-	101	75-125
Molybdenum	ND	50.64	0.50	50	-	101	75-125
Nickel	ND	50.82	0.50	50	-	102	75-125
Selenium	ND	55.58	0.50	50	-	111	75-125
Silver	ND	49.76	0.50	50	-	99.5	75-125
Thallium	ND	49.2	0.50	50	-	98.4	75-125
Vanadium	ND	50.48	0.50	50	-	101	75-125
Zinc	ND	518.3	5.0	500	-	104	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	498.5	494.5		500	100	99	70-130



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83696  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83696  
 1311110-004AMS/MSD

### QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	51.43	50.87	50	ND	103	102	75-125	1.09	20
Arsenic	55.2	56.81	50	2.597	105	108	75-125	2.87	20
Barium	567.6	568.4	500	43.42	105	105	75-125	0	20
Beryllium	46	45.7	50	ND	92	91.4	75-125	0.654	20
Cadmium	52.59	52.18	50	ND	105	104	75-125	0.783	20
Chromium	106.5	105.9	50	47.30	118	117	75-125	0.565	20
Cobalt	59.73	59.25	50	7.129	105	104	75-125	0.807	20
Copper	60.89	64.59	50	8.012	106	113	75-125	5.90	20
Lead	58.25	58.45	50	6.213	104	104	75-125	0	20
Mercury	1.303	1.28	1.25	ND	104	102	75-125	1.78	20
Molybdenum	52.49	53.03	50	ND	105	106	75-125	1.02	20
Nickel	86.72	88.87	50	31.27	111	115	75-125	2.45	20
Selenium	53.1	53.92	50	ND	106	108	75-125	1.53	20
Silver	51.95	50.89	50	ND	104	102	75-125	2.06	20
Thallium	49.81	50.21	50	ND	99.6	100	75-125	0.800	20
Vanadium	100	100.7	50	40.45	119	120	75-125	0.698	20
Zinc	550.4	553.5	500	25.62	105	106	75-125	0.562	20
<b>Surrogate Recovery</b>									
Tb 350.917	504.9	497.7	500		101	100	70-130	1.44	20



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83695  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83695  
 1311110-004AMS/MSD

## QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.6236	0.40	0.60	-	104	70-130
MTBE	ND	0.09828	0.050	0.10	-	98.3	70-130
Benzene	ND	0.116	0.0050	0.10	-	116	70-130
Toluene	ND	0.1073	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.1187	0.0050	0.10	-	119	70-130
Xylenes	ND	0.3547	0.0050	0.30	-	118	70-130

### Surrogate Recovery

2-Fluorotoluene	0.1152	0.1139		0.10	115	114	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.5743	0.586	0.60	ND	95.7	97.7	70-130	2.02	20
MTBE	0.08996	0.08427	0.10	ND	90	84.3	70-130	6.53	20
Benzene	0.1075	0.1058	0.10	ND	107	106	70-130	1.63	20
Toluene	0.1002	0.09834	0.10	ND	100	98.3	70-130	1.83	20
Ethylbenzene	0.1112	0.1095	0.10	ND	111	110	70-130	1.51	20
Xylenes	0.328	0.3264	0.30	ND	109	109	70-130	0	20

### Surrogate Recovery

2-Fluorotoluene	0.107	0.1058	0.10		107	106	70-130	1.06	20
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(Cont.)



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/7/13  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83764  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83764  
 1311063-021AMS/MSD

## QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.7538	0.40	0.60	-	126	70-130
MTBE	ND	0.09589	0.050	0.10	-	95.9	70-130
Benzene	ND	0.1093	0.0050	0.10	-	109	70-130
Toluene	ND	0.1061	0.0050	0.10	-	106	70-130
Ethylbenzene	ND	0.1179	0.0050	0.10	-	118	70-130
Xylenes	ND	0.3581	0.0050	0.30	-	119	70-130

### Surrogate Recovery

2-Fluorotoluene	0.1119	0.114		0.10	112	114	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.5838	0.587	0.60	ND	97.3	97.8	70-130	0.540	20
MTBE	0.08746	0.09279	0.10	ND	87.5	92.8	70-130	5.91	20
Benzene	0.1039	0.1003	0.10	ND	104	100	70-130	3.56	20
Toluene	0.09872	0.09638	0.10	ND	98.7	96.4	70-130	2.40	20
Ethylbenzene	0.1119	0.1101	0.10	ND	112	110	70-130	1.59	20
Xylenes	0.3337	0.3266	0.30	ND	111	109	70-130	2.14	20

### Surrogate Recovery

2-Fluorotoluene	0.1092	0.1056	0.10		109	106	70-130	3.28	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83675  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83675  
 1310948-004BMS/MSD

### QC SUMMARY REPORT FOR 6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	52.25	5.0	50	-	104	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	567.2	557.5		500	113	112	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	NR	NR	50	1244	NR	NR	75-125	NR	25
<b>Surrogate Recovery</b>									
Tb 350.917	565.2	581	500		113	116	70-130	2.75	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/4/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC9b  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311111  
**BatchID:** 83651  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83651

### QC SUMMARY REPORT FOR SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	40.61	1.0	40	-	102	70-130
<b>Surrogate Recovery</b>							
C9	20.6	20.63		25	82	83	70-130

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1311111 ClientCode: TWRF

WaterTrax  
  WriteOn  
  EDF  
  Excel  
  EQulS  
  Email  
  HardCopy  
  ThirdParty  
  J-flag

Report to: Maria Flessas  
 Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111  
 (415) 955-9040 FAX: (415) 955-9041

Bill to: Accounts Payable  
 Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111

Requested TAT: 3 days

Date Received: 11/05/2013  
 Date Printed: 11/06/2013

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12

131111-001	B-5-2.5	Soil	11/2/2013 7:59	<input type="checkbox"/>	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
131111-002	B-5-5	Soil	11/2/2013 8:25	<input type="checkbox"/>															
131111-003	B-5-7.5	Soil	11/2/2013 8:40	<input type="checkbox"/>		A	A												
131111-004	B-5-10	Soil	11/2/2013 8:50	<input type="checkbox"/>															A

**Test Legend:**

1	8081PCB_S	3	8270D_S	4	ASBESTOS_S	5	CAM17MS_S
6	G-MBTX_S	8	PB_S	9		10	
11							
2	8260B_S						
7	LUFTMS_S						
12							

The following SampleIDs: 001A, 002A, 003A, 004A contain testgroup.

Prepared by: Zoraida Cortez

Comments: SEND HARD COPY

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.





### Sample Receipt Checklist

Client Name: **Treadwell & Rollo**

Date and Time Received: **11/5/2013 7:22:00 PM**

Project Name: **#731626701; India Basin**

LogIn Reviewed by: **Zoraida Cortez**

WorkOrder N°: **1311111** Matrix: Soil

Carrier: Rob Pringle (MAI Courier)

#### Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

#### Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

#### Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature	Cooler Temp: 4.2°C		NA <input type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Metal - pH acceptable upon receipt (pH<2)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1311110

**Report Created for:** Treadwell & Rollo  
555 Montgomery St., Suite 1300  
San Francisco, CA 94111

**Project Contact:** Maria Flessas  
**Project P.O.:**  
**Project Name:** #731626701; India Basin

**Project Received:** 11/05/2013

Analytical Report reviewed & approved for release on 11/08/2013 by:

*Question about  
your data?*

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**WorkOrder:** 1311110

### Glossary Abbreviation

### Description

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit
RPD	Relative Percent Deviation
SPK Val	Spike Value
SPKRef Val	Spike Reference Value

### Analytical Qualifier

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e4	gasoline range compounds are significant.
e7	oil range compounds are significant
h4	sulfuric acid permanganate (EPA 3665) cleanup

### Quality Control Qualifier

F1	MS/MSD recovery was out of acceptance criteria; LCS validated the prep batch.
F2	LCS recovery for this compound is outside of acceptance limits.



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A  
**Unit:** mg/kg

### Organochlorine Pesticides (8080 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-2.5	1311110-001A	Soil	11/02/2013 07:30	GC22	83679
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.010	10	11/06/2013 19:31
a-BHC	ND		0.010	10	11/06/2013 19:31
b-BHC	ND		0.010	10	11/06/2013 19:31
d-BHC	ND		0.010	10	11/06/2013 19:31
g-BHC	ND		0.010	10	11/06/2013 19:31
Chlordane (Technical)	ND		0.25	10	11/06/2013 19:31
a-Chlordane	ND		0.010	10	11/06/2013 19:31
g-Chlordane	ND		0.010	10	11/06/2013 19:31
p,p-DDD	ND		0.010	10	11/06/2013 19:31
p,p-DDE	ND		0.010	10	11/06/2013 19:31
p,p-DDT	ND		0.010	10	11/06/2013 19:31
Dieldrin	ND		0.010	10	11/06/2013 19:31
Endosulfan I	ND		0.010	10	11/06/2013 19:31
Endosulfan II	ND		0.010	10	11/06/2013 19:31
Endosulfan sulfate	ND		0.010	10	11/06/2013 19:31
Endrin	ND		0.010	10	11/06/2013 19:31
Endrin aldehyde	ND		0.010	10	11/06/2013 19:31
Endrin ketone	ND		0.010	10	11/06/2013 19:31
Heptachlor	ND		0.010	10	11/06/2013 19:31
Heptachlor epoxide	ND		0.010	10	11/06/2013 19:31
Hexachlorobenzene	ND		0.10	10	11/06/2013 19:31
Hexachlorocyclopentadiene	ND		0.20	10	11/06/2013 19:31
Methoxychlor	ND		0.010	10	11/06/2013 19:31
Toxaphene	ND		0.50	10	11/06/2013 19:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	96		70-130		11/06/2013 19:31



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg

### Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC5A	83697
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aroclor1016	ND		0.050	1	11/06/2013 10:20
Aroclor1221	ND		0.050	1	11/06/2013 10:20
Aroclor1232	ND		0.050	1	11/06/2013 10:20
Aroclor1242	ND		0.050	1	11/06/2013 10:20
Aroclor1248	ND		0.050	1	11/06/2013 10:20
Aroclor1254	ND		0.050	1	11/06/2013 10:20
Aroclor1260	ND		0.050	1	11/06/2013 10:20
PCBs, total	ND		0.050	1	11/06/2013 10:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	<u>Analytical Comments:</u> h4	
Decachlorobiphenyl	110		70-130	11/06/2013 10:20	



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	11/06/2013 15:38
tert-Amyl methyl ether (TAME)	ND		0.0050	1	11/06/2013 15:38
Benzene	ND		0.0050	1	11/06/2013 15:38
Bromobenzene	ND		0.0050	1	11/06/2013 15:38
Bromochloromethane	ND		0.0050	1	11/06/2013 15:38
Bromodichloromethane	ND		0.0050	1	11/06/2013 15:38
Bromoform	ND		0.0050	1	11/06/2013 15:38
Bromomethane	ND		0.0050	1	11/06/2013 15:38
2-Butanone (MEK)	ND		0.020	1	11/06/2013 15:38
t-Butyl alcohol (TBA)	ND		0.050	1	11/06/2013 15:38
n-Butyl benzene	ND		0.0050	1	11/06/2013 15:38
sec-Butyl benzene	ND		0.0050	1	11/06/2013 15:38
tert-Butyl benzene	ND		0.0050	1	11/06/2013 15:38
Carbon Disulfide	ND		0.0050	1	11/06/2013 15:38
Carbon Tetrachloride	ND		0.0050	1	11/06/2013 15:38
Chlorobenzene	ND		0.0050	1	11/06/2013 15:38
Chloroethane	ND		0.0050	1	11/06/2013 15:38
Chloroform	ND		0.0050	1	11/06/2013 15:38
Chloromethane	ND		0.0050	1	11/06/2013 15:38
2-Chlorotoluene	ND		0.0050	1	11/06/2013 15:38
4-Chlorotoluene	ND		0.0050	1	11/06/2013 15:38
Dibromochloromethane	ND		0.0050	1	11/06/2013 15:38
1,2-Dibromo-3-chloropropane	ND		0.0040	1	11/06/2013 15:38
1,2-Dibromoethane (EDB)	ND		0.0040	1	11/06/2013 15:38
Dibromomethane	ND		0.0050	1	11/06/2013 15:38
1,2-Dichlorobenzene	ND		0.0050	1	11/06/2013 15:38
1,3-Dichlorobenzene	ND		0.0050	1	11/06/2013 15:38
1,4-Dichlorobenzene	ND		0.0050	1	11/06/2013 15:38
Dichlorodifluoromethane	ND		0.0050	1	11/06/2013 15:38
1,1-Dichloroethane	ND		0.0050	1	11/06/2013 15:38
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	11/06/2013 15:38
1,1-Dichloroethene	ND		0.0050	1	11/06/2013 15:38
cis-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 15:38
trans-1,2-Dichloroethene	ND		0.0050	1	11/06/2013 15:38
1,2-Dichloropropane	ND		0.0050	1	11/06/2013 15:38
1,3-Dichloropropane	ND		0.0050	1	11/06/2013 15:38
2,2-Dichloropropane	ND		0.0050	1	11/06/2013 15:38
1,1-Dichloropropene	ND		0.0050	1	11/06/2013 15:38

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC16	83658
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 15:38
trans-1,3-Dichloropropene	ND		0.0050	1	11/06/2013 15:38
Diisopropyl ether (DIPE)	ND		0.0050	1	11/06/2013 15:38
Ethylbenzene	ND		0.0050	1	11/06/2013 15:38
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	11/06/2013 15:38
Freon 113	ND		0.10	1	11/06/2013 15:38
Hexachlorobutadiene	ND		0.0050	1	11/06/2013 15:38
Hexachloroethane	ND		0.0050	1	11/06/2013 15:38
2-Hexanone	ND		0.0050	1	11/06/2013 15:38
Isopropylbenzene	ND		0.0050	1	11/06/2013 15:38
4-Isopropyl toluene	ND		0.0050	1	11/06/2013 15:38
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	11/06/2013 15:38
Methylene chloride	ND		0.0050	1	11/06/2013 15:38
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	11/06/2013 15:38
Naphthalene	ND		0.0050	1	11/06/2013 15:38
n-Propyl benzene	ND		0.0050	1	11/06/2013 15:38
Styrene	ND		0.0050	1	11/06/2013 15:38
1,1,1,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 15:38
1,1,2,2-Tetrachloroethane	ND		0.0050	1	11/06/2013 15:38
Tetrachloroethene	ND		0.0050	1	11/06/2013 15:38
Toluene	ND		0.0050	1	11/06/2013 15:38
1,2,3-Trichlorobenzene	ND		0.0050	1	11/06/2013 15:38
1,2,4-Trichlorobenzene	ND		0.0050	1	11/06/2013 15:38
1,1,1-Trichloroethane	ND		0.0050	1	11/06/2013 15:38
1,1,2-Trichloroethane	ND		0.0050	1	11/06/2013 15:38
Trichloroethene	ND		0.0050	1	11/06/2013 15:38
Trichlorofluoromethane	ND		0.0050	1	11/06/2013 15:38
1,2,3-Trichloropropane	ND		0.0050	1	11/06/2013 15:38
1,2,4-Trimethylbenzene	ND		0.0050	1	11/06/2013 15:38
1,3,5-Trimethylbenzene	ND		0.0050	1	11/06/2013 15:38
Vinyl Chloride	ND		0.0050	1	11/06/2013 15:38
Xylenes, Total	ND		0.0050	1	11/06/2013 15:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	95		70-130		11/06/2013 15:38
Toluene-d8	99		70-130		11/06/2013 15:38
4-BFB	105		70-130		11/06/2013 15:38



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311110  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.50	2	11/06/2013 23:25
Acenaphthylene	ND		0.50	2	11/06/2013 23:25
Acetochlor	ND		0.50	2	11/06/2013 23:25
Anthracene	ND		0.50	2	11/06/2013 23:25
Benzidine	ND		2.6	2	11/06/2013 23:25
Benzo (a) anthracene	ND		0.50	2	11/06/2013 23:25
Benzo (b) fluoranthene	ND		0.50	2	11/06/2013 23:25
Benzo (k) fluoranthene	ND		0.50	2	11/06/2013 23:25
Benzo (g,h,i) perylene	ND		0.50	2	11/06/2013 23:25
Benzo (a) pyrene	ND		0.50	2	11/06/2013 23:25
Benzyl Alcohol	ND		2.6	2	11/06/2013 23:25
1,1-Biphenyl	ND		0.50	2	11/06/2013 23:25
Bis (2-chloroethoxy) Methane	ND		0.50	2	11/06/2013 23:25
Bis (2-chloroethyl) Ether	ND		0.50	2	11/06/2013 23:25
Bis (2-chloroisopropyl) Ether	ND		0.50	2	11/06/2013 23:25
Bis (2-ethylhexyl) Adipate	ND		0.50	2	11/06/2013 23:25
Bis (2-ethylhexyl) Phthalate	ND		0.50	2	11/06/2013 23:25
4-Bromophenyl Phenyl Ether	ND		0.50	2	11/06/2013 23:25
Butylbenzyl Phthalate	ND		0.50	2	11/06/2013 23:25
4-Chloroaniline	ND		0.50	2	11/06/2013 23:25
4-Chloro-3-methylphenol	ND		0.50	2	11/06/2013 23:25
2-Chloronaphthalene	ND		0.50	2	11/06/2013 23:25
2-Chlorophenol	ND		0.50	2	11/06/2013 23:25
4-Chlorophenyl Phenyl Ether	ND		0.50	2	11/06/2013 23:25
Chrysene	ND		0.50	2	11/06/2013 23:25
Dibenzo (a,h) anthracene	ND		0.50	2	11/06/2013 23:25
Dibenzofuran	ND		0.50	2	11/06/2013 23:25
Di-n-butyl Phthalate	ND		0.50	2	11/06/2013 23:25
1,2-Dichlorobenzene	ND		0.50	2	11/06/2013 23:25
1,3-Dichlorobenzene	ND		0.50	2	11/06/2013 23:25
1,4-Dichlorobenzene	ND		0.50	2	11/06/2013 23:25
3,3-Dichlorobenzidine	ND		1.0	2	11/06/2013 23:25
2,4-Dichlorophenol	ND		0.50	2	11/06/2013 23:25
Diethyl Phthalate	ND		0.50	2	11/06/2013 23:25
2,4-Dimethylphenol	ND		0.50	2	11/06/2013 23:25
Dimethyl Phthalate	ND		0.50	2	11/06/2013 23:25
4,6-Dinitro-2-methylphenol	ND		2.6	2	11/06/2013 23:25
2,4-Dinitrophenol	ND		13	2	11/06/2013 23:25

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311110  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC21	83748
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.50	2	11/06/2013 23:25
2,6-Dinitrotoluene	ND		0.50	2	11/06/2013 23:25
Di-n-octyl Phthalate	ND		1.0	2	11/06/2013 23:25
1,2-Diphenylhydrazine	ND		0.50	2	11/06/2013 23:25
Fluoranthene	ND		0.50	2	11/06/2013 23:25
Fluorene	ND		0.50	2	11/06/2013 23:25
Hexachlorobenzene	ND		0.50	2	11/06/2013 23:25
Hexachlorobutadiene	ND		0.50	2	11/06/2013 23:25
Hexachlorocyclopentadiene	ND		2.6	2	11/06/2013 23:25
Hexachloroethane	ND		0.50	2	11/06/2013 23:25
Indeno (1,2,3-cd) pyrene	ND		0.50	2	11/06/2013 23:25
Isophorone	ND		0.50	2	11/06/2013 23:25
2-Methylnaphthalene	ND		0.50	2	11/06/2013 23:25
2-Methylphenol (o-Cresol)	ND		0.50	2	11/06/2013 23:25
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.50	2	11/06/2013 23:25
Naphthalene	ND		0.50	2	11/06/2013 23:25
2-Nitroaniline	ND		2.6	2	11/06/2013 23:25
3-Nitroaniline	ND		2.6	2	11/06/2013 23:25
4-Nitroaniline	ND		2.6	2	11/06/2013 23:25
Nitrobenzene	ND		0.50	2	11/06/2013 23:25
2-Nitrophenol	ND		2.6	2	11/06/2013 23:25
4-Nitrophenol	ND		2.6	2	11/06/2013 23:25
N-Nitrosodiphenylamine	ND		0.50	2	11/06/2013 23:25
N-Nitrosodi-n-propylamine	ND		0.50	2	11/06/2013 23:25
Pentachlorophenol	ND		2.6	2	11/06/2013 23:25
Phenanthrene	ND		0.50	2	11/06/2013 23:25
Phenol	ND		0.50	2	11/06/2013 23:25
Pyrene	ND		0.50	2	11/06/2013 23:25
1,2,4-Trichlorobenzene	ND		0.50	2	11/06/2013 23:25
2,4,5-Trichlorophenol	ND		0.50	2	11/06/2013 23:25
2,4,6-Trichlorophenol	ND		0.50	2	11/06/2013 23:25

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/6/13

**WorkOrder:** 1311110  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil	11/02/2013 07:40	GC21	83748
Analytes	Result		RL	DF	Date Analyzed
Surrogates	REC (%)		Limits		
2-Fluorophenol	116		30-130		11/06/2013 23:25
Phenol-d5	111		30-130		11/06/2013 23:25
Nitrobenzene-d5	94		30-130		11/06/2013 23:25
2-Fluorobiphenyl	89		30-130		11/06/2013 23:25
2,4,6-Tribromophenol	97		30-130		11/06/2013 23:25
4-Terphenyl-d14	101		30-130		11/06/2013 23:25



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-2.5	1311110-001A	Soil/TOTAL	11/02/2013 07:30	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.70		0.50	1	11/06/2013 13:41
Arsenic	8.9		0.50	1	11/06/2013 13:41
Barium	280		5.0	1	11/06/2013 13:41
Beryllium	0.51		0.50	1	11/06/2013 13:41
Cadmium	ND		0.25	1	11/06/2013 13:41
Chromium	41		0.50	1	11/06/2013 13:41
Cobalt	17		0.50	1	11/06/2013 13:41
Copper	78		0.50	1	11/06/2013 13:41
Lead	28		0.50	1	11/06/2013 13:41
Mercury	0.35		0.050	1	11/06/2013 13:41
Molybdenum	0.71		0.50	1	11/06/2013 13:41
Nickel	60		0.50	1	11/06/2013 13:41
Selenium	ND		0.50	1	11/06/2013 13:41
Silver	ND		0.50	1	11/06/2013 13:41
Thallium	ND		0.50	1	11/06/2013 13:41
Vanadium	42		0.50	1	11/06/2013 13:41
Zinc	130		5.0	1	11/06/2013 13:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	100		70-130		11/06/2013 13:41

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-10	1311110-004A	Soil/TOTAL	11/02/2013 08:06	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	11/06/2013 13:54
Arsenic	2.6		0.50	1	11/06/2013 13:54
Barium	43		5.0	1	11/06/2013 13:54
Beryllium	ND		0.50	1	11/06/2013 13:54
Cadmium	ND		0.25	1	11/06/2013 13:54
Chromium	47		0.50	1	11/06/2013 13:54
Cobalt	7.1		0.50	1	11/06/2013 13:54
Copper	8.0		0.50	1	11/06/2013 13:54
Lead	6.2		0.50	1	11/06/2013 13:54
Mercury	ND		0.050	1	11/06/2013 13:54
Molybdenum	ND		0.50	1	11/06/2013 13:54
Nickel	31		0.50	1	11/06/2013 13:54
Selenium	ND		0.50	1	11/06/2013 13:54
Silver	ND		0.50	1	11/06/2013 13:54
Thallium	ND		0.50	1	11/06/2013 13:54
Vanadium	40		0.50	1	11/06/2013 13:54
Zinc	26		5.0	1	11/06/2013 13:54
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		11/06/2013 13:54



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-2-2.5</b>	<b>1311110-001A</b>	<b>Soil</b>	<b>11/02/2013 07:30</b>	<b>GC19</b>	<b>83650</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	11/06/2013 11:55
MTBE	---		0.050	1	11/06/2013 11:55
Benzene	---		0.0050	1	11/06/2013 11:55
Toluene	---		0.0050	1	11/06/2013 11:55
Ethylbenzene	---		0.0050	1	11/06/2013 11:55
Xylenes	---		0.0050	1	11/06/2013 11:55
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	109		70-130		11/06/2013 11:55
<b>B-2-5</b>	<b>1311110-002A</b>	<b>Soil</b>	<b>11/02/2013 07:40</b>	<b>GC19</b>	<b>83650</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	11/06/2013 12:56
MTBE	---		0.050	1	11/06/2013 12:56
Benzene	---		0.0050	1	11/06/2013 12:56
Toluene	---		0.0050	1	11/06/2013 12:56
Ethylbenzene	---		0.0050	1	11/06/2013 12:56
Xylenes	---		0.0050	1	11/06/2013 12:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	102		70-130		11/06/2013 12:56
<b>B-2-7.5</b>	<b>1311110-003A</b>	<b>Soil</b>	<b>11/02/2013 07:55</b>	<b>GC19</b>	<b>83650</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	<b>13</b>		1.0	1	11/06/2013 13:57
MTBE	---		0.050	1	11/06/2013 13:57
Benzene	---		0.0050	1	11/06/2013 13:57
Toluene	---		0.0050	1	11/06/2013 13:57
Ethylbenzene	---		0.0050	1	11/06/2013 13:57
Xylenes	---		0.0050	1	11/06/2013 13:57
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	84		70-130		11/06/2013 13:57

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-10	1311110-004A	Soil	11/02/2013 08:06	GC7	83695
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND		1.0	1	11/06/2013 19:38
MTBE	---		0.050	1	11/06/2013 19:38
Benzene	---		0.0050	1	11/06/2013 19:38
Toluene	---		0.0050	1	11/06/2013 19:38
Ethylbenzene	---		0.0050	1	11/06/2013 19:38
Xylenes	---		0.0050	1	11/06/2013 19:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	103		70-130		11/06/2013 19:38



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-5	1311110-002A	Soil/TOTAL	11/02/2013 07:40	ICP-MS1	83696
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.32		0.25	1	11/06/2013 13:48
Chromium	58		0.50	1	11/06/2013 13:48
Lead	140		5.0	10	11/07/2013 22:46
Nickel	73		0.50	1	11/06/2013 13:48
Zinc	190		5.0	1	11/06/2013 13:48
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		11/06/2013 13:48



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/Kg

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2-7.5	1311110-003A	Soil/TOTAL	11/02/2013 07:55	ICP-JY	83675
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	48		5.0	1	11/06/2013 13:01
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	111		70-130		11/06/2013 13:01



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 11/5/13 19:02  
**Date Prepared:** 11/5/13

**WorkOrder:** 1311110  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-2-2.5</b>	<b>1311110-001A</b>	<b>Soil</b>	<b>11/02/2013 07:30</b>	<b>GC2A</b>	<b>83651</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>52</b>		5.0	5	11/07/2013 05:18
TPH-Motor Oil (C18-C36)	<b>160</b>		25	5	11/07/2013 05:18
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	88		70-130		11/07/2013 05:18
<b>B-2-5</b>	<b>1311110-002A</b>	<b>Soil</b>	<b>11/02/2013 07:40</b>	<b>GC11A</b>	<b>83651</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>15</b>		2.0	2	11/06/2013 19:07
TPH-Motor Oil (C18-C36)	<b>79</b>		10	2	11/06/2013 19:07
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	105		70-130		11/06/2013 19:07
<b>B-2-7.5</b>	<b>1311110-003A</b>	<b>Soil</b>	<b>11/02/2013 07:55</b>	<b>GC11A</b>	<b>83651</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>23</b>		2.0	2	11/06/2013 22:33
TPH-Motor Oil (C18-C36)	<b>36</b>		10	2	11/06/2013 22:33
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e4,e2	
C9	106		70-130		11/06/2013 22:33
<b>B-2-10</b>	<b>1311110-004A</b>	<b>Soil</b>	<b>11/02/2013 08:06</b>	<b>GC6B</b>	<b>83651</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>1.6</b>		1.0	1	11/07/2013 01:46
TPH-Motor Oil (C18-C36)	<b>7.7</b>		5.0	1	11/07/2013 01:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	120		70-130		11/07/2013 01:46



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC22  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83679  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-83679  
 1311094-042AMS/MSD

### QC SUMMARY REPORT FOR SW8081A

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.04901	0.0010	0.050	-	98	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.05253	0.0010	0.050	-	105	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.04269	0.0010	0.050	-	85.4	70-130
Dieldrin	ND	-	0.0010	-	-	-	-
Dieldrin	ND	0.06078	0.0010	0.050	-	122	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	-	0.0010	-	-	-	-
Endrin	ND	0.05975	0.0010	0.050	-	119	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.05865	0.0010	0.050	-	117	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-

**Surrogate Recovery**

Decachlorobiphenyl	0.05017	0.05225		0.050	100	105	70-130
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC22  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83679  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-83679  
 1311094-042AMS/MSD

### QC SUMMARY REPORT FOR SW8081A

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	0.04816	0.04805	0.050	ND	96.3	96.1	70-130	0.218	30
g-BHC	0.05257	0.05262	0.050	ND	105	105	70-130	0	30
p,p-DDT	0.04306	0.04315	0.050	ND	86.1	86.3	70-130	0.205	30
Dieldrin	0.07643	0.07412	0.050	0.01327	126	122	70-130	3.07	30
Endrin	0.05881	0.05899	0.050	ND	118	118	70-130	0	30
Heptachlor	0.05915	0.05904	0.050	ND	118	118	70-130	0	30
<b>Surrogate Recovery</b>									
Decachlorobiphenyl	0.04971	0.04978	0.050		99	100	70-130	0.147	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC5A  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83697  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-83697  
 1311110-002AMS/MSD

### QC SUMMARY REPORT FOR SW8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	0.1905	0.050	0.15	-	127	70-130
PCBs, total	ND	-	0.050	-	-	-	-

**Surrogate Recovery**

Decachlorobiphenyl	0.05596	0.05652		0.050	112	113	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aroclor1260	0.1842	0.1852	0.15	ND	123	123	70-130	0	30

**Surrogate Recovery**

Decachlorobiphenyl	0.05413	0.05428	0.050		108	109	70-130	0.265	30
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# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83658  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83658  
 1311078-001AMS/MSD

## QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0543	0.0050	0.050	-	109	70-130
Benzene	ND	0.05051	0.0050	0.050	-	101	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.2638	0.050	0.20	-	132, F2	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.05295	0.0050	0.050	-	106	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.05487	0.0040	0.050	-	110	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.05423	0.0040	0.050	-	108	70-130
1,1-Dichloroethene	ND	0.05143	0.0050	0.050	-	103	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83658  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83658  
 1311078-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.05298	0.0050	0.050	-	106	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.05306	0.0050	0.050	-	106	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.05513	0.0050	0.050	-	110	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.05411	0.0050	0.050	-	108	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.05475	0.0050	0.050	-	110	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.1216	0.1689		0.18	97	97	70-130
Toluene-d8	0.142	0.2011		0.18	114	115	70-130
4-BFB	0.01341	0.01767		0.018	107	101	70-130

(Cont.)



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC16  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83658  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83658  
 1311078-001AMS/MSD

## QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.05008	0.0505	0.050	ND	100,F1	101,F1	56-94	0.829	30
Benzene	0.04516	0.04516	0.050	ND	90.3	90.3	60-106	0	30
t-Butyl alcohol (TBA)	0.2398	0.2351	0.20	ND	120	118	56-140	1.95	30
Chlorobenzene	0.04667	0.04689	0.050	ND	93.3	93.8	61-108	0.477	30
1,2-Dibromoethane (EDB)	0.04983	0.04894	0.050	ND	99.7	97.9	54-119	1.81	30
1,2-Dichloroethane (1,2-DCA)	0.0486	0.04934	0.050	ND	97.2	98.7	48-115	1.50	30
1,1-Dichloroethene	0.0449	0.04541	0.050	ND	89.8	90.8	46-111	1.13	30
Diisopropyl ether (DIPE)	0.04789	0.04832	0.050	ND	95.8	96.6	53-111	0.888	30
Ethyl tert-butyl ether (ETBE)	0.0484	0.04862	0.050	ND	96.8	97.2	61-104	0.438	30
Methyl-t-butyl ether (MTBE)	0.05017	0.05082	0.050	ND	100	102	58-107	1.30	30
Toluene	0.04743	0.04734	0.050	ND	94.9	94.7	64-114	0.184	30
Trichloroethene	0.04903	0.04905	0.050	ND	98.1	98.1	60-116	0	30
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.1655	0.1653	0.18		95	94	70-130	0.148	30
Toluene-d8	0.1885	0.1871	0.18		108	107	70-130	0.748	30
4-BFB	0.01709	0.01671	0.018		98	95	70-130	2.23	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83748  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83748  
 1311111-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.559	0.25	5	-	71.2	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	3.967	0.25	5	-	79.3	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.084	0.25	5	-	81.7	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.421	0.25	5	-	68.4	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	3.853	0.25	5	-	77.1	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83748  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83748  
 1311111-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	2.947	1.3	5	-	58.9	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	4.009	0.25	5	-	80.2	30-130
Pentachlorophenol	ND	2.654	1.3	5	-	53.1	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.099	0.25	5	-	82	30-130
Pyrene	ND	3.999	0.25	5	-	80	30-130
1,2,4-Trichlorobenzene	ND	3.427	0.25	5	-	68.5	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

#### Surrogate Recovery

2-Fluorophenol	5.863	3.765		5	117	75	30-130
Phenol-d5	5.664	3.676		5	113	74	30-130
Nitrobenzene-d5	5.064	3.427		5	101	69	30-130
2-Fluorobiphenyl	4.527	2.953		5	91	59	30-130
2,4,6-Tribromophenol	4.342	3.464		5	87	69	30-130
4-Terphenyl-d14	5.09	3.43		5	102	69	30-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/6/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83748  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83748  
 1311111-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<4	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<4	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<4	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<21	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<4	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<21	NR	NR	-	NR	
Phenol	NR	NR	0	ND<4	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<4	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<4	NR	NR	-	NR	

#### Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83696  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83696  
 1311110-004AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	50.85	0.50	50	-	102	75-125
Arsenic	ND	51.94	0.50	50	-	104	75-125
Barium	ND	492.6	5.0	500	-	98.5	75-125
Beryllium	ND	48.2	0.50	50	-	96.4	75-125
Cadmium	ND	51.49	0.25	50	-	103	75-125
Chromium	ND	48.83	0.50	50	-	97.7	75-125
Cobalt	ND	53.61	0.50	50	-	107	75-125
Copper	ND	50.9	0.50	50	-	102	75-125
Lead	ND	51.07	0.50	50	-	102	75-125
Mercury	ND	1.267	0.050	1.25	-	101	75-125
Molybdenum	ND	50.64	0.50	50	-	101	75-125
Nickel	ND	50.82	0.50	50	-	102	75-125
Selenium	ND	55.58	0.50	50	-	111	75-125
Silver	ND	49.76	0.50	50	-	99.5	75-125
Thallium	ND	49.2	0.50	50	-	98.4	75-125
Vanadium	ND	50.48	0.50	50	-	101	75-125
Zinc	ND	518.3	5.0	500	-	104	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	498.5	494.5		500	100	99	70-130



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83696  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83696  
 1311110-004AMS/MSD

### QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	51.43	50.87	50	ND	103	102	75-125	1.09	20
Arsenic	55.2	56.81	50	2.597	105	108	75-125	2.87	20
Barium	567.6	568.4	500	43.42	105	105	75-125	0	20
Beryllium	46	45.7	50	ND	92	91.4	75-125	0.654	20
Cadmium	52.59	52.18	50	ND	105	104	75-125	0.783	20
Chromium	106.5	105.9	50	47.30	118	117	75-125	0.565	20
Cobalt	59.73	59.25	50	7.129	105	104	75-125	0.807	20
Copper	60.89	64.59	50	8.012	106	113	75-125	5.90	20
Lead	58.25	58.45	50	6.213	104	104	75-125	0	20
Mercury	1.303	1.28	1.25	ND	104	102	75-125	1.78	20
Molybdenum	52.49	53.03	50	ND	105	106	75-125	1.02	20
Nickel	86.72	88.87	50	31.27	111	115	75-125	2.45	20
Selenium	53.1	53.92	50	ND	106	108	75-125	1.53	20
Silver	51.95	50.89	50	ND	104	102	75-125	2.06	20
Thallium	49.81	50.21	50	ND	99.6	100	75-125	0.800	20
Vanadium	100	100.7	50	40.45	119	120	75-125	0.698	20
Zinc	550.4	553.5	500	25.62	105	106	75-125	0.562	20
<b>Surrogate Recovery</b>									
Tb 350.917	504.9	497.7	500		101	100	70-130	1.44	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/4/13  
**Date Analyzed:** 11/5/13  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83650  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83650

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.5958	0.40	0.60	-	99.3	70-130
MTBE	ND	0.1001	0.050	0.10	-	100	70-130
Benzene	ND	0.12	0.0050	0.10	-	120	70-130
Toluene	ND	0.1087	0.0050	0.10	-	109	70-130
Ethylbenzene	ND	0.1213	0.0050	0.10	-	121	70-130
Xylenes	ND	0.359	0.0050	0.30	-	120	70-130
<b>Surrogate Recovery</b>							
2-Fluorotoluene	0.1125	0.1188		0.10	113	119	70-130



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83695  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83695  
 1311110-004AMS/MSD

## QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.6236	0.40	0.60	-	104	70-130
MTBE	ND	0.09828	0.050	0.10	-	98.3	70-130
Benzene	ND	0.116	0.0050	0.10	-	116	70-130
Toluene	ND	0.1073	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.1187	0.0050	0.10	-	119	70-130
Xylenes	ND	0.3547	0.0050	0.30	-	118	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.1152	0.1139		0.10	115	114	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.5743	0.586	0.60	ND	95.7	97.7	70-130	2.02	20
MTBE	0.08996	0.08427	0.10	ND	90	84.3	70-130	6.53	20
Benzene	0.1075	0.1058	0.10	ND	107	106	70-130	1.63	20
Toluene	0.1002	0.09834	0.10	ND	100	98.3	70-130	1.83	20
Ethylbenzene	0.1112	0.1095	0.10	ND	111	110	70-130	1.51	20
Xylenes	0.328	0.3264	0.30	ND	109	109	70-130	0	20

**Surrogate Recovery**

2-Fluorotoluene	0.107	0.1058	0.10		107	106	70-130	1.06	20
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# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83696  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83696  
 1311110-004AMS/MSD

## QC SUMMARY REPORT FOR SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	51.49	0.25	50	-	103	75-125
Chromium	ND	48.83	0.50	50	-	97.7	75-125
Lead	ND	51.07	0.50	50	-	102	75-125
Nickel	ND	50.82	0.50	50	-	102	75-125
Zinc	ND	518.3	5.0	500	-	104	75-125

**Surrogate Recovery**

Tb 350.917	498.5	494.5		500	100	99	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	52.59	52.18	50	ND	105	104	75-125	0.783	20
Chromium	106.5	105.9	50	47.30	118	117	75-125	0.565	20
Lead	58.25	58.45	50	6.213	104	104	75-125	0	20
Nickel	86.72	88.87	50	31.27	111	115	75-125	2.45	20
Zinc	550.4	553.5	500	25.62	105	106	75-125	0.562	20

**Surrogate Recovery**

Tb 350.917	504.9	497.7	500		101	100	70-130	1.44	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/5/13  
**Date Analyzed:** 11/6/13  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83675  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83675  
 1310948-004BMS/MSD

### QC SUMMARY REPORT FOR 6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	52.25	5.0	50	-	104	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	567.2	557.5		500	113	112	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	NR	NR	50	1244	NR	NR	75-125	NR	25
<b>Surrogate Recovery</b>									
Tb 350.917	565.2	581	500		113	116	70-130	2.75	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 11/4/13  
**Date Analyzed:** 11/6/13  
**Instrument:** GC9b  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1311110  
**BatchID:** 83651  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-83651

### QC SUMMARY REPORT FOR SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	40.61	1.0	40	-	102	70-130
<b>Surrogate Recovery</b>							
C9	20.6	20.63		25	82	83	70-130

WorkOrder: 1311110 ClientCode: TWRF

WaterTrax  
  WriteOn  
  EDF  
  Excel  
  EQulS  
  Email  
  HardCopy  
  ThirdParty  
  J-flag

Report to: Maria Flessas Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111  
 (415) 955-9040 FAX: (415) 955-9041

Bill to: Accounts Payable  
 Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111

Requested TAT: 3 days

Date Received: 11/05/2013  
 Date Printed: 11/05/2013

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12			
131110-001	B-2-2.5	Soil	11/2/2013 7:30	<input type="checkbox"/>	A					A	A	A							
131110-002	B-2-5	Soil	11/2/2013 7:40	<input type="checkbox"/>		A	A	A											
131110-003	B-2-7.5	Soil	11/2/2013 7:55	<input type="checkbox"/>					A										A
131110-004	B-2-10	Soil	11/2/2013 8:06	<input type="checkbox"/>							A	A							

**Test Legend:**

1	8081_S	3	8260B_S	4	8270D_S	5	ASBESTOS_S
6	CAM17MS_S	8	LUFTMS_S	9	PB_S	10	
11							
2	8082A_PCB_S						
7	G-MBTX_S						
12							

The following SampleIDs: 001A, 002A, 003A, 004A contain testgroup.

Prepared by: Zoraida Cortez

Comments: SEND HARD COPY

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.





### Sample Receipt Checklist

Client Name: **Treadwell & Rollo** Date and Time Received: **11/5/2013 7:02:12 PM**  
 Project Name: **#731626701; India Basin** Login Reviewed by: **Zoraida Cortez**  
 WorkOrder N°: **1311110** Matrix: Soil Carrier: Rob Pringle (MAI Courier)

**Chain of Custody (COC) Information**

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time? Yes  No   
 Container/Temp Blank temperature Cooler Temp: 4.2°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  NA   
 Sample labels checked for correct preservation? Yes  No   
 Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA   
 Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1405A73

**Report Created for:** Treadwell & Rollo  
555 Montgomery St., Suite 1300  
San Francisco, CA 94111

**Project Contact:** Peter Cusack  
**Project P.O.:**  
**Project Name:** #731626701; India Basin

**Project Received:** 05/28/2014

Analytical Report reviewed & approved for release on 06/04/2014 by:

*Question about  
your data?*

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**WorkOrder:** 1405A73

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

### Analytical Qualifiers

H	samples were analyzed out of holding time
a3	sample diluted due to high organic content.
e2	diesel range compounds are significant; no recognizable pattern
e3	aged diesel is significant
e7	oil range compounds are significant

### Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD was out of acceptance criteria; LCS validated the prep batch.
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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-3-3'</b>	<b>1405A73-001A</b>	<b>Soil</b>	<b>05/03/2014</b>	<b>GC22</b>	<b>90885</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND	H	0.020	20	05/29/2014 00:44
a-BHC	ND	H	0.020	20	05/29/2014 00:44
b-BHC	ND	H	0.020	20	05/29/2014 00:44
d-BHC	ND	H	0.020	20	05/29/2014 00:44
g-BHC	ND	H	0.020	20	05/29/2014 00:44
Chlordane (Technical)	ND	H	0.50	20	05/29/2014 00:44
a-Chlordane	ND	H	0.020	20	05/29/2014 00:44
g-Chlordane	ND	H	0.020	20	05/29/2014 00:44
p,p-DDD	ND	H	0.020	20	05/29/2014 00:44
p,p-DDE	ND	H	0.020	20	05/29/2014 00:44
p,p-DDT	ND	H	0.020	20	05/29/2014 00:44
Dieldrin	ND	H	0.020	20	05/29/2014 00:44
Endosulfan I	ND	H	0.020	20	05/29/2014 00:44
Endosulfan II	ND	H	0.020	20	05/29/2014 00:44
Endosulfan sulfate	ND	H	0.020	20	05/29/2014 00:44
Endrin	ND	H	0.020	20	05/29/2014 00:44
Endrin aldehyde	ND	H	0.020	20	05/29/2014 00:44
Endrin ketone	ND	H	0.020	20	05/29/2014 00:44
Heptachlor	ND	H	0.020	20	05/29/2014 00:44
Heptachlor epoxide	ND	H	0.020	20	05/29/2014 00:44
Hexachlorobenzene	ND	H	0.20	20	05/29/2014 00:44
Hexachlorocyclopentadiene	ND	H	0.40	20	05/29/2014 00:44
Methoxychlor	ND	H	0.020	20	05/29/2014 00:44
Toxaphene	ND	H	1.0	20	05/29/2014 00:44
Aroclor1016	ND	H	1.0	20	05/29/2014 00:44
Aroclor1221	ND	H	1.0	20	05/29/2014 00:44
Aroclor1232	ND	H	1.0	20	05/29/2014 00:44
Aroclor1242	ND	H	1.0	20	05/29/2014 00:44
Aroclor1248	ND	H	1.0	20	05/29/2014 00:44
Aroclor1254	ND	H	1.0	20	05/29/2014 00:44
Aroclor1260	ND	H	1.0	20	05/29/2014 00:44
PCBs, total	ND	H	1.0	20	05/29/2014 00:44
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	<u>Analytical Comments:</u> a3	
Decachlorobiphenyl	103	H	70-130	05/29/2014 00:44	

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-4-3'</b>	<b>1405A73-004A</b>	<b>Soil</b>	<b>05/08/2014</b>	<b>GC22</b>	<b>90885</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND	H	0.020	20	05/29/2014 00:09
a-BHC	ND	H	0.020	20	05/29/2014 00:09
b-BHC	ND	H	0.020	20	05/29/2014 00:09
d-BHC	ND	H	0.020	20	05/29/2014 00:09
g-BHC	ND	H	0.020	20	05/29/2014 00:09
Chlordane (Technical)	ND	H	0.50	20	05/29/2014 00:09
a-Chlordane	ND	H	0.020	20	05/29/2014 00:09
g-Chlordane	ND	H	0.020	20	05/29/2014 00:09
p,p-DDD	ND	H	0.020	20	05/29/2014 00:09
p,p-DDE	ND	H	0.020	20	05/29/2014 00:09
p,p-DDT	ND	H	0.020	20	05/29/2014 00:09
Dieldrin	ND	H	0.020	20	05/29/2014 00:09
Endosulfan I	ND	H	0.020	20	05/29/2014 00:09
Endosulfan II	ND	H	0.020	20	05/29/2014 00:09
Endosulfan sulfate	ND	H	0.020	20	05/29/2014 00:09
Endrin	ND	H	0.020	20	05/29/2014 00:09
Endrin aldehyde	ND	H	0.020	20	05/29/2014 00:09
Endrin ketone	ND	H	0.020	20	05/29/2014 00:09
Heptachlor	ND	H	0.020	20	05/29/2014 00:09
Heptachlor epoxide	ND	H	0.020	20	05/29/2014 00:09
Hexachlorobenzene	ND	H	0.20	20	05/29/2014 00:09
Hexachlorocyclopentadiene	ND	H	0.40	20	05/29/2014 00:09
Methoxychlor	ND	H	0.020	20	05/29/2014 00:09
Toxaphene	ND	H	1.0	20	05/29/2014 00:09
Aroclor1016	ND	H	1.0	20	05/29/2014 00:09
Aroclor1221	ND	H	1.0	20	05/29/2014 00:09
Aroclor1232	ND	H	1.0	20	05/29/2014 00:09
Aroclor1242	ND	H	1.0	20	05/29/2014 00:09
Aroclor1248	ND	H	1.0	20	05/29/2014 00:09
Aroclor1254	ND	H	1.0	20	05/29/2014 00:09
Aroclor1260	ND	H	1.0	20	05/29/2014 00:09
PCBs, total	ND	H	1.0	20	05/29/2014 00:09
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3	
Decachlorobiphenyl	101	H	70-130	05/29/2014 00:09	

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-15-5.5'</b>	<b>1405A73-007A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC22</b>	<b>90885</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND	H	0.050	50	05/28/2014 23:35
a-BHC	ND	H	0.050	50	05/28/2014 23:35
b-BHC	ND	H	0.050	50	05/28/2014 23:35
d-BHC	ND	H	0.050	50	05/28/2014 23:35
g-BHC	ND	H	0.050	50	05/28/2014 23:35
Chlordane (Technical)	ND	H	1.2	50	05/28/2014 23:35
a-Chlordane	ND	H	0.050	50	05/28/2014 23:35
g-Chlordane	ND	H	0.050	50	05/28/2014 23:35
p,p-DDD	ND	H	0.050	50	05/28/2014 23:35
p,p-DDE	ND	H	0.050	50	05/28/2014 23:35
p,p-DDT	ND	H	0.050	50	05/28/2014 23:35
Dieldrin	ND	H	0.050	50	05/28/2014 23:35
Endosulfan I	ND	H	0.050	50	05/28/2014 23:35
Endosulfan II	ND	H	0.050	50	05/28/2014 23:35
Endosulfan sulfate	ND	H	0.050	50	05/28/2014 23:35
Endrin	ND	H	0.050	50	05/28/2014 23:35
Endrin aldehyde	ND	H	0.050	50	05/28/2014 23:35
Endrin ketone	ND	H	0.050	50	05/28/2014 23:35
Heptachlor	ND	H	0.050	50	05/28/2014 23:35
Heptachlor epoxide	ND	H	0.050	50	05/28/2014 23:35
Hexachlorobenzene	ND	H	0.50	50	05/28/2014 23:35
Hexachlorocyclopentadiene	ND	H	1.0	50	05/28/2014 23:35
Methoxychlor	ND	H	0.050	50	05/28/2014 23:35
Toxaphene	ND	H	2.5	50	05/28/2014 23:35
Aroclor1016	ND	H	2.5	50	05/28/2014 23:35
Aroclor1221	ND	H	2.5	50	05/28/2014 23:35
Aroclor1232	ND	H	2.5	50	05/28/2014 23:35
Aroclor1242	ND	H	2.5	50	05/28/2014 23:35
Aroclor1248	ND	H	2.5	50	05/28/2014 23:35
Aroclor1254	ND	H	2.5	50	05/28/2014 23:35
Aroclor1260	ND	H	2.5	50	05/28/2014 23:35
PCBs, total	ND	H	2.5	50	05/28/2014 23:35
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	<u>Analytical Comments:</u> a3	
Decachlorobiphenyl	114	H	70-130	05/28/2014 23:35	



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND	H	0.10	1	06/01/2014 00:14
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	06/01/2014 00:14
Benzene	ND	H	0.0050	1	06/01/2014 00:14
Bromobenzene	ND	H	0.0050	1	06/01/2014 00:14
Bromochloromethane	ND	H	0.0050	1	06/01/2014 00:14
Bromodichloromethane	ND	H	0.0050	1	06/01/2014 00:14
Bromoform	ND	H	0.0050	1	06/01/2014 00:14
Bromomethane	ND	H	0.0050	1	06/01/2014 00:14
2-Butanone (MEK)	ND	H	0.020	1	06/01/2014 00:14
t-Butyl alcohol (TBA)	ND	H	0.050	1	06/01/2014 00:14
n-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:14
sec-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:14
tert-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:14
Carbon Disulfide	ND	H	0.0050	1	06/01/2014 00:14
Carbon Tetrachloride	ND	H	0.0050	1	06/01/2014 00:14
Chlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
Chloroethane	ND	H	0.0050	1	06/01/2014 00:14
Chloroform	ND	H	0.0050	1	06/01/2014 00:14
Chloromethane	ND	H	0.0050	1	06/01/2014 00:14
2-Chlorotoluene	ND	H	0.0050	1	06/01/2014 00:14
4-Chlorotoluene	ND	H	0.0050	1	06/01/2014 00:14
Dibromochloromethane	ND	H	0.0050	1	06/01/2014 00:14
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	06/01/2014 00:14
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	06/01/2014 00:14
Dibromomethane	ND	H	0.0050	1	06/01/2014 00:14
1,2-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
1,3-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
1,4-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
Dichlorodifluoromethane	ND	H	0.0050	1	06/01/2014 00:14
1,1-Dichloroethane	ND	H	0.0050	1	06/01/2014 00:14
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	06/01/2014 00:14
1,1-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:14
cis-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:14
trans-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:14
1,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:14
1,3-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:14
2,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:14
1,1-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:14

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:14
trans-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:14
Diisopropyl ether (DIPE)	ND	H	0.0050	1	06/01/2014 00:14
Ethylbenzene	ND	H	0.0050	1	06/01/2014 00:14
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	06/01/2014 00:14
Freon 113	ND	H	0.10	1	06/01/2014 00:14
Hexachlorobutadiene	ND	H	0.0050	1	06/01/2014 00:14
Hexachloroethane	ND	H	0.0050	1	06/01/2014 00:14
2-Hexanone	ND	H	0.0050	1	06/01/2014 00:14
Isopropylbenzene	ND	H	0.0050	1	06/01/2014 00:14
4-Isopropyl toluene	ND	H	0.0050	1	06/01/2014 00:14
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	06/01/2014 00:14
Methylene chloride	ND	H	0.0050	1	06/01/2014 00:14
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	06/01/2014 00:14
Naphthalene	ND	H	0.0050	1	06/01/2014 00:14
n-Propyl benzene	ND	H	0.0050	1	06/01/2014 00:14
Styrene	ND	H	0.0050	1	06/01/2014 00:14
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 00:14
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 00:14
Tetrachloroethene	ND	H	0.0050	1	06/01/2014 00:14
Toluene	ND	H	0.0050	1	06/01/2014 00:14
1,2,3-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
1,2,4-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 00:14
1,1,1-Trichloroethane	ND	H	0.0050	1	06/01/2014 00:14
1,1,2-Trichloroethane	ND	H	0.0050	1	06/01/2014 00:14
Trichloroethene	ND	H	0.0050	1	06/01/2014 00:14
Trichlorofluoromethane	ND	H	0.0050	1	06/01/2014 00:14
1,2,3-Trichloropropane	ND	H	0.0050	1	06/01/2014 00:14
1,2,4-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 00:14
1,3,5-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 00:14
Vinyl Chloride	ND	H	0.0050	1	06/01/2014 00:14
Xylenes, Total	ND	H	0.0050	1	06/01/2014 00:14
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	108	H	70-130		06/01/2014 00:14
Toluene-d8	100	H	70-130		06/01/2014 00:14
4-BFB	98	H	70-130		06/01/2014 00:14

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND	H	0.10	1	06/01/2014 00:56
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	06/01/2014 00:56
Benzene	ND	H	0.0050	1	06/01/2014 00:56
Bromobenzene	ND	H	0.0050	1	06/01/2014 00:56
Bromochloromethane	ND	H	0.0050	1	06/01/2014 00:56
Bromodichloromethane	ND	H	0.0050	1	06/01/2014 00:56
Bromoform	ND	H	0.0050	1	06/01/2014 00:56
Bromomethane	ND	H	0.0050	1	06/01/2014 00:56
2-Butanone (MEK)	ND	H	0.020	1	06/01/2014 00:56
t-Butyl alcohol (TBA)	ND	H	0.050	1	06/01/2014 00:56
n-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:56
sec-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:56
tert-Butyl benzene	ND	H	0.0050	1	06/01/2014 00:56
Carbon Disulfide	ND	H	0.0050	1	06/01/2014 00:56
Carbon Tetrachloride	ND	H	0.0050	1	06/01/2014 00:56
Chlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
Chloroethane	ND	H	0.0050	1	06/01/2014 00:56
Chloroform	ND	H	0.0050	1	06/01/2014 00:56
Chloromethane	ND	H	0.0050	1	06/01/2014 00:56
2-Chlorotoluene	ND	H	0.0050	1	06/01/2014 00:56
4-Chlorotoluene	ND	H	0.0050	1	06/01/2014 00:56
Dibromochloromethane	ND	H	0.0050	1	06/01/2014 00:56
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	06/01/2014 00:56
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	06/01/2014 00:56
Dibromomethane	ND	H	0.0050	1	06/01/2014 00:56
1,2-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
1,3-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
1,4-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
Dichlorodifluoromethane	ND	H	0.0050	1	06/01/2014 00:56
1,1-Dichloroethane	ND	H	0.0050	1	06/01/2014 00:56
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	06/01/2014 00:56
1,1-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:56
cis-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:56
trans-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 00:56
1,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:56
1,3-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:56
2,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 00:56
1,1-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:56

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:56
trans-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 00:56
Diisopropyl ether (DIPE)	ND	H	0.0050	1	06/01/2014 00:56
Ethylbenzene	ND	H	0.0050	1	06/01/2014 00:56
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	06/01/2014 00:56
Freon 113	ND	H	0.10	1	06/01/2014 00:56
Hexachlorobutadiene	ND	H	0.0050	1	06/01/2014 00:56
Hexachloroethane	ND	H	0.0050	1	06/01/2014 00:56
2-Hexanone	ND	H	0.0050	1	06/01/2014 00:56
Isopropylbenzene	ND	H	0.0050	1	06/01/2014 00:56
4-Isopropyl toluene	ND	H	0.0050	1	06/01/2014 00:56
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	06/01/2014 00:56
Methylene chloride	ND	H	0.0050	1	06/01/2014 00:56
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	06/01/2014 00:56
Naphthalene	ND	H	0.0050	1	06/01/2014 00:56
n-Propyl benzene	ND	H	0.0050	1	06/01/2014 00:56
Styrene	ND	H	0.0050	1	06/01/2014 00:56
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 00:56
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 00:56
Tetrachloroethene	ND	H	0.0050	1	06/01/2014 00:56
Toluene	ND	H	0.0050	1	06/01/2014 00:56
1,2,3-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
1,2,4-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 00:56
1,1,1-Trichloroethane	ND	H	0.0050	1	06/01/2014 00:56
1,1,2-Trichloroethane	ND	H	0.0050	1	06/01/2014 00:56
Trichloroethene	ND	H	0.0050	1	06/01/2014 00:56
Trichlorofluoromethane	ND	H	0.0050	1	06/01/2014 00:56
1,2,3-Trichloropropane	ND	H	0.0050	1	06/01/2014 00:56
1,2,4-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 00:56
1,3,5-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 00:56
Vinyl Chloride	ND	H	0.0050	1	06/01/2014 00:56
Xylenes, Total	ND	H	0.0050	1	06/01/2014 00:56
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	110	H	70-130		06/01/2014 00:56
Toluene-d8	99	H	70-130		06/01/2014 00:56
4-BFB	100	H	70-130		06/01/2014 00:56

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND	H	0.10	1	06/01/2014 01:37
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	06/01/2014 01:37
Benzene	ND	H	0.0050	1	06/01/2014 01:37
Bromobenzene	ND	H	0.0050	1	06/01/2014 01:37
Bromochloromethane	ND	H	0.0050	1	06/01/2014 01:37
Bromodichloromethane	ND	H	0.0050	1	06/01/2014 01:37
Bromoform	ND	H	0.0050	1	06/01/2014 01:37
Bromomethane	ND	H	0.0050	1	06/01/2014 01:37
2-Butanone (MEK)	ND	H	0.020	1	06/01/2014 01:37
t-Butyl alcohol (TBA)	ND	H	0.050	1	06/01/2014 01:37
n-Butyl benzene	ND	H	0.0050	1	06/01/2014 01:37
sec-Butyl benzene	ND	H	0.0050	1	06/01/2014 01:37
tert-Butyl benzene	ND	H	0.0050	1	06/01/2014 01:37
Carbon Disulfide	ND	H	0.0050	1	06/01/2014 01:37
Carbon Tetrachloride	ND	H	0.0050	1	06/01/2014 01:37
Chlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
Chloroethane	ND	H	0.0050	1	06/01/2014 01:37
Chloroform	ND	H	0.0050	1	06/01/2014 01:37
Chloromethane	ND	H	0.0050	1	06/01/2014 01:37
2-Chlorotoluene	ND	H	0.0050	1	06/01/2014 01:37
4-Chlorotoluene	ND	H	0.0050	1	06/01/2014 01:37
Dibromochloromethane	ND	H	0.0050	1	06/01/2014 01:37
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	06/01/2014 01:37
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	06/01/2014 01:37
Dibromomethane	ND	H	0.0050	1	06/01/2014 01:37
1,2-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
1,3-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
1,4-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
Dichlorodifluoromethane	ND	H	0.0050	1	06/01/2014 01:37
1,1-Dichloroethane	ND	H	0.0050	1	06/01/2014 01:37
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	06/01/2014 01:37
1,1-Dichloroethene	ND	H	0.0050	1	06/01/2014 01:37
cis-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 01:37
trans-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 01:37
1,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 01:37
1,3-Dichloropropane	ND	H	0.0050	1	06/01/2014 01:37
2,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 01:37
1,1-Dichloropropene	ND	H	0.0050	1	06/01/2014 01:37

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC10	90881
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 01:37
trans-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 01:37
Diisopropyl ether (DIPE)	ND	H	0.0050	1	06/01/2014 01:37
Ethylbenzene	ND	H	0.0050	1	06/01/2014 01:37
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	06/01/2014 01:37
Freon 113	ND	H	0.10	1	06/01/2014 01:37
Hexachlorobutadiene	ND	H	0.0050	1	06/01/2014 01:37
Hexachloroethane	ND	H	0.0050	1	06/01/2014 01:37
2-Hexanone	ND	H	0.0050	1	06/01/2014 01:37
Isopropylbenzene	ND	H	0.0050	1	06/01/2014 01:37
4-Isopropyl toluene	ND	H	0.0050	1	06/01/2014 01:37
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	06/01/2014 01:37
Methylene chloride	ND	H	0.0050	1	06/01/2014 01:37
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	06/01/2014 01:37
Naphthalene	ND	H	0.0050	1	06/01/2014 01:37
n-Propyl benzene	ND	H	0.0050	1	06/01/2014 01:37
Styrene	ND	H	0.0050	1	06/01/2014 01:37
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 01:37
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 01:37
Tetrachloroethene	ND	H	0.0050	1	06/01/2014 01:37
Toluene	ND	H	0.0050	1	06/01/2014 01:37
1,2,3-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
1,2,4-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 01:37
1,1,1-Trichloroethane	ND	H	0.0050	1	06/01/2014 01:37
1,1,2-Trichloroethane	ND	H	0.0050	1	06/01/2014 01:37
Trichloroethene	ND	H	0.0050	1	06/01/2014 01:37
Trichlorofluoromethane	ND	H	0.0050	1	06/01/2014 01:37
1,2,3-Trichloropropane	ND	H	0.0050	1	06/01/2014 01:37
1,2,4-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 01:37
1,3,5-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 01:37
Vinyl Chloride	ND	H	0.0050	1	06/01/2014 01:37
Xylenes, Total	ND	H	0.0050	1	06/01/2014 01:37
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	110	H	70-130		06/01/2014 01:37
Toluene-d8	100	H	70-130		06/01/2014 01:37
4-BFB	98	H	70-130		06/01/2014 01:37

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-15-10.5'</b>	<b>1405A73-009A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC10</b>	<b>90881</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND	H	0.10	1	06/01/2014 02:19
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	06/01/2014 02:19
Benzene	ND	H	0.0050	1	06/01/2014 02:19
Bromobenzene	ND	H	0.0050	1	06/01/2014 02:19
Bromochloromethane	ND	H	0.0050	1	06/01/2014 02:19
Bromodichloromethane	ND	H	0.0050	1	06/01/2014 02:19
Bromoform	ND	H	0.0050	1	06/01/2014 02:19
Bromomethane	ND	H	0.0050	1	06/01/2014 02:19
2-Butanone (MEK)	ND	H	0.020	1	06/01/2014 02:19
t-Butyl alcohol (TBA)	ND	H	0.050	1	06/01/2014 02:19
n-Butyl benzene	ND	H	0.0050	1	06/01/2014 02:19
sec-Butyl benzene	ND	H	0.0050	1	06/01/2014 02:19
tert-Butyl benzene	ND	H	0.0050	1	06/01/2014 02:19
Carbon Disulfide	ND	H	0.0050	1	06/01/2014 02:19
Carbon Tetrachloride	ND	H	0.0050	1	06/01/2014 02:19
Chlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
Chloroethane	ND	H	0.0050	1	06/01/2014 02:19
Chloroform	ND	H	0.0050	1	06/01/2014 02:19
Chloromethane	ND	H	0.0050	1	06/01/2014 02:19
2-Chlorotoluene	ND	H	0.0050	1	06/01/2014 02:19
4-Chlorotoluene	ND	H	0.0050	1	06/01/2014 02:19
Dibromochloromethane	ND	H	0.0050	1	06/01/2014 02:19
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	06/01/2014 02:19
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	06/01/2014 02:19
Dibromomethane	ND	H	0.0050	1	06/01/2014 02:19
1,2-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
1,3-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
1,4-Dichlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
Dichlorodifluoromethane	ND	H	0.0050	1	06/01/2014 02:19
1,1-Dichloroethane	ND	H	0.0050	1	06/01/2014 02:19
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	06/01/2014 02:19
1,1-Dichloroethene	ND	H	0.0050	1	06/01/2014 02:19
cis-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 02:19
trans-1,2-Dichloroethene	ND	H	0.0050	1	06/01/2014 02:19
1,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 02:19
1,3-Dichloropropane	ND	H	0.0050	1	06/01/2014 02:19
2,2-Dichloropropane	ND	H	0.0050	1	06/01/2014 02:19
1,1-Dichloropropene	ND	H	0.0050	1	06/01/2014 02:19

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-15-10.5'</b>	<b>1405A73-009A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC10</b>	<b>90881</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 02:19
trans-1,3-Dichloropropene	ND	H	0.0050	1	06/01/2014 02:19
Diisopropyl ether (DIPE)	ND	H	0.0050	1	06/01/2014 02:19
Ethylbenzene	ND	H	0.0050	1	06/01/2014 02:19
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	06/01/2014 02:19
Freon 113	ND	H	0.10	1	06/01/2014 02:19
Hexachlorobutadiene	ND	H	0.0050	1	06/01/2014 02:19
Hexachloroethane	ND	H	0.0050	1	06/01/2014 02:19
2-Hexanone	ND	H	0.0050	1	06/01/2014 02:19
Isopropylbenzene	ND	H	0.0050	1	06/01/2014 02:19
4-Isopropyl toluene	ND	H	0.0050	1	06/01/2014 02:19
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	06/01/2014 02:19
Methylene chloride	ND	H	0.0050	1	06/01/2014 02:19
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	06/01/2014 02:19
Naphthalene	ND	H	0.0050	1	06/01/2014 02:19
n-Propyl benzene	ND	H	0.0050	1	06/01/2014 02:19
Styrene	ND	H	0.0050	1	06/01/2014 02:19
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 02:19
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	06/01/2014 02:19
Tetrachloroethene	ND	H	0.0050	1	06/01/2014 02:19
Toluene	ND	H	0.0050	1	06/01/2014 02:19
1,2,3-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
1,2,4-Trichlorobenzene	ND	H	0.0050	1	06/01/2014 02:19
1,1,1-Trichloroethane	ND	H	0.0050	1	06/01/2014 02:19
1,1,2-Trichloroethane	ND	H	0.0050	1	06/01/2014 02:19
Trichloroethene	ND	H	0.0050	1	06/01/2014 02:19
Trichlorofluoromethane	ND	H	0.0050	1	06/01/2014 02:19
1,2,3-Trichloropropane	ND	H	0.0050	1	06/01/2014 02:19
1,2,4-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 02:19
1,3,5-Trimethylbenzene	ND	H	0.0050	1	06/01/2014 02:19
Vinyl Chloride	ND	H	0.0050	1	06/01/2014 02:19
Xylenes, Total	ND	H	0.0050	1	06/01/2014 02:19
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	110	H	70-130		06/01/2014 02:19
Toluene-d8	100	H	70-130		06/01/2014 02:19
4-BFB	97	H	70-130		06/01/2014 02:19



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND	H	1.2	5	05/30/2014 21:58
Acenaphthylene	ND	H	1.2	5	05/30/2014 21:58
Acetochlor	ND	H	1.2	5	05/30/2014 21:58
Anthracene	ND	H	1.2	5	05/30/2014 21:58
Benzidine	ND	H	6.5	5	05/30/2014 21:58
Benzo (a) anthracene	ND	H	1.2	5	05/30/2014 21:58
Benzo (b) fluoranthene	ND	H	1.2	5	05/30/2014 21:58
Benzo (k) fluoranthene	ND	H	1.2	5	05/30/2014 21:58
Benzo (g,h,i) perylene	ND	H	1.2	5	05/30/2014 21:58
Benzo (a) pyrene	ND	H	1.2	5	05/30/2014 21:58
Benzyl Alcohol	ND	H	6.5	5	05/30/2014 21:58
1,1-Biphenyl	ND	H	1.2	5	05/30/2014 21:58
Bis (2-chloroethoxy) Methane	ND	H	1.2	5	05/30/2014 21:58
Bis (2-chloroethyl) Ether	ND	H	1.2	5	05/30/2014 21:58
Bis (2-chloroisopropyl) Ether	ND	H	1.2	5	05/30/2014 21:58
Bis (2-ethylhexyl) Adipate	ND	H	1.2	5	05/30/2014 21:58
Bis (2-ethylhexyl) Phthalate	ND	H	1.2	5	05/30/2014 21:58
4-Bromophenyl Phenyl Ether	ND	H	1.2	5	05/30/2014 21:58
Butylbenzyl Phthalate	ND	H	1.2	5	05/30/2014 21:58
4-Chloroaniline	ND	H	1.2	5	05/30/2014 21:58
4-Chloro-3-methylphenol	ND	H	1.2	5	05/30/2014 21:58
2-Chloronaphthalene	ND	H	1.2	5	05/30/2014 21:58
2-Chlorophenol	ND	H	1.2	5	05/30/2014 21:58
4-Chlorophenyl Phenyl Ether	ND	H	1.2	5	05/30/2014 21:58
Chrysene	ND	H	1.2	5	05/30/2014 21:58
Dibenzo (a,h) anthracene	ND	H	1.2	5	05/30/2014 21:58
Dibenzofuran	ND	H	1.2	5	05/30/2014 21:58
Di-n-butyl Phthalate	ND	H	1.2	5	05/30/2014 21:58
1,2-Dichlorobenzene	ND	H	1.2	5	05/30/2014 21:58
1,3-Dichlorobenzene	ND	H	1.2	5	05/30/2014 21:58
1,4-Dichlorobenzene	ND	H	1.2	5	05/30/2014 21:58
3,3-Dichlorobenzidine	ND	H	2.5	5	05/30/2014 21:58
2,4-Dichlorophenol	ND	H	1.2	5	05/30/2014 21:58
Diethyl Phthalate	ND	H	1.2	5	05/30/2014 21:58
2,4-Dimethylphenol	ND	H	1.2	5	05/30/2014 21:58
Dimethyl Phthalate	ND	H	1.2	5	05/30/2014 21:58
4,6-Dinitro-2-methylphenol	ND	H	6.5	5	05/30/2014 21:58
2,4-Dinitrophenol	ND	H	32	5	05/30/2014 21:58

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	1.2	5	05/30/2014 21:58
2,6-Dinitrotoluene	ND	H	1.2	5	05/30/2014 21:58
Di-n-octyl Phthalate	ND	H	2.5	5	05/30/2014 21:58
1,2-Diphenylhydrazine	ND	H	1.2	5	05/30/2014 21:58
Fluoranthene	ND	H	1.2	5	05/30/2014 21:58
Fluorene	ND	H	1.2	5	05/30/2014 21:58
Hexachlorobenzene	ND	H	1.2	5	05/30/2014 21:58
Hexachlorobutadiene	ND	H	1.2	5	05/30/2014 21:58
Hexachlorocyclopentadiene	ND	H	6.5	5	05/30/2014 21:58
Hexachloroethane	ND	H	1.2	5	05/30/2014 21:58
Indeno (1,2,3-cd) pyrene	ND	H	1.2	5	05/30/2014 21:58
Isophorone	ND	H	1.2	5	05/30/2014 21:58
2-Methylnaphthalene	ND	H	1.2	5	05/30/2014 21:58
2-Methylphenol (o-Cresol)	ND	H	1.2	5	05/30/2014 21:58
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	1.2	5	05/30/2014 21:58
Naphthalene	ND	H	1.2	5	05/30/2014 21:58
2-Nitroaniline	ND	H	6.5	5	05/30/2014 21:58
3-Nitroaniline	ND	H	6.5	5	05/30/2014 21:58
4-Nitroaniline	ND	H	6.5	5	05/30/2014 21:58
Nitrobenzene	ND	H	1.2	5	05/30/2014 21:58
2-Nitrophenol	ND	H	6.5	5	05/30/2014 21:58
4-Nitrophenol	ND	H	6.5	5	05/30/2014 21:58
N-Nitrosodiphenylamine	ND	H	1.2	5	05/30/2014 21:58
N-Nitrosodi-n-propylamine	ND	H	1.2	5	05/30/2014 21:58
Pentachlorophenol	ND	H	6.5	5	05/30/2014 21:58
Phenanthrene	ND	H	1.2	5	05/30/2014 21:58
Phenol	ND	H	1.2	5	05/30/2014 21:58
Pyrene	ND	H	1.2	5	05/30/2014 21:58
1,2,4-Trichlorobenzene	ND	H	1.2	5	05/30/2014 21:58
2,4,5-Trichlorophenol	ND	H	1.2	5	05/30/2014 21:58
2,4,6-Trichlorophenol	ND	H	1.2	5	05/30/2014 21:58

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil	05/03/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3	
2-Fluorophenol	102	H	30-130	05/30/2014 21:58	
Phenol-d5	103	H	30-130	05/30/2014 21:58	
Nitrobenzene-d5	84	H	30-130	05/30/2014 21:58	
2-Fluorobiphenyl	92	H	30-130	05/30/2014 21:58	
2,4,6-Tribromophenol	75	H	16-130	05/30/2014 21:58	
4-Terphenyl-d14	114	H	30-130	05/30/2014 21:58	

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND	H	2.5	10	05/30/2014 22:25
Acenaphthylene	ND	H	2.5	10	05/30/2014 22:25
Acetochlor	ND	H	2.5	10	05/30/2014 22:25
Anthracene	ND	H	2.5	10	05/30/2014 22:25
Benzidine	ND	H	13	10	05/30/2014 22:25
Benzo (a) anthracene	ND	H	2.5	10	05/30/2014 22:25
Benzo (b) fluoranthene	ND	H	2.5	10	05/30/2014 22:25
Benzo (k) fluoranthene	ND	H	2.5	10	05/30/2014 22:25
Benzo (g,h,i) perylene	ND	H	2.5	10	05/30/2014 22:25
Benzo (a) pyrene	ND	H	2.5	10	05/30/2014 22:25
Benzyl Alcohol	ND	H	13	10	05/30/2014 22:25
1,1-Biphenyl	ND	H	2.5	10	05/30/2014 22:25
Bis (2-chloroethoxy) Methane	ND	H	2.5	10	05/30/2014 22:25
Bis (2-chloroethyl) Ether	ND	H	2.5	10	05/30/2014 22:25
Bis (2-chloroisopropyl) Ether	ND	H	2.5	10	05/30/2014 22:25
Bis (2-ethylhexyl) Adipate	ND	H	2.5	10	05/30/2014 22:25
Bis (2-ethylhexyl) Phthalate	ND	H	2.5	10	05/30/2014 22:25
4-Bromophenyl Phenyl Ether	ND	H	2.5	10	05/30/2014 22:25
Butylbenzyl Phthalate	ND	H	2.5	10	05/30/2014 22:25
4-Chloroaniline	ND	H	2.5	10	05/30/2014 22:25
4-Chloro-3-methylphenol	ND	H	2.5	10	05/30/2014 22:25
2-Chloronaphthalene	ND	H	2.5	10	05/30/2014 22:25
2-Chlorophenol	ND	H	2.5	10	05/30/2014 22:25
4-Chlorophenyl Phenyl Ether	ND	H	2.5	10	05/30/2014 22:25
Chrysene	ND	H	2.5	10	05/30/2014 22:25
Dibenzo (a,h) anthracene	ND	H	2.5	10	05/30/2014 22:25
Dibenzofuran	ND	H	2.5	10	05/30/2014 22:25
Di-n-butyl Phthalate	ND	H	2.5	10	05/30/2014 22:25
1,2-Dichlorobenzene	ND	H	2.5	10	05/30/2014 22:25
1,3-Dichlorobenzene	ND	H	2.5	10	05/30/2014 22:25
1,4-Dichlorobenzene	ND	H	2.5	10	05/30/2014 22:25
3,3-Dichlorobenzidine	ND	H	5.0	10	05/30/2014 22:25
2,4-Dichlorophenol	ND	H	2.5	10	05/30/2014 22:25
Diethyl Phthalate	ND	H	2.5	10	05/30/2014 22:25
2,4-Dimethylphenol	ND	H	2.5	10	05/30/2014 22:25
Dimethyl Phthalate	ND	H	2.5	10	05/30/2014 22:25
4,6-Dinitro-2-methylphenol	ND	H	13	10	05/30/2014 22:25
2,4-Dinitrophenol	ND	H	63	10	05/30/2014 22:25

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	2.5	10	05/30/2014 22:25
2,6-Dinitrotoluene	ND	H	2.5	10	05/30/2014 22:25
Di-n-octyl Phthalate	ND	H	5.0	10	05/30/2014 22:25
1,2-Diphenylhydrazine	ND	H	2.5	10	05/30/2014 22:25
Fluoranthene	ND	H	2.5	10	05/30/2014 22:25
Fluorene	ND	H	2.5	10	05/30/2014 22:25
Hexachlorobenzene	ND	H	2.5	10	05/30/2014 22:25
Hexachlorobutadiene	ND	H	2.5	10	05/30/2014 22:25
Hexachlorocyclopentadiene	ND	H	13	10	05/30/2014 22:25
Hexachloroethane	ND	H	2.5	10	05/30/2014 22:25
Indeno (1,2,3-cd) pyrene	ND	H	2.5	10	05/30/2014 22:25
Isophorone	ND	H	2.5	10	05/30/2014 22:25
2-Methylnaphthalene	ND	H	2.5	10	05/30/2014 22:25
2-Methylphenol (o-Cresol)	ND	H	2.5	10	05/30/2014 22:25
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	2.5	10	05/30/2014 22:25
Naphthalene	ND	H	2.5	10	05/30/2014 22:25
2-Nitroaniline	ND	H	13	10	05/30/2014 22:25
3-Nitroaniline	ND	H	13	10	05/30/2014 22:25
4-Nitroaniline	ND	H	13	10	05/30/2014 22:25
Nitrobenzene	ND	H	2.5	10	05/30/2014 22:25
2-Nitrophenol	ND	H	13	10	05/30/2014 22:25
4-Nitrophenol	ND	H	13	10	05/30/2014 22:25
N-Nitrosodiphenylamine	ND	H	2.5	10	05/30/2014 22:25
N-Nitrosodi-n-propylamine	ND	H	2.5	10	05/30/2014 22:25
Pentachlorophenol	ND	H	13	10	05/30/2014 22:25
Phenanthrene	ND	H	2.5	10	05/30/2014 22:25
Phenol	ND	H	2.5	10	05/30/2014 22:25
Pyrene	ND	H	2.5	10	05/30/2014 22:25
1,2,4-Trichlorobenzene	ND	H	2.5	10	05/30/2014 22:25
2,4,5-Trichlorophenol	ND	H	2.5	10	05/30/2014 22:25
2,4,6-Trichlorophenol	ND	H	2.5	10	05/30/2014 22:25

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	<u>Analytical Comments: a3</u>	
2-Fluorophenol	90	H	30-130	05/30/2014 22:25	
Phenol-d5	90	H	30-130	05/30/2014 22:25	
Nitrobenzene-d5	70	H	30-130	05/30/2014 22:25	
2-Fluorobiphenyl	82	H	30-130	05/30/2014 22:25	
2,4,6-Tribromophenol	72	H	16-130	05/30/2014 22:25	
4-Terphenyl-d14	103	H	30-130	05/30/2014 22:25	

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND	H	5.0	20	05/30/2014 23:19
Acenaphthylene	ND	H	5.0	20	05/30/2014 23:19
Acetochlor	ND	H	5.0	20	05/30/2014 23:19
Anthracene	ND	H	5.0	20	05/30/2014 23:19
Benzidine	ND	H	26	20	05/30/2014 23:19
Benzo (a) anthracene	ND	H	5.0	20	05/30/2014 23:19
Benzo (b) fluoranthene	ND	H	5.0	20	05/30/2014 23:19
Benzo (k) fluoranthene	ND	H	5.0	20	05/30/2014 23:19
Benzo (g,h,i) perylene	ND	H	5.0	20	05/30/2014 23:19
Benzo (a) pyrene	ND	H	5.0	20	05/30/2014 23:19
Benzyl Alcohol	ND	H	26	20	05/30/2014 23:19
1,1-Biphenyl	ND	H	5.0	20	05/30/2014 23:19
Bis (2-chloroethoxy) Methane	ND	H	5.0	20	05/30/2014 23:19
Bis (2-chloroethyl) Ether	ND	H	5.0	20	05/30/2014 23:19
Bis (2-chloroisopropyl) Ether	ND	H	5.0	20	05/30/2014 23:19
Bis (2-ethylhexyl) Adipate	ND	H	5.0	20	05/30/2014 23:19
Bis (2-ethylhexyl) Phthalate	ND	H	5.0	20	05/30/2014 23:19
4-Bromophenyl Phenyl Ether	ND	H	5.0	20	05/30/2014 23:19
Butylbenzyl Phthalate	ND	H	5.0	20	05/30/2014 23:19
4-Chloroaniline	ND	H	5.0	20	05/30/2014 23:19
4-Chloro-3-methylphenol	ND	H	5.0	20	05/30/2014 23:19
2-Chloronaphthalene	ND	H	5.0	20	05/30/2014 23:19
2-Chlorophenol	ND	H	5.0	20	05/30/2014 23:19
4-Chlorophenyl Phenyl Ether	ND	H	5.0	20	05/30/2014 23:19
Chrysene	ND	H	5.0	20	05/30/2014 23:19
Dibenzo (a,h) anthracene	ND	H	5.0	20	05/30/2014 23:19
Dibenzofuran	ND	H	5.0	20	05/30/2014 23:19
Di-n-butyl Phthalate	ND	H	5.0	20	05/30/2014 23:19
1,2-Dichlorobenzene	ND	H	5.0	20	05/30/2014 23:19
1,3-Dichlorobenzene	ND	H	5.0	20	05/30/2014 23:19
1,4-Dichlorobenzene	ND	H	5.0	20	05/30/2014 23:19
3,3-Dichlorobenzidine	ND	H	10	20	05/30/2014 23:19
2,4-Dichlorophenol	ND	H	5.0	20	05/30/2014 23:19
Diethyl Phthalate	ND	H	5.0	20	05/30/2014 23:19
2,4-Dimethylphenol	ND	H	5.0	20	05/30/2014 23:19
Dimethyl Phthalate	ND	H	5.0	20	05/30/2014 23:19
4,6-Dinitro-2-methylphenol	ND	H	26	20	05/30/2014 23:19
2,4-Dinitrophenol	ND	H	130	20	05/30/2014 23:19

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	5.0	20	05/30/2014 23:19
2,6-Dinitrotoluene	ND	H	5.0	20	05/30/2014 23:19
Di-n-octyl Phthalate	ND	H	10	20	05/30/2014 23:19
1,2-Diphenylhydrazine	ND	H	5.0	20	05/30/2014 23:19
Fluoranthene	ND	H	5.0	20	05/30/2014 23:19
Fluorene	ND	H	5.0	20	05/30/2014 23:19
Hexachlorobenzene	ND	H	5.0	20	05/30/2014 23:19
Hexachlorobutadiene	ND	H	5.0	20	05/30/2014 23:19
Hexachlorocyclopentadiene	ND	H	26	20	05/30/2014 23:19
Hexachloroethane	ND	H	5.0	20	05/30/2014 23:19
Indeno (1,2,3-cd) pyrene	ND	H	5.0	20	05/30/2014 23:19
Isophorone	ND	H	5.0	20	05/30/2014 23:19
2-Methylnaphthalene	ND	H	5.0	20	05/30/2014 23:19
2-Methylphenol (o-Cresol)	ND	H	5.0	20	05/30/2014 23:19
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	5.0	20	05/30/2014 23:19
Naphthalene	ND	H	5.0	20	05/30/2014 23:19
2-Nitroaniline	ND	H	26	20	05/30/2014 23:19
3-Nitroaniline	ND	H	26	20	05/30/2014 23:19
4-Nitroaniline	ND	H	26	20	05/30/2014 23:19
Nitrobenzene	ND	H	5.0	20	05/30/2014 23:19
2-Nitrophenol	ND	H	26	20	05/30/2014 23:19
4-Nitrophenol	ND	H	26	20	05/30/2014 23:19
N-Nitrosodiphenylamine	ND	H	5.0	20	05/30/2014 23:19
N-Nitrosodi-n-propylamine	ND	H	5.0	20	05/30/2014 23:19
Pentachlorophenol	ND	H	26	20	05/30/2014 23:19
Phenanthrene	ND	H	5.0	20	05/30/2014 23:19
Phenol	ND	H	5.0	20	05/30/2014 23:19
Pyrene	ND	H	5.0	20	05/30/2014 23:19
1,2,4-Trichlorobenzene	ND	H	5.0	20	05/30/2014 23:19
2,4,5-Trichlorophenol	ND	H	5.0	20	05/30/2014 23:19
2,4,6-Trichlorophenol	ND	H	5.0	20	05/30/2014 23:19

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil	05/10/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3	
2-Fluorophenol	83	H	30-130		05/30/2014 23:19
Phenol-d5	89	H	30-130		05/30/2014 23:19
Nitrobenzene-d5	67	H	30-130		05/30/2014 23:19
2-Fluorobiphenyl	81	H	30-130		05/30/2014 23:19
2,4,6-Tribromophenol	57	H	16-130		05/30/2014 23:19
4-Terphenyl-d14	100	H	30-130		05/30/2014 23:19

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-15-10.5'</b>	<b>1405A73-009A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC21</b>	<b>90969</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	1.0	H	0.50	2	05/30/2014 21:04
Acenaphthylene	ND	H	0.50	2	05/30/2014 21:04
Acetochlor	ND	H	0.50	2	05/30/2014 21:04
Anthracene	ND	H	0.50	2	05/30/2014 21:04
Benzidine	ND	H	2.6	2	05/30/2014 21:04
Benzo (a) anthracene	ND	H	0.50	2	05/30/2014 21:04
Benzo (b) fluoranthene	ND	H	0.50	2	05/30/2014 21:04
Benzo (k) fluoranthene	ND	H	0.50	2	05/30/2014 21:04
Benzo (g,h,i) perylene	ND	H	0.50	2	05/30/2014 21:04
Benzo (a) pyrene	ND	H	0.50	2	05/30/2014 21:04
Benzyl Alcohol	ND	H	2.6	2	05/30/2014 21:04
1,1-Biphenyl	ND	H	0.50	2	05/30/2014 21:04
Bis (2-chloroethoxy) Methane	ND	H	0.50	2	05/30/2014 21:04
Bis (2-chloroethyl) Ether	ND	H	0.50	2	05/30/2014 21:04
Bis (2-chloroisopropyl) Ether	ND	H	0.50	2	05/30/2014 21:04
Bis (2-ethylhexyl) Adipate	ND	H	0.50	2	05/30/2014 21:04
Bis (2-ethylhexyl) Phthalate	ND	H	0.50	2	05/30/2014 21:04
4-Bromophenyl Phenyl Ether	ND	H	0.50	2	05/30/2014 21:04
Butylbenzyl Phthalate	ND	H	0.50	2	05/30/2014 21:04
4-Chloroaniline	ND	H	0.50	2	05/30/2014 21:04
4-Chloro-3-methylphenol	ND	H	0.50	2	05/30/2014 21:04
2-Chloronaphthalene	ND	H	0.50	2	05/30/2014 21:04
2-Chlorophenol	ND	H	0.50	2	05/30/2014 21:04
4-Chlorophenyl Phenyl Ether	ND	H	0.50	2	05/30/2014 21:04
Chrysene	ND	H	0.50	2	05/30/2014 21:04
Dibenzo (a,h) anthracene	ND	H	0.50	2	05/30/2014 21:04
Dibenzofuran	1.0	H	0.50	2	05/30/2014 21:04
Di-n-butyl Phthalate	ND	H	0.50	2	05/30/2014 21:04
1,2-Dichlorobenzene	ND	H	0.50	2	05/30/2014 21:04
1,3-Dichlorobenzene	ND	H	0.50	2	05/30/2014 21:04
1,4-Dichlorobenzene	ND	H	0.50	2	05/30/2014 21:04
3,3-Dichlorobenzidine	ND	H	1.0	2	05/30/2014 21:04
2,4-Dichlorophenol	ND	H	0.50	2	05/30/2014 21:04
Diethyl Phthalate	ND	H	0.50	2	05/30/2014 21:04
2,4-Dimethylphenol	ND	H	0.50	2	05/30/2014 21:04
Dimethyl Phthalate	ND	H	0.50	2	05/30/2014 21:04
4,6-Dinitro-2-methylphenol	ND	H	2.6	2	05/30/2014 21:04
2,4-Dinitrophenol	ND	H	13	2	05/30/2014 21:04

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-15-10.5'</b>	<b>1405A73-009A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC21</b>	<b>90969</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	0.50	2	05/30/2014 21:04
2,6-Dinitrotoluene	ND	H	0.50	2	05/30/2014 21:04
Di-n-octyl Phthalate	ND	H	1.0	2	05/30/2014 21:04
1,2-Diphenylhydrazine	ND	H	0.50	2	05/30/2014 21:04
Fluoranthene	<b>1.3</b>	H	0.50	2	05/30/2014 21:04
Fluorene	<b>0.97</b>	H	0.50	2	05/30/2014 21:04
Hexachlorobenzene	ND	H	0.50	2	05/30/2014 21:04
Hexachlorobutadiene	ND	H	0.50	2	05/30/2014 21:04
Hexachlorocyclopentadiene	ND	H	2.6	2	05/30/2014 21:04
Hexachloroethane	ND	H	0.50	2	05/30/2014 21:04
Indeno (1,2,3-cd) pyrene	ND	H	0.50	2	05/30/2014 21:04
Isophorone	ND	H	0.50	2	05/30/2014 21:04
2-Methylnaphthalene	ND	H	0.50	2	05/30/2014 21:04
2-Methylphenol (o-Cresol)	ND	H	0.50	2	05/30/2014 21:04
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	0.50	2	05/30/2014 21:04
Naphthalene	ND	H	0.50	2	05/30/2014 21:04
2-Nitroaniline	ND	H	2.6	2	05/30/2014 21:04
3-Nitroaniline	ND	H	2.6	2	05/30/2014 21:04
4-Nitroaniline	ND	H	2.6	2	05/30/2014 21:04
Nitrobenzene	ND	H	0.50	2	05/30/2014 21:04
2-Nitrophenol	ND	H	2.6	2	05/30/2014 21:04
4-Nitrophenol	ND	H	2.6	2	05/30/2014 21:04
N-Nitrosodiphenylamine	ND	H	0.50	2	05/30/2014 21:04
N-Nitrosodi-n-propylamine	ND	H	0.50	2	05/30/2014 21:04
Pentachlorophenol	ND	H	2.6	2	05/30/2014 21:04
Phenanthrene	<b>3.7</b>	H	0.50	2	05/30/2014 21:04
Phenol	ND	H	0.50	2	05/30/2014 21:04
Pyrene	<b>0.85</b>	H	0.50	2	05/30/2014 21:04
1,2,4-Trichlorobenzene	ND	H	0.50	2	05/30/2014 21:04
2,4,5-Trichlorophenol	ND	H	0.50	2	05/30/2014 21:04
2,4,6-Trichlorophenol	ND	H	0.50	2	05/30/2014 21:04

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	GC21	90969
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorophenol	86	H	30-130		05/30/2014 21:04
Phenol-d5	85	H	30-130		05/30/2014 21:04
Nitrobenzene-d5	75	H	30-130		05/30/2014 21:04
2-Fluorobiphenyl	77	H	30-130		05/30/2014 21:04
2,4,6-Tribromophenol	64	H	16-130		05/30/2014 21:04
4-Terphenyl-d14	90	H	30-130		05/30/2014 21:04



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-3'	1405A73-001A	Soil/TOTAL	05/03/2014	ICP-MS1	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.86		0.50	1	05/30/2014 08:38
Arsenic	5.6		0.50	1	05/30/2014 08:38
Barium	190		5.0	1	05/30/2014 08:38
Beryllium	0.58		0.50	1	05/30/2014 08:38
Cadmium	ND		0.25	1	05/30/2014 08:38
Chromium	58		0.50	1	05/30/2014 08:38
Cobalt	14		0.50	1	05/30/2014 08:38
Copper	34		0.50	1	05/30/2014 08:38
Lead	58		0.50	1	05/30/2014 08:38
Mercury	1.5		0.050	1	05/30/2014 08:38
Molybdenum	0.58		0.50	1	05/30/2014 08:38
Nickel	170		5.0	10	05/30/2014 16:18
Selenium	ND		0.50	1	05/30/2014 08:38
Silver	ND		0.50	1	05/30/2014 08:38
Thallium	ND		0.50	1	05/30/2014 08:38
Vanadium	43		0.50	1	05/30/2014 08:38
Zinc	100		5.0	1	05/30/2014 08:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	108		70-130		05/30/2014 08:38

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil/TOTAL	05/08/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	4.3		0.50	1	05/30/2014 18:01
Arsenic	18		0.50	1	05/30/2014 18:01
Barium	130		5.0	1	05/30/2014 18:01
Beryllium	ND		0.50	1	05/30/2014 18:01
Cadmium	0.40		0.25	1	05/30/2014 18:01
Chromium	170		5.0	10	05/31/2014 02:04
Cobalt	27		0.50	1	05/30/2014 18:01
Copper	210		5.0	10	05/31/2014 02:04
Lead	130		5.0	10	05/31/2014 02:04
Mercury	0.57		0.050	1	05/30/2014 18:01
Molybdenum	1.2		0.50	1	05/30/2014 18:01
Nickel	270		5.0	10	05/31/2014 02:04
Selenium	ND		0.50	1	05/30/2014 18:01
Silver	ND		0.50	1	05/30/2014 18:01
Thallium	ND		0.50	1	05/30/2014 18:01
Vanadium	84		0.50	1	05/30/2014 18:01
Zinc	130		5.0	1	05/30/2014 18:01
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	108		70-130		05/30/2014 18:01

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-3'	1405A73-006A	Soil/TOTAL	05/10/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.4		0.50	1	05/30/2014 18:07
Arsenic	6.5		0.50	1	05/30/2014 18:07
Barium	120		5.0	1	05/30/2014 18:07
Beryllium	ND		0.50	1	05/30/2014 18:07
Cadmium	1.0		0.25	1	05/30/2014 18:07
Chromium	87		0.50	1	05/30/2014 18:07
Cobalt	10		0.50	1	05/30/2014 18:07
Copper	67		0.50	1	05/30/2014 18:07
Lead	170		5.0	10	05/31/2014 02:23
Mercury	0.61		0.050	1	05/30/2014 18:07
Molybdenum	0.55		0.50	1	05/30/2014 18:07
Nickel	53		0.50	1	05/30/2014 18:07
Selenium	ND		0.50	1	05/30/2014 18:07
Silver	ND		0.50	1	05/30/2014 18:07
Thallium	ND		0.50	1	05/30/2014 18:07
Vanadium	66		0.50	1	05/30/2014 18:07
Zinc	180		5.0	1	05/30/2014 18:07
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	111		70-130		05/30/2014 18:07

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil/TOTAL	05/10/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	05/30/2014 18:12
Arsenic	5.3		0.50	1	05/30/2014 18:12
Barium	130		5.0	1	05/30/2014 18:12
Beryllium	ND		0.50	1	05/30/2014 18:12
Cadmium	ND		0.25	1	05/30/2014 18:12
Chromium	130		5.0	10	05/31/2014 02:29
Cobalt	14		0.50	1	05/30/2014 18:12
Copper	31		0.50	1	05/30/2014 18:12
Lead	45		0.50	1	05/30/2014 18:12
Mercury	0.26		0.050	1	05/30/2014 18:12
Molybdenum	ND		0.50	1	05/30/2014 18:12
Nickel	110		5.0	10	05/31/2014 02:29
Selenium	ND		0.50	1	05/30/2014 18:12
Silver	ND		0.50	1	05/30/2014 18:12
Thallium	ND		0.50	1	05/30/2014 18:12
Vanadium	72		0.50	1	05/30/2014 18:12
Zinc	87		5.0	1	05/30/2014 18:12
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	103		70-130		05/30/2014 18:12



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 6/3/14

**WorkOrder:** 1405A73  
**Extraction Method:** SM4500-CN<sup>-</sup> E  
**Analytical Method:** SM4500-CN<sup>-</sup> ABCE  
**Unit:** mg/Kg

## Cyanide, Total

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	SKALAR	91103

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Total Cyanide	0.16	H	0.10	1	06/03/2014 13:14

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	SKALAR	91103

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Total Cyanide	0.13	H	0.10	1	06/03/2014 13:18



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14-5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-3-3'</b>	<b>1405A73-001A</b>	<b>Soil</b>	<b>05/03/2014</b>	<b>GC19</b>	<b>90904</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 05:01
MTBE	---		0.050	1	05/30/2014 05:01
Benzene	---		0.0050	1	05/30/2014 05:01
Toluene	---		0.0050	1	05/30/2014 05:01
Ethylbenzene	---		0.0050	1	05/30/2014 05:01
Xylenes	---		0.0050	1	05/30/2014 05:01
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	98	H	70-130		05/30/2014 05:01
<b>B-3-5.5'</b>	<b>1405A73-002A</b>	<b>Soil</b>	<b>05/03/2014</b>	<b>GC19</b>	<b>90904</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 05:31
MTBE	---		0.050	1	05/30/2014 05:31
Benzene	---		0.0050	1	05/30/2014 05:31
Toluene	---		0.0050	1	05/30/2014 05:31
Ethylbenzene	---		0.0050	1	05/30/2014 05:31
Xylenes	---		0.0050	1	05/30/2014 05:31
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	100	H	70-130		05/30/2014 05:31
<b>B-3-8'</b>	<b>1405A73-003A</b>	<b>Soil</b>	<b>05/03/2014</b>	<b>GC19</b>	<b>90904</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 06:01
MTBE	---		0.050	1	05/30/2014 06:01
Benzene	---		0.0050	1	05/30/2014 06:01
Toluene	---		0.0050	1	05/30/2014 06:01
Ethylbenzene	---		0.0050	1	05/30/2014 06:01
Xylenes	---		0.0050	1	05/30/2014 06:01
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	98	H	70-130		05/30/2014 06:01

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14-5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-4-3'</b>	<b>1405A73-004A</b>	<b>Soil</b>	<b>05/08/2014</b>	<b>GC19</b>	<b>90904</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 06:30
MTBE	---		0.050	1	05/30/2014 06:30
Benzene	---		0.0050	1	05/30/2014 06:30
Toluene	---		0.0050	1	05/30/2014 06:30
Ethylbenzene	---		0.0050	1	05/30/2014 06:30
Xylenes	---		0.0050	1	05/30/2014 06:30
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	97	H	70-130		05/30/2014 06:30
<b>B-4-6</b>	<b>1405A73-005A</b>	<b>Soil</b>	<b>05/08/2014</b>	<b>GC7</b>	<b>90987</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/30/2014 22:55
MTBE	---		0.050	1	05/30/2014 22:55
Benzene	---		0.0050	1	05/30/2014 22:55
Toluene	---		0.0050	1	05/30/2014 22:55
Ethylbenzene	---		0.0050	1	05/30/2014 22:55
Xylenes	---		0.0050	1	05/30/2014 22:55
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	103	H	70-130		05/30/2014 22:55
<b>B-15-3'</b>	<b>1405A73-006A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC7</b>	<b>90987</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	H	1.0	1	05/31/2014 08:17
MTBE	---		0.050	1	05/31/2014 08:17
Benzene	---		0.0050	1	05/31/2014 08:17
Toluene	---		0.0050	1	05/31/2014 08:17
Ethylbenzene	---		0.0050	1	05/31/2014 08:17
Xylenes	---		0.0050	1	05/31/2014 08:17
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	103	H	70-130		05/31/2014 08:17

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14-5/30/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-15-5.5'</b>	<b>1405A73-007A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC7</b>	<b>90987</b>

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	ND	H	1.0	1	05/31/2014 09:46
MTBE	---		0.050	1	05/31/2014 09:46
Benzene	---		0.0050	1	05/31/2014 09:46
Toluene	---		0.0050	1	05/31/2014 09:46
Ethylbenzene	---		0.0050	1	05/31/2014 09:46
Xylenes	---		0.0050	1	05/31/2014 09:46

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
2-Fluorotoluene	108	H	70-130	05/31/2014 09:46

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-15-8'</b>	<b>1405A73-008A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC19</b>	<b>90987</b>

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	ND	H	1.0	1	05/31/2014 01:31
MTBE	---		0.050	1	05/31/2014 01:31
Benzene	---		0.0050	1	05/31/2014 01:31
Toluene	---		0.0050	1	05/31/2014 01:31
Ethylbenzene	---		0.0050	1	05/31/2014 01:31
Xylenes	---		0.0050	1	05/31/2014 01:31

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
2-Fluorotoluene	97	H	70-130	05/31/2014 01:31

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-15-10.5'</b>	<b>1405A73-009A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC19</b>	<b>90987</b>

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	ND	H	1.0	1	05/30/2014 22:33
MTBE	---		0.050	1	05/30/2014 22:33
Benzene	---		0.0050	1	05/30/2014 22:33
Toluene	---		0.0050	1	05/30/2014 22:33
Ethylbenzene	---		0.0050	1	05/30/2014 22:33
Xylenes	---		0.0050	1	05/30/2014 22:33

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
2-Fluorotoluene	103	H	70-130	05/30/2014 22:33



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-5.5'	1405A73-002A	Soil/TOTAL	05/03/2014	ICP-MS2	90875

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.30	0.25	1	05/30/2014 18:35
Chromium	74	0.50	1	05/30/2014 18:35
Lead	98	5.0	10	05/31/2014 02:42
Nickel	63	0.50	1	05/30/2014 18:35
Zinc	150	5.0	1	05/30/2014 18:35
Surrogates	REC (%)	Limits		
Tb 350.917	110	70-130		05/30/2014 18:35

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-6	1405A73-005A	Soil/TOTAL	05/08/2014	ICP-MS2	90875

Analytes	Result	RL	DF	Date Analyzed
Cadmium	1.2	0.25	1	05/30/2014 18:40
Chromium	130	5.0	10	05/31/2014 02:48
Lead	120	5.0	10	05/31/2014 02:48
Nickel	220	5.0	10	05/31/2014 02:48
Zinc	230	5.0	1	05/30/2014 18:40
Surrogates	REC (%)	Limits		
Tb 350.917	109	70-130		05/30/2014 18:40

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-5.5'	1405A73-007A	Soil/TOTAL	05/10/2014	ICP-MS2	90875

Analytes	Result	RL	DF	Date Analyzed
Cadmium	3.5	0.25	1	05/30/2014 18:46
Chromium	120	5.0	10	05/31/2014 02:54
Lead	410	5.0	10	05/31/2014 02:54
Nickel	110	5.0	10	05/31/2014 02:54
Zinc	260	5.0	1	05/30/2014 18:46
Surrogates	REC (%)	Limits		
Tb 350.917	112	70-130		05/30/2014 18:46

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-8'	1405A73-008A	Soil/TOTAL	05/10/2014	ICP-MS2	90875
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	05/30/2014 18:51
Chromium	76		0.50	1	05/30/2014 18:51
Lead	110		5.0	10	05/31/2014 03:00
Nickel	63		0.50	1	05/30/2014 18:51
Zinc	110		5.0	1	05/30/2014 18:51
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	109		70-130		05/30/2014 18:51



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/Kg

## Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3-8'	1405A73-003A	Soil/TOTAL	05/03/2014	ICP-JY	90870
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	110		5.0	1	05/29/2014 19:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	98		70-130		05/29/2014 19:00



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/29/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW9045D  
**Analytical Method:** SW9045D  
**Unit:** ±, pH units @ 25°C

## pH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	WetChem	90941

Analytes	Result	Accuracy	DF	Date Analyzed
pH	8.89	0.1	1	05/29/2014 14:21

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	WetChem	90941

Analytes	Result	Accuracy	DF	Date Analyzed
pH	8.11	0.1	1	05/29/2014 14:27



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 6/3/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW9030A/E376.2  
**Analytical Method:** SW9030A/E376.2  
**Unit:** mg/Kg

## Acid Soluble Sulfide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-3'	1405A73-004A	Soil	05/08/2014	SPECTROPHOTOMETER	91140

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Sulfide	ND	H	10	1	06/03/2014 18:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	SPECTROPHOTOMETER	91140

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Sulfide	ND	H	10	1	06/03/2014 18:35



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-3-3'</b>	<b>1405A73-001A</b>	<b>Soil</b>	<b>05/03/2014</b>	<b>GC6A</b>	<b>90905</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>170</b>	H	5.0	5	06/03/2014 09:48
TPH-Motor Oil (C18-C36)	<b>220</b>	H	25	5	06/03/2014 09:48
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e3,e7	
C9	101	H	70-130		06/03/2014 09:48
<b>B-3-5.5'</b>	<b>1405A73-002A</b>	<b>Soil</b>	<b>05/03/2014</b>	<b>GC11A</b>	<b>90905</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>23</b>	H	5.0	5	06/03/2014 10:51
TPH-Motor Oil (C18-C36)	<b>100</b>	H	25	5	06/03/2014 10:51
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	106	H	70-130		06/03/2014 10:51
<b>B-3-8'</b>	<b>1405A73-003A</b>	<b>Soil</b>	<b>05/03/2014</b>	<b>GC2B</b>	<b>90905</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>8.8</b>	H	1.0	1	06/04/2014 01:25
TPH-Motor Oil (C18-C36)	<b>28</b>	H	5.0	1	06/04/2014 01:25
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	113	H	70-130		06/04/2014 01:25
<b>B-4-3'</b>	<b>1405A73-004A</b>	<b>Soil</b>	<b>05/08/2014</b>	<b>GC2B</b>	<b>90905</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>55</b>	H	5.0	5	06/03/2014 00:25
TPH-Motor Oil (C18-C36)	<b>190</b>	H	25	5	06/03/2014 00:25
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	111	H	70-130		06/03/2014 00:25

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-4-6</b>	<b>1405A73-005A</b>	<b>Soil</b>	<b>05/08/2014</b>	<b>GC2B</b>	<b>90905</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>57</b>	H	10	10	06/03/2014 20:19
TPH-Motor Oil (C18-C36)	<b>230</b>	H	50	10	06/03/2014 20:19
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	107	H	70-130		06/03/2014 20:19
<b>B-15-3'</b>	<b>1405A73-006A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC11A</b>	<b>90905</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>7.5</b>	H	1.0	1	06/03/2014 00:33
TPH-Motor Oil (C18-C36)	<b>56</b>	H	5.0	1	06/03/2014 00:33
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	99	H	70-130		06/03/2014 00:33
<b>B-15-5.5'</b>	<b>1405A73-007A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC2B</b>	<b>90905</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>63</b>	H	20	20	06/03/2014 07:57
TPH-Motor Oil (C18-C36)	<b>510</b>	H	100	20	06/03/2014 07:57
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	107	H	70-130		06/03/2014 07:57
<b>B-15-8'</b>	<b>1405A73-008A</b>	<b>Soil</b>	<b>05/10/2014</b>	<b>GC11A</b>	<b>90905</b>
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>39</b>	H	10	10	06/02/2014 22:16
TPH-Motor Oil (C18-C36)	<b>230</b>	H	50	10	06/02/2014 22:16
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: e7,e2	
C9	105	H	70-130		06/02/2014 22:16

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 5/28/14 18:36  
**Date Prepared:** 5/28/14

**WorkOrder:** 1405A73  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

## Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-15-10.5'	1405A73-009A	Soil	05/10/2014	GC11B	90905

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	H	1.0	1	06/01/2014 06:17
TPH-Motor Oil (C18-C36)	ND	H	5.0	1	06/01/2014 06:17

Surrogates	REC (%)	Qualifiers	Limits	
C9	107	H	70-130	06/01/2014 06:17



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/28/14  
**Instrument:** GC22  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90885  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-90885  
 1405A73-007AMS/MSD

### QC Summary Report for SW8081A/8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.0526	0.0010	0.050	-	105	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.0531	0.0010	0.050	-	106	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.0523	0.0010	0.050	-	105	70-130
Dieldrin	ND	0.0605	0.0010	0.050	-	121	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	0.0571	0.0010	0.050	-	114	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.0416	0.0010	0.050	-	83.1	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-
<b>Surrogate Recovery</b>							
Decachlorobiphenyl	0.0585	0.0577		0.050	117	115	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/28/14  
**Instrument:** GC22  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90885  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-90885  
 1405A73-007AMS/MSD

### QC Summary Report for SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	NR	NR	0	ND<0.05	NR	NR	-	NR	
g-BHC	NR	NR	0	ND<0.05	NR	NR	-	NR	
p,p-DDT	NR	NR	0	ND<0.05	NR	NR	-	NR	
Dieldrin	NR	NR	0	ND<0.05	NR	NR	-	NR	
Endrin	NR	NR	0	ND<0.05	NR	NR	-	NR	
Heptachlor	NR	NR	0	ND<0.05	NR	NR	-	NR	
<b>Surrogate Recovery</b>									
Decachlorobiphenyl	NR	NR	0		NR	NR	-	NR	



# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/30/14  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90881  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90881  
 1405A79-003AMS/MSD

## QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0368	0.0050	0.050	-	73.7	70-130
Benzene	ND	0.0462	0.0050	0.050	-	92.4	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.146	0.050	0.20	-	73.3	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0462	0.0050	0.050	-	92.4	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0405	0.0040	0.050	-	81	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0420	0.0040	0.050	-	83.9	70-130
1,1-Dichloroethene	ND	0.0452	0.0050	0.050	-	90.3	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/30/14  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90881  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90881  
 1405A79-003AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0406	0.0050	0.050	-	81.3	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0398	0.0050	0.050	-	79.6	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0384	0.0050	0.050	-	76.9	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0470	0.0050	0.050	-	94.1	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0478	0.0050	0.050	-	95.7	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.138	0.189		0.18	110	108	70-130
Toluene-d8	0.125	0.170		0.18	100	97	70-130
4-BFB	0.0127	0.0174		0.018	101	99	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/30/14  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90881  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90881  
 1405A79-003AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0354	0.0346	0.050	ND	70.8	69.1,F1	70-130	2.45	30
Benzene	0.0360	0.0366	0.050	ND	72.1	73.1	70-130	1.43	30
t-Butyl alcohol (TBA)	0.155	0.158	0.20	ND	77.4	79	70-130	1.98	30
Chlorobenzene	0.0388	0.0385	0.050	ND	77.5	77	70-130	0.642	30
1,2-Dibromoethane (EDB)	0.0377	0.0380	0.050	ND	75.5	76.1	70-130	0.812	30
1,2-Dichloroethane (1,2-DCA)	0.0340	0.0347	0.050	ND	68,F1	69.5,F1	70-130	2.07	30
1,1-Dichloroethene	0.0393	0.0402	0.050	ND	78.6	80.3	70-130	2.20	30
Diisopropyl ether (DIPE)	0.0365	0.0357	0.050	ND	73	71.4	70-130	2.25	30
Ethyl tert-butyl ether (ETBE)	0.0357	0.0352	0.050	ND	71.5	70.4	70-130	1.57	30
Methyl-t-butyl ether (MTBE)	0.0338	0.0347	0.050	ND	67.6,F1	69.3,F1	70-130	2.57	30
Toluene	0.0403	0.0404	0.050	ND	80.7	80.7	70-130	0	30
Trichloroethene	0.0383	0.0391	0.050	ND	76.6	78.2	70-130	1.98	30
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.176	0.178	0.18		101	102	70-130	1.04	30
Toluene-d8	0.174	0.174	0.18		99	99	70-130	0	30
4-BFB	0.0175	0.0176	0.018		100	101	70-130	0.764	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/30/14  
**Date Analyzed:** 5/30/14  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90969  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90969  
 1405B08-006AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.61	0.25	5	-	72.2	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	4.85	0.25	5	-	97	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.58	0.25	5	-	91.6	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.97	0.25	5	-	79.4	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	4.13	0.25	5	-	82.6	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/30/14  
**Date Analyzed:** 5/30/14  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90969  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90969  
 1405B08-006AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	3.64	1.3	5	-	72.9	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	4.88	0.25	5	-	97.5	30-130
Pentachlorophenol	ND	3.17	1.3	5	-	63.3	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.51	0.25	5	-	90.2	30-130
Pyrene	ND	3.99	0.25	5	-	79.8	30-130
1,2,4-Trichlorobenzene	ND	4.27	0.25	5	-	85.3	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

#### Surrogate Recovery

2-Fluorophenol	3.93	4.41		5	79	88	30-130
Phenol-d5	3.87	4.33		5	77	87	30-130
Nitrobenzene-d5	3.53	4.05		5	71	81	30-130
2-Fluorobiphenyl	3.34	3.72		5	67	74	30-130
2,4,6-Tribromophenol	2.81	3.19		5	56	64	16-130
4-Terphenyl-d14	4.02	4.62		5	80	92	30-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/30/14  
**Date Analyzed:** 5/30/14  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90969  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90969  
 1405B08-006AMS/MSD

### QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	3.56	3.59	5	ND	71.2	71.7	30-130	0.767	30
4-Chloro-3-methylphenol	4.69	4.63	5	ND	93.7	92.6	30-130	1.14	30
2-Chlorophenol	4.65	4.50	5	ND	93.1	90	30-130	3.41	30
1,4-Dichlorobenzene	4.06	3.66	5	ND	81.2	73.1	30-130	10.4	30
2,4-Dinitrotoluene	4.18	4.06	5	ND	83.7	81.3	30-130	2.88	30
4-Nitrophenol	3.83	3.63	5	ND	76.6	72.7	30-130	5.21	30
N-Nitrosodi-n-propylamine	4.61	4.48	5	ND	92.1	89.5	30-130	2.89	30
Pentachlorophenol	3.88	3.89	5	ND	77.7	77.8	30-130	0.138	30
Phenol	4.56	4.41	5	ND	91.1	88.3	30-130	3.20	30
Pyrene	4.04	3.92	5	ND	80.7	78.4	30-130	2.90	30
1,2,4-Trichlorobenzene	4.21	4.01	5	ND	84.1	80.3	30-130	4.72	30

#### Surrogate Recovery

2-Fluorophenol	4.40	4.19	5		88	84	30-130	4.98	30
Phenol-d5	4.24	4.18	5		85	84	30-130	1.53	30
Nitrobenzene-d5	3.89	3.76	5		78	75	30-130	3.29	30
2-Fluorobiphenyl	3.65	3.65	5		73	73	30-130	0	30
2,4,6-Tribromophenol	3.26	3.20	5		65	64	16-130	2.00	30
4-Terphenyl-d14	4.55	4.45	5		91	89	30-130	2.19	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/29/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90875  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90875  
 1405A18-001AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	54.3	0.50	50	-	109	75-125
Arsenic	ND	54.3	0.50	50	-	109	75-125
Barium	ND	578	5.0	500	-	116	75-125
Beryllium	ND	58.2	0.50	50	-	116	75-125
Cadmium	ND	58.2	0.25	50	-	116	75-125
Chromium	ND	54.7	0.50	50	-	109	75-125
Cobalt	ND	56.6	0.50	50	-	113	75-125
Copper	ND	56.6	0.50	50	-	113	75-125
Lead	ND	55.3	0.50	50	-	111	75-125
Mercury	ND	1.20	0.050	1.25	-	95.7	75-125
Molybdenum	ND	51.9	0.50	50	-	104	75-125
Nickel	ND	55.8	0.50	50	-	112	75-125
Selenium	ND	51.5	0.50	50	-	103	75-125
Silver	ND	57.9	0.50	50	-	116	75-125
Thallium	ND	56.7	0.50	50	-	113	75-125
Vanadium	ND	55.2	0.50	50	-	110	75-125
Zinc	ND	550	5.0	500	-	110	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	599	572		500	120	114	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/29/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90875  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90875  
 1405A18-001AMS/MSD

### QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	49.8	54.7	50	ND	99.5	109	75-125	9.51	20
Arsenic	54.7	54.5	50	3.942	102	101	75-125	0.385	20
Barium	648	668	500	115.0	107	111	75-125	3.07	20
Beryllium	47.3	50.4	50	ND	94.7	101	75-125	6.20	20
Cadmium	51.7	54.6	50	ND	103	109	75-125	5.49	20
Chromium	89.8	95.6	50	47.47	84.7	96.3	75-125	6.25	20
Cobalt	54.8	58.8	50	8.949	91.6	99.8	75-125	7.20	20
Copper	60.2	63.3	50	13.66	93.2	99.3	75-125	4.97	20
Lead	60.2	65.3	50	10.94	98.5	109	75-125	8.13	20
Mercury	1.17	1.30	1.25	ND	93.9	104	75-125	9.80	20
Molybdenum	48.5	53.5	50	ND	97	107	75-125	9.77	20
Nickel	86.3	90.5	50	49.29	74,F1	82.4	75-125	4.77	20
Selenium	46.5	53.3	50	ND	93	107	75-125	13.7	20
Silver	53.2	58.3	50	ND	106	117	75-125	9.06	20
Thallium	50.2	54.3	50	ND	100	109	75-125	7.92	20
Vanadium	83.0	85.6	50	34.30	97.4	103	75-125	3.05	20
Zinc	536	551	500	38.85	99.5	102	75-125	2.70	20
<b>Surrogate Recovery</b>									
Tb 350.917	522	556	500		104	111	70-130	6.33	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 6/3/14  
**Date Analyzed:** 6/3/14  
**Instrument:** SKALAR  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 91103  
**Extraction Method:** SM4500-CN<sup>-</sup> E  
**Analytical Method:** SM4500-CN<sup>-</sup> ABCE  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-91103  
 1405A73-004AMS/MSD

### QC Summary Report for SM4500-CN<sup>-</sup> ABCE

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Total Cyanide	ND	0.778	0.10	0.80	-	97.3	90-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Cyanide	0.639	0.753	0.80	0.1559	60.4,F1	74.6,F1	80-120	16.3	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/29/14  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90904  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90904  
 1405A53-001AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.660	0.40	0.60	-	110	70-130
MTBE	ND	0.0904	0.050	0.10	-	90.4	70-130
Benzene	ND	0.112	0.0050	0.10	-	112	70-130
Toluene	ND	0.109	0.0050	0.10	-	109	70-130
Ethylbenzene	ND	0.117	0.0050	0.10	-	117	70-130
Xylenes	ND	0.360	0.0050	0.30	-	120	70-130

#### Surrogate Recovery

2-Fluorotoluene	0.116	0.114		0.10	116	114	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.637	0.643	0.60	ND	106	107	70-130	0.967	20
MTBE	0.0916	0.107	0.10	ND	91.6	107	70-130	15.7	20
Benzene	0.112	0.116	0.10	ND	112	116	70-130	3.62	20
Toluene	0.108	0.111	0.10	ND	108	111	70-130	2.45	20
Ethylbenzene	0.115	0.117	0.10	ND	115	117	70-130	1.85	20
Xylenes	0.352	0.360	0.30	ND	117	120	70-130	2.25	20

#### Surrogate Recovery

2-Fluorotoluene	0.112	0.114	0.10		112	115	70-130	2.17	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/30/14  
**Date Analyzed:** 5/31/14  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90987  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90987  
 1405B38-006AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.619	0.40	0.60	-	103	70-130
MTBE	ND	0.0814	0.050	0.10	-	81.4	70-130
Benzene	ND	0.112	0.0050	0.10	-	112	70-130
Toluene	ND	0.109	0.0050	0.10	-	109	70-130
Ethylbenzene	ND	0.118	0.0050	0.10	-	118	70-130
Xylenes	ND	0.362	0.0050	0.30	-	121	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.119	0.115		0.10	119	115	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.643	0.678	0.60	ND	107	113	70-130	5.30	20
MTBE	0.0764	0.0847	0.10	ND	76.4	84.7	70-130	10.4	20
Benzene	0.108	0.115	0.10	ND	108	115	70-130	5.81	20
Toluene	0.107	0.113	0.10	ND	107	113	70-130	4.76	20
Ethylbenzene	0.114	0.118	0.10	ND	114	118	70-130	3.63	20
Xylenes	0.352	0.365	0.30	ND	117	122	70-130	3.63	20

**Surrogate Recovery**

2-Fluorotoluene	0.112	0.115	0.10		112	115	70-130	2.79	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/29/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90875  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90875  
 1405A18-001AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	58.2	0.25	50	-	116	75-125
Chromium	ND	54.7	0.50	50	-	109	75-125
Lead	ND	55.3	0.50	50	-	111	75-125
Nickel	ND	55.8	0.50	50	-	112	75-125
Zinc	ND	550	5.0	500	-	110	75-125

**Surrogate Recovery**

Tb 350.917	599	572		500	120	114	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	51.7	54.6	50	ND	103	109	75-125	5.49	20
Chromium	89.8	95.6	50	47.47	84.7	96.3	75-125	6.25	20
Lead	60.2	65.3	50	10.94	98.5	109	75-125	8.13	20
Nickel	86.3	90.5	50	49.29	74,F1	82.4	75-125	4.77	20
Zinc	536	551	500	38.85	99.5	102	75-125	2.70	20

**Surrogate Recovery**

Tb 350.917	522	556	500		104	111	70-130	6.33	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/29/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90870  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90870  
 1405A50-005AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	48.2	5.0	50	-	96.3	75-125

**Surrogate Recovery**

Tb 350.917	492	474		500	98	95	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	NR	NR	50	293.2	NR	NR	75-125	NR	25

**Surrogate Recovery**

Tb 350.917	531	532	500		106	106	70-130	0	20
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# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/29/14  
**Date Analyzed:** 5/29/14  
**Instrument:** WetChem  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90941  
**Extraction Method:** SW9045D  
**Analytical Method:** SW9045D  
**Unit:** ±, pH units @ 25°C

## QC Summary Report for pH

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1405A73-004A	8.89	1	8.88	1	0.01	0.1



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 6/3/14  
**Date Analyzed:** 6/3/14  
**Instrument:** SPECTROPHOTOMETER  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 91140  
**Extraction Method:** SW9030A/E376.2  
**Analytical Method:** SW9030A/E376.2  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-91140  
 1405A73-009AMS/MSD

### QC Summary Report for SW9030A/E376.2

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Sulfide	ND	ND	10	50	-	91.7	80-120

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Sulfide	ND	ND	50	ND	82.8	84.9	75-125	2.50	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/28/14  
**Date Analyzed:** 5/29/14  
**Instrument:** GC6A  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1405A73  
**BatchID:** 90905  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-90905  
 1405A53-001AMS/MSD

### QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.5	1.0	40	-	104	70-130

**Surrogate Recovery**

C9	23.6	23.3		25	94	93	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	39.7	38.7	40	1.922	94.5	91.9	70-130	2.62	30

**Surrogate Recovery**

C9	24.2	24.4	25		97	97	70-130	0	30
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# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1405A73 ClientCode: TWRF

WaterTrax    WriteOn    EDF    Excel    Email    HardCopy    ThirdParty    J-flag  
 EQulS    EQulS

Requested TAT: 5 days

Bill to: Accounts Payable  
 Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111

Email: pcusack@langan.com  
 cc/3rd Party:  
 PO: 555 Montgomery St., Suite 1300  
 ProjectNo: #731626701; India Basin  
 San Francisco, CA 94111  
 (415) 955-5244 FAX: (415) 955-9041

Report to: Peter Cusack  
 Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111  
 (415) 955-5244 FAX: (415) 955-9041

Date Received: 05/28/2014  
 Date Printed: 06/04/2014

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)															
					1	2	3	4	5	6	7	8	9	10	11	12				
1405A73-001	B-3-3'	Soil	5/3/2014	<input type="checkbox"/>	A					A										
1405A73-002	B-3-5.5'	Soil	5/3/2014	<input type="checkbox"/>		A							A							
1405A73-003	B-3-8'	Soil	5/3/2014	<input type="checkbox"/>						A										
1405A73-004	B-4-3'	Soil	5/8/2014	<input type="checkbox"/>	A	A														
1405A73-005	B-4-6	Soil	5/8/2014	<input type="checkbox"/>																
1405A73-006	B-15-3'	Soil	5/10/2014	<input type="checkbox"/>																
1405A73-007	B-15-5.5'	Soil	5/10/2014	<input type="checkbox"/>	A	A														
1405A73-008	B-15-8'	Soil	5/10/2014	<input type="checkbox"/>																
1405A73-009	B-15-10.5'	Soil	5/10/2014	<input type="checkbox"/>																

**Test Legend:**

1	8081PCB_S	2	8260B_S	3	8270D_S	4	ASBEST400 (435 CARB)_S	5	CAM17MS_S
6	CN_TOTAL_S	7	G-MBTEX_S	8	LUFTMS_S	9	PB_S	10	PH_S
11	SULFIDE_S	12							

The following SampleIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A contain testgroup.

Prepared by: Ana Venegas

Comments: SEND HARD COPY

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



**McC Campbell Analytical, Inc.**  
 "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626701; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1405A73  
**Date Received:** 5/28/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Hold Content
1405A73-001A	B-3-3'	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17)	1	Big Stainless Tube	<input type="checkbox"/>	5/3/2014	5 days	<input type="checkbox"/>
1405A73-002A	B-3-5.5'	Soil	SW8081A/8082 (OC Pesticides+PCBs) SW6020 (LUFT) Multi-Range TPH(g,d,mo) SW8270C (SVOCs) SW8260B (VOCs)	1	Big Stainless Tube	<input type="checkbox"/>	5/3/2014	5 days	<input type="checkbox"/>
1405A73-003A	B-3-8'	Soil	SW6010B (Lead) Multi-Range TPH(g,d,mo) Asbestos, 435 CARB 400	1	Big Stainless Tube	<input type="checkbox"/>	5/3/2014	5 days	<input type="checkbox"/>
1405A73-004A	B-4-3'	Soil	SW9030A/E376.2 (Sulfide) SW9045D (pH) Multi-Range TPH(g,d,mo) Cyanide, Total SW6020 (CAM 17) SW8270C (SVOCs) SW8260B (VOCs)	1	Big Stainless Tube	<input type="checkbox"/>	5/8/2014	5 days	<input type="checkbox"/>

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

Big Stainless Tube =



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 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626701; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1405A73  
**Date Received:** 5/28/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Hold	SubOut
1405A73-004A	B-4-3'	Soil	SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	<input type="checkbox"/>	5/8/2014	5 days	<input type="checkbox"/>	
1405A73-005A	B-4-6	Soil	SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	5/8/2014	5 days	<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	
1405A73-006A	B-15-3'	Soil	Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	<input type="checkbox"/>	5/10/2014	5 days	<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	
1405A73-007A	B-15-5.5'	Soil	Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	<input type="checkbox"/>	5/10/2014	5 days	<input type="checkbox"/>	
			SW6020 (LUFT)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	
			Asbestos, 435 CARB 400			<input type="checkbox"/>		5 days	<input type="checkbox"/>	SubOut
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	
1405A73-008A	B-15-8'	Soil	SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	5/10/2014	5 days	<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	
1405A73-009A	B-15-10.5'	Soil	SW9030A/E376.2 (Sulfide)	1	Big Stainless Tube	<input type="checkbox"/>	5/10/2014	5 days	<input type="checkbox"/>	
			SW9045D (pH)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days	<input type="checkbox"/>	
			Cyanide, Total			<input type="checkbox"/>		5 days	<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

Big Stainless Tube =



**McC Campbell Analytical, Inc.**  
*"When Quality Counts"*

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626701; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1405A73  
**Date Received:** 5/28/2014

WaterTrax  WriteOn  EDF

Excel

Fax

Email

HardCopy

ThirdParty

J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1405A73-009A	B-15-10.5'	Soil	SW6020 (CAM 17)	1	Big Stainless Tube	<input type="checkbox"/>	5/10/2014	5 days		<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

Big Stainless Tube =





### Sample Receipt Checklist

Client Name: **Treadwell & Rollo** Date and Time Received: **5/28/2014 6:36:39 PM**  
 Project Name: **#731626701; India Basin** LogIn Reviewed by: **Ana Venegas**  
 WorkOrder N°: **1405A73** Matrix: Soil Carrier: Rob Pringle (MAI Courier)

#### Chain of Custody (COC) Information

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

#### Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes  No   
 Container/Temp Blank temperature Cooler Temp: 2.7°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  NA   
 Sample labels checked for correct preservation? Yes  No   
 pH acceptable upon receipt (Metal: pH<2; 522: pH<4)? Yes  No  NA   
 Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

Comments: All samples were received out of hold time.



# Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

McC Campbell Analytical, Inc.  
Account Payable  
1534 Willow Pass Rd

Pittsburg, CA 94565

**Client ID:** A31409  
**Report Number:** N006334  
**Date Received:** 05/29/14  
**Date Analyzed:** 06/05/14  
**Date Printed:** 06/05/14

**Job ID/Site:** 1405A73 - #731626701, Indian Basin

**FALI Job ID:** A31409

**PLM Report Number:** N/A

**Total Samples Submitted:** 2

**Total Samples Analyzed:** 2

### Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

<b>B-3-8'</b>	11519353	<b>Grey Soil</b>
---------------	----------	------------------

*Visual Estimation Results:*

Matrix percentage of entire 100

**Visual estimation percentage:** **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

<b>B-15-5.5'</b>	11519354	<b>Grey Soil</b>
------------------	----------	------------------

*Visual Estimation Results:*

Matrix percentage of entire 100

**Visual estimation percentage:** **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 0.25%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

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# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1404200

**Report Created for:** Treadwell & Rollo  
555 Montgomery St., Suite 1300  
San Francisco, CA 94111

**Project Contact:** Peter Cusack  
**Project P.O.:**  
**Project Name:** #731626701; India Basin

**Project Received:** 04/04/2014

Analytical Report reviewed & approved for release on 04/14/2014 by:

*Question about  
your data?*

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***







## **Glossary of Terms & Qualifier Definitions**

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**WorkOrder:** 1404200

F1



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-10-2.5</b>	<b>1404200-001A</b>	<b>Soil</b>	<b>03/24/2014</b>	<b>GC22</b>	<b>89021</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.050	50	04/08/2014 05:45
a-BHC	ND		0.050	50	04/08/2014 05:45
b-BHC	ND		0.050	50	04/08/2014 05:45
d-BHC	ND		0.050	50	04/08/2014 05:45
g-BHC	ND		0.050	50	04/08/2014 05:45
Chlordane (Technical)	ND		1.2	50	04/08/2014 05:45
a-Chlordane	ND		0.050	50	04/08/2014 05:45
g-Chlordane	ND		0.050	50	04/08/2014 05:45
p,p-DDD	ND		0.050	50	04/08/2014 05:45
p,p-DDE	ND		0.050	50	04/08/2014 05:45
p,p-DDT	ND		0.050	50	04/08/2014 05:45
Dieldrin	ND		0.050	50	04/08/2014 05:45
Endosulfan I	ND		0.050	50	04/08/2014 05:45
Endosulfan II	ND		0.050	50	04/08/2014 05:45
Endosulfan sulfate	ND		0.050	50	04/08/2014 05:45
Endrin	ND		0.050	50	04/08/2014 05:45
Endrin aldehyde	ND		0.050	50	04/08/2014 05:45
Endrin ketone	ND		0.050	50	04/08/2014 05:45
Heptachlor	ND		0.050	50	04/08/2014 05:45
Heptachlor epoxide	ND		0.050	50	04/08/2014 05:45
Hexachlorobenzene	ND		0.50	50	04/08/2014 05:45
Hexachlorocyclopentadiene	ND		1.0	50	04/08/2014 05:45
Methoxychlor	ND		0.050	50	04/08/2014 05:45
Toxaphene	ND		2.5	50	04/08/2014 05:45
Aroclor1016	ND		2.5	50	04/08/2014 05:45
Aroclor1221	ND		2.5	50	04/08/2014 05:45
Aroclor1232	ND		2.5	50	04/08/2014 05:45
Aroclor1242	ND		2.5	50	04/08/2014 05:45
Aroclor1248	ND		2.5	50	04/08/2014 05:45
Aroclor1254	ND		2.5	50	04/08/2014 05:45
Aroclor1260	ND		2.5	50	04/08/2014 05:45
PCBs, total	ND		2.5	50	04/08/2014 05:45
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	<u>Analytical Comments:</u> a3	
Decachlorobiphenyl	112		70-130	04/08/2014 05:45	

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.010	10	04/08/2014 05:12
a-BHC	ND		0.010	10	04/08/2014 05:12
b-BHC	ND		0.010	10	04/08/2014 05:12
d-BHC	ND		0.010	10	04/08/2014 05:12
g-BHC	ND		0.010	10	04/08/2014 05:12
Chlordane (Technical)	<b>0.27</b>		0.25	10	04/08/2014 05:12
a-Chlordane	<b>0.023</b>		0.010	10	04/08/2014 05:12
g-Chlordane	<b>0.028</b>		0.010	10	04/08/2014 05:12
p,p-DDD	ND		0.010	10	04/08/2014 05:12
p,p-DDE	ND		0.010	10	04/08/2014 05:12
p,p-DDT	ND		0.010	10	04/08/2014 05:12
Dieldrin	<b>0.021</b>		0.010	10	04/08/2014 05:12
Endosulfan I	ND		0.010	10	04/08/2014 05:12
Endosulfan II	ND		0.010	10	04/08/2014 05:12
Endosulfan sulfate	ND		0.010	10	04/08/2014 05:12
Endrin	ND		0.010	10	04/08/2014 05:12
Endrin aldehyde	ND		0.010	10	04/08/2014 05:12
Endrin ketone	ND		0.010	10	04/08/2014 05:12
Heptachlor	ND		0.010	10	04/08/2014 05:12
Heptachlor epoxide	ND		0.010	10	04/08/2014 05:12
Hexachlorobenzene	ND		0.10	10	04/08/2014 05:12
Hexachlorocyclopentadiene	ND		0.20	10	04/08/2014 05:12
Methoxychlor	ND		0.010	10	04/08/2014 05:12
Toxaphene	ND		0.50	10	04/08/2014 05:12
Aroclor1016	ND		0.50	10	04/08/2014 05:12
Aroclor1221	ND		0.50	10	04/08/2014 05:12
Aroclor1232	ND		0.50	10	04/08/2014 05:12
Aroclor1242	ND		0.50	10	04/08/2014 05:12
Aroclor1248	ND		0.50	10	04/08/2014 05:12
Aroclor1254	ND		0.50	10	04/08/2014 05:12
Aroclor1260	ND		0.50	10	04/08/2014 05:12
PCBs, total	ND		0.50	10	04/08/2014 05:12
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	90		70-130		04/08/2014 05:12

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-8-3'</b>	<b>1404200-009A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC22</b>	<b>89021</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0010	1	04/08/2014 04:38
a-BHC	ND		0.0010	1	04/08/2014 04:38
b-BHC	ND		0.0010	1	04/08/2014 04:38
d-BHC	ND		0.0010	1	04/08/2014 04:38
g-BHC	ND		0.0010	1	04/08/2014 04:38
Chlordane (Technical)	ND		0.025	1	04/08/2014 04:38
a-Chlordane	ND		0.0010	1	04/08/2014 04:38
g-Chlordane	<b>0.0011</b>		0.0010	1	04/08/2014 04:38
p,p-DDD	ND		0.0010	1	04/08/2014 04:38
p,p-DDE	ND		0.0010	1	04/08/2014 04:38
p,p-DDT	ND		0.0010	1	04/08/2014 04:38
Dieldrin	<b>0.0081</b>		0.0010	1	04/08/2014 04:38
Endosulfan I	ND		0.0010	1	04/08/2014 04:38
Endosulfan II	ND		0.0010	1	04/08/2014 04:38
Endosulfan sulfate	ND		0.0010	1	04/08/2014 04:38
Endrin	ND		0.0010	1	04/08/2014 04:38
Endrin aldehyde	ND		0.0010	1	04/08/2014 04:38
Endrin ketone	ND		0.0010	1	04/08/2014 04:38
Heptachlor	ND		0.0010	1	04/08/2014 04:38
Heptachlor epoxide	ND		0.0010	1	04/08/2014 04:38
Hexachlorobenzene	ND		0.010	1	04/08/2014 04:38
Hexachlorocyclopentadiene	ND		0.020	1	04/08/2014 04:38
Methoxychlor	ND		0.0010	1	04/08/2014 04:38
Toxaphene	ND		0.050	1	04/08/2014 04:38
Aroclor1016	ND		0.050	1	04/08/2014 04:38
Aroclor1221	ND		0.050	1	04/08/2014 04:38
Aroclor1232	ND		0.050	1	04/08/2014 04:38
Aroclor1242	ND		0.050	1	04/08/2014 04:38
Aroclor1248	ND		0.050	1	04/08/2014 04:38
Aroclor1254	ND		0.050	1	04/08/2014 04:38
Aroclor1260	ND		0.050	1	04/08/2014 04:38
PCBs, total	ND		0.050	1	04/08/2014 04:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	80		70-130		04/08/2014 04:38

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-14-3</b>	<b>1404200-012A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC22</b>	<b>89021</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0020	2	04/08/2014 04:04
a-BHC	ND		0.0020	2	04/08/2014 04:04
b-BHC	ND		0.0020	2	04/08/2014 04:04
d-BHC	ND		0.0020	2	04/08/2014 04:04
g-BHC	ND		0.0020	2	04/08/2014 04:04
Chlordane (Technical)	ND		0.050	2	04/08/2014 04:04
a-Chlordane	ND		0.0020	2	04/08/2014 04:04
g-Chlordane	ND		0.0020	2	04/08/2014 04:04
p,p-DDD	ND		0.0020	2	04/08/2014 04:04
p,p-DDE	ND		0.0020	2	04/08/2014 04:04
p,p-DDT	ND		0.0020	2	04/08/2014 04:04
Dieldrin	ND		0.0020	2	04/08/2014 04:04
Endosulfan I	ND		0.0020	2	04/08/2014 04:04
Endosulfan II	ND		0.0020	2	04/08/2014 04:04
Endosulfan sulfate	ND		0.0020	2	04/08/2014 04:04
Endrin	ND		0.0020	2	04/08/2014 04:04
Endrin aldehyde	ND		0.0020	2	04/08/2014 04:04
Endrin ketone	ND		0.0020	2	04/08/2014 04:04
Heptachlor	ND		0.0020	2	04/08/2014 04:04
Heptachlor epoxide	ND		0.0020	2	04/08/2014 04:04
Hexachlorobenzene	ND		0.020	2	04/08/2014 04:04
Hexachlorocyclopentadiene	ND		0.040	2	04/08/2014 04:04
Methoxychlor	ND		0.0020	2	04/08/2014 04:04
Toxaphene	ND		0.10	2	04/08/2014 04:04
Aroclor1016	ND		0.10	2	04/08/2014 04:04
Aroclor1221	ND		0.10	2	04/08/2014 04:04
Aroclor1232	ND		0.10	2	04/08/2014 04:04
Aroclor1242	ND		0.10	2	04/08/2014 04:04
Aroclor1248	ND		0.10	2	04/08/2014 04:04
Aroclor1254	ND		0.10	2	04/08/2014 04:04
Aroclor1260	ND		0.10	2	04/08/2014 04:04
PCBs, total	ND		0.10	2	04/08/2014 04:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	<u>Analytical Comments:</u> a3	
Decachlorobiphenyl	84		70-130	04/08/2014 04:04	

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-11-3</b>	<b>1404200-019A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC22</b>	<b>89021</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.010	10	04/08/2014 03:31
a-BHC	ND		0.010	10	04/08/2014 03:31
b-BHC	ND		0.010	10	04/08/2014 03:31
d-BHC	ND		0.010	10	04/08/2014 03:31
g-BHC	ND		0.010	10	04/08/2014 03:31
Chlordane (Technical)	ND		0.25	10	04/08/2014 03:31
a-Chlordane	ND		0.010	10	04/08/2014 03:31
g-Chlordane	ND		0.010	10	04/08/2014 03:31
p,p-DDD	ND		0.010	10	04/08/2014 03:31
p,p-DDE	ND		0.010	10	04/08/2014 03:31
p,p-DDT	ND		0.010	10	04/08/2014 03:31
Dieldrin	ND		0.010	10	04/08/2014 03:31
Endosulfan I	ND		0.010	10	04/08/2014 03:31
Endosulfan II	ND		0.010	10	04/08/2014 03:31
Endosulfan sulfate	ND		0.010	10	04/08/2014 03:31
Endrin	ND		0.010	10	04/08/2014 03:31
Endrin aldehyde	ND		0.010	10	04/08/2014 03:31
Endrin ketone	ND		0.010	10	04/08/2014 03:31
Heptachlor	ND		0.010	10	04/08/2014 03:31
Heptachlor epoxide	ND		0.010	10	04/08/2014 03:31
Hexachlorobenzene	ND		0.10	10	04/08/2014 03:31
Hexachlorocyclopentadiene	ND		0.20	10	04/08/2014 03:31
Methoxychlor	ND		0.010	10	04/08/2014 03:31
Toxaphene	ND		0.50	10	04/08/2014 03:31
Aroclor1016	ND		0.50	10	04/08/2014 03:31
Aroclor1221	ND		0.50	10	04/08/2014 03:31
Aroclor1232	ND		0.50	10	04/08/2014 03:31
Aroclor1242	ND		0.50	10	04/08/2014 03:31
Aroclor1248	ND		0.50	10	04/08/2014 03:31
Aroclor1254	ND		0.50	10	04/08/2014 03:31
Aroclor1260	ND		0.50	10	04/08/2014 03:31
PCBs, total	ND		0.50	10	04/08/2014 03:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	<u>Analytical Comments:</u> a3	
Decachlorobiphenyl	98		70-130	04/08/2014 03:31	

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-5	1404200-020A	Soil	03/26/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.010	10	04/09/2014 20:31
a-BHC	ND		0.010	10	04/09/2014 20:31
b-BHC	ND		0.010	10	04/09/2014 20:31
d-BHC	ND		0.010	10	04/09/2014 20:31
g-BHC	ND		0.010	10	04/09/2014 20:31
Chlordane (Technical)	ND		0.25	10	04/09/2014 20:31
a-Chlordane	ND		0.010	10	04/09/2014 20:31
g-Chlordane	ND		0.010	10	04/09/2014 20:31
p,p-DDD	ND		0.010	10	04/09/2014 20:31
p,p-DDE	ND		0.010	10	04/09/2014 20:31
p,p-DDT	ND		0.010	10	04/09/2014 20:31
Dieldrin	ND		0.010	10	04/09/2014 20:31
Endosulfan I	ND		0.010	10	04/09/2014 20:31
Endosulfan II	ND		0.010	10	04/09/2014 20:31
Endosulfan sulfate	ND		0.010	10	04/09/2014 20:31
Endrin	ND		0.010	10	04/09/2014 20:31
Endrin aldehyde	ND		0.010	10	04/09/2014 20:31
Endrin ketone	ND		0.010	10	04/09/2014 20:31
Heptachlor	ND		0.010	10	04/09/2014 20:31
Heptachlor epoxide	ND		0.010	10	04/09/2014 20:31
Hexachlorobenzene	ND		0.10	10	04/09/2014 20:31
Hexachlorocyclopentadiene	ND		0.20	10	04/09/2014 20:31
Methoxychlor	ND		0.010	10	04/09/2014 20:31
Toxaphene	ND		0.50	10	04/09/2014 20:31
Aroclor1016	ND		0.50	10	04/09/2014 20:31
Aroclor1221	ND		0.50	10	04/09/2014 20:31
Aroclor1232	ND		0.50	10	04/09/2014 20:31
Aroclor1242	ND		0.50	10	04/09/2014 20:31
Aroclor1248	ND		0.50	10	04/09/2014 20:31
Aroclor1254	ND		0.50	10	04/09/2014 20:31
Aroclor1260	ND		0.50	10	04/09/2014 20:31
PCBs, total	ND		0.50	10	04/09/2014 20:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	<u>Analytical Comments:</u> a3	
Decachlorobiphenyl	94		70-130	04/09/2014 20:31	

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0050	5	04/08/2014 08:00
a-BHC	ND		0.0050	5	04/08/2014 08:00
b-BHC	ND		0.0050	5	04/08/2014 08:00
d-BHC	ND		0.0050	5	04/08/2014 08:00
g-BHC	ND		0.0050	5	04/08/2014 08:00
Chlordane (Technical)	ND		0.12	5	04/08/2014 08:00
a-Chlordane	ND		0.0050	5	04/08/2014 08:00
g-Chlordane	ND		0.0050	5	04/08/2014 08:00
p,p-DDD	ND		0.0050	5	04/08/2014 08:00
p,p-DDE	ND		0.0050	5	04/08/2014 08:00
p,p-DDT	ND		0.0050	5	04/08/2014 08:00
Dieldrin	ND		0.0050	5	04/08/2014 08:00
Endosulfan I	ND		0.0050	5	04/08/2014 08:00
Endosulfan II	ND		0.0050	5	04/08/2014 08:00
Endosulfan sulfate	ND		0.0050	5	04/08/2014 08:00
Endrin	ND		0.0050	5	04/08/2014 08:00
Endrin aldehyde	ND		0.0050	5	04/08/2014 08:00
Endrin ketone	ND		0.0050	5	04/08/2014 08:00
Heptachlor	ND		0.0050	5	04/08/2014 08:00
Heptachlor epoxide	ND		0.0050	5	04/08/2014 08:00
Hexachlorobenzene	ND		0.050	5	04/08/2014 08:00
Hexachlorocyclopentadiene	ND		0.10	5	04/08/2014 08:00
Methoxychlor	ND		0.0050	5	04/08/2014 08:00
Toxaphene	ND		0.25	5	04/08/2014 08:00
Aroclor1016	ND		0.25	5	04/08/2014 08:00
Aroclor1221	ND		0.25	5	04/08/2014 08:00
Aroclor1232	ND		0.25	5	04/08/2014 08:00
Aroclor1242	ND		0.25	5	04/08/2014 08:00
Aroclor1248	ND		0.25	5	04/08/2014 08:00
Aroclor1254	ND		0.25	5	04/08/2014 08:00
Aroclor1260	ND		0.25	5	04/08/2014 08:00
PCBs, total	ND		0.25	5	04/08/2014 08:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	<u>Analytical Comments:</u> a3	
Decachlorobiphenyl	86		70-130	04/08/2014 08:00	

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg

### Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-7-2.5</b>	<b>1404200-030A</b>	<b>Soil</b>	<b>04/02/2014</b>	<b>GC22</b>	<b>89021</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.20	200	04/08/2014 07:26
a-BHC	ND		0.20	200	04/08/2014 07:26
b-BHC	ND		0.20	200	04/08/2014 07:26
d-BHC	ND		0.20	200	04/08/2014 07:26
g-BHC	ND		0.20	200	04/08/2014 07:26
Chlordane (Technical)	ND		5.0	200	04/08/2014 07:26
a-Chlordane	ND		0.20	200	04/08/2014 07:26
g-Chlordane	ND		0.20	200	04/08/2014 07:26
p,p-DDD	ND		0.20	200	04/08/2014 07:26
p,p-DDE	ND		0.20	200	04/08/2014 07:26
p,p-DDT	ND		0.20	200	04/08/2014 07:26
Dieldrin	ND		0.20	200	04/08/2014 07:26
Endosulfan I	ND		0.20	200	04/08/2014 07:26
Endosulfan II	ND		0.20	200	04/08/2014 07:26
Endosulfan sulfate	ND		0.20	200	04/08/2014 07:26
Endrin	ND		0.20	200	04/08/2014 07:26
Endrin aldehyde	ND		0.20	200	04/08/2014 07:26
Endrin ketone	ND		0.20	200	04/08/2014 07:26
Heptachlor	ND		0.20	200	04/08/2014 07:26
Heptachlor epoxide	ND		0.20	200	04/08/2014 07:26
Hexachlorobenzene	ND		2.0	200	04/08/2014 07:26
Hexachlorocyclopentadiene	ND		4.0	200	04/08/2014 07:26
Methoxychlor	ND		0.20	200	04/08/2014 07:26
Toxaphene	ND		10	200	04/08/2014 07:26
Aroclor1016	ND		10	200	04/08/2014 07:26
Aroclor1221	ND		10	200	04/08/2014 07:26
Aroclor1232	ND		10	200	04/08/2014 07:26
Aroclor1242	ND		10	200	04/08/2014 07:26
Aroclor1248	ND		10	200	04/08/2014 07:26
Aroclor1254	ND		10	200	04/08/2014 07:26
Aroclor1260	ND		10	200	04/08/2014 07:26
PCBs, total	ND		10	200	04/08/2014 07:26
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	<u>Analytical Comments:</u> a3,c4	
Decachlorobiphenyl	262	S	70-130	04/08/2014 07:26	



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND	H	0.10	1	04/08/2014 12:09
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	04/08/2014 12:09
Benzene	ND	H	0.0050	1	04/08/2014 12:09
Bromobenzene	ND	H	0.0050	1	04/08/2014 12:09
Bromochloromethane	ND	H	0.0050	1	04/08/2014 12:09
Bromodichloromethane	ND	H	0.0050	1	04/08/2014 12:09
Bromoform	ND	H	0.0050	1	04/08/2014 12:09
Bromomethane	ND	H	0.0050	1	04/08/2014 12:09
2-Butanone (MEK)	ND	H	0.020	1	04/08/2014 12:09
t-Butyl alcohol (TBA)	ND	H	0.050	1	04/08/2014 12:09
n-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:09
sec-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:09
tert-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:09
Carbon Disulfide	ND	H	0.0050	1	04/08/2014 12:09
Carbon Tetrachloride	ND	H	0.0050	1	04/08/2014 12:09
Chlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
Chloroethane	ND	H	0.0050	1	04/08/2014 12:09
Chloroform	ND	H	0.0050	1	04/08/2014 12:09
Chloromethane	ND	H	0.0050	1	04/08/2014 12:09
2-Chlorotoluene	ND	H	0.0050	1	04/08/2014 12:09
4-Chlorotoluene	ND	H	0.0050	1	04/08/2014 12:09
Dibromochloromethane	ND	H	0.0050	1	04/08/2014 12:09
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	04/08/2014 12:09
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	04/08/2014 12:09
Dibromomethane	ND	H	0.0050	1	04/08/2014 12:09
1,2-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
1,3-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
1,4-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
Dichlorodifluoromethane	ND	H	0.0050	1	04/08/2014 12:09
1,1-Dichloroethane	ND	H	0.0050	1	04/08/2014 12:09
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	04/08/2014 12:09
1,1-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:09
cis-1,2-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:09
trans-1,2-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:09
1,2-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:09
1,3-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:09
2,2-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:09
1,1-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:09

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:09
trans-1,3-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:09
Diisopropyl ether (DIPE)	ND	H	0.0050	1	04/08/2014 12:09
Ethylbenzene	ND	H	0.0050	1	04/08/2014 12:09
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	04/08/2014 12:09
Freon 113	ND	H	0.10	1	04/08/2014 12:09
Hexachlorobutadiene	ND	H	0.0050	1	04/08/2014 12:09
Hexachloroethane	ND	H	0.0050	1	04/08/2014 12:09
2-Hexanone	ND	H	0.0050	1	04/08/2014 12:09
Isopropylbenzene	ND	H	0.0050	1	04/08/2014 12:09
4-Isopropyl toluene	ND	H	0.0050	1	04/08/2014 12:09
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	04/08/2014 12:09
Methylene chloride	ND	H	0.0050	1	04/08/2014 12:09
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	04/08/2014 12:09
Naphthalene	ND	H	0.0050	1	04/08/2014 12:09
n-Propyl benzene	ND	H	0.0050	1	04/08/2014 12:09
Styrene	ND	H	0.0050	1	04/08/2014 12:09
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	04/08/2014 12:09
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	04/08/2014 12:09
Tetrachloroethene	ND	H	0.0050	1	04/08/2014 12:09
Toluene	ND	H	0.0050	1	04/08/2014 12:09
1,2,3-Trichlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
1,2,4-Trichlorobenzene	ND	H	0.0050	1	04/08/2014 12:09
1,1,1-Trichloroethane	ND	H	0.0050	1	04/08/2014 12:09
1,1,2-Trichloroethane	ND	H	0.0050	1	04/08/2014 12:09
Trichloroethene	ND	H	0.0050	1	04/08/2014 12:09
Trichlorofluoromethane	ND	H	0.0050	1	04/08/2014 12:09
1,2,3-Trichloropropane	ND	H	0.0050	1	04/08/2014 12:09
1,2,4-Trimethylbenzene	ND	H	0.0050	1	04/08/2014 12:09
1,3,5-Trimethylbenzene	ND	H	0.0050	1	04/08/2014 12:09
Vinyl Chloride	ND	H	0.0050	1	04/08/2014 12:09
Xylenes, Total	ND	H	0.0050	1	04/08/2014 12:09
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	98	H	70-130		04/08/2014 12:09
Toluene-d8	95	H	70-130		04/08/2014 12:09
4-BFB	90	H	70-130		04/08/2014 12:09

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil	03/24/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND	H	0.10	1	04/08/2014 12:51
tert-Amyl methyl ether (TAME)	ND	H	0.0050	1	04/08/2014 12:51
Benzene	ND	H	0.0050	1	04/08/2014 12:51
Bromobenzene	ND	H	0.0050	1	04/08/2014 12:51
Bromochloromethane	ND	H	0.0050	1	04/08/2014 12:51
Bromodichloromethane	ND	H	0.0050	1	04/08/2014 12:51
Bromoform	ND	H	0.0050	1	04/08/2014 12:51
Bromomethane	ND	H	0.0050	1	04/08/2014 12:51
2-Butanone (MEK)	ND	H	0.020	1	04/08/2014 12:51
t-Butyl alcohol (TBA)	ND	H	0.050	1	04/08/2014 12:51
n-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:51
sec-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:51
tert-Butyl benzene	ND	H	0.0050	1	04/08/2014 12:51
Carbon Disulfide	ND	H	0.0050	1	04/08/2014 12:51
Carbon Tetrachloride	ND	H	0.0050	1	04/08/2014 12:51
Chlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
Chloroethane	ND	H	0.0050	1	04/08/2014 12:51
Chloroform	ND	H	0.0050	1	04/08/2014 12:51
Chloromethane	ND	H	0.0050	1	04/08/2014 12:51
2-Chlorotoluene	ND	H	0.0050	1	04/08/2014 12:51
4-Chlorotoluene	ND	H	0.0050	1	04/08/2014 12:51
Dibromochloromethane	ND	H	0.0050	1	04/08/2014 12:51
1,2-Dibromo-3-chloropropane	ND	H	0.0040	1	04/08/2014 12:51
1,2-Dibromoethane (EDB)	ND	H	0.0040	1	04/08/2014 12:51
Dibromomethane	ND	H	0.0050	1	04/08/2014 12:51
1,2-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
1,3-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
1,4-Dichlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
Dichlorodifluoromethane	ND	H	0.0050	1	04/08/2014 12:51
1,1-Dichloroethane	ND	H	0.0050	1	04/08/2014 12:51
1,2-Dichloroethane (1,2-DCA)	ND	H	0.0040	1	04/08/2014 12:51
1,1-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:51
cis-1,2-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:51
trans-1,2-Dichloroethene	ND	H	0.0050	1	04/08/2014 12:51
1,2-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:51
1,3-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:51
2,2-Dichloropropane	ND	H	0.0050	1	04/08/2014 12:51
1,1-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:51

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil	03/24/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:51
trans-1,3-Dichloropropene	ND	H	0.0050	1	04/08/2014 12:51
Diisopropyl ether (DIPE)	ND	H	0.0050	1	04/08/2014 12:51
Ethylbenzene	ND	H	0.0050	1	04/08/2014 12:51
Ethyl tert-butyl ether (ETBE)	ND	H	0.0050	1	04/08/2014 12:51
Freon 113	ND	H	0.10	1	04/08/2014 12:51
Hexachlorobutadiene	ND	H	0.0050	1	04/08/2014 12:51
Hexachloroethane	ND	H	0.0050	1	04/08/2014 12:51
2-Hexanone	ND	H	0.0050	1	04/08/2014 12:51
Isopropylbenzene	ND	H	0.0050	1	04/08/2014 12:51
4-Isopropyl toluene	ND	H	0.0050	1	04/08/2014 12:51
Methyl-t-butyl ether (MTBE)	ND	H	0.0050	1	04/08/2014 12:51
Methylene chloride	ND	H	0.0050	1	04/08/2014 12:51
4-Methyl-2-pentanone (MIBK)	ND	H	0.0050	1	04/08/2014 12:51
Naphthalene	ND	H	0.0050	1	04/08/2014 12:51
n-Propyl benzene	ND	H	0.0050	1	04/08/2014 12:51
Styrene	ND	H	0.0050	1	04/08/2014 12:51
1,1,1,2-Tetrachloroethane	ND	H	0.0050	1	04/08/2014 12:51
1,1,2,2-Tetrachloroethane	ND	H	0.0050	1	04/08/2014 12:51
Tetrachloroethene	ND	H	0.0050	1	04/08/2014 12:51
Toluene	ND	H	0.0050	1	04/08/2014 12:51
1,2,3-Trichlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
1,2,4-Trichlorobenzene	ND	H	0.0050	1	04/08/2014 12:51
1,1,1-Trichloroethane	ND	H	0.0050	1	04/08/2014 12:51
1,1,2-Trichloroethane	ND	H	0.0050	1	04/08/2014 12:51
Trichloroethene	ND	H	0.0050	1	04/08/2014 12:51
Trichlorofluoromethane	ND	H	0.0050	1	04/08/2014 12:51
1,2,3-Trichloropropane	ND	H	0.0050	1	04/08/2014 12:51
1,2,4-Trimethylbenzene	ND	H	0.0050	1	04/08/2014 12:51
1,3,5-Trimethylbenzene	ND	H	0.0050	1	04/08/2014 12:51
Vinyl Chloride	ND	H	0.0050	1	04/08/2014 12:51
Xylenes, Total	ND	H	0.0050	1	04/08/2014 12:51
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	99	H	70-130		04/08/2014 12:51
Toluene-d8	93	H	70-130		04/08/2014 12:51
4-BFB	94	H	70-130		04/08/2014 12:51

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 13:33
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 13:33
Benzene	ND		0.0050	1	04/08/2014 13:33
Bromobenzene	ND		0.0050	1	04/08/2014 13:33
Bromochloromethane	ND		0.0050	1	04/08/2014 13:33
Bromodichloromethane	ND		0.0050	1	04/08/2014 13:33
Bromoform	ND		0.0050	1	04/08/2014 13:33
Bromomethane	ND		0.0050	1	04/08/2014 13:33
2-Butanone (MEK)	ND		0.020	1	04/08/2014 13:33
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 13:33
n-Butyl benzene	ND		0.0050	1	04/08/2014 13:33
sec-Butyl benzene	ND		0.0050	1	04/08/2014 13:33
tert-Butyl benzene	ND		0.0050	1	04/08/2014 13:33
Carbon Disulfide	ND		0.0050	1	04/08/2014 13:33
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 13:33
Chlorobenzene	ND		0.0050	1	04/08/2014 13:33
Chloroethane	ND		0.0050	1	04/08/2014 13:33
Chloroform	ND		0.0050	1	04/08/2014 13:33
Chloromethane	ND		0.0050	1	04/08/2014 13:33
2-Chlorotoluene	ND		0.0050	1	04/08/2014 13:33
4-Chlorotoluene	ND		0.0050	1	04/08/2014 13:33
Dibromochloromethane	ND		0.0050	1	04/08/2014 13:33
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 13:33
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 13:33
Dibromomethane	ND		0.0050	1	04/08/2014 13:33
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 13:33
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 13:33
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 13:33
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 13:33
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 13:33
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 13:33
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 13:33
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 13:33
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 13:33
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 13:33
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 13:33
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 13:33
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 13:33

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-13-5.5</b>	<b>1404200-006A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC10</b>	<b>89000</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 13:33
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 13:33
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 13:33
Ethylbenzene	ND		0.0050	1	04/08/2014 13:33
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 13:33
Freon 113	ND		0.10	1	04/08/2014 13:33
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 13:33
Hexachloroethane	ND		0.0050	1	04/08/2014 13:33
2-Hexanone	ND		0.0050	1	04/08/2014 13:33
Isopropylbenzene	ND		0.0050	1	04/08/2014 13:33
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 13:33
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 13:33
Methylene chloride	ND		0.0050	1	04/08/2014 13:33
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 13:33
Naphthalene	ND		0.0050	1	04/08/2014 13:33
n-Propyl benzene	ND		0.0050	1	04/08/2014 13:33
Styrene	ND		0.0050	1	04/08/2014 13:33
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 13:33
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 13:33
Tetrachloroethene	ND		0.0050	1	04/08/2014 13:33
Toluene	ND		0.0050	1	04/08/2014 13:33
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 13:33
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 13:33
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 13:33
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 13:33
Trichloroethene	ND		0.0050	1	04/08/2014 13:33
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 13:33
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 13:33
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 13:33
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 13:33
Vinyl Chloride	ND		0.0050	1	04/08/2014 13:33
Xylenes, Total	ND		0.0050	1	04/08/2014 13:33
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	98		70-130		04/08/2014 13:33
Toluene-d8	94		70-130		04/08/2014 13:33
4-BFB	100		70-130		04/08/2014 13:33

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 14:26
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 14:26
Benzene	ND		0.0050	1	04/08/2014 14:26
Bromobenzene	ND		0.0050	1	04/08/2014 14:26
Bromochloromethane	ND		0.0050	1	04/08/2014 14:26
Bromodichloromethane	ND		0.0050	1	04/08/2014 14:26
Bromoform	ND		0.0050	1	04/08/2014 14:26
Bromomethane	ND		0.0050	1	04/08/2014 14:26
2-Butanone (MEK)	ND		0.020	1	04/08/2014 14:26
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 14:26
n-Butyl benzene	ND		0.0050	1	04/08/2014 14:26
sec-Butyl benzene	ND		0.0050	1	04/08/2014 14:26
tert-Butyl benzene	ND		0.0050	1	04/08/2014 14:26
Carbon Disulfide	ND		0.0050	1	04/08/2014 14:26
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 14:26
Chlorobenzene	ND		0.0050	1	04/08/2014 14:26
Chloroethane	ND		0.0050	1	04/08/2014 14:26
Chloroform	ND		0.0050	1	04/08/2014 14:26
Chloromethane	ND		0.0050	1	04/08/2014 14:26
2-Chlorotoluene	ND		0.0050	1	04/08/2014 14:26
4-Chlorotoluene	ND		0.0050	1	04/08/2014 14:26
Dibromochloromethane	ND		0.0050	1	04/08/2014 14:26
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 14:26
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 14:26
Dibromomethane	ND		0.0050	1	04/08/2014 14:26
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 14:26
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 14:26
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 14:26
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 14:26
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 14:26
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 14:26
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 14:26
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 14:26
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 14:26
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 14:26
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 14:26
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 14:26
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 14:26

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-14-3</b>	<b>1404200-012A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC10</b>	<b>89000</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 14:26
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 14:26
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 14:26
Ethylbenzene	ND		0.0050	1	04/08/2014 14:26
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 14:26
Freon 113	ND		0.10	1	04/08/2014 14:26
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 14:26
Hexachloroethane	ND		0.0050	1	04/08/2014 14:26
2-Hexanone	ND		0.0050	1	04/08/2014 14:26
Isopropylbenzene	ND		0.0050	1	04/08/2014 14:26
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 14:26
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 14:26
Methylene chloride	ND		0.0050	1	04/08/2014 14:26
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 14:26
Naphthalene	ND		0.0050	1	04/08/2014 14:26
n-Propyl benzene	ND		0.0050	1	04/08/2014 14:26
Styrene	ND		0.0050	1	04/08/2014 14:26
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 14:26
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 14:26
Tetrachloroethene	ND		0.0050	1	04/08/2014 14:26
Toluene	ND		0.0050	1	04/08/2014 14:26
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 14:26
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 14:26
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 14:26
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 14:26
Trichloroethene	ND		0.0050	1	04/08/2014 14:26
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 14:26
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 14:26
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 14:26
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 14:26
Vinyl Chloride	ND		0.0050	1	04/08/2014 14:26
Xylenes, Total	ND		0.0050	1	04/08/2014 14:26
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		04/08/2014 14:26
Toluene-d8	97		70-130		04/08/2014 14:26
4-BFB	98		70-130		04/08/2014 14:26

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 15:08
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 15:08
Benzene	ND		0.0050	1	04/08/2014 15:08
Bromobenzene	ND		0.0050	1	04/08/2014 15:08
Bromochloromethane	ND		0.0050	1	04/08/2014 15:08
Bromodichloromethane	ND		0.0050	1	04/08/2014 15:08
Bromoform	ND		0.0050	1	04/08/2014 15:08
Bromomethane	ND		0.0050	1	04/08/2014 15:08
2-Butanone (MEK)	ND		0.020	1	04/08/2014 15:08
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 15:08
n-Butyl benzene	ND		0.0050	1	04/08/2014 15:08
sec-Butyl benzene	ND		0.0050	1	04/08/2014 15:08
tert-Butyl benzene	ND		0.0050	1	04/08/2014 15:08
Carbon Disulfide	ND		0.0050	1	04/08/2014 15:08
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 15:08
Chlorobenzene	ND		0.0050	1	04/08/2014 15:08
Chloroethane	ND		0.0050	1	04/08/2014 15:08
Chloroform	ND		0.0050	1	04/08/2014 15:08
Chloromethane	ND		0.0050	1	04/08/2014 15:08
2-Chlorotoluene	ND		0.0050	1	04/08/2014 15:08
4-Chlorotoluene	ND		0.0050	1	04/08/2014 15:08
Dibromochloromethane	ND		0.0050	1	04/08/2014 15:08
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 15:08
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 15:08
Dibromomethane	ND		0.0050	1	04/08/2014 15:08
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:08
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:08
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:08
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 15:08
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 15:08
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 15:08
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 15:08
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 15:08
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 15:08
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 15:08
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 15:08
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 15:08
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 15:08

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-14-5.5</b>	<b>1404200-013A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC10</b>	<b>89000</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 15:08
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 15:08
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 15:08
Ethylbenzene	ND		0.0050	1	04/08/2014 15:08
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 15:08
Freon 113	ND		0.10	1	04/08/2014 15:08
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 15:08
Hexachloroethane	ND		0.0050	1	04/08/2014 15:08
2-Hexanone	ND		0.0050	1	04/08/2014 15:08
Isopropylbenzene	ND		0.0050	1	04/08/2014 15:08
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 15:08
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 15:08
Methylene chloride	ND		0.0050	1	04/08/2014 15:08
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 15:08
Naphthalene	ND		0.0050	1	04/08/2014 15:08
n-Propyl benzene	ND		0.0050	1	04/08/2014 15:08
Styrene	ND		0.0050	1	04/08/2014 15:08
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 15:08
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 15:08
Tetrachloroethene	ND		0.0050	1	04/08/2014 15:08
Toluene	ND		0.0050	1	04/08/2014 15:08
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 15:08
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 15:08
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 15:08
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 15:08
Trichloroethene	ND		0.0050	1	04/08/2014 15:08
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 15:08
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 15:08
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 15:08
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 15:08
Vinyl Chloride	ND		0.0050	1	04/08/2014 15:08
Xylenes, Total	ND		0.0050	1	04/08/2014 15:08
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		04/08/2014 15:08
Toluene-d8	94		70-130		04/08/2014 15:08
4-BFB	101		70-130		04/08/2014 15:08

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-9-5.5</b>	<b>1404200-016A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC10</b>	<b>89000</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 15:50
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 15:50
Benzene	ND		0.0050	1	04/08/2014 15:50
Bromobenzene	ND		0.0050	1	04/08/2014 15:50
Bromochloromethane	ND		0.0050	1	04/08/2014 15:50
Bromodichloromethane	ND		0.0050	1	04/08/2014 15:50
Bromoform	ND		0.0050	1	04/08/2014 15:50
Bromomethane	ND		0.0050	1	04/08/2014 15:50
2-Butanone (MEK)	ND		0.020	1	04/08/2014 15:50
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 15:50
n-Butyl benzene	ND		0.0050	1	04/08/2014 15:50
sec-Butyl benzene	ND		0.0050	1	04/08/2014 15:50
tert-Butyl benzene	ND		0.0050	1	04/08/2014 15:50
Carbon Disulfide	ND		0.0050	1	04/08/2014 15:50
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 15:50
Chlorobenzene	ND		0.0050	1	04/08/2014 15:50
Chloroethane	ND		0.0050	1	04/08/2014 15:50
Chloroform	ND		0.0050	1	04/08/2014 15:50
Chloromethane	ND		0.0050	1	04/08/2014 15:50
2-Chlorotoluene	ND		0.0050	1	04/08/2014 15:50
4-Chlorotoluene	ND		0.0050	1	04/08/2014 15:50
Dibromochloromethane	ND		0.0050	1	04/08/2014 15:50
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 15:50
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 15:50
Dibromomethane	ND		0.0050	1	04/08/2014 15:50
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:50
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:50
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 15:50
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 15:50
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 15:50
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 15:50
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 15:50
cis-1,2-Dichloroethene	<b>0.017</b>		0.0050	1	04/08/2014 15:50
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 15:50
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 15:50
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 15:50
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 15:50
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 15:50

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-9-5.5</b>	<b>1404200-016A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC10</b>	<b>89000</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 15:50
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 15:50
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 15:50
Ethylbenzene	ND		0.0050	1	04/08/2014 15:50
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 15:50
Freon 113	ND		0.10	1	04/08/2014 15:50
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 15:50
Hexachloroethane	ND		0.0050	1	04/08/2014 15:50
2-Hexanone	ND		0.0050	1	04/08/2014 15:50
Isopropylbenzene	ND		0.0050	1	04/08/2014 15:50
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 15:50
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 15:50
Methylene chloride	ND		0.0050	1	04/08/2014 15:50
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 15:50
Naphthalene	ND		0.0050	1	04/08/2014 15:50
n-Propyl benzene	ND		0.0050	1	04/08/2014 15:50
Styrene	ND		0.0050	1	04/08/2014 15:50
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 15:50
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 15:50
Tetrachloroethene	ND		0.0050	1	04/08/2014 15:50
Toluene	ND		0.0050	1	04/08/2014 15:50
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 15:50
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 15:50
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 15:50
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 15:50
Trichloroethene	ND		0.0050	1	04/08/2014 15:50
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 15:50
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 15:50
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 15:50
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 15:50
Vinyl Chloride	ND		0.0050	1	04/08/2014 15:50
Xylenes, Total	ND		0.0050	1	04/08/2014 15:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		04/08/2014 15:50
Toluene-d8	94		70-130		04/08/2014 15:50
4-BFB	102		70-130		04/08/2014 15:50

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 16:32
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 16:32
Benzene	ND		0.0050	1	04/08/2014 16:32
Bromobenzene	ND		0.0050	1	04/08/2014 16:32
Bromochloromethane	ND		0.0050	1	04/08/2014 16:32
Bromodichloromethane	ND		0.0050	1	04/08/2014 16:32
Bromoform	ND		0.0050	1	04/08/2014 16:32
Bromomethane	ND		0.0050	1	04/08/2014 16:32
2-Butanone (MEK)	ND		0.020	1	04/08/2014 16:32
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 16:32
n-Butyl benzene	ND		0.0050	1	04/08/2014 16:32
sec-Butyl benzene	ND		0.0050	1	04/08/2014 16:32
tert-Butyl benzene	ND		0.0050	1	04/08/2014 16:32
Carbon Disulfide	ND		0.0050	1	04/08/2014 16:32
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 16:32
Chlorobenzene	ND		0.0050	1	04/08/2014 16:32
Chloroethane	ND		0.0050	1	04/08/2014 16:32
Chloroform	ND		0.0050	1	04/08/2014 16:32
Chloromethane	ND		0.0050	1	04/08/2014 16:32
2-Chlorotoluene	ND		0.0050	1	04/08/2014 16:32
4-Chlorotoluene	ND		0.0050	1	04/08/2014 16:32
Dibromochloromethane	ND		0.0050	1	04/08/2014 16:32
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 16:32
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 16:32
Dibromomethane	ND		0.0050	1	04/08/2014 16:32
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 16:32
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 16:32
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 16:32
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 16:32
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 16:32
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 16:32
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 16:32
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 16:32
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 16:32
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 16:32
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 16:32
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 16:32
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 16:32

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 16:32
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 16:32
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 16:32
Ethylbenzene	ND		0.0050	1	04/08/2014 16:32
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 16:32
Freon 113	ND		0.10	1	04/08/2014 16:32
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 16:32
Hexachloroethane	ND		0.0050	1	04/08/2014 16:32
2-Hexanone	ND		0.0050	1	04/08/2014 16:32
Isopropylbenzene	ND		0.0050	1	04/08/2014 16:32
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 16:32
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 16:32
Methylene chloride	ND		0.0050	1	04/08/2014 16:32
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 16:32
Naphthalene	ND		0.0050	1	04/08/2014 16:32
n-Propyl benzene	ND		0.0050	1	04/08/2014 16:32
Styrene	ND		0.0050	1	04/08/2014 16:32
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 16:32
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 16:32
Tetrachloroethene	ND		0.0050	1	04/08/2014 16:32
Toluene	ND		0.0050	1	04/08/2014 16:32
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 16:32
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 16:32
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 16:32
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 16:32
Trichloroethene	ND		0.0050	1	04/08/2014 16:32
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 16:32
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 16:32
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 16:32
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 16:32
Vinyl Chloride	ND		0.0050	1	04/08/2014 16:32
Xylenes, Total	ND		0.0050	1	04/08/2014 16:32
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	100		70-130		04/08/2014 16:32
Toluene-d8	95		70-130		04/08/2014 16:32
4-BFB	102		70-130		04/08/2014 16:32

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 02:57
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 02:57
Benzene	ND		0.0050	1	04/08/2014 02:57
Bromobenzene	ND		0.0050	1	04/08/2014 02:57
Bromochloromethane	ND		0.0050	1	04/08/2014 02:57
Bromodichloromethane	ND		0.0050	1	04/08/2014 02:57
Bromoform	ND		0.0050	1	04/08/2014 02:57
Bromomethane	ND		0.0050	1	04/08/2014 02:57
2-Butanone (MEK)	ND		0.020	1	04/08/2014 02:57
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 02:57
n-Butyl benzene	ND		0.0050	1	04/08/2014 02:57
sec-Butyl benzene	ND		0.0050	1	04/08/2014 02:57
tert-Butyl benzene	ND		0.0050	1	04/08/2014 02:57
Carbon Disulfide	ND		0.0050	1	04/08/2014 02:57
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 02:57
Chlorobenzene	ND		0.0050	1	04/08/2014 02:57
Chloroethane	ND		0.0050	1	04/08/2014 02:57
Chloroform	ND		0.0050	1	04/08/2014 02:57
Chloromethane	ND		0.0050	1	04/08/2014 02:57
2-Chlorotoluene	ND		0.0050	1	04/08/2014 02:57
4-Chlorotoluene	ND		0.0050	1	04/08/2014 02:57
Dibromochloromethane	ND		0.0050	1	04/08/2014 02:57
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 02:57
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 02:57
Dibromomethane	ND		0.0050	1	04/08/2014 02:57
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 02:57
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 02:57
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 02:57
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 02:57
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 02:57
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 02:57
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 02:57
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 02:57
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 02:57
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 02:57
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 02:57
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 02:57
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 02:57

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 02:57
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 02:57
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 02:57
Ethylbenzene	ND		0.0050	1	04/08/2014 02:57
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 02:57
Freon 113	ND		0.10	1	04/08/2014 02:57
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 02:57
Hexachloroethane	ND		0.0050	1	04/08/2014 02:57
2-Hexanone	ND		0.0050	1	04/08/2014 02:57
Isopropylbenzene	ND		0.0050	1	04/08/2014 02:57
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 02:57
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 02:57
Methylene chloride	ND		0.0050	1	04/08/2014 02:57
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 02:57
Naphthalene	ND		0.0050	1	04/08/2014 02:57
n-Propyl benzene	ND		0.0050	1	04/08/2014 02:57
Styrene	ND		0.0050	1	04/08/2014 02:57
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 02:57
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 02:57
Tetrachloroethene	ND		0.0050	1	04/08/2014 02:57
Toluene	ND		0.0050	1	04/08/2014 02:57
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 02:57
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 02:57
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 02:57
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 02:57
Trichloroethene	ND		0.0050	1	04/08/2014 02:57
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 02:57
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 02:57
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 02:57
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 02:57
Vinyl Chloride	ND		0.0050	1	04/08/2014 02:57
Xylenes, Total	ND		0.0050	1	04/08/2014 02:57
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	99		70-130		04/08/2014 02:57
Toluene-d8	96		70-130		04/08/2014 02:57
4-BFB	99		70-130		04/08/2014 02:57

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/08/2014 17:57
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/08/2014 17:57
Benzene	ND		0.0050	1	04/08/2014 17:57
Bromobenzene	ND		0.0050	1	04/08/2014 17:57
Bromochloromethane	ND		0.0050	1	04/08/2014 17:57
Bromodichloromethane	ND		0.0050	1	04/08/2014 17:57
Bromoform	ND		0.0050	1	04/08/2014 17:57
Bromomethane	ND		0.0050	1	04/08/2014 17:57
2-Butanone (MEK)	ND		0.020	1	04/08/2014 17:57
t-Butyl alcohol (TBA)	ND		0.050	1	04/08/2014 17:57
n-Butyl benzene	ND		0.0050	1	04/08/2014 17:57
sec-Butyl benzene	ND		0.0050	1	04/08/2014 17:57
tert-Butyl benzene	ND		0.0050	1	04/08/2014 17:57
Carbon Disulfide	ND		0.0050	1	04/08/2014 17:57
Carbon Tetrachloride	ND		0.0050	1	04/08/2014 17:57
Chlorobenzene	ND		0.0050	1	04/08/2014 17:57
Chloroethane	ND		0.0050	1	04/08/2014 17:57
Chloroform	ND		0.0050	1	04/08/2014 17:57
Chloromethane	ND		0.0050	1	04/08/2014 17:57
2-Chlorotoluene	ND		0.0050	1	04/08/2014 17:57
4-Chlorotoluene	ND		0.0050	1	04/08/2014 17:57
Dibromochloromethane	ND		0.0050	1	04/08/2014 17:57
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/08/2014 17:57
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/08/2014 17:57
Dibromomethane	ND		0.0050	1	04/08/2014 17:57
1,2-Dichlorobenzene	ND		0.0050	1	04/08/2014 17:57
1,3-Dichlorobenzene	ND		0.0050	1	04/08/2014 17:57
1,4-Dichlorobenzene	ND		0.0050	1	04/08/2014 17:57
Dichlorodifluoromethane	ND		0.0050	1	04/08/2014 17:57
1,1-Dichloroethane	ND		0.0050	1	04/08/2014 17:57
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/08/2014 17:57
1,1-Dichloroethene	ND		0.0050	1	04/08/2014 17:57
cis-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 17:57
trans-1,2-Dichloroethene	ND		0.0050	1	04/08/2014 17:57
1,2-Dichloropropane	ND		0.0050	1	04/08/2014 17:57
1,3-Dichloropropane	ND		0.0050	1	04/08/2014 17:57
2,2-Dichloropropane	ND		0.0050	1	04/08/2014 17:57
1,1-Dichloropropene	ND		0.0050	1	04/08/2014 17:57

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 17:57
trans-1,3-Dichloropropene	ND		0.0050	1	04/08/2014 17:57
Diisopropyl ether (DIPE)	ND		0.0050	1	04/08/2014 17:57
Ethylbenzene	ND		0.0050	1	04/08/2014 17:57
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/08/2014 17:57
Freon 113	ND		0.10	1	04/08/2014 17:57
Hexachlorobutadiene	ND		0.0050	1	04/08/2014 17:57
Hexachloroethane	ND		0.0050	1	04/08/2014 17:57
2-Hexanone	ND		0.0050	1	04/08/2014 17:57
Isopropylbenzene	ND		0.0050	1	04/08/2014 17:57
4-Isopropyl toluene	ND		0.0050	1	04/08/2014 17:57
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/08/2014 17:57
Methylene chloride	ND		0.0050	1	04/08/2014 17:57
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/08/2014 17:57
Naphthalene	ND		0.0050	1	04/08/2014 17:57
n-Propyl benzene	ND		0.0050	1	04/08/2014 17:57
Styrene	ND		0.0050	1	04/08/2014 17:57
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 17:57
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/08/2014 17:57
Tetrachloroethene	ND		0.0050	1	04/08/2014 17:57
Toluene	ND		0.0050	1	04/08/2014 17:57
1,2,3-Trichlorobenzene	ND		0.0050	1	04/08/2014 17:57
1,2,4-Trichlorobenzene	ND		0.0050	1	04/08/2014 17:57
1,1,1-Trichloroethane	ND		0.0050	1	04/08/2014 17:57
1,1,2-Trichloroethane	ND		0.0050	1	04/08/2014 17:57
Trichloroethene	ND		0.0050	1	04/08/2014 17:57
Trichlorofluoromethane	ND		0.0050	1	04/08/2014 17:57
1,2,3-Trichloropropane	ND		0.0050	1	04/08/2014 17:57
1,2,4-Trimethylbenzene	ND		0.0050	1	04/08/2014 17:57
1,3,5-Trimethylbenzene	ND		0.0050	1	04/08/2014 17:57
Vinyl Chloride	ND		0.0050	1	04/08/2014 17:57
Xylenes, Total	ND		0.0050	1	04/08/2014 17:57
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	103		70-130		04/08/2014 17:57
Toluene-d8	96		70-130		04/08/2014 17:57
4-BFB	100		70-130		04/08/2014 17:57

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil	03/31/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/09/2014 03:48
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/09/2014 03:48
Benzene	ND		0.0050	1	04/09/2014 03:48
Bromobenzene	ND		0.0050	1	04/09/2014 03:48
Bromochloromethane	ND		0.0050	1	04/09/2014 03:48
Bromodichloromethane	ND		0.0050	1	04/09/2014 03:48
Bromoform	ND		0.0050	1	04/09/2014 03:48
Bromomethane	ND		0.0050	1	04/09/2014 03:48
2-Butanone (MEK)	ND		0.020	1	04/09/2014 03:48
t-Butyl alcohol (TBA)	ND		0.050	1	04/09/2014 03:48
n-Butyl benzene	ND		0.0050	1	04/09/2014 03:48
sec-Butyl benzene	ND		0.0050	1	04/09/2014 03:48
tert-Butyl benzene	ND		0.0050	1	04/09/2014 03:48
Carbon Disulfide	ND		0.0050	1	04/09/2014 03:48
Carbon Tetrachloride	ND		0.0050	1	04/09/2014 03:48
Chlorobenzene	ND		0.0050	1	04/09/2014 03:48
Chloroethane	ND		0.0050	1	04/09/2014 03:48
Chloroform	ND		0.0050	1	04/09/2014 03:48
Chloromethane	ND		0.0050	1	04/09/2014 03:48
2-Chlorotoluene	ND		0.0050	1	04/09/2014 03:48
4-Chlorotoluene	ND		0.0050	1	04/09/2014 03:48
Dibromochloromethane	ND		0.0050	1	04/09/2014 03:48
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/09/2014 03:48
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/09/2014 03:48
Dibromomethane	ND		0.0050	1	04/09/2014 03:48
1,2-Dichlorobenzene	ND		0.0050	1	04/09/2014 03:48
1,3-Dichlorobenzene	ND		0.0050	1	04/09/2014 03:48
1,4-Dichlorobenzene	ND		0.0050	1	04/09/2014 03:48
Dichlorodifluoromethane	ND		0.0050	1	04/09/2014 03:48
1,1-Dichloroethane	ND		0.0050	1	04/09/2014 03:48
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/09/2014 03:48
1,1-Dichloroethene	ND		0.0050	1	04/09/2014 03:48
cis-1,2-Dichloroethene	ND		0.0050	1	04/09/2014 03:48
trans-1,2-Dichloroethene	ND		0.0050	1	04/09/2014 03:48
1,2-Dichloropropane	ND		0.0050	1	04/09/2014 03:48
1,3-Dichloropropane	ND		0.0050	1	04/09/2014 03:48
2,2-Dichloropropane	ND		0.0050	1	04/09/2014 03:48
1,1-Dichloropropene	ND		0.0050	1	04/09/2014 03:48

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-6-10</b>	<b>1404200-028A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC10</b>	<b>89000</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/09/2014 03:48
trans-1,3-Dichloropropene	ND		0.0050	1	04/09/2014 03:48
Diisopropyl ether (DIPE)	ND		0.0050	1	04/09/2014 03:48
Ethylbenzene	ND		0.0050	1	04/09/2014 03:48
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/09/2014 03:48
Freon 113	ND		0.10	1	04/09/2014 03:48
Hexachlorobutadiene	ND		0.0050	1	04/09/2014 03:48
Hexachloroethane	ND		0.0050	1	04/09/2014 03:48
2-Hexanone	ND		0.0050	1	04/09/2014 03:48
Isopropylbenzene	ND		0.0050	1	04/09/2014 03:48
4-Isopropyl toluene	ND		0.0050	1	04/09/2014 03:48
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/09/2014 03:48
Methylene chloride	ND		0.0050	1	04/09/2014 03:48
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/09/2014 03:48
Naphthalene	ND		0.0050	1	04/09/2014 03:48
n-Propyl benzene	ND		0.0050	1	04/09/2014 03:48
Styrene	ND		0.0050	1	04/09/2014 03:48
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/09/2014 03:48
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/09/2014 03:48
Tetrachloroethene	ND		0.0050	1	04/09/2014 03:48
Toluene	ND		0.0050	1	04/09/2014 03:48
1,2,3-Trichlorobenzene	ND		0.0050	1	04/09/2014 03:48
1,2,4-Trichlorobenzene	ND		0.0050	1	04/09/2014 03:48
1,1,1-Trichloroethane	ND		0.0050	1	04/09/2014 03:48
1,1,2-Trichloroethane	ND		0.0050	1	04/09/2014 03:48
Trichloroethene	ND		0.0050	1	04/09/2014 03:48
Trichlorofluoromethane	ND		0.0050	1	04/09/2014 03:48
1,2,3-Trichloropropane	ND		0.0050	1	04/09/2014 03:48
1,2,4-Trimethylbenzene	ND		0.0050	1	04/09/2014 03:48
1,3,5-Trimethylbenzene	ND		0.0050	1	04/09/2014 03:48
Vinyl Chloride	ND		0.0050	1	04/09/2014 03:48
Xylenes, Total	ND		0.0050	1	04/09/2014 03:48
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	101		70-130		04/09/2014 03:48
Toluene-d8	95		70-130		04/09/2014 03:48
4-BFB	102		70-130		04/09/2014 03:48

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	04/09/2014 04:30
tert-Amyl methyl ether (TAME)	ND		0.0050	1	04/09/2014 04:30
Benzene	ND		0.0050	1	04/09/2014 04:30
Bromobenzene	ND		0.0050	1	04/09/2014 04:30
Bromochloromethane	ND		0.0050	1	04/09/2014 04:30
Bromodichloromethane	ND		0.0050	1	04/09/2014 04:30
Bromoform	ND		0.0050	1	04/09/2014 04:30
Bromomethane	ND		0.0050	1	04/09/2014 04:30
2-Butanone (MEK)	ND		0.020	1	04/09/2014 04:30
t-Butyl alcohol (TBA)	ND		0.050	1	04/09/2014 04:30
n-Butyl benzene	ND		0.0050	1	04/09/2014 04:30
sec-Butyl benzene	ND		0.0050	1	04/09/2014 04:30
tert-Butyl benzene	ND		0.0050	1	04/09/2014 04:30
Carbon Disulfide	ND		0.0050	1	04/09/2014 04:30
Carbon Tetrachloride	ND		0.0050	1	04/09/2014 04:30
Chlorobenzene	ND		0.0050	1	04/09/2014 04:30
Chloroethane	ND		0.0050	1	04/09/2014 04:30
Chloroform	ND		0.0050	1	04/09/2014 04:30
Chloromethane	ND		0.0050	1	04/09/2014 04:30
2-Chlorotoluene	ND		0.0050	1	04/09/2014 04:30
4-Chlorotoluene	ND		0.0050	1	04/09/2014 04:30
Dibromochloromethane	ND		0.0050	1	04/09/2014 04:30
1,2-Dibromo-3-chloropropane	ND		0.0040	1	04/09/2014 04:30
1,2-Dibromoethane (EDB)	ND		0.0040	1	04/09/2014 04:30
Dibromomethane	ND		0.0050	1	04/09/2014 04:30
1,2-Dichlorobenzene	ND		0.0050	1	04/09/2014 04:30
1,3-Dichlorobenzene	ND		0.0050	1	04/09/2014 04:30
1,4-Dichlorobenzene	ND		0.0050	1	04/09/2014 04:30
Dichlorodifluoromethane	ND		0.0050	1	04/09/2014 04:30
1,1-Dichloroethane	ND		0.0050	1	04/09/2014 04:30
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	04/09/2014 04:30
1,1-Dichloroethene	ND		0.0050	1	04/09/2014 04:30
cis-1,2-Dichloroethene	ND		0.0050	1	04/09/2014 04:30
trans-1,2-Dichloroethene	ND		0.0050	1	04/09/2014 04:30
1,2-Dichloropropane	ND		0.0050	1	04/09/2014 04:30
1,3-Dichloropropane	ND		0.0050	1	04/09/2014 04:30
2,2-Dichloropropane	ND		0.0050	1	04/09/2014 04:30
1,1-Dichloropropene	ND		0.0050	1	04/09/2014 04:30

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	GC10	89000
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
cis-1,3-Dichloropropene	ND		0.0050	1	04/09/2014 04:30
trans-1,3-Dichloropropene	ND		0.0050	1	04/09/2014 04:30
Diisopropyl ether (DIPE)	ND		0.0050	1	04/09/2014 04:30
Ethylbenzene	ND		0.0050	1	04/09/2014 04:30
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	04/09/2014 04:30
Freon 113	ND		0.10	1	04/09/2014 04:30
Hexachlorobutadiene	ND		0.0050	1	04/09/2014 04:30
Hexachloroethane	ND		0.0050	1	04/09/2014 04:30
2-Hexanone	ND		0.0050	1	04/09/2014 04:30
Isopropylbenzene	ND		0.0050	1	04/09/2014 04:30
4-Isopropyl toluene	ND		0.0050	1	04/09/2014 04:30
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	04/09/2014 04:30
Methylene chloride	ND		0.0050	1	04/09/2014 04:30
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	04/09/2014 04:30
Naphthalene	ND		0.0050	1	04/09/2014 04:30
n-Propyl benzene	ND		0.0050	1	04/09/2014 04:30
Styrene	ND		0.0050	1	04/09/2014 04:30
1,1,1,2-Tetrachloroethane	ND		0.0050	1	04/09/2014 04:30
1,1,2,2-Tetrachloroethane	ND		0.0050	1	04/09/2014 04:30
Tetrachloroethene	ND		0.0050	1	04/09/2014 04:30
Toluene	ND		0.0050	1	04/09/2014 04:30
1,2,3-Trichlorobenzene	ND		0.0050	1	04/09/2014 04:30
1,2,4-Trichlorobenzene	ND		0.0050	1	04/09/2014 04:30
1,1,1-Trichloroethane	ND		0.0050	1	04/09/2014 04:30
1,1,2-Trichloroethane	ND		0.0050	1	04/09/2014 04:30
Trichloroethene	ND		0.0050	1	04/09/2014 04:30
Trichlorofluoromethane	ND		0.0050	1	04/09/2014 04:30
1,2,3-Trichloropropane	ND		0.0050	1	04/09/2014 04:30
1,2,4-Trimethylbenzene	ND		0.0050	1	04/09/2014 04:30
1,3,5-Trimethylbenzene	ND		0.0050	1	04/09/2014 04:30
Vinyl Chloride	ND		0.0050	1	04/09/2014 04:30
Xylenes, Total	ND		0.0050	1	04/09/2014 04:30
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	101		70-130		04/09/2014 04:30
Toluene-d8	95		70-130		04/09/2014 04:30
4-BFB	101		70-130		04/09/2014 04:30



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND	H	20	10	04/08/2014 22:07
Acenaphthylene	ND	H	20	10	04/08/2014 22:07
Acetochlor	ND	H	20	10	04/08/2014 22:07
Anthracene	ND	H	20	10	04/08/2014 22:07
Benzidine	ND	H	100	10	04/08/2014 22:07
Benzo (a) anthracene	ND	H	20	10	04/08/2014 22:07
Benzo (b) fluoranthene	ND	H	20	10	04/08/2014 22:07
Benzo (k) fluoranthene	ND	H	20	10	04/08/2014 22:07
Benzo (g,h,i) perylene	ND	H	20	10	04/08/2014 22:07
Benzo (a) pyrene	ND	H	20	10	04/08/2014 22:07
Benzyl Alcohol	ND	H	100	10	04/08/2014 22:07
1,1-Biphenyl	ND	H	20	10	04/08/2014 22:07
Bis (2-chloroethoxy) Methane	ND	H	20	10	04/08/2014 22:07
Bis (2-chloroethyl) Ether	ND	H	20	10	04/08/2014 22:07
Bis (2-chloroisopropyl) Ether	ND	H	20	10	04/08/2014 22:07
Bis (2-ethylhexyl) Adipate	ND	H	20	10	04/08/2014 22:07
Bis (2-ethylhexyl) Phthalate	ND	H	20	10	04/08/2014 22:07
4-Bromophenyl Phenyl Ether	ND	H	20	10	04/08/2014 22:07
Butylbenzyl Phthalate	ND	H	20	10	04/08/2014 22:07
4-Chloroaniline	ND	H	20	10	04/08/2014 22:07
4-Chloro-3-methylphenol	ND	H	20	10	04/08/2014 22:07
2-Chloronaphthalene	ND	H	20	10	04/08/2014 22:07
2-Chlorophenol	ND	H	20	10	04/08/2014 22:07
4-Chlorophenyl Phenyl Ether	ND	H	20	10	04/08/2014 22:07
Chrysene	ND	H	20	10	04/08/2014 22:07
Dibenzo (a,h) anthracene	ND	H	20	10	04/08/2014 22:07
Dibenzofuran	ND	H	20	10	04/08/2014 22:07
Di-n-butyl Phthalate	ND	H	20	10	04/08/2014 22:07
1,2-Dichlorobenzene	ND	H	20	10	04/08/2014 22:07
1,3-Dichlorobenzene	ND	H	20	10	04/08/2014 22:07
1,4-Dichlorobenzene	ND	H	20	10	04/08/2014 22:07
3,3-Dichlorobenzidine	ND	H	40	10	04/08/2014 22:07
2,4-Dichlorophenol	ND	H	20	10	04/08/2014 22:07
Diethyl Phthalate	ND	H	20	10	04/08/2014 22:07
2,4-Dimethylphenol	ND	H	20	10	04/08/2014 22:07
Dimethyl Phthalate	ND	H	20	10	04/08/2014 22:07
4,6-Dinitro-2-methylphenol	ND	H	100	10	04/08/2014 22:07
2,4-Dinitrophenol	ND	H	500	10	04/08/2014 22:07

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	20	10	04/08/2014 22:07
2,6-Dinitrotoluene	ND	H	20	10	04/08/2014 22:07
Di-n-octyl Phthalate	ND	H	40	10	04/08/2014 22:07
1,2-Diphenylhydrazine	ND	H	20	10	04/08/2014 22:07
Fluoranthene	ND	H	20	10	04/08/2014 22:07
Fluorene	ND	H	20	10	04/08/2014 22:07
Hexachlorobenzene	ND	H	20	10	04/08/2014 22:07
Hexachlorobutadiene	ND	H	20	10	04/08/2014 22:07
Hexachlorocyclopentadiene	ND	H	100	10	04/08/2014 22:07
Hexachloroethane	ND	H	20	10	04/08/2014 22:07
Indeno (1,2,3-cd) pyrene	ND	H	20	10	04/08/2014 22:07
Isophorone	ND	H	20	10	04/08/2014 22:07
2-Methylnaphthalene	ND	H	20	10	04/08/2014 22:07
2-Methylphenol (o-Cresol)	ND	H	20	10	04/08/2014 22:07
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	20	10	04/08/2014 22:07
Naphthalene	ND	H	20	10	04/08/2014 22:07
2-Nitroaniline	ND	H	100	10	04/08/2014 22:07
3-Nitroaniline	ND	H	100	10	04/08/2014 22:07
4-Nitroaniline	ND	H	100	10	04/08/2014 22:07
Nitrobenzene	ND	H	20	10	04/08/2014 22:07
2-Nitrophenol	ND	H	100	10	04/08/2014 22:07
4-Nitrophenol	ND	H	100	10	04/08/2014 22:07
N-Nitrosodiphenylamine	ND	H	20	10	04/08/2014 22:07
N-Nitrosodi-n-propylamine	ND	H	20	10	04/08/2014 22:07
Pentachlorophenol	ND	H	100	10	04/08/2014 22:07
Phenanthrene	ND	H	20	10	04/08/2014 22:07
Phenol	ND	H	20	10	04/08/2014 22:07
Pyrene	ND	H	20	10	04/08/2014 22:07
1,2,4-Trichlorobenzene	ND	H	20	10	04/08/2014 22:07
2,4,5-Trichlorophenol	ND	H	20	10	04/08/2014 22:07
2,4,6-Trichlorophenol	ND	H	20	10	04/08/2014 22:07

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

## Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	GC17	89060

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3,a4	
2-Fluorophenol	97	H	30-130		04/08/2014 22:07
Phenol-d5	84	H	30-130		04/08/2014 22:07
Nitrobenzene-d5	88	H	30-130		04/08/2014 22:07
2-Fluorobiphenyl	93	H	30-130		04/08/2014 22:07
2,4,6-Tribromophenol	30	H	30-130		04/08/2014 22:07
4-Terphenyl-d14	107	H	30-130		04/08/2014 22:07

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND	H	2.0	1	04/08/2014 20:14
Acenaphthylene	ND	H	2.0	1	04/08/2014 20:14
Acetochlor	ND	H	2.0	1	04/08/2014 20:14
Anthracene	ND	H	2.0	1	04/08/2014 20:14
Benzidine	ND	H	10	1	04/08/2014 20:14
Benzo (a) anthracene	ND	H	2.0	1	04/08/2014 20:14
Benzo (b) fluoranthene	ND	H	2.0	1	04/08/2014 20:14
Benzo (k) fluoranthene	ND	H	2.0	1	04/08/2014 20:14
Benzo (g,h,i) perylene	ND	H	2.0	1	04/08/2014 20:14
Benzo (a) pyrene	ND	H	2.0	1	04/08/2014 20:14
Benzyl Alcohol	ND	H	10	1	04/08/2014 20:14
1,1-Biphenyl	ND	H	2.0	1	04/08/2014 20:14
Bis (2-chloroethoxy) Methane	ND	H	2.0	1	04/08/2014 20:14
Bis (2-chloroethyl) Ether	ND	H	2.0	1	04/08/2014 20:14
Bis (2-chloroisopropyl) Ether	ND	H	2.0	1	04/08/2014 20:14
Bis (2-ethylhexyl) Adipate	ND	H	2.0	1	04/08/2014 20:14
Bis (2-ethylhexyl) Phthalate	ND	H	2.0	1	04/08/2014 20:14
4-Bromophenyl Phenyl Ether	ND	H	2.0	1	04/08/2014 20:14
Butylbenzyl Phthalate	ND	H	2.0	1	04/08/2014 20:14
4-Chloroaniline	ND	H	2.0	1	04/08/2014 20:14
4-Chloro-3-methylphenol	ND	H	2.0	1	04/08/2014 20:14
2-Chloronaphthalene	ND	H	2.0	1	04/08/2014 20:14
2-Chlorophenol	ND	H	2.0	1	04/08/2014 20:14
4-Chlorophenyl Phenyl Ether	ND	H	2.0	1	04/08/2014 20:14
Chrysene	ND	H	2.0	1	04/08/2014 20:14
Dibenzo (a,h) anthracene	ND	H	2.0	1	04/08/2014 20:14
Dibenzofuran	ND	H	2.0	1	04/08/2014 20:14
Di-n-butyl Phthalate	ND	H	2.0	1	04/08/2014 20:14
1,2-Dichlorobenzene	ND	H	2.0	1	04/08/2014 20:14
1,3-Dichlorobenzene	ND	H	2.0	1	04/08/2014 20:14
1,4-Dichlorobenzene	ND	H	2.0	1	04/08/2014 20:14
3,3-Dichlorobenzidine	ND	H	4.0	1	04/08/2014 20:14
2,4-Dichlorophenol	ND	H	2.0	1	04/08/2014 20:14
Diethyl Phthalate	ND	H	2.0	1	04/08/2014 20:14
2,4-Dimethylphenol	ND	H	2.0	1	04/08/2014 20:14
Dimethyl Phthalate	ND	H	2.0	1	04/08/2014 20:14
4,6-Dinitro-2-methylphenol	ND	H	10	1	04/08/2014 20:14
2,4-Dinitrophenol	ND	H	50	1	04/08/2014 20:14

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND	H	2.0	1	04/08/2014 20:14
2,6-Dinitrotoluene	ND	H	2.0	1	04/08/2014 20:14
Di-n-octyl Phthalate	ND	H	4.0	1	04/08/2014 20:14
1,2-Diphenylhydrazine	ND	H	2.0	1	04/08/2014 20:14
Fluoranthene	ND	H	2.0	1	04/08/2014 20:14
Fluorene	ND	H	2.0	1	04/08/2014 20:14
Hexachlorobenzene	ND	H	2.0	1	04/08/2014 20:14
Hexachlorobutadiene	ND	H	2.0	1	04/08/2014 20:14
Hexachlorocyclopentadiene	ND	H	10	1	04/08/2014 20:14
Hexachloroethane	ND	H	2.0	1	04/08/2014 20:14
Indeno (1,2,3-cd) pyrene	ND	H	2.0	1	04/08/2014 20:14
Isophorone	ND	H	2.0	1	04/08/2014 20:14
2-Methylnaphthalene	ND	H	2.0	1	04/08/2014 20:14
2-Methylphenol (o-Cresol)	ND	H	2.0	1	04/08/2014 20:14
3 &/or 4-Methylphenol (m,p-Cresol)	ND	H	2.0	1	04/08/2014 20:14
Naphthalene	ND	H	2.0	1	04/08/2014 20:14
2-Nitroaniline	ND	H	10	1	04/08/2014 20:14
3-Nitroaniline	ND	H	10	1	04/08/2014 20:14
4-Nitroaniline	ND	H	10	1	04/08/2014 20:14
Nitrobenzene	ND	H	2.0	1	04/08/2014 20:14
2-Nitrophenol	ND	H	10	1	04/08/2014 20:14
4-Nitrophenol	ND	H	10	1	04/08/2014 20:14
N-Nitrosodiphenylamine	ND	H	2.0	1	04/08/2014 20:14
N-Nitrosodi-n-propylamine	ND	H	2.0	1	04/08/2014 20:14
Pentachlorophenol	ND	H	10	1	04/08/2014 20:14
Phenanthrene	ND	H	2.0	1	04/08/2014 20:14
Phenol	ND	H	2.0	1	04/08/2014 20:14
Pyrene	ND	H	2.0	1	04/08/2014 20:14
1,2,4-Trichlorobenzene	ND	H	2.0	1	04/08/2014 20:14
2,4,5-Trichlorophenol	ND	H	2.0	1	04/08/2014 20:14
2,4,6-Trichlorophenol	ND	H	2.0	1	04/08/2014 20:14

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-8	1404200-003A	Soil	03/24/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a4	
2-Fluorophenol	86	H	30-130		04/08/2014 20:14
Phenol-d5	84	H	30-130		04/08/2014 20:14
Nitrobenzene-d5	81	H	30-130		04/08/2014 20:14
2-Fluorobiphenyl	82	H	30-130		04/08/2014 20:14
2,4,6-Tribromophenol	67	H	30-130		04/08/2014 20:14
4-Terphenyl-d14	83	H	30-130		04/08/2014 20:14

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		4.0	2	04/08/2014 20:42
Acenaphthylene	ND		4.0	2	04/08/2014 20:42
Acetochlor	ND		4.0	2	04/08/2014 20:42
Anthracene	ND		4.0	2	04/08/2014 20:42
Benzidine	ND		21	2	04/08/2014 20:42
Benzo (a) anthracene	ND		4.0	2	04/08/2014 20:42
Benzo (b) fluoranthene	ND		4.0	2	04/08/2014 20:42
Benzo (k) fluoranthene	ND		4.0	2	04/08/2014 20:42
Benzo (g,h,i) perylene	ND		4.0	2	04/08/2014 20:42
Benzo (a) pyrene	ND		4.0	2	04/08/2014 20:42
Benzyl Alcohol	ND		21	2	04/08/2014 20:42
1,1-Biphenyl	ND		4.0	2	04/08/2014 20:42
Bis (2-chloroethoxy) Methane	ND		4.0	2	04/08/2014 20:42
Bis (2-chloroethyl) Ether	ND		4.0	2	04/08/2014 20:42
Bis (2-chloroisopropyl) Ether	ND		4.0	2	04/08/2014 20:42
Bis (2-ethylhexyl) Adipate	ND		4.0	2	04/08/2014 20:42
Bis (2-ethylhexyl) Phthalate	ND		4.0	2	04/08/2014 20:42
4-Bromophenyl Phenyl Ether	ND		4.0	2	04/08/2014 20:42
Butylbenzyl Phthalate	ND		4.0	2	04/08/2014 20:42
4-Chloroaniline	ND		4.0	2	04/08/2014 20:42
4-Chloro-3-methylphenol	ND		4.0	2	04/08/2014 20:42
2-Chloronaphthalene	ND		4.0	2	04/08/2014 20:42
2-Chlorophenol	ND		4.0	2	04/08/2014 20:42
4-Chlorophenyl Phenyl Ether	ND		4.0	2	04/08/2014 20:42
Chrysene	ND		4.0	2	04/08/2014 20:42
Dibenzo (a,h) anthracene	ND		4.0	2	04/08/2014 20:42
Dibenzofuran	ND		4.0	2	04/08/2014 20:42
Di-n-butyl Phthalate	ND		4.0	2	04/08/2014 20:42
1,2-Dichlorobenzene	ND		4.0	2	04/08/2014 20:42
1,3-Dichlorobenzene	ND		4.0	2	04/08/2014 20:42
1,4-Dichlorobenzene	ND		4.0	2	04/08/2014 20:42
3,3-Dichlorobenzidine	ND		8.0	2	04/08/2014 20:42
2,4-Dichlorophenol	ND		4.0	2	04/08/2014 20:42
Diethyl Phthalate	ND		4.0	2	04/08/2014 20:42
2,4-Dimethylphenol	ND		4.0	2	04/08/2014 20:42
Dimethyl Phthalate	ND		4.0	2	04/08/2014 20:42
4,6-Dinitro-2-methylphenol	ND		21	2	04/08/2014 20:42
2,4-Dinitrophenol	ND		100	2	04/08/2014 20:42

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		4.0	2	04/08/2014 20:42
2,6-Dinitrotoluene	ND		4.0	2	04/08/2014 20:42
Di-n-octyl Phthalate	ND		8.0	2	04/08/2014 20:42
1,2-Diphenylhydrazine	ND		4.0	2	04/08/2014 20:42
Fluoranthene	ND		4.0	2	04/08/2014 20:42
Fluorene	ND		4.0	2	04/08/2014 20:42
Hexachlorobenzene	ND		4.0	2	04/08/2014 20:42
Hexachlorobutadiene	ND		4.0	2	04/08/2014 20:42
Hexachlorocyclopentadiene	ND		21	2	04/08/2014 20:42
Hexachloroethane	ND		4.0	2	04/08/2014 20:42
Indeno (1,2,3-cd) pyrene	ND		4.0	2	04/08/2014 20:42
Isophorone	ND		4.0	2	04/08/2014 20:42
2-Methylnaphthalene	ND		4.0	2	04/08/2014 20:42
2-Methylphenol (o-Cresol)	ND		4.0	2	04/08/2014 20:42
3 &/or 4-Methylphenol (m,p-Cresol)	ND		4.0	2	04/08/2014 20:42
Naphthalene	ND		4.0	2	04/08/2014 20:42
2-Nitroaniline	ND		21	2	04/08/2014 20:42
3-Nitroaniline	ND		21	2	04/08/2014 20:42
4-Nitroaniline	ND		21	2	04/08/2014 20:42
Nitrobenzene	ND		4.0	2	04/08/2014 20:42
2-Nitrophenol	ND		21	2	04/08/2014 20:42
4-Nitrophenol	ND		21	2	04/08/2014 20:42
N-Nitrosodiphenylamine	ND		4.0	2	04/08/2014 20:42
N-Nitrosodi-n-propylamine	ND		4.0	2	04/08/2014 20:42
Pentachlorophenol	ND		21	2	04/08/2014 20:42
Phenanthrene	ND		4.0	2	04/08/2014 20:42
Phenol	ND		4.0	2	04/08/2014 20:42
Pyrene	ND		4.0	2	04/08/2014 20:42
1,2,4-Trichlorobenzene	ND		4.0	2	04/08/2014 20:42
2,4,5-Trichlorophenol	ND		4.0	2	04/08/2014 20:42
2,4,6-Trichlorophenol	ND		4.0	2	04/08/2014 20:42

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-5.5	1404200-006A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: a3,a4,c1	
2-Fluorophenol	97		30-130		04/08/2014 20:42
Phenol-d5	92		30-130		04/08/2014 20:42
Nitrobenzene-d5	92		30-130		04/08/2014 20:42
2-Fluorobiphenyl	95		30-130		04/08/2014 20:42
2,4,6-Tribromophenol	23	S	30-130		04/08/2014 20:42
4-Terphenyl-d14	100		30-130		04/08/2014 20:42

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		2.0	1	04/08/2014 19:45
Acenaphthylene	ND		2.0	1	04/08/2014 19:45
Acetochlor	ND		2.0	1	04/08/2014 19:45
Anthracene	ND		2.0	1	04/08/2014 19:45
Benzidine	ND		10	1	04/08/2014 19:45
Benzo (a) anthracene	ND		2.0	1	04/08/2014 19:45
Benzo (b) fluoranthene	ND		2.0	1	04/08/2014 19:45
Benzo (k) fluoranthene	ND		2.0	1	04/08/2014 19:45
Benzo (g,h,i) perylene	ND		2.0	1	04/08/2014 19:45
Benzo (a) pyrene	ND		2.0	1	04/08/2014 19:45
Benzyl Alcohol	ND		10	1	04/08/2014 19:45
1,1-Biphenyl	ND		2.0	1	04/08/2014 19:45
Bis (2-chloroethoxy) Methane	ND		2.0	1	04/08/2014 19:45
Bis (2-chloroethyl) Ether	ND		2.0	1	04/08/2014 19:45
Bis (2-chloroisopropyl) Ether	ND		2.0	1	04/08/2014 19:45
Bis (2-ethylhexyl) Adipate	ND		2.0	1	04/08/2014 19:45
Bis (2-ethylhexyl) Phthalate	ND		2.0	1	04/08/2014 19:45
4-Bromophenyl Phenyl Ether	ND		2.0	1	04/08/2014 19:45
Butylbenzyl Phthalate	ND		2.0	1	04/08/2014 19:45
4-Chloroaniline	ND		2.0	1	04/08/2014 19:45
4-Chloro-3-methylphenol	ND		2.0	1	04/08/2014 19:45
2-Chloronaphthalene	ND		2.0	1	04/08/2014 19:45
2-Chlorophenol	ND		2.0	1	04/08/2014 19:45
4-Chlorophenyl Phenyl Ether	ND		2.0	1	04/08/2014 19:45
Chrysene	ND		2.0	1	04/08/2014 19:45
Dibenzo (a,h) anthracene	ND		2.0	1	04/08/2014 19:45
Dibenzofuran	ND		2.0	1	04/08/2014 19:45
Di-n-butyl Phthalate	ND		2.0	1	04/08/2014 19:45
1,2-Dichlorobenzene	ND		2.0	1	04/08/2014 19:45
1,3-Dichlorobenzene	ND		2.0	1	04/08/2014 19:45
1,4-Dichlorobenzene	ND		2.0	1	04/08/2014 19:45
3,3-Dichlorobenzidine	ND		4.0	1	04/08/2014 19:45
2,4-Dichlorophenol	ND		2.0	1	04/08/2014 19:45
Diethyl Phthalate	ND		2.0	1	04/08/2014 19:45
2,4-Dimethylphenol	ND		2.0	1	04/08/2014 19:45
Dimethyl Phthalate	ND		2.0	1	04/08/2014 19:45
4,6-Dinitro-2-methylphenol	ND		10	1	04/08/2014 19:45
2,4-Dinitrophenol	ND		50	1	04/08/2014 19:45

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		2.0	1	04/08/2014 19:45
2,6-Dinitrotoluene	ND		2.0	1	04/08/2014 19:45
Di-n-octyl Phthalate	ND		4.0	1	04/08/2014 19:45
1,2-Diphenylhydrazine	ND		2.0	1	04/08/2014 19:45
Fluoranthene	ND		2.0	1	04/08/2014 19:45
Fluorene	ND		2.0	1	04/08/2014 19:45
Hexachlorobenzene	ND		2.0	1	04/08/2014 19:45
Hexachlorobutadiene	ND		2.0	1	04/08/2014 19:45
Hexachlorocyclopentadiene	ND		10	1	04/08/2014 19:45
Hexachloroethane	ND		2.0	1	04/08/2014 19:45
Indeno (1,2,3-cd) pyrene	ND		2.0	1	04/08/2014 19:45
Isophorone	ND		2.0	1	04/08/2014 19:45
2-Methylnaphthalene	ND		2.0	1	04/08/2014 19:45
2-Methylphenol (o-Cresol)	ND		2.0	1	04/08/2014 19:45
3 &/or 4-Methylphenol (m,p-Cresol)	ND		2.0	1	04/08/2014 19:45
Naphthalene	ND		2.0	1	04/08/2014 19:45
2-Nitroaniline	ND		10	1	04/08/2014 19:45
3-Nitroaniline	ND		10	1	04/08/2014 19:45
4-Nitroaniline	ND		10	1	04/08/2014 19:45
Nitrobenzene	ND		2.0	1	04/08/2014 19:45
2-Nitrophenol	ND		10	1	04/08/2014 19:45
4-Nitrophenol	ND		10	1	04/08/2014 19:45
N-Nitrosodiphenylamine	ND		2.0	1	04/08/2014 19:45
N-Nitrosodi-n-propylamine	ND		2.0	1	04/08/2014 19:45
Pentachlorophenol	ND		10	1	04/08/2014 19:45
Phenanthrene	ND		2.0	1	04/08/2014 19:45
Phenol	ND		2.0	1	04/08/2014 19:45
Pyrene	ND		2.0	1	04/08/2014 19:45
1,2,4-Trichlorobenzene	ND		2.0	1	04/08/2014 19:45
2,4,5-Trichlorophenol	ND		2.0	1	04/08/2014 19:45
2,4,6-Trichlorophenol	ND		2.0	1	04/08/2014 19:45

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

## Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	<u>Analytical Comments: a4</u>	
2-Fluorophenol	92		30-130		04/08/2014 19:45
Phenol-d5	86		30-130		04/08/2014 19:45
Nitrobenzene-d5	82		30-130		04/08/2014 19:45
2-Fluorobiphenyl	83		30-130		04/08/2014 19:45
2,4,6-Tribromophenol	80		30-130		04/08/2014 19:45
4-Terphenyl-d14	85		30-130		04/08/2014 19:45

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		2.0	1	04/08/2014 18:17
Acenaphthylene	ND		2.0	1	04/08/2014 18:17
Acetochlor	ND		2.0	1	04/08/2014 18:17
Anthracene	ND		2.0	1	04/08/2014 18:17
Benzidine	ND		10	1	04/08/2014 18:17
Benzo (a) anthracene	ND		2.0	1	04/08/2014 18:17
Benzo (b) fluoranthene	ND		2.0	1	04/08/2014 18:17
Benzo (k) fluoranthene	ND		2.0	1	04/08/2014 18:17
Benzo (g,h,i) perylene	ND		2.0	1	04/08/2014 18:17
Benzo (a) pyrene	ND		2.0	1	04/08/2014 18:17
Benzyl Alcohol	ND		10	1	04/08/2014 18:17
1,1-Biphenyl	ND		2.0	1	04/08/2014 18:17
Bis (2-chloroethoxy) Methane	ND		2.0	1	04/08/2014 18:17
Bis (2-chloroethyl) Ether	ND		2.0	1	04/08/2014 18:17
Bis (2-chloroisopropyl) Ether	ND		2.0	1	04/08/2014 18:17
Bis (2-ethylhexyl) Adipate	ND		2.0	1	04/08/2014 18:17
Bis (2-ethylhexyl) Phthalate	ND		2.0	1	04/08/2014 18:17
4-Bromophenyl Phenyl Ether	ND		2.0	1	04/08/2014 18:17
Butylbenzyl Phthalate	ND		2.0	1	04/08/2014 18:17
4-Chloroaniline	ND		2.0	1	04/08/2014 18:17
4-Chloro-3-methylphenol	ND		2.0	1	04/08/2014 18:17
2-Chloronaphthalene	ND		2.0	1	04/08/2014 18:17
2-Chlorophenol	ND		2.0	1	04/08/2014 18:17
4-Chlorophenyl Phenyl Ether	ND		2.0	1	04/08/2014 18:17
Chrysene	ND		2.0	1	04/08/2014 18:17
Dibenzo (a,h) anthracene	ND		2.0	1	04/08/2014 18:17
Dibenzofuran	ND		2.0	1	04/08/2014 18:17
Di-n-butyl Phthalate	ND		2.0	1	04/08/2014 18:17
1,2-Dichlorobenzene	ND		2.0	1	04/08/2014 18:17
1,3-Dichlorobenzene	ND		2.0	1	04/08/2014 18:17
1,4-Dichlorobenzene	ND		2.0	1	04/08/2014 18:17
3,3-Dichlorobenzidine	ND		4.0	1	04/08/2014 18:17
2,4-Dichlorophenol	ND		2.0	1	04/08/2014 18:17
Diethyl Phthalate	ND		2.0	1	04/08/2014 18:17
2,4-Dimethylphenol	ND		2.0	1	04/08/2014 18:17
Dimethyl Phthalate	ND		2.0	1	04/08/2014 18:17
4,6-Dinitro-2-methylphenol	ND		10	1	04/08/2014 18:17
2,4-Dinitrophenol	ND		50	1	04/08/2014 18:17

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		2.0	1	04/08/2014 18:17
2,6-Dinitrotoluene	ND		2.0	1	04/08/2014 18:17
Di-n-octyl Phthalate	ND		4.0	1	04/08/2014 18:17
1,2-Diphenylhydrazine	ND		2.0	1	04/08/2014 18:17
Fluoranthene	ND		2.0	1	04/08/2014 18:17
Fluorene	ND		2.0	1	04/08/2014 18:17
Hexachlorobenzene	ND		2.0	1	04/08/2014 18:17
Hexachlorobutadiene	ND		2.0	1	04/08/2014 18:17
Hexachlorocyclopentadiene	ND		10	1	04/08/2014 18:17
Hexachloroethane	ND		2.0	1	04/08/2014 18:17
Indeno (1,2,3-cd) pyrene	ND		2.0	1	04/08/2014 18:17
Isophorone	ND		2.0	1	04/08/2014 18:17
2-Methylnaphthalene	ND		2.0	1	04/08/2014 18:17
2-Methylphenol (o-Cresol)	ND		2.0	1	04/08/2014 18:17
3 &/or 4-Methylphenol (m,p-Cresol)	ND		2.0	1	04/08/2014 18:17
Naphthalene	ND		2.0	1	04/08/2014 18:17
2-Nitroaniline	ND		10	1	04/08/2014 18:17
3-Nitroaniline	ND		10	1	04/08/2014 18:17
4-Nitroaniline	ND		10	1	04/08/2014 18:17
Nitrobenzene	ND		2.0	1	04/08/2014 18:17
2-Nitrophenol	ND		10	1	04/08/2014 18:17
4-Nitrophenol	ND		10	1	04/08/2014 18:17
N-Nitrosodiphenylamine	ND		2.0	1	04/08/2014 18:17
N-Nitrosodi-n-propylamine	ND		2.0	1	04/08/2014 18:17
Pentachlorophenol	ND		10	1	04/08/2014 18:17
Phenanthrene	ND		2.0	1	04/08/2014 18:17
Phenol	ND		2.0	1	04/08/2014 18:17
Pyrene	ND		2.0	1	04/08/2014 18:17
1,2,4-Trichlorobenzene	ND		2.0	1	04/08/2014 18:17
2,4,5-Trichlorophenol	ND		2.0	1	04/08/2014 18:17
2,4,6-Trichlorophenol	ND		2.0	1	04/08/2014 18:17

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	<u>Analytical Comments:</u> a4	
2-Fluorophenol	99		30-130		04/08/2014 18:17
Phenol-d5	90		30-130		04/08/2014 18:17
Nitrobenzene-d5	89		30-130		04/08/2014 18:17
2-Fluorobiphenyl	89		30-130		04/08/2014 18:17
2,4,6-Tribromophenol	91		30-130		04/08/2014 18:17
4-Terphenyl-d14	92		30-130		04/08/2014 18:17

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-9-5.5</b>	<b>1404200-016A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC17</b>	<b>89060</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		40	20	04/08/2014 22:36
Acenaphthylene	ND		40	20	04/08/2014 22:36
Acetochlor	ND		40	20	04/08/2014 22:36
Anthracene	ND		40	20	04/08/2014 22:36
Benzidine	ND		210	20	04/08/2014 22:36
Benzo (a) anthracene	ND		40	20	04/08/2014 22:36
Benzo (b) fluoranthene	ND		40	20	04/08/2014 22:36
Benzo (k) fluoranthene	ND		40	20	04/08/2014 22:36
Benzo (g,h,i) perylene	ND		40	20	04/08/2014 22:36
Benzo (a) pyrene	ND		40	20	04/08/2014 22:36
Benzyl Alcohol	ND		210	20	04/08/2014 22:36
1,1-Biphenyl	ND		40	20	04/08/2014 22:36
Bis (2-chloroethoxy) Methane	ND		40	20	04/08/2014 22:36
Bis (2-chloroethyl) Ether	ND		40	20	04/08/2014 22:36
Bis (2-chloroisopropyl) Ether	ND		40	20	04/08/2014 22:36
Bis (2-ethylhexyl) Adipate	ND		40	20	04/08/2014 22:36
Bis (2-ethylhexyl) Phthalate	ND		40	20	04/08/2014 22:36
4-Bromophenyl Phenyl Ether	ND		40	20	04/08/2014 22:36
Butylbenzyl Phthalate	ND		40	20	04/08/2014 22:36
4-Chloroaniline	ND		40	20	04/08/2014 22:36
4-Chloro-3-methylphenol	ND		40	20	04/08/2014 22:36
2-Chloronaphthalene	ND		40	20	04/08/2014 22:36
2-Chlorophenol	ND		40	20	04/08/2014 22:36
4-Chlorophenyl Phenyl Ether	ND		40	20	04/08/2014 22:36
Chrysene	ND		40	20	04/08/2014 22:36
Dibenzo (a,h) anthracene	ND		40	20	04/08/2014 22:36
Dibenzofuran	ND		40	20	04/08/2014 22:36
Di-n-butyl Phthalate	ND		40	20	04/08/2014 22:36
1,2-Dichlorobenzene	ND		40	20	04/08/2014 22:36
1,3-Dichlorobenzene	ND		40	20	04/08/2014 22:36
1,4-Dichlorobenzene	ND		40	20	04/08/2014 22:36
3,3-Dichlorobenzidine	ND		80	20	04/08/2014 22:36
2,4-Dichlorophenol	ND		40	20	04/08/2014 22:36
Diethyl Phthalate	ND		40	20	04/08/2014 22:36
2,4-Dimethylphenol	ND		40	20	04/08/2014 22:36
Dimethyl Phthalate	ND		40	20	04/08/2014 22:36
4,6-Dinitro-2-methylphenol	ND		210	20	04/08/2014 22:36
2,4-Dinitrophenol	ND		1000	20	04/08/2014 22:36

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-5.5	1404200-016A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		40	20	04/08/2014 22:36
2,6-Dinitrotoluene	ND		40	20	04/08/2014 22:36
Di-n-octyl Phthalate	ND		80	20	04/08/2014 22:36
1,2-Diphenylhydrazine	ND		40	20	04/08/2014 22:36
Fluoranthene	ND		40	20	04/08/2014 22:36
Fluorene	ND		40	20	04/08/2014 22:36
Hexachlorobenzene	ND		40	20	04/08/2014 22:36
Hexachlorobutadiene	ND		40	20	04/08/2014 22:36
Hexachlorocyclopentadiene	ND		210	20	04/08/2014 22:36
Hexachloroethane	ND		40	20	04/08/2014 22:36
Indeno (1,2,3-cd) pyrene	ND		40	20	04/08/2014 22:36
Isophorone	ND		40	20	04/08/2014 22:36
2-Methylnaphthalene	ND		40	20	04/08/2014 22:36
2-Methylphenol (o-Cresol)	ND		40	20	04/08/2014 22:36
3 &/or 4-Methylphenol (m,p-Cresol)	ND		40	20	04/08/2014 22:36
Naphthalene	ND		40	20	04/08/2014 22:36
2-Nitroaniline	ND		210	20	04/08/2014 22:36
3-Nitroaniline	ND		210	20	04/08/2014 22:36
4-Nitroaniline	ND		210	20	04/08/2014 22:36
Nitrobenzene	ND		40	20	04/08/2014 22:36
2-Nitrophenol	ND		210	20	04/08/2014 22:36
4-Nitrophenol	ND		210	20	04/08/2014 22:36
N-Nitrosodiphenylamine	ND		40	20	04/08/2014 22:36
N-Nitrosodi-n-propylamine	ND		40	20	04/08/2014 22:36
Pentachlorophenol	ND		210	20	04/08/2014 22:36
Phenanthrene	ND		40	20	04/08/2014 22:36
Phenol	ND		40	20	04/08/2014 22:36
Pyrene	ND		40	20	04/08/2014 22:36
1,2,4-Trichlorobenzene	ND		40	20	04/08/2014 22:36
2,4,5-Trichlorophenol	ND		40	20	04/08/2014 22:36
2,4,6-Trichlorophenol	ND		40	20	04/08/2014 22:36

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-5.5	1404200-016A	Soil	03/25/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3,a4	
2-Fluorophenol	91		30-130		04/08/2014 22:36
Phenol-d5	66		30-130		04/08/2014 22:36
Nitrobenzene-d5	77		30-130		04/08/2014 22:36
2-Fluorobiphenyl	101		30-130		04/08/2014 22:36
2,4,6-Tribromophenol	88		30-130		04/08/2014 22:36
4-Terphenyl-d14	103		30-130		04/08/2014 22:36

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		10	5	04/08/2014 21:10
Acenaphthylene	ND		10	5	04/08/2014 21:10
Acetochlor	ND		10	5	04/08/2014 21:10
Anthracene	ND		10	5	04/08/2014 21:10
Benzidine	ND		52	5	04/08/2014 21:10
Benzo (a) anthracene	ND		10	5	04/08/2014 21:10
Benzo (b) fluoranthene	ND		10	5	04/08/2014 21:10
Benzo (k) fluoranthene	ND		10	5	04/08/2014 21:10
Benzo (g,h,i) perylene	ND		10	5	04/08/2014 21:10
Benzo (a) pyrene	ND		10	5	04/08/2014 21:10
Benzyl Alcohol	ND		52	5	04/08/2014 21:10
1,1-Biphenyl	ND		10	5	04/08/2014 21:10
Bis (2-chloroethoxy) Methane	ND		10	5	04/08/2014 21:10
Bis (2-chloroethyl) Ether	ND		10	5	04/08/2014 21:10
Bis (2-chloroisopropyl) Ether	ND		10	5	04/08/2014 21:10
Bis (2-ethylhexyl) Adipate	ND		10	5	04/08/2014 21:10
Bis (2-ethylhexyl) Phthalate	ND		10	5	04/08/2014 21:10
4-Bromophenyl Phenyl Ether	ND		10	5	04/08/2014 21:10
Butylbenzyl Phthalate	ND		10	5	04/08/2014 21:10
4-Chloroaniline	ND		10	5	04/08/2014 21:10
4-Chloro-3-methylphenol	ND		10	5	04/08/2014 21:10
2-Chloronaphthalene	ND		10	5	04/08/2014 21:10
2-Chlorophenol	ND		10	5	04/08/2014 21:10
4-Chlorophenyl Phenyl Ether	ND		10	5	04/08/2014 21:10
Chrysene	ND		10	5	04/08/2014 21:10
Dibenzo (a,h) anthracene	ND		10	5	04/08/2014 21:10
Dibenzofuran	ND		10	5	04/08/2014 21:10
Di-n-butyl Phthalate	ND		10	5	04/08/2014 21:10
1,2-Dichlorobenzene	ND		10	5	04/08/2014 21:10
1,3-Dichlorobenzene	ND		10	5	04/08/2014 21:10
1,4-Dichlorobenzene	ND		10	5	04/08/2014 21:10
3,3-Dichlorobenzidine	ND		20	5	04/08/2014 21:10
2,4-Dichlorophenol	ND		10	5	04/08/2014 21:10
Diethyl Phthalate	ND		10	5	04/08/2014 21:10
2,4-Dimethylphenol	ND		10	5	04/08/2014 21:10
Dimethyl Phthalate	ND		10	5	04/08/2014 21:10
4,6-Dinitro-2-methylphenol	ND		52	5	04/08/2014 21:10
2,4-Dinitrophenol	ND		250	5	04/08/2014 21:10

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		10	5	04/08/2014 21:10
2,6-Dinitrotoluene	ND		10	5	04/08/2014 21:10
Di-n-octyl Phthalate	ND		20	5	04/08/2014 21:10
1,2-Diphenylhydrazine	ND		10	5	04/08/2014 21:10
Fluoranthene	ND		10	5	04/08/2014 21:10
Fluorene	ND		10	5	04/08/2014 21:10
Hexachlorobenzene	ND		10	5	04/08/2014 21:10
Hexachlorobutadiene	ND		10	5	04/08/2014 21:10
Hexachlorocyclopentadiene	ND		52	5	04/08/2014 21:10
Hexachloroethane	ND		10	5	04/08/2014 21:10
Indeno (1,2,3-cd) pyrene	ND		10	5	04/08/2014 21:10
Isophorone	ND		10	5	04/08/2014 21:10
2-Methylnaphthalene	ND		10	5	04/08/2014 21:10
2-Methylphenol (o-Cresol)	ND		10	5	04/08/2014 21:10
3 &/or 4-Methylphenol (m,p-Cresol)	ND		10	5	04/08/2014 21:10
Naphthalene	ND		10	5	04/08/2014 21:10
2-Nitroaniline	ND		52	5	04/08/2014 21:10
3-Nitroaniline	ND		52	5	04/08/2014 21:10
4-Nitroaniline	ND		52	5	04/08/2014 21:10
Nitrobenzene	ND		10	5	04/08/2014 21:10
2-Nitrophenol	ND		52	5	04/08/2014 21:10
4-Nitrophenol	ND		52	5	04/08/2014 21:10
N-Nitrosodiphenylamine	ND		10	5	04/08/2014 21:10
N-Nitrosodi-n-propylamine	ND		10	5	04/08/2014 21:10
Pentachlorophenol	ND		52	5	04/08/2014 21:10
Phenanthrene	ND		10	5	04/08/2014 21:10
Phenol	ND		10	5	04/08/2014 21:10
Pyrene	ND		10	5	04/08/2014 21:10
1,2,4-Trichlorobenzene	ND		10	5	04/08/2014 21:10
2,4,5-Trichlorophenol	ND		10	5	04/08/2014 21:10
2,4,6-Trichlorophenol	ND		10	5	04/08/2014 21:10

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC17	89060
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3,a4	
2-Fluorophenol	110		30-130		04/08/2014 21:10
Phenol-d5	99		30-130		04/08/2014 21:10
Nitrobenzene-d5	97		30-130		04/08/2014 21:10
2-Fluorobiphenyl	104		30-130		04/08/2014 21:10
2,4,6-Tribromophenol	37		30-130		04/08/2014 21:10
4-Terphenyl-d14	111		30-130		04/08/2014 21:10

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	04/08/2014 16:19
Acenaphthylene	ND		0.25	1	04/08/2014 16:19
Acetochlor	ND		0.25	1	04/08/2014 16:19
Anthracene	ND		0.25	1	04/08/2014 16:19
Benzidine	ND		1.3	1	04/08/2014 16:19
Benzo (a) anthracene	ND		0.25	1	04/08/2014 16:19
Benzo (b) fluoranthene	ND		0.25	1	04/08/2014 16:19
Benzo (k) fluoranthene	ND		0.25	1	04/08/2014 16:19
Benzo (g,h,i) perylene	ND		0.25	1	04/08/2014 16:19
Benzo (a) pyrene	ND		0.25	1	04/08/2014 16:19
Benzyl Alcohol	ND		1.3	1	04/08/2014 16:19
1,1-Biphenyl	ND		0.25	1	04/08/2014 16:19
Bis (2-chloroethoxy) Methane	ND		0.25	1	04/08/2014 16:19
Bis (2-chloroethyl) Ether	ND		0.25	1	04/08/2014 16:19
Bis (2-chloroisopropyl) Ether	ND		0.25	1	04/08/2014 16:19
Bis (2-ethylhexyl) Adipate	ND		0.25	1	04/08/2014 16:19
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	04/08/2014 16:19
4-Bromophenyl Phenyl Ether	ND		0.25	1	04/08/2014 16:19
Butylbenzyl Phthalate	ND		0.25	1	04/08/2014 16:19
4-Chloroaniline	ND		0.25	1	04/08/2014 16:19
4-Chloro-3-methylphenol	ND		0.25	1	04/08/2014 16:19
2-Chloronaphthalene	ND		0.25	1	04/08/2014 16:19
2-Chlorophenol	ND		0.25	1	04/08/2014 16:19
4-Chlorophenyl Phenyl Ether	ND		0.25	1	04/08/2014 16:19
Chrysene	ND		0.25	1	04/08/2014 16:19
Dibenzo (a,h) anthracene	ND		0.25	1	04/08/2014 16:19
Dibenzofuran	ND		0.25	1	04/08/2014 16:19
Di-n-butyl Phthalate	ND		0.25	1	04/08/2014 16:19
1,2-Dichlorobenzene	ND		0.25	1	04/08/2014 16:19
1,3-Dichlorobenzene	ND		0.25	1	04/08/2014 16:19
1,4-Dichlorobenzene	ND		0.25	1	04/08/2014 16:19
3,3-Dichlorobenzidine	ND		0.50	1	04/08/2014 16:19
2,4-Dichlorophenol	ND		0.25	1	04/08/2014 16:19
Diethyl Phthalate	ND		0.25	1	04/08/2014 16:19
2,4-Dimethylphenol	ND		0.25	1	04/08/2014 16:19
Dimethyl Phthalate	ND		0.25	1	04/08/2014 16:19
4,6-Dinitro-2-methylphenol	ND		1.3	1	04/08/2014 16:19
2,4-Dinitrophenol	ND		6.3	1	04/08/2014 16:19

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.25	1	04/08/2014 16:19
2,6-Dinitrotoluene	ND		0.25	1	04/08/2014 16:19
Di-n-octyl Phthalate	ND		0.50	1	04/08/2014 16:19
1,2-Diphenylhydrazine	ND		0.25	1	04/08/2014 16:19
Fluoranthene	ND		0.25	1	04/08/2014 16:19
Fluorene	ND		0.25	1	04/08/2014 16:19
Hexachlorobenzene	ND		0.25	1	04/08/2014 16:19
Hexachlorobutadiene	ND		0.25	1	04/08/2014 16:19
Hexachlorocyclopentadiene	ND		1.3	1	04/08/2014 16:19
Hexachloroethane	ND		0.25	1	04/08/2014 16:19
Indeno (1,2,3-cd) pyrene	ND		0.25	1	04/08/2014 16:19
Isophorone	ND		0.25	1	04/08/2014 16:19
2-Methylnaphthalene	ND		0.25	1	04/08/2014 16:19
2-Methylphenol (o-Cresol)	ND		0.25	1	04/08/2014 16:19
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.25	1	04/08/2014 16:19
Naphthalene	ND		0.25	1	04/08/2014 16:19
2-Nitroaniline	ND		1.3	1	04/08/2014 16:19
3-Nitroaniline	ND		1.3	1	04/08/2014 16:19
4-Nitroaniline	ND		1.3	1	04/08/2014 16:19
Nitrobenzene	ND		0.25	1	04/08/2014 16:19
2-Nitrophenol	ND		1.3	1	04/08/2014 16:19
4-Nitrophenol	ND		1.3	1	04/08/2014 16:19
N-Nitrosodiphenylamine	ND		0.25	1	04/08/2014 16:19
N-Nitrosodi-n-propylamine	ND		0.25	1	04/08/2014 16:19
Pentachlorophenol	ND		1.3	1	04/08/2014 16:19
Phenanthrene	ND		0.25	1	04/08/2014 16:19
Phenol	ND		0.25	1	04/08/2014 16:19
Pyrene	ND		0.25	1	04/08/2014 16:19
1,2,4-Trichlorobenzene	ND		0.25	1	04/08/2014 16:19
2,4,5-Trichlorophenol	ND		0.25	1	04/08/2014 16:19
2,4,6-Trichlorophenol	ND		0.25	1	04/08/2014 16:19

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil	03/26/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorophenol	89		30-130		04/08/2014 16:19
Phenol-d5	84		30-130		04/08/2014 16:19
Nitrobenzene-d5	75		30-130		04/08/2014 16:19
2-Fluorobiphenyl	75		30-130		04/08/2014 16:19
2,4,6-Tribromophenol	83		30-130		04/08/2014 16:19
4-Terphenyl-d14	89		30-130		04/08/2014 16:19

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		2.0	1	04/08/2014 19:16
Acenaphthylene	ND		2.0	1	04/08/2014 19:16
Acetochlor	ND		2.0	1	04/08/2014 19:16
Anthracene	ND		2.0	1	04/08/2014 19:16
Benzidine	ND		10	1	04/08/2014 19:16
Benzo (a) anthracene	ND		2.0	1	04/08/2014 19:16
Benzo (b) fluoranthene	ND		2.0	1	04/08/2014 19:16
Benzo (k) fluoranthene	ND		2.0	1	04/08/2014 19:16
Benzo (g,h,i) perylene	ND		2.0	1	04/08/2014 19:16
Benzo (a) pyrene	ND		2.0	1	04/08/2014 19:16
Benzyl Alcohol	ND		10	1	04/08/2014 19:16
1,1-Biphenyl	ND		2.0	1	04/08/2014 19:16
Bis (2-chloroethoxy) Methane	ND		2.0	1	04/08/2014 19:16
Bis (2-chloroethyl) Ether	ND		2.0	1	04/08/2014 19:16
Bis (2-chloroisopropyl) Ether	ND		2.0	1	04/08/2014 19:16
Bis (2-ethylhexyl) Adipate	ND		2.0	1	04/08/2014 19:16
Bis (2-ethylhexyl) Phthalate	ND		2.0	1	04/08/2014 19:16
4-Bromophenyl Phenyl Ether	ND		2.0	1	04/08/2014 19:16
Butylbenzyl Phthalate	ND		2.0	1	04/08/2014 19:16
4-Chloroaniline	ND		2.0	1	04/08/2014 19:16
4-Chloro-3-methylphenol	ND		2.0	1	04/08/2014 19:16
2-Chloronaphthalene	ND		2.0	1	04/08/2014 19:16
2-Chlorophenol	ND		2.0	1	04/08/2014 19:16
4-Chlorophenyl Phenyl Ether	ND		2.0	1	04/08/2014 19:16
Chrysene	ND		2.0	1	04/08/2014 19:16
Dibenzo (a,h) anthracene	ND		2.0	1	04/08/2014 19:16
Dibenzofuran	ND		2.0	1	04/08/2014 19:16
Di-n-butyl Phthalate	ND		2.0	1	04/08/2014 19:16
1,2-Dichlorobenzene	ND		2.0	1	04/08/2014 19:16
1,3-Dichlorobenzene	ND		2.0	1	04/08/2014 19:16
1,4-Dichlorobenzene	ND		2.0	1	04/08/2014 19:16
3,3-Dichlorobenzidine	ND		4.0	1	04/08/2014 19:16
2,4-Dichlorophenol	ND		2.0	1	04/08/2014 19:16
Diethyl Phthalate	ND		2.0	1	04/08/2014 19:16
2,4-Dimethylphenol	ND		2.0	1	04/08/2014 19:16
Dimethyl Phthalate	ND		2.0	1	04/08/2014 19:16
4,6-Dinitro-2-methylphenol	ND		10	1	04/08/2014 19:16
2,4-Dinitrophenol	ND		50	1	04/08/2014 19:16

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		2.0	1	04/08/2014 19:16
2,6-Dinitrotoluene	ND		2.0	1	04/08/2014 19:16
Di-n-octyl Phthalate	ND		4.0	1	04/08/2014 19:16
1,2-Diphenylhydrazine	ND		2.0	1	04/08/2014 19:16
Fluoranthene	ND		2.0	1	04/08/2014 19:16
Fluorene	ND		2.0	1	04/08/2014 19:16
Hexachlorobenzene	ND		2.0	1	04/08/2014 19:16
Hexachlorobutadiene	ND		2.0	1	04/08/2014 19:16
Hexachlorocyclopentadiene	ND		10	1	04/08/2014 19:16
Hexachloroethane	ND		2.0	1	04/08/2014 19:16
Indeno (1,2,3-cd) pyrene	ND		2.0	1	04/08/2014 19:16
Isophorone	ND		2.0	1	04/08/2014 19:16
2-Methylnaphthalene	ND		2.0	1	04/08/2014 19:16
2-Methylphenol (o-Cresol)	ND		2.0	1	04/08/2014 19:16
3 &/or 4-Methylphenol (m,p-Cresol)	ND		2.0	1	04/08/2014 19:16
Naphthalene	ND		2.0	1	04/08/2014 19:16
2-Nitroaniline	ND		10	1	04/08/2014 19:16
3-Nitroaniline	ND		10	1	04/08/2014 19:16
4-Nitroaniline	ND		10	1	04/08/2014 19:16
Nitrobenzene	ND		2.0	1	04/08/2014 19:16
2-Nitrophenol	ND		10	1	04/08/2014 19:16
4-Nitrophenol	ND		10	1	04/08/2014 19:16
N-Nitrosodiphenylamine	ND		2.0	1	04/08/2014 19:16
N-Nitrosodi-n-propylamine	ND		2.0	1	04/08/2014 19:16
Pentachlorophenol	ND		10	1	04/08/2014 19:16
Phenanthrene	ND		2.0	1	04/08/2014 19:16
Phenol	ND		2.0	1	04/08/2014 19:16
Pyrene	ND		2.0	1	04/08/2014 19:16
1,2,4-Trichlorobenzene	ND		2.0	1	04/08/2014 19:16
2,4,5-Trichlorophenol	ND		2.0	1	04/08/2014 19:16
2,4,6-Trichlorophenol	ND		2.0	1	04/08/2014 19:16

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil	03/31/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	<u>Analytical Comments:</u> a4	
2-Fluorophenol	96		30-130		04/08/2014 19:16
Phenol-d5	87		30-130		04/08/2014 19:16
Nitrobenzene-d5	80		30-130		04/08/2014 19:16
2-Fluorobiphenyl	80		30-130		04/08/2014 19:16
2,4,6-Tribromophenol	89		30-130		04/08/2014 19:16
4-Terphenyl-d14	84		30-130		04/08/2014 19:16

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil	03/31/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		10	5	04/08/2014 21:39
Acenaphthylene	ND		10	5	04/08/2014 21:39
Acetochlor	ND		10	5	04/08/2014 21:39
Anthracene	ND		10	5	04/08/2014 21:39
Benzidine	ND		52	5	04/08/2014 21:39
Benzo (a) anthracene	ND		10	5	04/08/2014 21:39
Benzo (b) fluoranthene	ND		10	5	04/08/2014 21:39
Benzo (k) fluoranthene	ND		10	5	04/08/2014 21:39
Benzo (g,h,i) perylene	ND		10	5	04/08/2014 21:39
Benzo (a) pyrene	ND		10	5	04/08/2014 21:39
Benzyl Alcohol	ND		52	5	04/08/2014 21:39
1,1-Biphenyl	ND		10	5	04/08/2014 21:39
Bis (2-chloroethoxy) Methane	ND		10	5	04/08/2014 21:39
Bis (2-chloroethyl) Ether	ND		10	5	04/08/2014 21:39
Bis (2-chloroisopropyl) Ether	ND		10	5	04/08/2014 21:39
Bis (2-ethylhexyl) Adipate	ND		10	5	04/08/2014 21:39
Bis (2-ethylhexyl) Phthalate	ND		10	5	04/08/2014 21:39
4-Bromophenyl Phenyl Ether	ND		10	5	04/08/2014 21:39
Butylbenzyl Phthalate	ND		10	5	04/08/2014 21:39
4-Chloroaniline	ND		10	5	04/08/2014 21:39
4-Chloro-3-methylphenol	ND		10	5	04/08/2014 21:39
2-Chloronaphthalene	ND		10	5	04/08/2014 21:39
2-Chlorophenol	ND		10	5	04/08/2014 21:39
4-Chlorophenyl Phenyl Ether	ND		10	5	04/08/2014 21:39
Chrysene	ND		10	5	04/08/2014 21:39
Dibenzo (a,h) anthracene	ND		10	5	04/08/2014 21:39
Dibenzofuran	ND		10	5	04/08/2014 21:39
Di-n-butyl Phthalate	ND		10	5	04/08/2014 21:39
1,2-Dichlorobenzene	ND		10	5	04/08/2014 21:39
1,3-Dichlorobenzene	ND		10	5	04/08/2014 21:39
1,4-Dichlorobenzene	ND		10	5	04/08/2014 21:39
3,3-Dichlorobenzidine	ND		20	5	04/08/2014 21:39
2,4-Dichlorophenol	ND		10	5	04/08/2014 21:39
Diethyl Phthalate	ND		10	5	04/08/2014 21:39
2,4-Dimethylphenol	ND		10	5	04/08/2014 21:39
Dimethyl Phthalate	ND		10	5	04/08/2014 21:39
4,6-Dinitro-2-methylphenol	ND		52	5	04/08/2014 21:39
2,4-Dinitrophenol	ND		250	5	04/08/2014 21:39

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-6-10</b>	<b>1404200-028A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC17</b>	<b>89108</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		10	5	04/08/2014 21:39
2,6-Dinitrotoluene	ND		10	5	04/08/2014 21:39
Di-n-octyl Phthalate	ND		20	5	04/08/2014 21:39
1,2-Diphenylhydrazine	ND		10	5	04/08/2014 21:39
Fluoranthene	ND		10	5	04/08/2014 21:39
Fluorene	ND		10	5	04/08/2014 21:39
Hexachlorobenzene	ND		10	5	04/08/2014 21:39
Hexachlorobutadiene	ND		10	5	04/08/2014 21:39
Hexachlorocyclopentadiene	ND		52	5	04/08/2014 21:39
Hexachloroethane	ND		10	5	04/08/2014 21:39
Indeno (1,2,3-cd) pyrene	ND		10	5	04/08/2014 21:39
Isophorone	ND		10	5	04/08/2014 21:39
2-Methylnaphthalene	ND		10	5	04/08/2014 21:39
2-Methylphenol (o-Cresol)	ND		10	5	04/08/2014 21:39
3 &/or 4-Methylphenol (m,p-Cresol)	ND		10	5	04/08/2014 21:39
Naphthalene	ND		10	5	04/08/2014 21:39
2-Nitroaniline	ND		52	5	04/08/2014 21:39
3-Nitroaniline	ND		52	5	04/08/2014 21:39
4-Nitroaniline	ND		52	5	04/08/2014 21:39
Nitrobenzene	ND		10	5	04/08/2014 21:39
2-Nitrophenol	ND		52	5	04/08/2014 21:39
4-Nitrophenol	ND		52	5	04/08/2014 21:39
N-Nitrosodiphenylamine	ND		10	5	04/08/2014 21:39
N-Nitrosodi-n-propylamine	ND		10	5	04/08/2014 21:39
Pentachlorophenol	ND		52	5	04/08/2014 21:39
Phenanthrene	ND		10	5	04/08/2014 21:39
Phenol	ND		10	5	04/08/2014 21:39
Pyrene	ND		10	5	04/08/2014 21:39
1,2,4-Trichlorobenzene	ND		10	5	04/08/2014 21:39
2,4,5-Trichlorophenol	ND		10	5	04/08/2014 21:39
2,4,6-Trichlorophenol	ND		10	5	04/08/2014 21:39

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-6-10</b>	<b>1404200-028A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC17</b>	<b>89108</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: a3,a4	
2-Fluorophenol	106		30-130		04/08/2014 21:39
Phenol-d5	98		30-130		04/08/2014 21:39
Nitrobenzene-d5	98		30-130		04/08/2014 21:39
2-Fluorobiphenyl	99		30-130		04/08/2014 21:39
2,4,6-Tribromophenol	97		30-130		04/08/2014 21:39
4-Terphenyl-d14	110		30-130		04/08/2014 21:39

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	04/08/2014 17:18
Acenaphthylene	ND		0.25	1	04/08/2014 17:18
Acetochlor	ND		0.25	1	04/08/2014 17:18
Anthracene	ND		0.25	1	04/08/2014 17:18
Benzidine	ND		1.3	1	04/08/2014 17:18
Benzo (a) anthracene	ND		0.25	1	04/08/2014 17:18
Benzo (b) fluoranthene	ND		0.25	1	04/08/2014 17:18
Benzo (k) fluoranthene	ND		0.25	1	04/08/2014 17:18
Benzo (g,h,i) perylene	ND		0.25	1	04/08/2014 17:18
Benzo (a) pyrene	ND		0.25	1	04/08/2014 17:18
Benzyl Alcohol	ND		1.3	1	04/08/2014 17:18
1,1-Biphenyl	ND		0.25	1	04/08/2014 17:18
Bis (2-chloroethoxy) Methane	ND		0.25	1	04/08/2014 17:18
Bis (2-chloroethyl) Ether	ND		0.25	1	04/08/2014 17:18
Bis (2-chloroisopropyl) Ether	ND		0.25	1	04/08/2014 17:18
Bis (2-ethylhexyl) Adipate	ND		0.25	1	04/08/2014 17:18
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	04/08/2014 17:18
4-Bromophenyl Phenyl Ether	ND		0.25	1	04/08/2014 17:18
Butylbenzyl Phthalate	ND		0.25	1	04/08/2014 17:18
4-Chloroaniline	ND		0.25	1	04/08/2014 17:18
4-Chloro-3-methylphenol	ND		0.25	1	04/08/2014 17:18
2-Chloronaphthalene	ND		0.25	1	04/08/2014 17:18
2-Chlorophenol	ND		0.25	1	04/08/2014 17:18
4-Chlorophenyl Phenyl Ether	ND		0.25	1	04/08/2014 17:18
Chrysene	ND		0.25	1	04/08/2014 17:18
Dibenzo (a,h) anthracene	ND		0.25	1	04/08/2014 17:18
Dibenzofuran	ND		0.25	1	04/08/2014 17:18
Di-n-butyl Phthalate	ND		0.25	1	04/08/2014 17:18
1,2-Dichlorobenzene	ND		0.25	1	04/08/2014 17:18
1,3-Dichlorobenzene	ND		0.25	1	04/08/2014 17:18
1,4-Dichlorobenzene	ND		0.25	1	04/08/2014 17:18
3,3-Dichlorobenzidine	ND		0.50	1	04/08/2014 17:18
2,4-Dichlorophenol	ND		0.25	1	04/08/2014 17:18
Diethyl Phthalate	ND		0.25	1	04/08/2014 17:18
2,4-Dimethylphenol	ND		0.25	1	04/08/2014 17:18
Dimethyl Phthalate	ND		0.25	1	04/08/2014 17:18
4,6-Dinitro-2-methylphenol	ND		1.3	1	04/08/2014 17:18
2,4-Dinitrophenol	ND		6.3	1	04/08/2014 17:18

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrotoluene	ND		0.25	1	04/08/2014 17:18
2,6-Dinitrotoluene	ND		0.25	1	04/08/2014 17:18
Di-n-octyl Phthalate	ND		0.50	1	04/08/2014 17:18
1,2-Diphenylhydrazine	ND		0.25	1	04/08/2014 17:18
Fluoranthene	ND		0.25	1	04/08/2014 17:18
Fluorene	ND		0.25	1	04/08/2014 17:18
Hexachlorobenzene	ND		0.25	1	04/08/2014 17:18
Hexachlorobutadiene	ND		0.25	1	04/08/2014 17:18
Hexachlorocyclopentadiene	ND		1.3	1	04/08/2014 17:18
Hexachloroethane	ND		0.25	1	04/08/2014 17:18
Indeno (1,2,3-cd) pyrene	ND		0.25	1	04/08/2014 17:18
Isophorone	ND		0.25	1	04/08/2014 17:18
2-Methylnaphthalene	ND		0.25	1	04/08/2014 17:18
2-Methylphenol (o-Cresol)	ND		0.25	1	04/08/2014 17:18
3 &/or 4-Methylphenol (m,p-Cresol)	ND		0.25	1	04/08/2014 17:18
Naphthalene	ND		0.25	1	04/08/2014 17:18
2-Nitroaniline	ND		1.3	1	04/08/2014 17:18
3-Nitroaniline	ND		1.3	1	04/08/2014 17:18
4-Nitroaniline	ND		1.3	1	04/08/2014 17:18
Nitrobenzene	ND		0.25	1	04/08/2014 17:18
2-Nitrophenol	ND		1.3	1	04/08/2014 17:18
4-Nitrophenol	ND		1.3	1	04/08/2014 17:18
N-Nitrosodiphenylamine	ND		0.25	1	04/08/2014 17:18
N-Nitrosodi-n-propylamine	ND		0.25	1	04/08/2014 17:18
Pentachlorophenol	ND		1.3	1	04/08/2014 17:18
Phenanthrene	ND		0.25	1	04/08/2014 17:18
Phenol	ND		0.25	1	04/08/2014 17:18
Pyrene	ND		0.25	1	04/08/2014 17:18
1,2,4-Trichlorobenzene	ND		0.25	1	04/08/2014 17:18
2,4,5-Trichlorophenol	ND		0.25	1	04/08/2014 17:18
2,4,6-Trichlorophenol	ND		0.25	1	04/08/2014 17:18

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/8/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg

### Semi-Volatile Organics by GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	GC17	89108
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorophenol	90		30-130		04/08/2014 17:18
Phenol-d5	85		30-130		04/08/2014 17:18
Nitrobenzene-d5	74		30-130		04/08/2014 17:18
2-Fluorobiphenyl	74		30-130		04/08/2014 17:18
2,4,6-Tribromophenol	83		30-130		04/08/2014 17:18
4-Terphenyl-d14	85		30-130		04/08/2014 17:18



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil/TOTAL	03/24/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.2		0.50	1	04/08/2014 09:58
Arsenic	3.8		0.50	1	04/08/2014 09:58
Barium	170		5.0	1	04/08/2014 09:58
Beryllium	ND		0.50	1	04/08/2014 09:58
Cadmium	0.26		0.25	1	04/08/2014 09:58
Chromium	54		0.50	1	04/08/2014 09:58
Cobalt	12		0.50	1	04/08/2014 09:58
Copper	32		0.50	1	04/08/2014 09:58
Lead	140		5.0	10	04/09/2014 05:09
Mercury	0.22		0.050	1	04/08/2014 09:58
Molybdenum	ND		0.50	1	04/08/2014 09:58
Nickel	100		5.0	10	04/09/2014 05:09
Selenium	ND		0.50	1	04/08/2014 09:58
Silver	ND		0.50	1	04/08/2014 09:58
Thallium	ND		0.50	1	04/08/2014 09:58
Vanadium	68		0.50	1	04/08/2014 09:58
Zinc	120		5.0	1	04/08/2014 09:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	105		70-130		04/08/2014 09:58

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-13-5.5</b>	<b>1404200-006A</b>	<b>Soil/TOTAL</b>	<b>03/25/2014</b>	<b>ICP-MS1</b>	<b>89005</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	<b>0.50</b>		0.50	1	04/08/2014 12:29
Arsenic	<b>3.9</b>		0.50	1	04/08/2014 12:29
Barium	<b>86</b>		5.0	1	04/08/2014 12:29
Beryllium	ND		0.50	1	04/08/2014 12:29
Cadmium	ND		0.25	1	04/08/2014 12:29
Chromium	<b>40</b>		0.50	1	04/08/2014 12:29
Cobalt	<b>8.4</b>		0.50	1	04/08/2014 12:29
Copper	<b>16</b>		0.50	1	04/08/2014 12:29
Lead	<b>25</b>		0.50	1	04/08/2014 12:29
Mercury	<b>0.14</b>		0.050	1	04/08/2014 12:29
Molybdenum	ND		0.50	1	04/08/2014 12:29
Nickel	<b>35</b>		0.50	1	04/08/2014 12:29
Selenium	ND		0.50	1	04/08/2014 12:29
Silver	ND		0.50	1	04/08/2014 12:29
Thallium	ND		0.50	1	04/08/2014 12:29
Vanadium	<b>47</b>		0.50	1	04/08/2014 12:29
Zinc	<b>58</b>		5.0	1	04/08/2014 12:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	111		70-130		04/08/2014 12:29

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-3'	1404200-009A	Soil/TOTAL	03/25/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	04/08/2014 12:16
Arsenic	3.8		0.50	1	04/08/2014 12:16
Barium	180		5.0	1	04/08/2014 12:16
Beryllium	ND		0.50	1	04/08/2014 12:16
Cadmium	ND		0.25	1	04/08/2014 12:16
Chromium	31		0.50	1	04/08/2014 12:16
Cobalt	6.3		0.50	1	04/08/2014 12:16
Copper	24		0.50	1	04/08/2014 12:16
Lead	63		0.50	1	04/08/2014 12:16
Mercury	0.087		0.050	1	04/08/2014 12:16
Molybdenum	ND		0.50	1	04/08/2014 12:16
Nickel	41		0.50	1	04/08/2014 12:16
Selenium	ND		0.50	1	04/08/2014 12:16
Silver	ND		0.50	1	04/08/2014 12:16
Thallium	ND		0.50	1	04/08/2014 12:16
Vanadium	34		0.50	1	04/08/2014 12:16
Zinc	72		5.0	1	04/08/2014 12:16
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	104		70-130		04/08/2014 12:16

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil/TOTAL	03/26/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.93		0.50	1	04/08/2014 12:41
Arsenic	2.3		0.50	1	04/08/2014 12:41
Barium	53		5.0	1	04/08/2014 12:41
Beryllium	ND		0.50	1	04/08/2014 12:41
Cadmium	ND		0.25	1	04/08/2014 12:41
Chromium	330		10	20	04/09/2014 05:53
Cobalt	77		0.50	1	04/08/2014 12:41
Copper	21		0.50	1	04/08/2014 12:41
Lead	48		0.50	1	04/08/2014 12:41
Mercury	0.16		0.050	1	04/08/2014 12:41
Molybdenum	ND		0.50	1	04/08/2014 12:41
Nickel	1300		10	20	04/09/2014 05:53
Selenium	ND		0.50	1	04/08/2014 12:41
Silver	ND		0.50	1	04/08/2014 12:41
Thallium	ND		0.50	1	04/08/2014 12:41
Vanadium	32		0.50	1	04/08/2014 12:41
Zinc	64		5.0	1	04/08/2014 12:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	118		70-130		04/08/2014 12:41

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-3	1404200-015A	Soil/TOTAL	03/25/2014	ICP-MS1	89005
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	0.67		0.50	1	04/08/2014 12:54
Arsenic	5.2		0.50	1	04/08/2014 12:54
Barium	150		5.0	1	04/08/2014 12:54
Beryllium	ND		0.50	1	04/08/2014 12:54
Cadmium	ND		0.25	1	04/08/2014 12:54
Chromium	73		0.50	1	04/08/2014 12:54
Cobalt	16		0.50	1	04/08/2014 12:54
Copper	25		0.50	1	04/08/2014 12:54
Lead	120		5.0	10	04/09/2014 06:05
Mercury	0.33		0.050	1	04/08/2014 12:54
Molybdenum	1.3		0.50	1	04/08/2014 12:54
Nickel	160		5.0	10	04/09/2014 06:05
Selenium	ND		0.50	1	04/08/2014 12:54
Silver	ND		0.50	1	04/08/2014 12:54
Thallium	ND		0.50	1	04/08/2014 12:54
Vanadium	44		0.50	1	04/08/2014 12:54
Zinc	110		5.0	1	04/08/2014 12:54
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	104		70-130		04/08/2014 12:54

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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-5	1404200-020A	Soil/TOTAL	03/26/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.1		0.50	1	04/08/2014 13:31
Arsenic	5.8		0.50	1	04/08/2014 13:31
Barium	70		5.0	1	04/08/2014 13:31
Beryllium	ND		0.50	1	04/08/2014 13:31
Cadmium	0.32		0.25	1	04/08/2014 13:31
Chromium	70		0.50	1	04/08/2014 13:31
Cobalt	11		0.50	1	04/08/2014 13:31
Copper	42		0.50	1	04/08/2014 13:31
Lead	65		0.50	1	04/08/2014 13:31
Mercury	0.37		0.050	1	04/08/2014 13:31
Molybdenum	0.51		0.50	1	04/08/2014 13:31
Nickel	71		0.50	1	04/08/2014 13:31
Selenium	ND		0.50	1	04/08/2014 13:31
Silver	ND		0.50	1	04/08/2014 13:31
Thallium	ND		0.50	1	04/08/2014 13:31
Vanadium	49		0.50	1	04/08/2014 13:31
Zinc	120		5.0	1	04/08/2014 13:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	104		70-130		04/08/2014 13:31

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-10.5	1404200-024A	Soil/TOTAL	03/26/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	04/08/2014 13:50
Arsenic	2.2		0.50	1	04/08/2014 13:50
Barium	40		5.0	1	04/08/2014 13:50
Beryllium	ND		0.50	1	04/08/2014 13:50
Cadmium	ND		0.25	1	04/08/2014 13:50
Chromium	130		5.0	10	04/09/2014 06:31
Cobalt	16		0.50	1	04/08/2014 13:50
Copper	9.9		0.50	1	04/08/2014 13:50
Lead	2.8		0.50	1	04/08/2014 13:50
Mercury	ND		0.050	1	04/08/2014 13:50
Molybdenum	ND		0.50	1	04/08/2014 13:50
Nickel	450		5.0	10	04/09/2014 06:31
Selenium	ND		0.50	1	04/08/2014 13:50
Silver	ND		0.50	1	04/08/2014 13:50
Thallium	ND		0.50	1	04/08/2014 13:50
Vanadium	43		0.50	1	04/08/2014 13:50
Zinc	28		5.0	1	04/08/2014 13:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	107		70-130		04/08/2014 13:50

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-6-10</b>	<b>1404200-028A</b>	<b>Soil/TOTAL</b>	<b>03/31/2014</b>	<b>ICP-MS1</b>	<b>89023</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	<b>1.6</b>		0.50	1	04/08/2014 14:03
Arsenic	<b>8.0</b>		0.50	1	04/08/2014 14:03
Barium	<b>170</b>		5.0	1	04/08/2014 14:03
Beryllium	ND		0.50	1	04/08/2014 14:03
Cadmium	<b>0.49</b>		0.25	1	04/08/2014 14:03
Chromium	<b>83</b>		0.50	1	04/08/2014 14:03
Cobalt	<b>16</b>		0.50	1	04/08/2014 14:03
Copper	<b>59</b>		0.50	1	04/08/2014 14:03
Lead	<b>92</b>		5.0	10	04/09/2014 06:56
Mercury	<b>0.38</b>		0.050	1	04/08/2014 14:03
Molybdenum	<b>0.52</b>		0.50	1	04/08/2014 14:03
Nickel	<b>75</b>		0.50	1	04/08/2014 14:03
Selenium	ND		0.50	1	04/08/2014 14:03
Silver	ND		0.50	1	04/08/2014 14:03
Thallium	ND		0.50	1	04/08/2014 14:03
Vanadium	<b>66</b>		0.50	1	04/08/2014 14:03
Zinc	<b>230</b>		5.0	1	04/08/2014 14:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	123		70-130		04/08/2014 14:03

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil/TOTAL	04/02/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	04/08/2014 14:53
Arsenic	<b>3.3</b>		0.50	1	04/08/2014 14:53
Barium	<b>15</b>		5.0	1	04/08/2014 14:53
Beryllium	ND		0.50	1	04/08/2014 14:53
Cadmium	ND		0.25	1	04/08/2014 14:53
Chromium	<b>30</b>		0.50	1	04/08/2014 14:53
Cobalt	<b>4.3</b>		0.50	1	04/08/2014 14:53
Copper	<b>3.4</b>		0.50	1	04/08/2014 14:53
Lead	<b>5.0</b>		0.50	1	04/08/2014 14:53
Mercury	ND		0.050	1	04/08/2014 14:53
Molybdenum	ND		0.50	1	04/08/2014 14:53
Nickel	<b>20</b>		0.50	1	04/08/2014 14:53
Selenium	ND		0.50	1	04/08/2014 14:53
Silver	ND		0.50	1	04/08/2014 14:53
Thallium	ND		0.50	1	04/08/2014 14:53
Vanadium	<b>27</b>		0.50	1	04/08/2014 14:53
Zinc	<b>15</b>		5.0	1	04/08/2014 14:53
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	109		70-130		04/08/2014 14:53



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/9/14

**WorkOrder:** 1404200  
**Extraction Method:** SM4500-CN<sup>-</sup> E  
**Analytical Method:** SM4500-CN<sup>-</sup> ABCE  
**Unit:** mg/Kg

### Cyanide, Total

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	SKALAR	89157

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Total Cyanide	ND	H	0.10	1	04/10/2014 15:18

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-10.5	1404200-008A	Soil	03/25/2014	SKALAR	89157

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Total Cyanide	ND	H	0.10	1	04/10/2014 15:44

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	SKALAR	89157

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Total Cyanide	ND	H	0.10	1	04/10/2014 15:55

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-5	1404200-020A	Soil	03/26/2014	SKALAR	89157

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Total Cyanide	ND	H	0.10	1	04/10/2014 15:59

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil	03/31/2014	SKALAR	89157

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Total Cyanide	0.25		0.10	1	04/10/2014 16:02

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/9/14

**WorkOrder:** 1404200  
**Extraction Method:** SM4500-CN<sup>-</sup> E  
**Analytical Method:** SM4500-CN<sup>-</sup> ABCE  
**Unit:** mg/Kg

## Cyanide, Total

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	SKALAR	89157
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Total Cyanide	ND		0.10	1	04/10/2014 16:06



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-10-2.5</b>	<b>1404200-001A</b>	<b>Soil</b>	<b>03/24/2014</b>	<b>GC7</b>	<b>89004</b>

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	ND	H	1.0	1	04/08/2014 14:30
MTBE	---		0.050	1	04/08/2014 14:30
Benzene	---		0.0050	1	04/08/2014 14:30
Toluene	---		0.0050	1	04/08/2014 14:30
Ethylbenzene	---		0.0050	1	04/08/2014 14:30
Xylenes	---		0.0050	1	04/08/2014 14:30
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	96	H	70-130		04/08/2014 14:30

<b>B-10-5.5</b>	<b>1404200-002A</b>	<b>Soil</b>	<b>03/24/2014</b>	<b>GC7</b>	<b>89004</b>
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Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	1.7	H	1.0	1	04/08/2014 15:01
MTBE	---		0.050	1	04/08/2014 15:01
Benzene	---		0.0050	1	04/08/2014 15:01
Toluene	---		0.0050	1	04/08/2014 15:01
Ethylbenzene	---		0.0050	1	04/08/2014 15:01
Xylenes	---		0.0050	1	04/08/2014 15:01
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	94	H	70-130		04/08/2014 15:01

<b>B-10-8</b>	<b>1404200-003A</b>	<b>Soil</b>	<b>03/24/2014</b>	<b>GC7</b>	<b>89004</b>
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Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	1.1	H	1.0	1	04/08/2014 15:32
MTBE	---		0.050	1	04/08/2014 15:32
Benzene	---		0.0050	1	04/08/2014 15:32
Toluene	---		0.0050	1	04/08/2014 15:32
Ethylbenzene	---		0.0050	1	04/08/2014 15:32
Xylenes	---		0.0050	1	04/08/2014 15:32
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	88	H	70-130		04/08/2014 15:32

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-10-10.5</b>	<b>1404200-004A</b>	<b>Soil</b>	<b>03/24/2014</b>	<b>GC7</b>	<b>89004</b>

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	1.7	H	1.0	1	04/08/2014 16:03
MTBE	---		0.050	1	04/08/2014 16:03
Benzene	---		0.0050	1	04/08/2014 16:03
Toluene	---		0.0050	1	04/08/2014 16:03
Ethylbenzene	---		0.0050	1	04/08/2014 16:03
Xylenes	---		0.0050	1	04/08/2014 16:03

Surrogates	REC (%)	Qualifiers	Limits	Analytical Comments: d7
2-Fluorotoluene	95	H	70-130	04/08/2014 16:03

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-13-3</b>	<b>1404200-005A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC19</b>	<b>89004</b>

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	2.9		1.0	1	04/08/2014 15:16
MTBE	---		0.050	1	04/08/2014 15:16
Benzene	---		0.0050	1	04/08/2014 15:16
Toluene	---		0.0050	1	04/08/2014 15:16
Ethylbenzene	---		0.0050	1	04/08/2014 15:16
Xylenes	---		0.0050	1	04/08/2014 15:16

Surrogates	REC (%)	Qualifiers	Limits	Analytical Comments: d7
2-Fluorotoluene	89		70-130	04/08/2014 15:16

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-13-5.5</b>	<b>1404200-006A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC19</b>	<b>89004</b>

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	2.8		1.0	1	04/08/2014 16:19
MTBE	---		0.050	1	04/08/2014 16:19
Benzene	---		0.0050	1	04/08/2014 16:19
Toluene	---		0.0050	1	04/08/2014 16:19
Ethylbenzene	---		0.0050	1	04/08/2014 16:19
Xylenes	---		0.0050	1	04/08/2014 16:19

Surrogates	REC (%)	Qualifiers	Limits	Analytical Comments: d7
2-Fluorotoluene	88		70-130	04/08/2014 16:19

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-8	1404200-007A	Soil	03/25/2014	GC19	89004

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/08/2014 17:21
MTBE	---	0.050	1	04/08/2014 17:21
Benzene	---	0.0050	1	04/08/2014 17:21
Toluene	---	0.0050	1	04/08/2014 17:21
Ethylbenzene	---	0.0050	1	04/08/2014 17:21
Xylenes	---	0.0050	1	04/08/2014 17:21
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	97	70-130		04/08/2014 17:21

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-10.5	1404200-008A	Soil	03/25/2014	GC19	89004

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	1.5	1.0	1	04/08/2014 17:53
MTBE	---	0.050	1	04/08/2014 17:53
Benzene	---	0.0050	1	04/08/2014 17:53
Toluene	---	0.0050	1	04/08/2014 17:53
Ethylbenzene	---	0.0050	1	04/08/2014 17:53
Xylenes	---	0.0050	1	04/08/2014 17:53
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	86	70-130	04/08/2014 17:53	

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-3'	1404200-009A	Soil	03/25/2014	GC19	89004

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/08/2014 18:24
MTBE	---	0.050	1	04/08/2014 18:24
Benzene	---	0.0050	1	04/08/2014 18:24
Toluene	---	0.0050	1	04/08/2014 18:24
Ethylbenzene	---	0.0050	1	04/08/2014 18:24
Xylenes	---	0.0050	1	04/08/2014 18:24
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	83	70-130		04/08/2014 18:24

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-8-5'</b>	<b>1404200-010A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC19</b>	<b>89004</b>

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/08/2014 18:55
MTBE	---	0.050	1	04/08/2014 18:55
Benzene	---	0.0050	1	04/08/2014 18:55
Toluene	---	0.0050	1	04/08/2014 18:55
Ethylbenzene	---	0.0050	1	04/08/2014 18:55
Xylenes	---	0.0050	1	04/08/2014 18:55
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	95	70-130		04/08/2014 18:55

<b>B-8-10.5</b>	<b>1404200-011A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC19</b>	<b>89154</b>
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Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	1.2	H	1.0	1	04/09/2014 19:13
MTBE	---		0.050	1	04/09/2014 19:13
Benzene	---		0.0050	1	04/09/2014 19:13
Toluene	---		0.0050	1	04/09/2014 19:13
Ethylbenzene	---		0.0050	1	04/09/2014 19:13
Xylenes	---		0.0050	1	04/09/2014 19:13
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	<u>Analytical Comments: d7</u>	
2-Fluorotoluene	95	H	70-130	04/09/2014 19:13	

<b>B-14-3</b>	<b>1404200-012A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC19</b>	<b>89004</b>
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/08/2014 19:57
MTBE	---	0.050	1	04/08/2014 19:57
Benzene	---	0.0050	1	04/08/2014 19:57
Toluene	---	0.0050	1	04/08/2014 19:57
Ethylbenzene	---	0.0050	1	04/08/2014 19:57
Xylenes	---	0.0050	1	04/08/2014 19:57
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	97	70-130		04/08/2014 19:57

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-14-5.5</b>	<b>1404200-013A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC19</b>	<b>89154</b>

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	<b>2.2</b>	1.0	1	04/09/2014 20:14
MTBE	---	0.050	1	04/09/2014 20:14
Benzene	---	0.0050	1	04/09/2014 20:14
Toluene	---	0.0050	1	04/09/2014 20:14
Ethylbenzene	---	0.0050	1	04/09/2014 20:14
Xylenes	---	0.0050	1	04/09/2014 20:14
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	94	70-130		04/09/2014 20:14

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-14-7.5</b>	<b>1404200-014A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC19</b>	<b>89004</b>

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	<b>1.9</b>	1.0	1	04/08/2014 20:58
MTBE	---	0.050	1	04/08/2014 20:58
Benzene	---	0.0050	1	04/08/2014 20:58
Toluene	---	0.0050	1	04/08/2014 20:58
Ethylbenzene	---	0.0050	1	04/08/2014 20:58
Xylenes	---	0.0050	1	04/08/2014 20:58
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	94	70-130		04/08/2014 20:58

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-9-3</b>	<b>1404200-015A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC19</b>	<b>89004</b>

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	<b>4.1</b>	1.0	1	04/08/2014 21:59
MTBE	---	0.050	1	04/08/2014 21:59
Benzene	---	0.0050	1	04/08/2014 21:59
Toluene	---	0.0050	1	04/08/2014 21:59
Ethylbenzene	---	0.0050	1	04/08/2014 21:59
Xylenes	---	0.0050	1	04/08/2014 21:59
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	88	70-130		04/08/2014 21:59

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-9-5.5</b>	<b>1404200-016A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC19</b>	<b>89004</b>

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	<b>2.0</b>	1.0	1	04/08/2014 22:30
MTBE	---	0.050	1	04/08/2014 22:30
Benzene	---	0.0050	1	04/08/2014 22:30
Toluene	---	0.0050	1	04/08/2014 22:30
Ethylbenzene	---	0.0050	1	04/08/2014 22:30
Xylenes	---	0.0050	1	04/08/2014 22:30
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: d1	
2-Fluorotoluene	94	70-130		04/08/2014 22:30

<b>B-9-8</b>	<b>1404200-017A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC19</b>	<b>89004</b>
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/08/2014 23:00
MTBE	---	0.050	1	04/08/2014 23:00
Benzene	---	0.0050	1	04/08/2014 23:00
Toluene	---	0.0050	1	04/08/2014 23:00
Ethylbenzene	---	0.0050	1	04/08/2014 23:00
Xylenes	---	0.0050	1	04/08/2014 23:00
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	100	70-130		04/08/2014 23:00

<b>B-9-10</b>	<b>1404200-018A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC19</b>	<b>89004</b>
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Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	<b>7.0</b>	H	3.3	3.3	04/09/2014 14:35
MTBE	---		0.17	3.3	04/09/2014 14:35
Benzene	---		0.017	3.3	04/09/2014 14:35
Toluene	---		0.017	3.3	04/09/2014 14:35
Ethylbenzene	---		0.017	3.3	04/09/2014 14:35
Xylenes	---		0.017	3.3	04/09/2014 14:35
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	94	H	70-130		04/09/2014 14:35

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil	03/26/2014	GC19	89020

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/09/2014 01:32
MTBE	---	0.050	1	04/09/2014 01:32
Benzene	---	0.0050	1	04/09/2014 01:32
Toluene	---	0.0050	1	04/09/2014 01:32
Ethylbenzene	---	0.0050	1	04/09/2014 01:32
Xylenes	---	0.0050	1	04/09/2014 01:32
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	104	70-130		04/09/2014 01:32

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-5	1404200-020A	Soil	03/26/2014	GC19	89020

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	4.2	1.0	1	04/09/2014 02:02
MTBE	---	0.050	1	04/09/2014 02:02
Benzene	---	0.0050	1	04/09/2014 02:02
Toluene	---	0.0050	1	04/09/2014 02:02
Ethylbenzene	---	0.0050	1	04/09/2014 02:02
Xylenes	---	0.0050	1	04/09/2014 02:02
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	92	70-130	04/09/2014 02:02	

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-3	1404200-021A	Soil	03/26/2014	GC19	89020

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	1.7	1.0	1	04/09/2014 00:01
MTBE	---	0.050	1	04/09/2014 00:01
Benzene	---	0.0050	1	04/09/2014 00:01
Toluene	---	0.0050	1	04/09/2014 00:01
Ethylbenzene	---	0.0050	1	04/09/2014 00:01
Xylenes	---	0.0050	1	04/09/2014 00:01
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	93	70-130	04/09/2014 00:01	

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-12-5.5</b>	<b>1404200-022A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC7</b>	<b>89020</b>

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	1.0	1	04/08/2014 09:20
MTBE	---	0.050	1	04/08/2014 09:20
Benzene	---	0.0050	1	04/08/2014 09:20
Toluene	---	0.0050	1	04/08/2014 09:20
Ethylbenzene	---	0.0050	1	04/08/2014 09:20
Xylenes	---	0.0050	1	04/08/2014 09:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	103	70-130		04/08/2014 09:20

<b>B-12-8</b>	<b>1404200-023A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC7</b>	<b>89020</b>
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	1.0	1	04/08/2014 09:50
MTBE	---	0.050	1	04/08/2014 09:50
Benzene	---	0.0050	1	04/08/2014 09:50
Toluene	---	0.0050	1	04/08/2014 09:50
Ethylbenzene	---	0.0050	1	04/08/2014 09:50
Xylenes	---	0.0050	1	04/08/2014 09:50
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	97	70-130		04/08/2014 09:50

<b>B-12-10.5</b>	<b>1404200-024A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC7</b>	<b>89020</b>
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	1.0	1	04/08/2014 10:20
MTBE	---	0.050	1	04/08/2014 10:20
Benzene	---	0.0050	1	04/08/2014 10:20
Toluene	---	0.0050	1	04/08/2014 10:20
Ethylbenzene	---	0.0050	1	04/08/2014 10:20
Xylenes	---	0.0050	1	04/08/2014 10:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	94	70-130		04/08/2014 10:20

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-6-3</b>	<b>1404200-025A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC19</b>	<b>89104</b>

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/09/2014 20:44
MTBE	---	0.050	1	04/09/2014 20:44
Benzene	---	0.0050	1	04/09/2014 20:44
Toluene	---	0.0050	1	04/09/2014 20:44
Ethylbenzene	---	0.0050	1	04/09/2014 20:44
Xylenes	---	0.0050	1	04/09/2014 20:44
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	97	70-130		04/09/2014 20:44

<b>B-6-5.5</b>	<b>1404200-026A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC19</b>	<b>89020</b>
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	<b>3.5</b>	1.0	1	04/09/2014 13:33
MTBE	---	0.050	1	04/09/2014 13:33
Benzene	---	0.0050	1	04/09/2014 13:33
Toluene	---	0.0050	1	04/09/2014 13:33
Ethylbenzene	---	0.0050	1	04/09/2014 13:33
Xylenes	---	0.0050	1	04/09/2014 13:33
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Analytical Comments: d7</u>	
2-Fluorotoluene	89	70-130	04/09/2014 13:33	

<b>B-6-10</b>	<b>1404200-028A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC19</b>	<b>89246</b>
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/11/2014 23:44
MTBE	---	0.050	1	04/11/2014 23:44
Benzene	---	0.0050	1	04/11/2014 23:44
Toluene	---	0.0050	1	04/11/2014 23:44
Ethylbenzene	---	0.0050	1	04/11/2014 23:44
Xylenes	---	0.0050	1	04/11/2014 23:44
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	106	70-130		04/11/2014 23:44

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-6-15.5</b>	<b>1404200-029A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC19</b>	<b>89104</b>

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	1.0	1	04/09/2014 21:14
MTBE	---	0.050	1	04/09/2014 21:14
Benzene	---	0.0050	1	04/09/2014 21:14
Toluene	---	0.0050	1	04/09/2014 21:14
Ethylbenzene	---	0.0050	1	04/09/2014 21:14
Xylenes	---	0.0050	1	04/09/2014 21:14
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	93	70-130		04/09/2014 21:14

<b>B-7-2.5</b>	<b>1404200-030A</b>	<b>Soil</b>	<b>04/02/2014</b>	<b>GC19</b>	<b>89020</b>
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	1.0	1	04/09/2014 15:06
MTBE	---	0.050	1	04/09/2014 15:06
Benzene	---	0.0050	1	04/09/2014 15:06
Toluene	---	0.0050	1	04/09/2014 15:06
Ethylbenzene	---	0.0050	1	04/09/2014 15:06
Xylenes	---	0.0050	1	04/09/2014 15:06
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	99	70-130		04/09/2014 15:06

<b>B-7-5</b>	<b>1404200-031A</b>	<b>Soil</b>	<b>04/02/2014</b>	<b>GC19</b>	<b>89020</b>
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g)	ND	1.0	1	04/09/2014 06:31
MTBE	---	0.050	1	04/09/2014 06:31
Benzene	---	0.0050	1	04/09/2014 06:31
Toluene	---	0.0050	1	04/09/2014 06:31
Ethylbenzene	---	0.0050	1	04/09/2014 06:31
Xylenes	---	0.0050	1	04/09/2014 06:31
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	95	70-130		04/09/2014 06:31

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14-4/11/14

**WorkOrder:** 1404200  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-8	1404200-032A	Soil	04/02/2014	GC19	89246

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/12/2014 00:14
MTBE	---	0.050	1	04/12/2014 00:14
Benzene	---	0.0050	1	04/12/2014 00:14
Toluene	---	0.0050	1	04/12/2014 00:14
Ethylbenzene	---	0.0050	1	04/12/2014 00:14
Xylenes	---	0.0050	1	04/12/2014 00:14
Surrogates	REC (%)	Limits		
2-Fluorotoluene	104	70-130		04/12/2014 00:14

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-15.5	1404200-034A	Soil	04/02/2014	GC19	89020

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	04/08/2014 07:30
MTBE	---	0.050	1	04/08/2014 07:30
Benzene	---	0.0050	1	04/08/2014 07:30
Toluene	---	0.0050	1	04/08/2014 07:30
Ethylbenzene	---	0.0050	1	04/08/2014 07:30
Xylenes	---	0.0050	1	04/08/2014 07:30
Surrogates	REC (%)	Limits		
2-Fluorotoluene	99	70-130		04/08/2014 07:30



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-10-5.5</b>	<b>1404200-002A</b>	<b>Soil/TOTAL</b>	<b>03/24/2014</b>	<b>ICP-MS1</b>	<b>89005</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 10:04
Chromium	<b>42</b>	0.50	1	04/08/2014 10:04
Lead	<b>16</b>	0.50	1	04/08/2014 10:04
Nickel	<b>35</b>	0.50	1	04/08/2014 10:04
Zinc	<b>66</b>	5.0	1	04/08/2014 10:04
Surrogates	REC (%)	Limits		
Tb 350.917	109	70-130		04/08/2014 10:04

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-10-10.5</b>	<b>1404200-004A</b>	<b>Soil/TOTAL</b>	<b>03/24/2014</b>	<b>ICP-MS1</b>	<b>89005</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 10:23
Chromium	<b>57</b>	0.50	1	04/08/2014 10:23
Lead	<b>21</b>	0.50	1	04/08/2014 10:23
Nickel	<b>54</b>	0.50	1	04/08/2014 10:23
Zinc	<b>44</b>	5.0	1	04/08/2014 10:23
Surrogates	REC (%)	Limits		
Tb 350.917	121	70-130		04/08/2014 10:23

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-13-8</b>	<b>1404200-007A</b>	<b>Soil/TOTAL</b>	<b>03/25/2014</b>	<b>ICP-MS1</b>	<b>89005</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 12:10
Chromium	<b>39</b>	0.50	1	04/08/2014 12:10
Lead	<b>13</b>	0.50	1	04/08/2014 12:10
Nickel	<b>37</b>	0.50	1	04/08/2014 12:10
Zinc	<b>54</b>	5.0	1	04/08/2014 12:10
Surrogates	REC (%)	Limits		
Tb 350.917	101	70-130		04/08/2014 12:10

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-8-10.5</b>	<b>1404200-011A</b>	<b>Soil/TOTAL</b>	<b>03/25/2014</b>	<b>ICP-MS1</b>	<b>89005</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	<b>0.39</b>	0.25	1	04/08/2014 12:35
Chromium	<b>53</b>	0.50	1	04/08/2014 12:35
Lead	<b>840</b>	10	20	04/09/2014 05:47
Nickel	<b>55</b>	0.50	1	04/08/2014 12:35
Zinc	<b>250</b>	5.0	1	04/08/2014 12:35
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	104	70-130		04/08/2014 12:35

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-14-5.5</b>	<b>1404200-013A</b>	<b>Soil/TOTAL</b>	<b>03/26/2014</b>	<b>ICP-MS1</b>	<b>89005</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 12:47
Chromium	<b>200</b>	5.0	10	04/09/2014 05:59
Lead	<b>92</b>	5.0	10	04/09/2014 05:59
Nickel	<b>760</b>	5.0	10	04/09/2014 05:59
Zinc	<b>110</b>	5.0	1	04/08/2014 12:47
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	101	70-130		04/08/2014 12:47

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-9-5.5</b>	<b>1404200-016A</b>	<b>Soil/TOTAL</b>	<b>03/25/2014</b>	<b>ICP-MS1</b>	<b>89005</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 13:00
Chromium	<b>43</b>	0.50	1	04/08/2014 13:00
Lead	<b>40</b>	0.50	1	04/08/2014 13:00
Nickel	<b>46</b>	0.50	1	04/08/2014 13:00
Zinc	<b>65</b>	5.0	1	04/08/2014 13:00
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	102	70-130		04/08/2014 13:00

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-9-10</b>	<b>1404200-018A</b>	<b>Soil/TOTAL</b>	<b>03/25/2014</b>	<b>ICP-MS1</b>	<b>89005</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 13:06
Chromium	<b>50</b>	0.50	1	04/08/2014 13:06
Lead	<b>120</b>	5.0	10	04/09/2014 06:12
Nickel	<b>43</b>	0.50	1	04/08/2014 13:06
Zinc	<b>96</b>	5.0	1	04/08/2014 13:06
Surrogates	REC (%)	Limits		
Tb 350.917	103	70-130		04/08/2014 13:06

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-11-3</b>	<b>1404200-019A</b>	<b>Soil/TOTAL</b>	<b>03/26/2014</b>	<b>ICP-MS1</b>	<b>89005</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 13:25
Chromium	<b>68</b>	0.50	1	04/08/2014 13:25
Lead	<b>21</b>	0.50	1	04/08/2014 13:25
Nickel	<b>49</b>	0.50	1	04/08/2014 13:25
Zinc	<b>68</b>	5.0	1	04/08/2014 13:25
Surrogates	REC (%)	Limits		
Tb 350.917	105	70-130		04/08/2014 13:25

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-12-5.5</b>	<b>1404200-022A</b>	<b>Soil/TOTAL</b>	<b>03/26/2014</b>	<b>ICP-MS1</b>	<b>89023</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 13:38
Chromium	<b>130</b>	5.0	10	04/09/2014 06:18
Lead	<b>5.6</b>	0.50	1	04/08/2014 13:38
Nickel	<b>270</b>	5.0	10	04/09/2014 06:18
Zinc	<b>41</b>	5.0	1	04/08/2014 13:38
Surrogates	REC (%)	Limits		
Tb 350.917	123	70-130		04/08/2014 13:38

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-12-8</b>	<b>1404200-023A</b>	<b>Soil/TOTAL</b>	<b>03/26/2014</b>	<b>ICP-MS1</b>	<b>89023</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 13:44
Chromium	<b>180</b>	5.0	10	04/09/2014 06:24
Lead	<b>4.9</b>	0.50	1	04/08/2014 13:44
Nickel	<b>500</b>	5.0	10	04/09/2014 06:24
Zinc	<b>38</b>	5.0	1	04/08/2014 13:44
Surrogates	REC (%)	Limits		
Tb 350.917	107	70-130		04/08/2014 13:44

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-6-5.5</b>	<b>1404200-026A</b>	<b>Soil/TOTAL</b>	<b>03/31/2014</b>	<b>ICP-MS1</b>	<b>89023</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	<b>1.7</b>	0.25	1	04/08/2014 13:56
Chromium	<b>70</b>	0.50	1	04/08/2014 13:56
Lead	<b>120</b>	5.0	10	04/09/2014 06:37
Nickel	<b>73</b>	0.50	1	04/08/2014 13:56
Zinc	<b>120</b>	5.0	1	04/08/2014 13:56
Surrogates	REC (%)	Limits		
Tb 350.917	112	70-130		04/08/2014 13:56

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-6-15.5</b>	<b>1404200-029A</b>	<b>Soil/TOTAL</b>	<b>03/31/2014</b>	<b>ICP-MS1</b>	<b>89023</b>

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 14:09
Chromium	<b>59</b>	0.50	1	04/08/2014 14:09
Lead	<b>48</b>	0.50	1	04/08/2014 14:09
Nickel	<b>28</b>	0.50	1	04/08/2014 14:09
Zinc	<b>55</b>	5.0	1	04/08/2014 14:09
Surrogates	REC (%)	Limits		
Tb 350.917	106	70-130		04/08/2014 14:09

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

## LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-2.5	1404200-030A	Soil/TOTAL	04/02/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.39		0.25	1	04/08/2014 14:15
Chromium	35		0.50	1	04/08/2014 14:15
Lead	29		0.50	1	04/08/2014 14:15
Nickel	48		0.50	1	04/08/2014 14:15
Zinc	93		5.0	1	04/08/2014 14:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	104		70-130		04/08/2014 14:15



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-10-8</b>	<b>1404200-003A</b>	<b>Soil/TOTAL</b>	<b>03/24/2014</b>	<b>ICP-MS1</b>	<b>89091</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	<b>16</b>		0.50	1	04/09/2014 04:08
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	105		70-130		04/09/2014 04:08
<b>B-13-3</b>	<b>1404200-005A</b>	<b>Soil/TOTAL</b>	<b>03/25/2014</b>	<b>ICP-MS1</b>	<b>89091</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	<b>42</b>		0.50	1	04/09/2014 04:13
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	106		70-130		04/09/2014 04:13
<b>B-13-10.5</b>	<b>1404200-008A</b>	<b>Soil/TOTAL</b>	<b>03/25/2014</b>	<b>ICP-MS1</b>	<b>89091</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	<b>59</b>		0.50	1	04/09/2014 04:17
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	107		70-130		04/09/2014 04:17
<b>B-8-5'</b>	<b>1404200-010A</b>	<b>Soil/TOTAL</b>	<b>03/25/2014</b>	<b>ICP-MS1</b>	<b>89091</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	<b>240</b>		5.0	10	04/09/2014 12:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	105		70-130		04/09/2014 12:29
<b>B-14-7.5</b>	<b>1404200-014A</b>	<b>Soil/TOTAL</b>	<b>03/26/2014</b>	<b>ICP-MS1</b>	<b>89091</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	<b>49</b>		0.50	1	04/09/2014 04:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	117		70-130		04/09/2014 04:38

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-9-8</b>	<b>1404200-017A</b>	<b>Soil/TOTAL</b>	<b>03/25/2014</b>	<b>ICP-MS1</b>	<b>89091</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	<b>57</b>		0.50	1	04/09/2014 04:42
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	100		70-130		04/09/2014 04:42
<b>B-12-3</b>	<b>1404200-021A</b>	<b>Soil/TOTAL</b>	<b>03/26/2014</b>	<b>ICP-MS1</b>	<b>89091</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	<b>120</b>		5.0	10	04/09/2014 12:33
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	99		70-130		04/09/2014 12:33
<b>B-6-3</b>	<b>1404200-025A</b>	<b>Soil/TOTAL</b>	<b>03/31/2014</b>	<b>ICP-MS1</b>	<b>89091</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	<b>140</b>		5.0	10	04/09/2014 12:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	108		70-130		04/09/2014 12:37
<b>B-7-8</b>	<b>1404200-032A</b>	<b>Soil/TOTAL</b>	<b>04/02/2014</b>	<b>ICP-MS1</b>	<b>89091</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	<b>200</b>		5.0	10	04/09/2014 12:43
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	108		70-130		04/09/2014 12:43
<b>B-7-15.5</b>	<b>1404200-034A</b>	<b>Soil/TOTAL</b>	<b>04/02/2014</b>	<b>ICP-MS1</b>	<b>89091</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	<b>75</b>		0.50	1	04/09/2014 04:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Tb 350.917	105		70-130		04/09/2014 04:58



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/7/14

**WorkOrder:** 1404200  
**Extraction Method:** SW9045D  
**Analytical Method:** SW9045D  
**Unit:** ±, pH units @ 25°C

### pH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	WetChem	89082

Analytes	Result	Accuracy	DF	Date Analyzed
pH	10.2	0.1	1	04/07/2014 20:31

B-13-10.5	1404200-008A	Soil	03/25/2014	WetChem	89082
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Analytes	Result	Accuracy	DF	Date Analyzed
pH	8.51	0.1	1	04/07/2014 20:37

B-14-3	1404200-012A	Soil	03/26/2014	WetChem	89082
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Analytes	Result	Accuracy	DF	Date Analyzed
pH	8.03	0.1	1	04/07/2014 20:40

B-11-5	1404200-020A	Soil	03/26/2014	WetChem	89082
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Analytes	Result	Accuracy	DF	Date Analyzed
pH	7.69	0.1	1	04/07/2014 20:43

B-6-10	1404200-028A	Soil	03/31/2014	WetChem	89082
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Analytes	Result	Accuracy	DF	Date Analyzed
pH	8.26	0.1	1	04/07/2014 20:46

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/7/14

**WorkOrder:** 1404200  
**Extraction Method:** SW9045D  
**Analytical Method:** SW9045D  
**Unit:** ±, pH units @ 25°C

## pH

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	WetChem	89082

Analytes	Result	Accuracy	DF	Date Analyzed
pH	8.40	0.1	1	04/07/2014 20:49



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/10/14

**WorkOrder:** 1404200  
**Extraction Method:** SW9030A/E376.2  
**Analytical Method:** SW9030A/E376.2  
**Unit:** mg/Kg

### Acid Soluble Sulfide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil	03/24/2014	SPECTROPHOTOMETER	89058

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Sulfide	ND	H	10	1	04/10/2014 15:45

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-10.5	1404200-008A	Soil	03/25/2014	SPECTROPHOTOMETER	89058

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Sulfide	ND	H	10	1	04/10/2014 15:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-3	1404200-012A	Soil	03/26/2014	SPECTROPHOTOMETER	89058

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Sulfide	ND	H	10	1	04/10/2014 15:55

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-5	1404200-020A	Soil	03/26/2014	SPECTROPHOTOMETER	89058

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Sulfide	ND	H	10	1	04/10/2014 16:00

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil	03/31/2014	SPECTROPHOTOMETER	89058

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Sulfide	ND	H	10	1	04/10/2014 16:05

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/10/14

**WorkOrder:** 1404200  
**Extraction Method:** SW9030A/E376.2  
**Analytical Method:** SW9030A/E376.2  
**Unit:** mg/Kg

## Acid Soluble Sulfide

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-7-5	1404200-031A	Soil	04/02/2014	SPECTROPHOTOMETER	89058
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Sulfide	ND	H	10	1	04/10/2014 16:10



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-10-2.5</b>	<b>1404200-001A</b>	<b>Soil</b>	<b>03/24/2014</b>	<b>GC11B</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>48</b>		20	20	04/09/2014 21:47
TPH-Motor Oil (C18-C36)	<b>730</b>		100	20	04/09/2014 21:47
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	118		70-130		04/09/2014 21:47
<b>B-10-5.5</b>	<b>1404200-002A</b>	<b>Soil</b>	<b>03/24/2014</b>	<b>GC2B</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>40</b>		2.0	2	04/10/2014 23:15
TPH-Motor Oil (C18-C36)	<b>140</b>		10	2	04/10/2014 23:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	115		70-130		04/10/2014 23:15
<b>B-10-8</b>	<b>1404200-003A</b>	<b>Soil</b>	<b>03/24/2014</b>	<b>GC6B</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>26</b>		2.0	1	04/10/2014 00:40
TPH-Motor Oil (C18-C36)	<b>120</b>		5.0	1	04/10/2014 00:40
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	109		70-130		04/10/2014 00:40
<b>B-10-10.5</b>	<b>1404200-004A</b>	<b>Soil</b>	<b>03/24/2014</b>	<b>GC11A</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>16</b>		5.0	5	04/12/2014 12:04
TPH-Motor Oil (C18-C36)	<b>230</b>		25	5	04/12/2014 12:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	118		70-130		04/12/2014 12:04

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-13-3</b>	<b>1404200-005A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC11B</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>20</b>		5.0	5	04/12/2014 14:21
TPH-Motor Oil (C18-C36)	<b>170</b>		25	5	04/12/2014 14:21
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	105		70-130		04/12/2014 14:21
<b>B-13-5.5</b>	<b>1404200-006A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC9a</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>38</b>		5.0	5	04/12/2014 11:40
TPH-Motor Oil (C18-C36)	<b>360</b>		25	5	04/12/2014 11:40
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	117		70-130		04/12/2014 11:40
<b>B-13-8</b>	<b>1404200-007A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC11A</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>12</b>		2.0	1	04/11/2014 08:56
TPH-Motor Oil (C18-C36)	<b>130</b>		5.0	1	04/11/2014 08:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	120		70-130		04/11/2014 08:56
<b>B-13-10.5</b>	<b>1404200-008A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC11A</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>36</b>		10	10	04/12/2014 17:46
TPH-Motor Oil (C18-C36)	<b>610</b>		50	10	04/12/2014 17:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	118		70-130		04/12/2014 17:46

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-8-3'</b>	<b>1404200-009A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC9a</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>9.3</b>		2.0	1	04/08/2014 21:05
TPH-Motor Oil (C18-C36)	<b>22</b>		5.0	1	04/08/2014 21:05
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	117		70-130		04/08/2014 21:05
<b>B-8-5'</b>	<b>1404200-010A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC9a</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>5.6</b>		2.0	1	04/10/2014 18:31
TPH-Motor Oil (C18-C36)	<b>34</b>		5.0	1	04/10/2014 18:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	120		70-130		04/10/2014 18:31
<b>B-8-10.5</b>	<b>1404200-011A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC2B</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>37</b>		2.0	1	04/10/2014 19:27
TPH-Motor Oil (C18-C36)	<b>130</b>		5.0	1	04/10/2014 19:27
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	109		70-130		04/10/2014 19:27
<b>B-14-3</b>	<b>1404200-012A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC11B</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>9.0</b>		2.0	2	04/11/2014 20:04
TPH-Motor Oil (C18-C36)	<b>46</b>		10	2	04/11/2014 20:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	106		70-130		04/11/2014 20:04

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-14-5.5</b>	<b>1404200-013A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC9a</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>12</b>		2.0	1	04/10/2014 21:52
TPH-Motor Oil (C18-C36)	<b>57</b>		5.0	1	04/10/2014 21:52
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	120		70-130		04/10/2014 21:52
<b>B-14-7.5</b>	<b>1404200-014A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC6B</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>10</b>		2.0	1	04/10/2014 01:52
TPH-Motor Oil (C18-C36)	<b>53</b>		5.0	1	04/10/2014 01:52
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	111		70-130		04/10/2014 01:52
<b>B-9-3</b>	<b>1404200-015A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC11B</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>22</b>		10	10	04/11/2014 23:30
TPH-Motor Oil (C18-C36)	<b>230</b>		50	10	04/11/2014 23:30
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	105		70-130		04/11/2014 23:30
<b>B-9-5.5</b>	<b>1404200-016A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC9a</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>140</b>		50	50	04/12/2014 17:15
TPH-Motor Oil (C18-C36)	<b>2800</b>		250	50	04/12/2014 17:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	119		70-130		04/12/2014 17:15

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-9-8</b>	<b>1404200-017A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC11B</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>17</b>		2.0	1	04/12/2014 04:04
TPH-Motor Oil (C18-C36)	<b>100</b>		5.0	1	04/12/2014 04:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	108		70-130		04/12/2014 04:04
<b>B-9-10</b>	<b>1404200-018A</b>	<b>Soil</b>	<b>03/25/2014</b>	<b>GC11A</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>210</b>		50	50	04/09/2014 10:37
TPH-Motor Oil (C18-C36)	<b>330</b>		250	50	04/09/2014 10:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	104		70-130		04/09/2014 10:37
<b>B-11-3</b>	<b>1404200-019A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC2A</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>34</b>		10	10	04/10/2014 18:11
TPH-Motor Oil (C18-C36)	<b>330</b>		50	10	04/10/2014 18:11
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	92		70-130		04/10/2014 18:11
<b>B-11-5</b>	<b>1404200-020A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC11A</b>	<b>89018</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>25</b>		2.0	1	04/09/2014 07:11
TPH-Motor Oil (C18-C36)	<b>62</b>		5.0	1	04/09/2014 07:11
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	126		70-130		04/09/2014 07:11

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-12-3</b>	<b>1404200-021A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC6B</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	9.5		2.0	2	04/11/2014 02:36
TPH-Motor Oil (C18-C36)	25		10	2	04/11/2014 02:36
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	117		70-130		04/11/2014 02:36
<b>B-12-5.5</b>	<b>1404200-022A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC6B</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		2.0	1	04/09/2014 17:21
TPH-Motor Oil (C18-C36)	ND		5.0	1	04/09/2014 17:21
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	109		70-130		04/09/2014 17:21
<b>B-12-8</b>	<b>1404200-023A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC6B</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		2.0	1	04/11/2014 00:11
TPH-Motor Oil (C18-C36)	ND		5.0	1	04/11/2014 00:11
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	107		70-130		04/11/2014 00:11
<b>B-12-10.5</b>	<b>1404200-024A</b>	<b>Soil</b>	<b>03/26/2014</b>	<b>GC6B</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		2.0	1	04/10/2014 05:26
TPH-Motor Oil (C18-C36)	ND		5.0	1	04/10/2014 05:26
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	123		70-130		04/10/2014 05:26

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-6-3</b>	<b>1404200-025A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC2A</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>36</b>		2.0	1	04/11/2014 04:17
TPH-Motor Oil (C18-C36)	<b>150</b>		5.0	1	04/11/2014 04:17
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	91		70-130		04/11/2014 04:17
<b>B-6-5.5</b>	<b>1404200-026A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC11B</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>110</b>		20	20	04/12/2014 09:47
TPH-Motor Oil (C18-C36)	<b>740</b>		100	20	04/12/2014 09:47
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	117		70-130		04/12/2014 09:47
<b>B-6-10</b>	<b>1404200-028A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC2B</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>45</b>		10	10	04/09/2014 07:41
TPH-Motor Oil (C18-C36)	<b>370</b>		50	10	04/09/2014 07:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	126		70-130		04/09/2014 07:41
<b>B-6-15.5</b>	<b>1404200-029A</b>	<b>Soil</b>	<b>03/31/2014</b>	<b>GC6B</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>4.2</b>		2.0	1	04/10/2014 07:49
TPH-Motor Oil (C18-C36)	<b>9.1</b>		5.0	1	04/10/2014 07:49
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	122		70-130		04/10/2014 07:49

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/4/14

**WorkOrder:** 1404200  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
<b>B-7-2.5</b>	<b>1404200-030A</b>	<b>Soil</b>	<b>04/02/2014</b>	<b>GC9a</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>130</b>		50	50	04/14/2014 12:20
TPH-Motor Oil (C18-C36)	<b>2600</b>		250	50	04/14/2014 12:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	105		70-130		04/14/2014 12:20
<b>B-7-5</b>	<b>1404200-031A</b>	<b>Soil</b>	<b>04/02/2014</b>	<b>GC6B</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		2.0	1	04/11/2014 20:19
TPH-Motor Oil (C18-C36)	ND		5.0	1	04/11/2014 20:19
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e2	
C9	118		70-130		04/11/2014 20:19
<b>B-7-8</b>	<b>1404200-032A</b>	<b>Soil</b>	<b>04/02/2014</b>	<b>GC2B</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>68</b>		2.0	2	04/11/2014 04:17
TPH-Motor Oil (C18-C36)	<b>230</b>		10	2	04/11/2014 04:17
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	125		70-130		04/11/2014 04:17
<b>B-7-15.5</b>	<b>1404200-034A</b>	<b>Soil</b>	<b>04/02/2014</b>	<b>GC9a</b>	<b>89024</b>
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	<b>9.5</b>		2.0	1	04/09/2014 00:26
TPH-Motor Oil (C18-C36)	<b>38</b>		5.0	1	04/09/2014 00:26
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: e7,e2	
C9	118		70-130		04/09/2014 00:26



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/7/14  
**Instrument:** GC22  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89021  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-89021  
 1404200-030AMS/MSD

### QC Summary Report for SW8081A/8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.05064	0.0010	0.050	-	101	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.05484	0.0010	0.050	-	110	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.04753	0.0010	0.050	-	95.1	70-130
Dieldrin	ND	0.05567	0.0010	0.050	-	111	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	0.05252	0.0010	0.050	-	105	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.04821	0.0010	0.050	-	96.4	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-
<b>Surrogate Recovery</b>							
Decachlorobiphenyl	0.04215	0.0416		0.050	84	83	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/7/14  
**Instrument:** GC22  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89021  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8081A/8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-89021  
 1404200-030AMS/MSD

### QC Summary Report for SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	NR	NR	0	ND<0.2	NR	NR	-	NR	
g-BHC	NR	NR	0	ND<0.2	NR	NR	-	NR	
p,p-DDT	NR	NR	0	ND<0.2	NR	NR	-	NR	
Dieldrin	NR	NR	0	ND<0.2	NR	NR	-	NR	
Endrin	NR	NR	0	ND<0.2	NR	NR	-	NR	
Heptachlor	NR	NR	0	ND<0.2	NR	NR	-	NR	
<b>Surrogate Recovery</b>									
Decachlorobiphenyl	NR	NR	0		NR	NR	-	NR	



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/7/14  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89000  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89000  
 1404179-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.04368	0.0050	0.050	-	87.4	70-130
Benzene	ND	0.04726	0.0050	0.050	-	94.5	70-130
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.18	0.050	0.20	-	90	70-130
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04831	0.0050	0.050	-	96.6	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.04986	0.0040	0.050	-	99.7	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04266	0.0040	0.050	-	85.3	70-130
1,1-Dichloroethene	ND	0.0384	0.0050	0.050	-	76.8	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/7/14  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89000  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89000  
 1404179-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.04394	0.0050	0.050	-	87.9	70-130
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.04407	0.0050	0.050	-	88.1	70-130
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.04478	0.0050	0.050	-	89.6	70-130
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.05157	0.0050	0.050	-	103	70-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04705	0.0050	0.050	-	94.1	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.1219	0.1695		0.18	97	97	70-130
Toluene-d8	0.1207	0.1628		0.18	97	93	70-130
4-BFB	0.01279	0.01782		0.018	102	102	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/7/14  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89000  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89000  
 1404179-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.03447	0.03586	0.050	ND	68.9,F1	71.7	70-130	3.94	30
Benzene	0.03565	0.03729	0.050	ND	71.3	74.6	70-130	4.51	30
t-Butyl alcohol (TBA)	0.1456	0.1554	0.20	ND	72.8	77.7	70-130	6.48	30
Chlorobenzene	0.03652	0.03759	0.050	ND	73	75.2	70-130	2.87	30
1,2-Dibromoethane (EDB)	0.03606	0.03862	0.050	ND	72.1	77.2	70-130	6.85	30
1,2-Dichloroethane (1,2-DCA)	0.03312	0.03477	0.050	ND	66.2,F1	69.5,F1	70-130	4.84	30
1,1-Dichloroethene	0.08262	0.0811	0.050	ND	165,F1	162,F1	70-130	1.86	30
Diisopropyl ether (DIPE)	0.03367	0.03525	0.050	ND	67.3,F1	70.5	70-130	4.58	30
Ethyl tert-butyl ether (ETBE)	0.03399	0.03564	0.050	ND	68,F1	71.3	70-130	4.76	30
Methyl-t-butyl ether (MTBE)	0.03557	0.03672	0.050	ND	71.1	73.4	70-130	3.17	30
Toluene	0.03762	0.03914	0.050	ND	75.2	78.3	70-130	3.95	30
Trichloroethene	0.08429	0.08269	0.050	ND	169,F1	165,F1	70-130	1.91	30
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.1287	0.1288	0.18		74	74	70-130	0	30
Toluene-d8	0.1489	0.1494	0.18		85	85	70-130	0	30
4-BFB	0.01651	0.01654	0.018		94	95	70-130	0.151	30



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/7/14  
**Date Analyzed:** 4/7/14  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89060  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89060  
 1404210-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.387	0.25	5	-	67.7	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	4.251	0.25	5	-	85	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.182	0.25	5	-	83.6	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	3.574	0.25	5	-	71.5	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	4.123	0.25	5	-	82.5	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/7/14  
**Date Analyzed:** 4/7/14  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89060  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89060  
 1404210-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	3.321	1.3	5	-	66.4	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	3.101	0.25	5	-	62	30-130
Pentachlorophenol	ND	3.579	1.3	5	-	71.6	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	3.997	0.25	5	-	79.9	30-130
Pyrene	ND	3.809	0.25	5	-	76.2	30-130
1,2,4-Trichlorobenzene	ND	4.01	0.25	5	-	80.2	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

**Surrogate Recovery**

2-Fluorophenol	4.441	3.831		5	89	77	30-130
Phenol-d5	4.39	3.867		5	88	77	30-130
Nitrobenzene-d5	3.928	3.548		5	79	71	30-130
2-Fluorobiphenyl	4.093	3.511		5	82	70	30-130
2,4,6-Tribromophenol	3.283	3.124		5	66	62	30-130
4-Terphenyl-d14	4.515	3.987		5	90	80	30-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/7/14  
**Date Analyzed:** 4/7/14  
**Instrument:** GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89060  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89060  
 1404210-001AMS/MSD

### QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<10	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<10	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<52	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<10	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<52	NR	NR	-	NR	
Phenol	NR	NR	0	ND<10	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<10	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	

#### Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/8/14  
**Date Analyzed:** 4/8/14  
**Instrument:** GC17, GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89108  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89108  
 1404200-028AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.867	0.25	5	-	77.3	30-130
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.25	-	-	-	-
4-Chloro-3-methylphenol	ND	4.869	0.25	5	-	97.4	30-130
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	4.772	0.25	5	-	95.4	30-130
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	4	0.25	5	-	80	30-130
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	4.887	0.25	5	-	97.7	30-130
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/8/14  
**Date Analyzed:** 4/8/14  
**Instrument:** GC17, GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89108  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89108  
 1404200-028AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 &/or 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	3.751	1.3	5	-	75	30-130
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	3.392	0.25	5	-	67.8	30-130
Pentachlorophenol	ND	4.404	1.3	5	-	88.1	30-130
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	4.432	0.25	5	-	88.6	30-130
Pyrene	ND	4.284	0.25	5	-	85.7	30-130
1,2,4-Trichlorobenzene	ND	4.719	0.25	5	-	94.4	30-130
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

#### Surrogate Recovery

2-Fluorophenol	3.985	4.027		5	80	81	30-130
Phenol-d5	3.674	3.925		5	73	78	30-130
Nitrobenzene-d5	3.59	3.722		5	72	74	30-130
2-Fluorobiphenyl	3.65	3.789		5	73	76	30-130
2,4,6-Tribromophenol	3.582	3.126		5	72	63	30-130
4-Terphenyl-d14	4.101	4.29		5	82	86	30-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/8/14  
**Date Analyzed:** 4/8/14  
**Instrument:** GC17, GC21  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89108  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89108  
 1404200-028AMS/MSD

### QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR	0	ND<10	NR	NR	-	NR	
2-Chlorophenol	NR	NR	0	ND<10	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR	0	ND<10	NR	NR	-	NR	
4-Nitrophenol	NR	NR	0	ND<52	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR	0	ND<10	NR	NR	-	NR	
Pentachlorophenol	NR	NR	0	ND<52	NR	NR	-	NR	
Phenol	NR	NR	0	ND<10	NR	NR	-	NR	
Pyrene	NR	NR	0	ND<10	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR	0	ND<10	NR	NR	-	NR	

#### Surrogate Recovery

2-Fluorophenol	NR	NR	0		NR	NR	-	NR	
Phenol-d5	NR	NR	0		NR	NR	-	NR	
Nitrobenzene-d5	NR	NR	0		NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR	0		NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR	0		NR	NR	-	NR	
4-Terphenyl-d14	NR	NR	0		NR	NR	-	NR	



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/5/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89005  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89005  
 1404184-012AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	47.42	0.50	50	-	94.8	75-125
Arsenic	ND	48.28	0.50	50	-	96.6	75-125
Barium	ND	466.8	5.0	500	-	93.4	75-125
Beryllium	ND	47.26	0.50	50	-	94.5	75-125
Cadmium	ND	48.03	0.25	50	-	96.1	75-125
Chromium	ND	47.31	0.50	50	-	94.6	75-125
Cobalt	ND	50.14	0.50	50	-	100	75-125
Copper	ND	47.63	0.50	50	-	95.3	75-125
Lead	ND	49.38	0.50	50	-	98.8	75-125
Mercury	ND	1.123	0.050	1.25	-	89.8	75-125
Molybdenum	ND	46.72	0.50	50	-	93.4	75-125
Nickel	ND	46.92	0.50	50	-	93.8	75-125
Selenium	ND	47.38	0.50	50	-	94.8	75-125
Silver	ND	45.73	0.50	50	-	91.5	75-125
Thallium	ND	49.43	0.50	50	-	98.9	75-125
Vanadium	ND	47.43	0.50	50	-	94.9	75-125
Zinc	ND	481	5.0	500	-	96.2	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	549.2	495.5		500	110	99	70-130



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/5/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89005  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89005  
 1404184-012AMS/MSD

### QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	90.42	64.91	50	22	136,F1	84.9	75-125	32.8,F1	20
Arsenic	56.86	60.48	50	4.5	105	112	75-125	6.17	20
Barium	697.3	791.4	500	120	115	134,F1	75-125	12.6	20
Beryllium	44.88	50.26	50	ND	89.8	101	75-125	11.3	20
Cadmium	48.34	56.18	50	ND	96.7	112	75-125	15.0	20
Chromium	107	566.2	50	38.77	136,F1	1050,F1	75-125	136,F1	20
Cobalt	54.44	80.85	50	4.1	101	154,F1	75-125	39,F1	20
Copper	NR	NR	50	91	NR	NR	75-125	NR	20
Lead	NR	NR	50	860	NR	NR	75-125	NR	20
Mercury	1.201	1.388	1.25	0.091	88.8	104	75-125	14.4	20
Molybdenum	47.05	55.63	50	ND	94.1	111	75-125	16.7	20
Nickel	117.6	652.5	50	38.70	158,F1	1230,F1	75-125	139,F1	20
Selenium	47.45	52.08	50	ND	94.9	104	75-125	9.30	20
Silver	45.95	52.37	50	ND	91.9	105	75-125	13.1	20
Thallium	47.59	56.27	50	ND	95.2	113	75-125	16.7	20
Vanadium	78.14	90.61	50	18	120	144,F1	75-125	14.8	20
Zinc	974.1	1006	500	341.6	127,F1	133,F1	75-125	3.22	20
<b>Surrogate Recovery</b>									
Tb 350.917	496.7	576.6	500		99	115	70-130	14.9	20

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/8/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89023  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89023  
 1404200-031AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	50.52	0.50	50	-	101	75-125
Arsenic	ND	50.45	0.50	50	-	101	75-125
Barium	ND	498.4	5.0	500	-	99.7	75-125
Beryllium	ND	46.78	0.50	50	-	93.6	75-125
Cadmium	ND	51.19	0.25	50	-	102	75-125
Chromium	ND	48.81	0.50	50	-	97.6	75-125
Cobalt	ND	51.79	0.50	50	-	104	75-125
Copper	ND	48.04	0.50	50	-	96.1	75-125
Lead	ND	51.72	0.50	50	-	103	75-125
Mercury	ND	1.151	0.050	1.25	-	92.1	75-125
Molybdenum	ND	47.32	0.50	50	-	94.6	75-125
Nickel	ND	47.95	0.50	50	-	95.9	75-125
Selenium	ND	50.96	0.50	50	-	102	75-125
Silver	ND	47.56	0.50	50	-	95.1	75-125
Thallium	ND	51.88	0.50	50	-	104	75-125
Vanadium	ND	49.83	0.50	50	-	99.7	75-125
Zinc	ND	507.6	5.0	500	-	102	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	518.3	523.4		500	104	105	70-130

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/8/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89023  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89023  
 1404200-031AMS/MSD

### QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	53.07	52.91	50	ND	106	106	75-125	0	20
Arsenic	55.53	58.3	50	3.290	104	110	75-125	4.87	20
Barium	542.3	538.5	500	15.13	105	105	75-125	0	20
Beryllium	47.56	47.24	50	ND	95.1	94.5	75-125	0.675	20
Cadmium	53.17	52.97	50	ND	106	106	75-125	0	20
Chromium	83.43	84.44	50	29.80	107	109	75-125	1.20	20
Cobalt	56.7	56.83	50	4.283	105	105	75-125	0	20
Copper	52.31	53.31	50	3.362	97.9	99.9	75-125	1.89	20
Lead	60.48	57.67	50	4.992	111	105	75-125	4.76	20
Mercury	1.197	1.212	1.25	ND	95.8	97	75-125	1.25	20
Molybdenum	50.1	50.02	50	ND	100	100	75-125	0	20
Nickel	68.81	69.47	50	19.70	98.2	99.5	75-125	0.955	20
Selenium	51.49	51.34	50	ND	103	103	75-125	0	20
Silver	49.56	49.43	50	ND	99.1	98.9	75-125	0.263	20
Thallium	53.92	53.49	50	ND	108	107	75-125	0.801	20
Vanadium	79.65	80.05	50	27.23	105	106	75-125	0.501	20
Zinc	530.8	542.3	500	15.22	103	105	75-125	2.14	20
<b>Surrogate Recovery</b>									
Tb 350.917	544	545.3	500		109	109	70-130	0	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/9/14  
**Date Analyzed:** 4/10/14  
**Instrument:** SKALAR  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89157  
**Extraction Method:** SM4500-CN<sup>-</sup> E  
**Analytical Method:** SM4500-CN<sup>-</sup> ABCE  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89157  
 1404200-008AMS/MSD

### QC Summary Report for SM4500-CN<sup>-</sup> ABCE

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Total Cyanide	ND	0.8312	0.10	0.80	-	104	90-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Total Cyanide	0.7647	0.8003	0.80	ND	95.6	100	80-120	4.55	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/7/14  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89004  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89004  
 1404184-011AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.6094	0.40	0.60	-	102	70-130
MTBE	ND	0.09954	0.050	0.10	-	99.5	70-130
Benzene	ND	0.1065	0.0050	0.10	-	107	70-130
Toluene	ND	0.1059	0.0050	0.10	-	106	70-130
Ethylbenzene	ND	0.1092	0.0050	0.10	-	109	70-130
Xylenes	ND	0.3328	0.0050	0.30	-	111	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.1065	0.105		0.10	106	105	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.5858	0.5736	0.60	ND	97.6	95.6	70-130	2.11	20
MTBE	0.08091	0.08584	0.10	ND	80.9	85.8	70-130	5.92	20
Benzene	0.08726	0.09231	0.10	ND	87.3	92.3	70-130	5.62	20
Toluene	0.08883	0.09426	0.10	ND	88.8	94.3	70-130	5.93	20
Ethylbenzene	0.09148	0.09648	0.10	ND	91.5	96.5	70-130	5.32	20
Xylenes	0.288	0.2952	0.30	ND	96	98.4	70-130	2.45	20

**Surrogate Recovery**

2-Fluorotoluene	0.08464	0.09062	0.10		85	91	70-130	6.82	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/8/14  
**Instrument:** GC19  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89020  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89020  
 1404200-034AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.5089	0.40	0.60	-	84.8	70-130
MTBE	ND	0.09036	0.050	0.10	-	90.4	70-130
Benzene	ND	0.1045	0.0050	0.10	-	104	70-130
Toluene	ND	0.1049	0.0050	0.10	-	105	70-130
Ethylbenzene	ND	0.1041	0.0050	0.10	-	104	70-130
Xylenes	ND	0.3227	0.0050	0.30	-	108	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.1089	0.1058		0.10	109	106	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.4592	0.5021	0.60	ND	76.5	83.7	70-130	8.93	20
MTBE	0.07182	0.08451	0.10	ND	71.8	84.5	70-130	16.2	20
Benzene	0.08938	0.1007	0.10	ND	89.4	101	70-130	11.9	20
Toluene	0.09044	0.1017	0.10	ND	90.4	102	70-130	11.7	20
Ethylbenzene	0.0901	0.1013	0.10	ND	90.1	101	70-130	11.7	20
Xylenes	0.28	0.3128	0.30	ND	93.3	104	70-130	11.1	20

**Surrogate Recovery**

2-Fluorotoluene	0.09231	0.1002	0.10		92	100	70-130	8.19	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/8/14  
**Date Analyzed:** 4/8/14  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89104  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89104  
 1404258-001AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.6065	0.40	0.60	-	101	70-130
MTBE	ND	0.09248	0.050	0.10	-	92.5	70-130
Benzene	ND	0.09904	0.0050	0.10	-	99	70-130
Toluene	ND	0.1004	0.0050	0.10	-	100	70-130
Ethylbenzene	ND	0.1043	0.0050	0.10	-	104	70-130
Xylenes	ND	0.3196	0.0050	0.30	-	107	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.1001	0.1023		0.10	100	102	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.5804	0.6134	0.60	ND	96.7	102	70-130	5.53	20
MTBE	0.09158	0.09598	0.10	ND	91.6	96	70-130	4.69	20
Benzene	0.09618	0.09703	0.10	ND	96.2	97	70-130	0.879	20
Toluene	0.09874	0.09978	0.10	ND	98.7	99.8	70-130	1.05	20
Ethylbenzene	0.1021	0.1039	0.10	ND	102	104	70-130	1.70	20
Xylenes	0.3151	0.3212	0.30	ND	105	107	70-130	1.91	20

**Surrogate Recovery**

2-Fluorotoluene	0.0991	0.09735	0.10		99	97	70-130	1.77	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/9/14  
**Date Analyzed:** 4/9/14  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89154  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89154  
 1404327-001AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.6433	0.40	0.60	-	107	70-130
MTBE	ND	0.09235	0.050	0.10	-	92.4	70-130
Benzene	ND	0.1071	0.0050	0.10	-	107	70-130
Toluene	ND	0.1068	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.1108	0.0050	0.10	-	111	70-130
Xylenes	ND	0.3376	0.0050	0.30	-	113	70-130

**Surrogate Recovery**

2-Fluorotoluene	0.1094	0.1022		0.10	109	102	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR	0	16	NR	NR	-	NR	
MTBE	NR	NR	0	ND<1	NR	NR	-	NR	
Benzene	NR	NR	0	ND<0.1	NR	NR	-	NR	
Toluene	NR	NR	0	0.19	NR	NR	-	NR	
Ethylbenzene	NR	NR	0	ND<0.1	NR	NR	-	NR	
Xylenes	NR	NR	0	ND<0.1	NR	NR	-	NR	

**Surrogate Recovery**

2-Fluorotoluene	NR	NR	0		NR	NR	-	NR	
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/5/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89005  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89005  
 1404184-012AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	48.03	0.25	50	-	96.1	75-125
Chromium	ND	47.31	0.50	50	-	94.6	75-125
Lead	ND	49.38	0.50	50	-	98.8	75-125
Nickel	ND	46.92	0.50	50	-	93.8	75-125
Zinc	ND	481	5.0	500	-	96.2	75-125

#### Surrogate Recovery

Tb 350.917	549.2	495.5		500	110	99	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	48.34	56.18	50	ND	96.7	112	75-125	15.0	20
Chromium	107	566.2	50	38.77	136,F1	1050,F1	75-125	136,F1	20
Lead	NR	NR	50	860	NR	NR	75-125	NR	20
Nickel	117.6	652.5	50	38.70	158,F1	1230,F1	75-125	139,F1	20
Zinc	974.1	1006	500	341.6	127,F1	133,F1	75-125	3.22	20

#### Surrogate Recovery

Tb 350.917	496.7	576.6	500		99	115	70-130	14.9	20
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(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/8/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89023  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89023  
 1404200-031AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	51.19	0.25	50	-	102	75-125
Chromium	ND	48.81	0.50	50	-	97.6	75-125
Lead	ND	51.72	0.50	50	-	103	75-125
Nickel	ND	47.95	0.50	50	-	95.9	75-125
Zinc	ND	507.6	5.0	500	-	102	75-125

**Surrogate Recovery**

Tb 350.917	518.3	523.4		500	104	105	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	53.17	52.97	50	ND	106	106	75-125	0	20
Chromium	83.43	84.44	50	29.80	107	109	75-125	1.20	20
Lead	60.48	57.67	50	4.992	111	105	75-125	4.76	20
Nickel	68.81	69.47	50	19.70	98.2	99.5	75-125	0.955	20
Zinc	530.8	542.3	500	15.22	103	105	75-125	2.14	20

**Surrogate Recovery**

Tb 350.917	544	545.3	500		109	109	70-130	0	20
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/8/14  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89091  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89091  
 1404183-007AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	53.25	0.50	50	-	106	75-125

**Surrogate Recovery**

Tb 350.917	530.7	537.7		500	106	108	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	NR	NR	50	1381	NR	NR	75-125	NR	20

**Surrogate Recovery**

Tb 350.917	528.5	516.8	500		106	103	70-130	2.24	20
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# Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/7/14  
**Date Analyzed:** 4/7/14  
**Instrument:** WetChem  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89082  
**Extraction Method:** SW9045D  
**Analytical Method:** SW9045D  
**Unit:** ±, pH units @ 25°C

## QC Summary Report for SW9045D (pH)

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1404200-001A	10.2	1	10.2	1	0	0.1



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/7/14  
**Date Analyzed:** 4/10/14  
**Instrument:** SPECTROPHOTOMETER  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89058  
**Extraction Method:** SW9030A/E376.2  
**Analytical Method:** SW9030A/E376.2  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89058  
 1404200-031AMS/MSD

### QC Summary Report for SW9030A/E376.2

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Sulfide	ND	ND	10	50	-	97.6	80-120

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Sulfide	ND	ND	50	ND	86	75.3	75-125	13.2	20



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/7/14 - 4/8/14  
**Instrument:** GC6B  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89018  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89018  
 1404200-020AMS/MSD

### QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.87	1.0	40	-	105	70-130

**Surrogate Recovery**

C9	24.9	26.58		25	100	106	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	63.27	65.29	40	24.82	96.1	101	70-130	3.14	30

**Surrogate Recovery**

C9	22.64	23.27	25		91	93	70-130	2.76	30
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## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/4/14  
**Date Analyzed:** 4/7/14  
**Instrument:** GC6B  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89024  
**Extraction Method:** SW3550B/3630C  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-89024  
 1404200-034AMS/MSD

### QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	50.55	1.0	40	-	126	70-130

**Surrogate Recovery**

C9	25.22	27.16		25	101	109	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	55.2	56.19	40	9.483	114	117	70-130	1.77	30

**Surrogate Recovery**

C9	29.64	29.41	25		119	118	70-130	0.763	30
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## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626701; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1404200  
**Date Received:** 4/4/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-001A	B-10-2.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/24/2014	5 days		<input type="checkbox"/>	
			SW9030A/E376.2 (Sulfide)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW9045D (pH)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			Cyanide, Total			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-002A	B-10-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	3/24/2014	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-003A	B-10-8	Soil	SW6010B (Lead)	1	Big Stainless Tube	<input type="checkbox"/>	3/24/2014	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			Asbestos, 435 CARB 400			<input type="checkbox"/>		5 days		<input type="checkbox"/>	SubOut
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

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## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626701; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1404200  
**Date Received:** 4/4/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-004A	B-10-10.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	3/24/2014	5 days	<input type="checkbox"/>		
1404200-005A	B-13-3	Soil	SW6010B (Lead) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days	<input type="checkbox"/>		
1404200-006A	B-13-5.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW6020 (CAM 17) SW8270C (SVOCs) SW8260B (VOCs) SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days	<input type="checkbox"/>		
1404200-007A	B-13-8	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days	<input type="checkbox"/>		
1404200-008A	B-13-10.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW9030A/E376.2 (Sulfide) SW9045D (pH) SW6010B (Lead)	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days	<input type="checkbox"/>		

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-008A	B-13-10.5	Soil	Cyanide, Total	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days		<input type="checkbox"/>	
1404200-009A	B-8-3'	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-010A	B-8-5'	Soil	SW6010B (Lead)	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-011A	B-8-10.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-012A	B-14-3	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days		<input type="checkbox"/>	
			SW9030A/E376.2 (Sulfide)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW9045D (pH)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			Cyanide, Total			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	

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**Work Order:** 1404200  
**Date Received:** 4/4/2014

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-012A	B-14-3	Soil	SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days		<input type="checkbox"/>	
1404200-013A	B-14-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-014A	B-14-7.5	Soil	SW6010B (Lead)	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-015A	B-9-3	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-016A	B-9-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-017A	B-9-8	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days		<input type="checkbox"/>	
			SW6010B (Lead)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	

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**QC Level:** LEVEL 2  
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**Contact's Email:** pcusack@langan.com

**Work Order:** 1404200  
**Date Received:** 4/4/2014

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-018A	B-9-10	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days	<input type="checkbox"/>		
1404200-019A	B-11-3	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW8270C (SVOCs) SW8260B (VOCs) SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days	<input type="checkbox"/>		
1404200-020A	B-11-5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW9030A/E376.2 (Sulfide) SW9045D (pH) Cyanide, Total SW6020 (CAM 17) SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days	<input type="checkbox"/>		
1404200-021A	B-12-3	Soil	SW6010B (Lead) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days	<input type="checkbox"/>		

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**QC Level:** LEVEL 2  
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**Work Order:** 1404200  
**Date Received:** 4/4/2014

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Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-022A	B-12-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days	<input type="checkbox"/>		
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days			
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1404200-023A	B-12-8	Soil	SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days	<input type="checkbox"/>		
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days			
			Asbestos, 435 CARB 400			<input type="checkbox"/>		5 days			SubOut
1404200-024A	B-12-10.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days	<input type="checkbox"/>		
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days			
1404200-025A	B-6-3	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/31/2014	5 days	<input type="checkbox"/>		
			SW6010B (Lead)			<input type="checkbox"/>		5 days			
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days			
1404200-026A	B-6-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	3/31/2014	5 days	<input type="checkbox"/>		

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

Big Stainless Tube =  
 Big Stainless Tube =



**McC Campbell Analytical, Inc.**  
 "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626701; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1404200  
**Date Received:** 4/4/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-026A	B-6-5.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	3/31/2014	5 days		<input type="checkbox"/>	
1404200-027A	B-6-8	Soil		1	Big Stainless Tube	<input type="checkbox"/>	3/31/2014			<input checked="" type="checkbox"/>	
1404200-028A	B-6-10	Soil	SW9030A/E376.2 (Sulfide) SW9045D (pH) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up Cyanide, Total	1	Big Stainless Tube	<input type="checkbox"/>	3/31/2014	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-029A	B-6-15.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	3/31/2014	5 days		<input type="checkbox"/>	
1404200-030A	B-7-2.5	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	4/2/2014	5 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-031A	B-7-5	Soil	SW9030A/E376.2 (Sulfide)	1	Big Stainless Tube	<input type="checkbox"/>	4/2/2014	5 days		<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

Big Stainless Tube =  
 Big Stainless Tube =



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## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626701; India Basin  
**Comments:** SEND HARD COPY

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1404200  
**Date Received:** 4/4/2014

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-031A	B-7-5	Soil	SW9045D (pH)	1	Big Stainless Tube	<input type="checkbox"/>	4/2/2014	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			Cyanide, Total			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-032A	B-7-8	Soil	SW6010B (Lead)	1	Big Stainless Tube	<input type="checkbox"/>	4/2/2014	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1404200-033A	B-7-10.5	Soil		1	Big Stainless Tube	<input type="checkbox"/>	4/2/2014			<input checked="" type="checkbox"/>	
1404200-034A	B-7-15.5	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Big Stainless Tube	<input type="checkbox"/>	4/2/2014	5 days		<input type="checkbox"/>	
			SW6010B (Lead)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

Big Stainless Tube =  
 Big Stainless Tube =



555 Montgomery Street, Suite 1300, San Francisco, CA 94111 Ph: 415.955.9040/Fax: 415.955.9041  
 501 14th Street, Third Floor, Oakland CA 94612 Ph: 510.874.4500/Fax: 510.874.4507  
 777 Campus Commons Rd., Suite 200, Sacramento, CA 95825 Ph: 916.565.7412/Fax: 916.565.7412

Site Name: Indra Basin  
 Job Number: 131626701  
 Project Manager/Contact: R. Cusack  
 Samplers: Keith Cusack  
 Recorder (Signature Required): Keith Cusack

Turnaround Time  
Normal

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative						Hold	Remarks				
				Soil	Water	Other	Soil	H <sub>2</sub> O <sub>2</sub>	HCL	HNO <sub>3</sub>	Ice	Other						
B-9-3	3/25/14			X			X											
B-9-5.5	3/25/14			X			X											
B-9-8	3/25/14			X			X											
B-9-10	3/25/14			X			X											
B-11-3	3/26/14			X			X											
B-11-5	3/26/14			X			X											
B-12-3	3/24/14			X			X											
B-12-5.5	3/24/14			X			X											
B-12-8	3/24/14			X			X											
B-12-10.5	3/26/14			X			X											
B-6-3	3/31/14			X			X											
B-6-5.5	3/31/14			X			X											
B-6-8	3/31/14			X			X											
B-6-10	3/31/14			X			X											
Relinquished by: (Signature)				Date	4/4/14	Time	9:00								Date	4/4/14	Time	9:00
Relinquished by: (Signature)				Date	4/4/14	Time	1:30								Date	4/4/11	Time	1:30
Relinquished by: (Signature)				Date		Time									Date		Time	

Received by Lab: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 Received by Lab: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Method of Shipment:  Hand Carried  Private Courier (Co. Name) \_\_\_\_\_  Lab courier  Fed Ex  Airborne  UPS

Sent to Laboratory (Name): McGarrath  
 Laboratory Comments/Notes: \_\_\_\_\_  
 White Copy - Original      Yellow Copy - Laboratory      Pink Copy - Field      COC Number: **004982**

555 Montgomery Street, Suite 1300, San Francisco, CA 94111 Ph: 415.955.9040/Fax: 415.955.9041  
 501 14th Street, Third Floor, Oakland CA 94612 Ph: 510.874.4500/Fax: 510.874.4507  
 777 Campus Commons Rd., Suite 200, Sacramento, CA 95825 Ph: 916.565.7412/Fax: 916.565.7412

Site Name: INDIA BASIN  
 Job Number: 231626701  
 Project Manager/Contact: KC W. Cusack  
 Samplers: KC W. Cusack  
 Recorder (Signature Required): [Signature]

Turnaround Time  
NORAMA 1

Analysis Requested										Hold		
TRH	VOCs	SVOCs	PCBs + Pesticides	CAM 17 METALS	LEAD 5 METALS	TOXIC LEAD	FISHPOISONS (CAMS)	PH	CYANIDES	SILICATES	Silica gel clean-up	Hold
X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative																	
				Soil	Water	Other	HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	Ice	Other													
B-6-15.5	3/31/14			X																				
B-7-7.5	4/2/14			X																				
B-7-5	4/2/14			X																				
B-7-8	4/2/14			X																				
B-7-10.5	4/2/14			X																				
B-7-15.5	4/2/14			X																				

Received by: (Signature) [Signature] Date 4/4/14 Time 1400  
 Received by: (Signature) [Signature] Date 4/4/14 Time 1530  
 Received by Lab: (Signature) [Signature] Date 4/4/14 Time 1536

Method of Shipment  
 Hand Carried  Private Courier (Co. Name)  Lab courier  Fed Ex  Airborne  UPS

White Copy - Original      Yellow Copy - Laboratory      Pink Copy - Field      COC Number: **004983**

Sent to Laboratory (Name): McCampbell  
 Laboratory Comments/Notes:



### Sample Receipt Checklist

Client Name: **Treadwell & Rollo** Date and Time Received: **4/4/2014 8:38:34 PM**  
 Project Name: **#731626701; India Basin** Login Reviewed by: **Ana Venegas**  
 WorkOrder N°: **1404200** Matrix: Soil Carrier: Rob Pringle (MAI Courier)

#### Chain of Custody (COC) Information

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

#### Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes  No   
 Container/Temp Blank temperature Cooler Temp: 2.5°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  NA   
 Sample labels checked for correct preservation? Yes  No   
 Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA   
 Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1404200 A

**Report Created for:** Treadwell & Rollo  
555 Montgomery St., Suite 1300  
San Francisco, CA 94111

**Project Contact:** Peter Cusack  
**Project P.O.:**  
**Project Name:** #731626701; India Basin

**Project Received:** 04/04/2014

Analytical Report reviewed & approved for release on 05/05/2014 by:

*Question about  
your data?*

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**WorkOrder:** 1404200

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

### Analytical Qualifier

H	samples were analyzed out of holding time
S	spike recovery outside accepted recovery limits
a3	sample diluted due to high organic content.
a4	the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.
c1	surrogate recovery outside of the control limits due to the dilution of the sample.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant



## **Glossary of Terms & Qualifier Definitions**

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**WorkOrder:** 1404200

### **Quality Control** **Qualifiers**

F1 MS/MSD recovery and/or RPD was out of acceptance criteria; LCS validated the prep batch.



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/30/14

**WorkOrder:** 1404200  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-10.5	1404200-004A	Soil/WET	03/24/2014	ICP-JY	89885

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.37	0.050	1	05/02/2014 21:44

B-14-3	1404200-012A	Soil/WET	03/26/2014	ICP-JY	89902
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Analytes	Result	RL	DF	Date Analyzed
Chromium	0.62	0.050	1	05/02/2014 21:51

B-11-3	1404200-019A	Soil/WET	03/26/2014	ICP-JY	89902
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Analytes	Result	RL	DF	Date Analyzed
Chromium	0.54	0.050	1	05/02/2014 21:55

B-12-5.5	1404200-022A	Soil/WET	03/26/2014	ICP-JY	89902
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Analytes	Result	RL	DF	Date Analyzed
Chromium	0.13	0.050	1	05/02/2014 22:00

B-12-8	1404200-023A	Soil/WET	03/26/2014	ICP-JY	89902
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Analytes	Result	RL	DF	Date Analyzed
Chromium	0.091	0.050	1	05/02/2014 22:02

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/30/14

**WorkOrder:** 1404200  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

## Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-10.5	1404200-024A	Soil/WET	03/26/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.074	0.050	1	05/02/2014 22:05

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-15.5	1404200-029A	Soil/WET	03/31/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.28	0.050	1	05/02/2014 22:12



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/30/14-5/3/14

**WorkOrder:** 1404200  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Lead & Chromium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil/WET	03/24/2014	ICP-JY	89885

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.33	0.050	1	05/02/2014 21:41
Lead	7.5	0.20	1	05/02/2014 21:41

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-3	1404200-015A	Soil/WET	03/25/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.36	0.050	1	05/02/2014 21:53
Lead	10	0.20	1	05/02/2014 21:53

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-10	1404200-018A	Soil/WET	03/25/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.59	0.050	1	05/05/2014 14:44
Lead	10	0.20	1	05/05/2014 14:44

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-5	1404200-020A	Soil/WET	03/26/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.34	0.050	1	05/02/2014 21:58
Lead	2.8	0.20	1	05/02/2014 21:58

(Cont.)



# Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/30/14-5/3/14

**WorkOrder:** 1404200  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

## Lead & Chromium

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-5.5	1404200-026A	Soil/WET	03/31/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.66	0.050	1	05/02/2014 22:09
Lead	7.9	0.20	1	05/02/2014 22:09

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-10	1404200-028A	Soil/WET	03/31/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.34	0.050	1	05/05/2014 14:50
Lead	6.0	0.20	1	05/05/2014 14:50



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/30/14-5/3/14

**WorkOrder:** 1404200  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-13-10.5	1404200-008A	Soil/WET	03/25/2014	ICP-JY	89885

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	0.51	0.20	1	05/05/2014 14:22

B-8-3'	1404200-009A	Soil/WET	03/25/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	0.49	0.20	1	05/05/2014 14:31

B-8-5'	1404200-010A	Soil/WET	03/25/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	3.7	0.20	1	05/05/2014 14:33

B-8-10.5	1404200-011A	Soil/WET	03/25/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	9.0	0.20	1	05/05/2014 14:36

B-14-5.5	1404200-013A	Soil/WET	03/26/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	3.8	0.20	1	05/05/2014 14:39

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 4/30/14-5/3/14

**WorkOrder:** 1404200  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-8	1404200-017A	Soil/WET	03/25/2014	ICP-JY	89902

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	2.9	0.20	1	05/05/2014 14:41

B-12-3	1404200-021A	Soil/WET	03/26/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	7.0	0.20	1	05/05/2014 14:47

B-6-3	1404200-025A	Soil/WET	03/31/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	9.8	0.20	1	05/02/2014 22:07

B-7-8	1404200-032A	Soil/WET	04/02/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	7.7	0.20	1	05/05/2014 15:03

B-7-15.5	1404200-034A	Soil/WET	04/02/2014	ICP-JY	89902
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	2.1	0.20	1	05/05/2014 15:06



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/29/14  
**Date Analyzed:** 5/1/14 - 5/2/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89885  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L  
**Sample ID:** MB/LCS-89885  
 1404961-001AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	0.928	0.050	1	-	92.8	75-125
Lead	ND	0.766	0.20	1	-	76.6	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	0.986	0.959	1	0.05141	93.4	90.8	70-130	2.75	30
Lead	N/A	N/A	N/A	N/A	N/A	N/A	-	N/A	

(Cont.)



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 4/30/14  
**Date Analyzed:** 5/5/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 89902  
**Extraction Method:** CA Title 22  
**Analytical Method:** SW6010B  
**Unit:** mg/L  
**Sample ID:** MB/LCS-89902  
 1404200-028AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	0.974	0.050	1	-	97.4	75-125
Lead	ND	1.04	0.20	1	-	104	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	1.34	1.34	1	0.3402	99.8	100	70-130	0.447	30
Lead	NR	NR	1	5.958	NR	NR	70-130	NR	30



**WorkOrder:** 1404200 **A**    **ClientCode:** TWRF

WaterTrax     WriteOn     EDF     Excel     Email     HardCopy     ThirdParty     J-flag

**Report to:** Peter Cusack    Accounts Payable    **Requested TAT:** 5 days  
 Treadwell & Rollo    Treadwell & Rollo    **Date Received:** 04/04/2014  
 555 Montgomery St., Suite 1300    555 Montgomery St., Suite 1300    **Date Add-On:** 04/30/2014  
 San Francisco, CA 94111    San Francisco, CA 94111    **Date Printed:** 04/30/2014

**Bill to:** Accounts Payable  
 Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12			
1404200-023	B-12-8	Soil	3/26/2014	<input type="checkbox"/>	A														
1404200-024	B-12-10.5	Soil	3/26/2014	<input type="checkbox"/>	A														
1404200-025	B-6-3	Soil	3/31/2014	<input type="checkbox"/>		A													
1404200-026	B-6-5.5	Soil	3/31/2014	<input type="checkbox"/>			A												
1404200-028	B-6-10	Soil	3/31/2014	<input type="checkbox"/>				A											
1404200-029	B-6-15.5	Soil	3/31/2014	<input type="checkbox"/>					A										
1404200-032	B-7-8	Soil	4/2/2014	<input type="checkbox"/>						A									
1404200-034	B-7-15.5	Soil	4/2/2014	<input type="checkbox"/>							A								

**Test Legend:**

1	STLC_METALS_S	2	STLC_PB_S	3	STLC_PBCR_S	4		5	
6		7		8		9		10	
11		12							

**Prepared by:** Ana Venegas  
**Add-On Prepared By:** Maria Venegas

**Comments:** SEND HARD COPY. STLC's added 4/30/14 STAT.

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.



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 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO  
**Project:** #731626701; India Basin  
**Comments:** SEND HARD COPY. STLC's added 4/30/14 STAT.

**QC Level:** LEVEL 2  
**Client Contact:** Peter Cusack  
**Contact's Email:** pcusack@langan.com

**Work Order:** 1404200  
**Date Received:** 4/4/2014  
**Date Add-On:** 4/30/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-001A	B-10-2.5	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/24/2014	5 days*		<input type="checkbox"/>	
1404200-004A	B-10-10.5	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/24/2014	5 days*		<input type="checkbox"/>	
1404200-008A	B-13-10.5	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		<input type="checkbox"/>	
1404200-009A	B-8-3'	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		<input type="checkbox"/>	
1404200-010A	B-8-5'	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		<input type="checkbox"/>	
1404200-011A	B-8-10.5	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		<input type="checkbox"/>	
1404200-012A	B-14-3	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/26/2014	5 days*		<input type="checkbox"/>	
1404200-013A	B-14-5.5	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/26/2014	5 days*		<input type="checkbox"/>	
1404200-015A	B-9-3	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		<input type="checkbox"/>	
1404200-017A	B-9-8	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		<input type="checkbox"/>	
1404200-018A	B-9-10	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/25/2014	5 days*		<input type="checkbox"/>	
1404200-019A	B-11-3	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/26/2014	5 days*		<input type="checkbox"/>	
1404200-020A	B-11-5	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/26/2014	5 days*		<input type="checkbox"/>	
1404200-021A	B-12-3	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/26/2014	5 days*		<input type="checkbox"/>	
1404200-022A	B-12-5.5	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/26/2014	5 days*		<input type="checkbox"/>	
1404200-023A	B-12-8	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/26/2014	5 days*		<input type="checkbox"/>	
1404200-024A	B-12-10.5	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/26/2014	5 days*		<input type="checkbox"/>	
1404200-025A	B-6-3	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	3/31/2014	5 days*		<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

Big Stainless Tube =  
 Big Stainless Tube =



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 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO      **QC Level:** LEVEL 2      **Work Order:** 1404200  
**Project:** #731626701; India Basin      **Client Contact:** Peter Cusack      **Date Received:** 4/4/2014  
**Comments:** SEND HARD COPY. STLC's added 4/30/14 STAT.      **Contact's Email:** pcusack@langan.com      **Date Add-On:** 4/30/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-026A	B-6-5.5	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/31/2014	5 days*		<input type="checkbox"/>	
1404200-028A	B-6-10	Soil	SW6010B (Chromium & Lead) (STLC)	1	Big Stainless Tube	3/31/2014	5 days*		<input type="checkbox"/>	
1404200-029A	B-6-15.5	Soil	SW6010B (Metals) (STLC) <Chromium>	1	Big Stainless Tube	3/31/2014	5 days*		<input type="checkbox"/>	
1404200-032A	B-7-8	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	4/2/2014	5 days*		<input type="checkbox"/>	
1404200-034A	B-7-15.5	Soil	SW6010B (Lead) (STLC)	1	Big Stainless Tube	4/2/2014	5 days*		<input type="checkbox"/>	

**\* NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

**Bottle Legend:**

Big Stainless Tube =  
 Big Stainless Tube =









# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1404200 B

**Report Created for:** Treadwell & Rollo  
555 Montgomery St., Suite 1300  
San Francisco, CA 94111

**Project Contact:** Peter Cusack  
**Project P.O.:**  
**Project Name:** #731626701; India Basin

**Project Received:** 04/04/2014

Analytical Report reviewed & approved for release on 05/27/2014 by:

*Question about  
your data?*

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**WorkOrder:** 1404200

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

### Analytical Qualifiers

H	samples were analyzed out of holding time
S	spike recovery outside accepted recovery limits
a3	sample diluted due to high organic content.
a4	the reporting limits were raised due to the sample's matrix prohibiting a full volume extraction.
c1	surrogate recovery outside of the control limits due to the dilution of the sample.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant

### Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD was out of acceptance criteria; LCS validated the prep batch.
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## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 5/22/14

**WorkOrder:** 1404200  
**Extraction Method:** SW1311/SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-10-2.5	1404200-001A	Soil/TCLP	03/24/2014	ICP-JY	90694

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	05/23/2014 20:41

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-10.5	1404200-011A	Soil/TCLP	03/25/2014	ICP-JY	90694

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	05/23/2014 20:43

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-3	1404200-015A	Soil/TCLP	03/25/2014	ICP-JY	90694

Analytes	Result	RL	DF	Date Analyzed
Lead	0.28	0.20	1	05/23/2014 20:46

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-10	1404200-018A	Soil/TCLP	03/25/2014	ICP-JY	90694

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	05/23/2014 20:48

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-3	1404200-021A	Soil/TCLP	03/26/2014	ICP-JY	90694

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	05/23/2014 20:51

(Cont.)



## Analytical Report

**Client:** Treadwell & Rollo  
**Project:** #731626701; India Basin  
**Date Received:** 4/4/14 20:38  
**Date Prepared:** 5/22/14

**WorkOrder:** 1404200  
**Extraction Method:** SW1311/SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/L

### Lead

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6-3	1404200-025A	Soil/TCLP	03/31/2014	ICP-JY	90694

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	05/23/2014 20:53

B-6-5.5	1404200-026A	Soil/TCLP	03/31/2014	ICP-JY	90694
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Analytes	Result	RL	DF	Date Analyzed
Lead	0.64	0.20	1	05/23/2014 20:55

B-6-10	1404200-028A	Soil/TCLP	03/31/2014	ICP-JY	90694
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Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	05/23/2014 20:58

B-7-8	1404200-032A	Soil/TCLP	04/02/2014	ICP-JY	90694
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Analytes	Result	RL	DF	Date Analyzed
Lead	0.33	0.20	1	05/23/2014 21:05



## Quality Control Report

**Client:** Treadwell & Rollo  
**Date Prepared:** 5/21/14  
**Date Analyzed:** 5/23/14  
**Instrument:** ICP-JY  
**Matrix:** Soil  
**Project:** #731626701; India Basin

**WorkOrder:** 1404200  
**BatchID:** 90694  
**Extraction Method:** SW1311/SW3050B  
**Analytical Method:** SW6010B  
**Unit:** mg/L  
**Sample ID:** MB/LCS-90694  
 1405689-001AMS/MSD

### QC Summary Report for SW6010B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	0.907	0.20	1	-	90.7	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	0.919	0.806	1	ND	91.9	80.6	70-130	13.1	30

# CHAIN-OF-CUSTODY RECORD

**WorkOrder:** 1404200 **B** **ClientCode:** TWRF

WaterTrax  WriteOn  EDF  Excel  Email  HardCopy  ThirdParty  J-flag

**Report to:** Peter Cusack Accounts Payable **Requested TAT:** 5 days  
 Treadwell & Rollo Treadwell & Rollo **Date Received:** 04/04/2014  
 555 Montgomery St., Suite 1300 555 Montgomery St., Suite 1300 **Date Add-On:** 05/22/2014  
 San Francisco, CA 94111 San Francisco, CA 94111 **Date Printed:** 05/22/2014

**Bill to:** Accounts Payable  
 Treadwell & Rollo  
 555 Montgomery St., Suite 1300  
 San Francisco, CA 94111

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)															
					1	2	3	4	5	6	7	8	9	10	11	12				
1404200-001	B-10-2.5	Soil	3/24/2014	<input type="checkbox"/>	A															
1404200-011	B-8-10.5	Soil	3/25/2014	<input type="checkbox"/>	A															
1404200-015	B-9-3	Soil	3/25/2014	<input type="checkbox"/>	A															
1404200-018	B-9-10	Soil	3/25/2014	<input type="checkbox"/>	A															
1404200-021	B-12-3	Soil	3/26/2014	<input type="checkbox"/>	A															
1404200-025	B-6-3	Soil	3/31/2014	<input type="checkbox"/>	A															
1404200-026	B-6-5.5	Soil	3/31/2014	<input type="checkbox"/>	A															
1404200-028	B-6-10	Soil	3/31/2014	<input type="checkbox"/>	A															
1404200-032	B-7-8	Soil	4/2/2014	<input type="checkbox"/>	A															

**Test Legend:**

1	TCLP_PB_S	3	4	5
6		8	9	10
11				

**Prepared by:** Ana Venegas  
**Add-On Prepared By:** Maria Venegas

**Comments:** SEND HARD COPY. STLC's added 4/30/14 STAT. TCLP's added 5/22/14 1Day TAT

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.



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 http://www.mccampbell.com / E-mail: main@mccampbell.com

## WORK ORDER SUMMARY

**Client Name:** TREADWELL & ROLLO

**Project:** #731626701; India Basin

**Comments:** SEND HARD COPY. STLC's added 4/30/14 STAT. TCLP's added 5/22/14 1Day TAT

**QC Level:** LEVEL 2

**Client Contact:** Peter Cusack

**Contact's Email:** pcusack@langan.com

**Work Order:** 1404200

**Date Received:** 4/4/2014

**Date Add-On:** 5/22/2014

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404200-001A	B-10-2.5	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/24/2014	1 day*		<input type="checkbox"/>	
1404200-011A	B-8-10.5	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/25/2014	1 day*		<input type="checkbox"/>	
1404200-015A	B-9-3	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/25/2014	1 day*		<input type="checkbox"/>	
1404200-018A	B-9-10	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/25/2014	1 day*		<input type="checkbox"/>	
1404200-021A	B-12-3	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/26/2014	1 day*		<input type="checkbox"/>	
1404200-025A	B-6-3	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/31/2014	1 day*		<input type="checkbox"/>	
1404200-026A	B-6-5.5	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/31/2014	1 day*		<input type="checkbox"/>	
1404200-028A	B-6-10	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	3/31/2014	1 day*		<input type="checkbox"/>	
1404200-032A	B-7-8	Soil	SW6010B (Lead) (TCLP)	1	Big Stainless Tube	4/2/2014	1 day*		<input type="checkbox"/>	

**\* NOTE:** STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).

**Bottle Legend:**

Big Stainless Tube =

Big Stainless Tube =









# Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

McC Campbell Analytical, Inc.  
Account Payable  
1534 Willow Pass Rd

Pittsburg, CA 94565

**Client ID:** A31409  
**Report Number:** N006201  
**Date Received:** 04/08/14  
**Date Analyzed:** 04/15/14  
**Date Printed:** 04/15/14

**Job ID/Site:** 1404200 - 731626701, India Basin

**FALI Job ID:** A31409

**PLM Report Number:** N/A

**Total Samples Submitted:** 2  
**Total Samples Analyzed:** 2

### Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

<b>B-10-8</b>	11501620	<b>Grey Soil</b>
---------------	----------	------------------

*Visual Estimation Results:*

Matrix percentage of entire 100

**Visual estimation percentage:** **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

<b>B-12-8</b>	11501621	<b>Grey Soil</b>
---------------	----------	------------------

*Visual Estimation Results:*

Matrix percentage of entire 100

**Visual estimation percentage:** **None Detected**

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 0.25%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected. Analytical results and reports are generated by Forensic Analytical Laboratories Inc. (FALI) at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by FALI to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by FALI. The client is solely responsible for the use and interpretation of test results and reports requested from FALI. Forensic Analytical Laboratories Inc. is not able to assess the degree of hazard resulting from materials analyzed. FALI reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.

**PHASE I/II INVESTIGATION  
TARGETED BROWNFIELDS ASSESSMENT  
FINAL REPORT**

**900 Innes Avenue Site  
San Francisco, San Francisco County, California**



Prepared for  
**U.S. Environmental Protection Agency  
Region 9**

**USACE Delivery Order Number: W91238-06-F-0083  
Document Control Number: 20074.063.095.1340**

**September 2013**

Prepared by



**Weston Solutions, Inc.**  
1340 Treat Boulevard, Suite 210  
Walnut Creek, CA 94597-7580  
(925) 948-2600

**PHASE I/ II INVESTIGATION  
TARGETED BROWNFIELDS ASSESSMENT  
FINAL REPORT**

**900 Innes Avenue Site  
San Francisco, San Francisco County, California**

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## LIST OF ACRONYMS

ACM	Asbestos-Containing Material
AOC	Analyte of Concern
APN	Assessor's Parcel Number
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
°C	Degrees Celsius
CALTRANS	California Department of Transportation
CAM	California Assessment Manual
CARB	California Air Resources Board
CCR	California Code of Regulations
CCSF	San Francisco Community College
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
CHMIRS	California Hazardous Materials Index Report System
DDD	Dichlorodiphenyldichloroethane
DTSC	Department of Toxic Substances Control
DQO	Data Quality Objective
DQI	Data Quality Indicator
EBMUD	East Bay Municipal Utility District
EDR	Environmental Data Resources, Inc.
EMI	Emissions Inventory Data
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System
ERT	Environmental Response Team
ESA	Environmental Site Assessment
FID	Facility Index Database
FINDS	Facility Index System
GPS	Global Positioning System
HAZNET	Hazardous Facility Manifest Data
HIST UST	Historical Hazardous Substance Containers
HPC	Historic Preservation Commission
HWT	Hazardous Waste Transporter
ISA	Hazardous Waste Initial Site Assessment
LOP	Local oversight program
LUST	Leaking Underground Storage Tank
mg/kg	milligrams per kilogram
µg /L	micrograms per liter

MS/MSD	Matrix Spike/Matrix Spike Duplicate
NFRAP	No Further Remedial Action Planned
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PCP	Pentachlorophenol
PLM	Polarized-Light Microscopy
PM	Project Manager
QA	Quality Assurance
QAO	Quality Assurance Office
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RCRA-LQG	Resource Conservation and Recovery Act Large Quantity Generator
RCRA-SQG	Resource Conservation and Recovery Act Small Quantity Generator
ROD	Record of Decision
RSL	Regional Screening Level
RWQCB	Region Water Quality Control Board
SAP	Sampling and Analysis Plan
SFDBI	San Francisco Department of Building Inspection
SFPA	San Francisco Parks Alliance
SFRPD	San Francisco Recreation and Parks Department
SMBRP	Site Mitigation and Brownfields Reuse Program
SOP	Standard Operating Procedure
SLIC	Spills, Leaks, Investigations and Clean-up
SVOC	Semi-Volatile Organic Compound
SWEEPS	Statewide Environmental Evaluation and Planning System
SWF	Solid Waste Facility
SWRCB	State Water Resources Control Board
TBA	Targeted Brownfields Assessment
TBT	Tributyltin
TM	Task Monitor
TPH-d,mo	Total Petroleum Hydrocarbons as diesel and motor oil
TPH-g	Total Petroleum Hydrocarbons as gasoline
USACE	U.S. Army Corps of Engineers
UST	Underground Storage Tank
VOC	Volatile Organic Compound
VCP	Voluntary Clean-up Program
WESTON	Weston Solutions, Inc.
WET	Waste Extraction Test
WMUD	Waste Management Unit Database

## 1. INTRODUCTION

### 1.1 Scope of Work and Purpose

The U.S. Environmental Protection Agency (EPA) Region 9 Targeted Brownfields Assessments (TBAs) are intended to characterize conditions at Brownfields' sites being considered for planned redevelopment or reuse.

The EPA Region 9, in coordination with the U.S. Army Corps of Engineers (USACE), tasked Weston Solutions, Inc. (WESTON) to conduct a TBA for the San Francisco Recreation and Parks Department (SFRPD) at the 900 Innes Avenue Site (Site). The Site is located in the Bayview – Hunters Point Neighborhood of San Francisco, in San Francisco County, California. The SFRPD would like to determine whether the Site is suitable for planned development as part of the proposed San Francisco Blue Greenway public open space.

Historically, the Site housed boatbuilding and ship repair operations for numerous companies during the marine-based cargo industry boom of the late 19<sup>th</sup> through early 20<sup>th</sup> centuries. Today, after nearly a decade of disuse, the Site is used as a construction equipment storage facility and laydown yard. Previous investigations conducted by the EPA have revealed soil contamination by metals, including copper, zinc, and lead.

During this current investigation, a Phase I/II Environmental Site Assessment (ESA) was conducted in general accordance with 40 Code of Federal Regulations (CFR) Part 312 - Innocent Landowners, Standards for Conducting All Appropriate Inquiries, American Society for Testing and Materials (ASTM) E1527-05, and project scoping meetings with stakeholders. The work was performed for the EPA under the USACE Contract W91238-06-F-0083.

The objective of the assessment is to identify existing or potential environmental liabilities; therefore, this effort does not preclude the potential for future environmental problems. The findings of this assessment were limited to areas accessible to WESTON during the site reconnaissance. During the assessment, WESTON employed acceptable environmental assessment procedures. WESTON also undertook appropriate inquiry into current and previous ownership, and uses of the property. The assessment was conducted by personnel experienced in recognizing both short- and long-term environmental hazards and liabilities. The Standard Practice for Site Assessments as issued by the ASTM, defines recognized environmental conditions as follows:

“...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that

generally do not present a threat to human health or the environment, and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions” (ASTM E-1527-05).

A Phase I ESA consists of four general components: a records review, a Site reconnaissance, interviews, and a report. The first three are conducted to identify recognized environmental conditions related to the subject property.

Under the Brownfields program, the EPA, in coordination with the USACE, has tasked WESTON to conduct a Phase II investigation to evaluate Site environmental concerns in an effort to facilitate redevelopment. To evaluate environmental concerns from former site activities, WESTON collected soil samples from 27 sampling locations and sediment samples from 6 locations, placed on a triangular grid, to be analyzed for analytes of concern (AOCs). Subsurface soil samples were collected at eight collocated locations, from a depth of 4 feet, allowing for vertical characterization of the soil. Sampling locations were restricted to seven parcels owned by the Tenderloin Housing Clinic; San Francisco County Assessor Parcel Numbers 4629A-010, 4630-002, 46464-001, 4646-019, 4646-002, 4646-003A, and 4646-003.

Analytes of Concern (AOCs) for the sampling included California Assessment Manual (CAM) 17 metals via EPA Method 6010/7471A, hexavalent chromium via EPA Method 7196A, fluorides via EPA Method 300.0, total petroleum hydrocarbons as gasoline (TPH-g) and total petroleum hydrocarbons as diesel and motor oil (TPH-d,mo) via EPA Method 8015B, polychlorinated biphenyls (PCBs) via EPA method 8082, semi-volatile organic compounds and polyaromatic hydrocarbons (SVOCs/PAHs) by EPA Method 8270, organotins via Krone et al. / EPA Method 3550B, asbestos via polarized-light microscopy (PLM) California Air Resources Board (CARB) 435 Method, volatile organic compounds (VOCs) via EPA Method 8260B, cyanides (CNs) by SM4500CN-E Method, and pH levels via EPA Method 9040C. AOCs were determined based on the historical activities performed at or near the Site.

Sample results were compared against action levels established in the Sampling and Analysis Plan (SAP) to determine the risk to human health and the environment, and to determine mitigation requirements (if any exist).

## **1.2 Special Terms and Conditions**

This document has been prepared by WESTON solely for the use and benefit of the EPA, USACE, and the City. Any use of this document or information herein by persons or entities other than EPA, USACE, and SFRPD without the express written consent of WESTON, will be at the sole risk and liability of said person or entity. WESTON will not be liable to the EPA, USACE, and SFRPD or such persons or entities for any damages resulting there from. It is understood that this document may not include all information pertaining to the described site.

### **1.3 Personnel Performing ESAs and Qualifications**

This ESA was completed by the following team of WESTON personnel:

**EPA Task Monitor (TM)** - The EPA TM is Nova Blazej. Ms. Blazej is the primary decision maker for this investigation.

**EPA QA Manager** - The EPA QA Manager is Eugenia E. McNaughton, Ph.D. Ms. McNaughton is responsible for EPA Quality Assurance Office (QAO) review of the SAP and to ensure project QA goals are met.

**San Francisco Recreation and Parks Department** – The Planner at the San Francisco Recreation and Parks Department is Holly Pearson, who operates in the Capital and Planning Division and functions as the primary point of contact for the San Francisco Recreation and Parks Department.

**San Francisco Parks Alliance** - The Blue Greenway Manager at the San Francisco Parks Alliance is Ana Vasudeo, who operates as the primary point of contact for the San Francisco Parks Alliance.

**WESTON QA Manager** - The WESTON QA Manager is Joe DeFao. Mr. DeFao is responsible for the overall management of the contract including cost, schedule, and technical quality.

**WESTON Project Manager (PM) / Field Manager** - The WESTON PM and Field Manager is Ian Bruce. Mr. Bruce is responsible for all tasks assigned to WESTON by the EPA; preparing the SAP; implementing the sampling design; collecting, handling, documenting, and transporting samples; and generating field documentation of sampling activities.

**WESTON Field Sampling Quality Control (QC) Coordinator** - The WESTON Field Sampling QC Coordinator is Ian Bruce. Mr. Bruce is responsible for working with the EPA QAO to ensure project QA goals are met.

**Analytical Laboratory** – Curtis & Tompkins Laboratories are subcontracted by WESTON for analytical services. Curtis & Tompkins will subcontract analysis of organotins to CalScience (Garden Grove, CA) and subcontract analysis of asbestos to Forensic Analysis (Hayward, CA). WESTON personnel will perform data validation activities.

**Drilling Services** - WESTON subcontracted Gregg Drilling and Testing, Inc. (Gregg) for drilling services. WESTON personnel directed the drilling activities in the field.

## **1.4 Limitations and Exceptions of Assessment**

ASTM E 1527-05 acknowledges that “No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property.” The ESA “... is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost.” Furthermore, the ASTM E 1527-05 states that “There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions.”

This assessment report contains the results of reconnaissance and sampling activities of the Site and surrounding properties conducted in August 2013, and a review of property, government, and historical records. Information used to complete these ESAs was reasonably ascertainable, and visually and physically observable. The ESA also included soil and sediment sampling and analyses to assess contamination at the Site.

## **1.5 Users Responsibilities**

In Section 6 of ASTM E 1527-05, the responsibilities of the user of a Phase I/II ESA to assist in the identification of potential recognized environmental conditions include the following:

- A review of reasonably ascertainable land title records and liens that might be recorded against the property. This might include environmental liens or activity and use limitations (deed recordations and/or deed restrictions). As part of this ESA, WESTON has not been notified of any such liens or restrictions. WESTON’s scope of work did not include a complete review of title information, and no chain-of-title information was provided for review.
- Communication to the Environmental Professional for any specialized knowledge or experience, or other information that might be material to the identification of recognized environmental conditions. Specialized knowledge or experience communicated to WESTON with the respect to this ESA included previous environmental reports. The previous environmental reports obtained by WESTON are listed in Section 11 – Selected References.
- Consideration of the purchase price to the fair market value of the subject property, assuming the subject property has not been contaminated through past usage. No information regarding the purchase price or fair market value was provided to WESTON.

## **2. PROJECT AREA DESCRIPTION**

The Site is a cluster of eleven parcels centered at the 900 Innes Avenue property, at the intersection of Innes Avenue and Griffith Street, in the Bayview Neighborhood of San Francisco, California. The parcels are positioned adjacent to India Basin of the San Francisco Bay, directly south of India Basin Shoreline Park. Two rights-of-way are located among the parcels comprising the Site; one right-of-way connects the eastern and western reaches of Hudson Avenue, the other right-of-way continuing Griffin Street to India Basin. Excluding the rights-of-way, the Site occupies approximately 105,550 square feet (2.4 acres) and is partially fenced. The Site is partially paved, with two functional docks, approximately two boat launches, and an access road. The Site generally slopes towards the San Francisco Bay such that most surface runoff flows directly into India Basin. Wetlands may be present along the shoreline adjacent to the Site. Four structures exist at the Site; an abandoned single-family home, two storage buildings, and a covered pier that has partially collapsed. The project area map is presented in Figure 1-1.

The geographic coordinates for the centroid of the 900 Innes Avenue property is 122° 22' 32.88" west longitude and 37° 43' 55.92" north latitude. Topographic gradient at the Site indicates a generalized northeast flow direction, toward India Basin and the San Francisco Bay. Elevation at the Site ranges from 0 to 27 feet above sea level, though surrounding elevations range from 0 to 252 feet above sea level. The Site is bordered to the north by India Basin Shoreline Park, to the northeast by India Basin and San Francisco Bay, residential housing to the southwest, and industrial facilities to the southeast and northwest. Notable public structures within a mile of the Site include Malcolm X Elementary School, Carver Elementary School, and Metropolitan Arts and Tech High School west of the Site, Anna E. Waden Library west of the Site, San Francisco Fire Station No. 17 southwest of the Site, and a US Post Office northwest of the Site.

The San Francisco Recreation and Parks Department has received an EPA Brownfields Assessment Grant to investigate the Site for planned development as part of the proposed San Francisco Blue Greenway public open space.

### **3. SITE CONDITIONS**

#### **3.1 Site Reconnaissance and Interviews**

WESTON conducted a site reconnaissance in August 2013. The reconnaissance included a visual inspection of the Site and adjacent properties. Photographs of the Site are provided in Appendix A.

No interviews were conducted during the site reconnaissance.

#### **3.2 Historical Background**

The Site functioned as a boatbuilding and ship repair facility for several companies spanning over 120 years, particularly through the historic 1875 to 1930 period of marine-based cargo transportation in San Francisco. Environmental contaminants typically associated with the shipbuilding and repair industry include those generated from vessel maintenance, general facility and yard operations, marine coatings and antifoulants, and abrasive blasting. These include, but are not limited to, heavy metals such as lead, nickel, zinc, and copper; volatile organic compounds such as solvents and overspray during painting operations; biocides such as tributyltin (TBT) and cuprous (copper) compounds; waste engine fluids such as oil, hydraulic fluids, lubricants; and general solid wastes.

In 1992, the owner, Donco Industries, was prosecuted for illegal dredging, leading to their eventual bankruptcy and abandonment of the Site. In its abandoned state, the Site became a homeless encampment. Donco Industries eventually sold the abandoned property to Mikel Manuel. During its new ownership by Mikel Manuel, the Site remained in its abandoned state. In 2001, it was sold to Joe Cassidy Construction and used as construction equipment storage. Six years later, in December 2007, Joe Cassidy sold the Site to the Tenderloin Housing Clinic. Joe Cassidy retained its access agreement to the Site, allowing continued use as a construction equipment storage facility and laydown yard.

Currently, the Tenderloin Housing Clinic owns the largest portion of the Site, but does not use it; parcels owned by Wintersteen and Acosta are currently vacant. The structure at 900 Innes Avenue has been registered as a City of San Francisco Landmark by the Historic Preservation Commission (HPC), for its association with the historic marine-based cargo transportation industry of 1875 to 1930.

##### **3.2.1 Previous Investigations and Regulatory Involvement**

In August 2011, Weiss Associates (Weiss) conducted a Phase I Environmental Site Assessment (ESA) for the San Francisco Department of Public Works (SFDPW) for the eleven parcels comprising the Site. Site reconnaissance occurred August 16, 2011, followed by interviews with knowledgeable persons regarding relevant site history. Weiss commissioned EDR to search available databases and to prepare a report reviewing information from federal, state, and local sources regarding the environmental

condition and history of the Site, as well as summarizing the environmental and hydrogeological setting at the Site, and compiling historical aerial photographs, topographic maps, Sanborn maps, and city directory entries for review. During their investigation, Weiss detailed a string of investigations at the Site beginning in 1991, though there are no pending legal or administrative actions currently. As a direct result of these investigations, the Property owners, Donco Industries, were convicted in 1992 of unlawful dredging of India Basin, subsequently going bankrupt and abandoning the Site.

According to their report, the EPA's National Enforcement Investigation Center conducted an investigation of the Property in 1991. Samples of container contents present onsite were collected for hazard categorization. Results indicated potential metal and organic compound contamination. In 1993, the EPA conducted another investigation of the Property, identifying high concentrations of lead and copper in soil based on the Toxicity Characteristic Leaching Procedure. Investigations of the Property ceased in 1994 pending site access and security issues due to the presence of a large homeless encampment. In 1998, an additional investigation was conducted to examine a potential illegal drug laboratory at the Property. Samples were collected from ash piles, sand blast grit, and drums that were found on-site. High concentrations of copper, lead, and zinc were identified. In 2005, a Phase II site assessment was conducted during which five soil samples were collected from test pits that were installed in 2005. The data appears to show some low level of contamination associated with fill material at the site.

Based on visual observations from a previous site reconnaissance conducted in 2011, the Site is scattered with various construction-related debris and trash piles. The interior of the abandoned single-family home at 900 Innes Avenue, as well as the interior of the two storage buildings located onsite, revealed a state of general disrepair and littered with household hazardous waste (garbage, paint cans, etc.). The covered pier was partially collapsed and was not explored during the site reconnaissance due to safety concerns.

### **3.2.2 Historic Topographic Map Review**

Historic topographic maps of the Site area dated 1899, 1915, 1947, 1950, 1956, 1968, 1973, 1980, 1993, and 1995 were obtained by Environmental Data Resources, Inc. (EDR) (Appendix B). The following narratives are descriptions of the principal observations from the historical topographic map review:

- The 1899 San Mateo 15-minute topographic map, with a scale of 1:62,500, shows Islais Creek and extensive wetlands separating San Francisco from Hunter(s) Point and the Site to the southeast, and San Francisco Bay located east of the Site. The San Miguel Hills and Mt. Davidson are located immediately west of the Site, and the San Bruno Mountains are shown just north of South San Francisco and northeast from a large tract of cemetery land. Structures are localized around Bernal Heights in San Francisco, the inland portion of Hunters Point, Oceanview, South San Francisco, and scattered along paved roads and railroad tracks; most development appears northwest of the Site. Two railroad lines are shown; the Monterey Line running northeast to southwest through Oceanview, and the

Southern running northwest to southeast through Baden Station west of South San Francisco.

- The 1915 San Mateo 15-minute topographic map, with a scale of 1:62,500, shows an area outside of the immediate vicinity of the Site. Instead of the India Basin area near Hunters Point, the San Mateo area from Milbrae to Homestead is displayed. Three lakes are shown in the valley between Sawyer Ridge and Buri Buri Ridge; Pilarcitas Lake, San Andreas Lake, and Crystal Springs Lake. Roads and accompanying structures are clearly defined throughout San Mateo, with fewer in Milbrae and Homestead. The Monterey Railroad Line extends along the coast of San Francisco Bay.
- The 1947 San Mateo 15-minute topographic map, with a scale of 1:50,000, shows an extent stretching from Pier 92 in San Francisco to Oyster Point in South San Francisco. The wetlands observed separating San Francisco from Hunters Point have been filled, and most new development has occurred southwest of the Site toward Bayshore. Additional development is apparent west of the Bayshore development, surrounding San Francisco Junior College. The San Bruno Mountains are still apparent south of the Site, bordered to the north by Brisbane and the Guadalupe Valley. Highway 101 lies west of the Site, running in a north to south direction, and the Southern Pacific Railroad Line follows the coast of the San Francisco Bay from San Francisco to South San Francisco. There are no schools or churches visible in the vicinity of the Site.
- The 1950 San Francisco South 7.5-minute topographic map, with a scale of 1:24,000, allows a more detailed examination of the area surrounding the Site, stretching from Islais Creek Channel to Bayshore. Development has continued south toward Bayshore, though no significant additional development can be observed adjacent to the Site. Highway 101 lies west of the Site, running in a north to south direction, and the Southern Pacific Railroad Line follows the coast of the San Francisco Bay from San Francisco to South San Francisco. Bayview School, Burnett School, and Ridgeport No. 1 School are located west of the Site; four churches are located nearby, each church near Bayview and Burnett Schools.
- The 1956 San Francisco South 7.5-minute topographic map, with a scale of 1:24,000, is similar to the 1950 topographic map; additional development is apparent in the facilities adjacent to Bayshore in Visitacion Valley, where Highway 101 has extended further south along the shore of the San Francisco Bay east of Bayshore. Three new schools have been constructed near the site; Hunters Point No. 2 School, Ridge Point No. 2 School, and All Hallows Eve. Approximately 13 sewage disposal tanks have been constructed between Third Street and the Southern Pacific Railroad Line northwest of the Site. John McLaren Park has been established north of Visitacion Valley and west of Bayview Park.

- The 1968 San Francisco South 7.5-minute topographic map, with a scale of 1:24,000, shows the creation of Highway 280 and its connection to Highway 101. The stadium has been constructed on Candlestick Point, and additional large facilities have been constructed along the north coast of Islais Creek Channel, including an oil tank storage yard. Fremont School has been constructed along with an Orphanage, west of the Site between Highway 280 and Third Street.
- The 1973 San Francisco South 7.5-minute topographic map, with a scale of 1:24,000, is not significantly different than the 1968 topographic map. Industrial development continues with the addition of several large facilities northwest of the South Basin and along the north shore of Islas Creek Channel, and oil tanks remain at the storage yard south of Islais Creek Channel. Minor development is apparent in the completion of the Stadium at Candlestick Point.
- The 1980 Richmond 7.5-minute topographic map, with a scale of 1:24,000, shows continued industrial development, though these regions are not significantly different than the 1973 map. Construction continues on large facilities along South Basin and Islais Creek Channel. Oil tanks have been constructed west of the Site, along the northwest corner of India Basin.
- The 1993 and 1995 Richmond 7.5-minute topographic maps, both with a scale of 1:24,000, show the construction of the Marine Corps Supply Annex northwest of the Site. Development has appeared to have stabilized.
- An examination of four additional adjoining 7.5-minute Hunters Point topographic maps, spanning 1956 to 1993 at a scale of 1:24,000, shows India Basin being filled between 1956 and 1968. Lash Lighter Basin is constructed northwest of India Basin between 1968 and 1980. A railroad line southeast of the Site was removed between 1980 and 1993.

### **3.2.3 Aerial Photograph Review**

Historic aerial photographs of the Site area were obtained by EDR. The EDR Aerial Photo Decade Package included images from 1943, 1946, 1956, 1968, 1974, 1982, 1993, 1998, 2005, 2009, 2010, and 2012 (Appendix C). The following narratives are descriptions of the principal observations related to the aerial photograph review:

- The 1943 black-and-white aerial photograph, with a scale of 1 inch = 500 feet, is centered at the Site but offers poor resolution; extent covers a long stretch of Hunters Point Boulevard / Innes Avenue along the shoreline of India Basin. Boats and commercial industry are visible at the Site; multiple cargo containers appear to be floating in the waters of India Basin southeast of the Site near the shore. A railroad terminus is visible south of the Site at Crisp Road. Areas to the northwest, west, and southwest of the Site are occupied by multifamily housing, and areas

northwest and southeast of these high density residential areas appear to be scattered single family residential housing.

- The 1946 black-and-white aerial photograph, with a scale of 1 inch = 500 feet, shows the same extent and is centered at the Site at a much better resolution than the 1943 aerial photograph. The railroad terminus and tracks are well-defined, extending in a generally west direction along Crisp Road, south of the Site. Large industrial facilities are visible at Hunters Point near South Basin, and near the eastern shore of India Basin. One large tank is visible northwest of the Site along Hunters Point Boulevard, associated with the Hunters Point Power Plant. High-density multifamily housing comprises the majority of residential areas surrounding the Site. Boats and related commercial activities are clearly visible at the Site.
- The 1956 black-and-white aerial photograph, with a scale of 1 inch = 500 feet, again shows the same extent and is centered at the Site. Development along South Basin is apparent, with much fill added and with additional construction at the railroad terminus; two large industrial/commercial facilities have been constructed. Fill has also been added to India Basin, changing its shoreline northwest and southeast of the Site; development is apparent at the Hunters Point Power Plant. Minor development continues north of South Basin near Crisp Road, and northwest of the Site along Hunters Point Boulevard. High-density multifamily housing comprises the majority of residential areas surrounding the Site. Boats and related commercial activities are clearly visible at the Site.
- The 1968 black-and-white aerial photograph, with a scale of 1 inch = 500 feet, shows the changing shoreline at India Basin surrounding the Site and South Basin. Fill continues to be added to South Basin, accompanied by the construction of large industrial/commercial buildings; the remaining water of South Basin appears as a crescent-shaped channel. Fill also continues to be added to India Basin on all sides surrounding the Site; India Basin Shoreline Park has begun construction, and a large expanse of undeveloped land is visible immediately adjacent to the eastern portion of the Site. The Hunters Point Power Plant has increased its footprint northwest of the Site, with three large storage tanks and four smaller processing tanks. High-density multifamily housing comprises the majority of residential areas surrounding the Site. Boats and related commercial activities are clearly visible at the Site.
- The 1974 color aerial photograph, with a scale of 1 inch = 500 feet, indicates very little change at the Site, though development continues at the Hunters Point Power Plant. The low resolution makes discernment of the Site details difficult, though the piers are still visible. India Basin Shoreline Park remains under construction, and the land immediately adjacent to the eastern portion of the Site remains undeveloped. The waters of South Basin are no longer visible. High-density multifamily housing comprises the majority of residential areas surrounding the Site.

- The 1982 color aerial photograph, with a scale of 1 inch = 500 feet, again indicates very little change at the Site, though the Hunters Point Power Plant continues to expand to the northwest. The low resolution makes discernment of the Site details difficult, though some boats and piers are visible. India Basin Shoreline Park remains under construction; construction has begun on the undeveloped land immediately adjacent to the eastern portion of the Site. New high-density multifamily residential housing appears southwest of the existing high-density multifamily housing, which still comprises the majority of residential areas surrounding the Site.
- The 1993 black-and-white aerial photograph, with a scale of 1 inch = 500 feet, shows very little change at the Site. The land adjacent to the Site has been graded and the outline of a street is apparent. The new multifamily residential structures observed in the previous aerial photograph, southwest of the existing high-density residential areas, have been removed. Development continues on the India Basin Shoreline Park immediately west of the Site; very few boats are visible at the Site.
- The 1998 black-and-white aerial photograph, with a scale of 1 inch = 500 feet, shows very little change at the Site and surrounding areas. No further development has occurred at the land adjacent to the eastern portion of the Site. The India Basin Shoreline Park development appears to have been completed. Multiple small boats are visible at the Site.
- The 2005 color aerial photograph, with a scale of 1 inch = 500 feet, again shows very little change at the Site and surrounding areas. No further development has occurred at the land adjacent to the eastern portion of the Site. The India Basin Shoreline Park development appears to have been completed. The Hunters Point Power Plant is being dismantled, apparent in the removal of several large tanks. Multiple small boats are visible at the Site.
- The 2009, 2010, and 2012 color aerial photographs, with a scale of 1 inch = 500 feet, shows little change at the Site and surrounding areas. No further development has occurred at the land adjacent to the eastern portion of the Site. The Hunters Point Power Plant has been removed. No boats are visible at the Site; some heavy machinery and construction equipment appears to be stored at the Site. Buildings have been removed and land cleared for what appears to be further residential development southeast of the Site.

### **3.2.4 Sanborn Map Review**

A historical review of Sanborn fire insurance maps was conducted by EDR (Appendix D). The entire Sanborn Library of more than 1.2 million fire insurance maps was searched, and fire insurance maps covering the Site location for the years 1900, 1914, 1950, 1966, 1975, 1987, 1989, 1991, and 1999 were found. The following narratives summarize the information ascertained during the Sanborn map review.

Sanborn Maps for the Site are presented in Appendix D.

- The 1900 Sanborn Maps cover approximately two blocks of properties at the Site, generally following 9<sup>th</sup> Avenue (Innes Avenue) and centered at the intersection of 9<sup>th</sup> Avenue and G Street (Griffith Street). Land use primarily consists of industrial properties, the majority of which are related to the marine industry; marine ways extend along the entire San Francisco Bay shoreline. The H. Anderson Ship Yard is located at the immediate Site, Fred Simer's Ship Yard is northwest of and adjacent to the Site. Albion Brewery is located at the opposite corner of the intersection. There are no schools or churches observed at the Site.
- The 1914 Sanborn Maps cover the same approximately two blocks of properties at the Site, following Innes Avenue and centered at the intersection of Innes Avenue and Griffith Street. The H. Anderson Ship Yard has expanded to become H. B. Anderson Boat Building facilities. Albion Brewery remains located at the opposite corner of the intersection. Hudson Avenue and Galvez Avenue are apparent, constructed with the addition of fill to San Francisco Bay. Some land use consists of residential properties, the majority of which appear vacant; properties surrounding Ohio Avenue are more developed than those surrounding Chanslor Avenue. There has been no significant change in commercial development, and the Hunters Point School is now located directly across from the Site at the corner of Innes Avenue and Griffith Street.
- The 1950 Sanborn Maps cover the same approximately two blocks of properties at the Site, following Innes Avenue and centered at the intersection of Innes Avenue and Griffith Street. Land use primarily consists of high-density residential properties, the majority of which are related to wartime industry (Harbor Slope War Dormitories); single-family residential properties are scattered along Innes Avenue and Hunters Point Boulevard. Gas and oil are stored at the corner of Innes Avenue and Hawes Street. Though the shoreline continues to be filled, boat ways extend along the San Francisco Bay shoreline; H. B. Anderson Boat Building has been renamed Anderson & Cristofani Boat Building, whose facilities include two boat building structures, a paint shop, planing mill, machine shop, roofing warehouse, and multiple storage buildings. The Albion Brewery has been removed, and there are no schools or churches observed at the Site.
- The 1966 Sanborn Maps cover the same approximately two blocks of properties at the Site, following Innes Avenue and centered at the intersection of Innes

Avenue and Griffith Street. Land use primarily consists of high-density residential properties, some of which are related to wartime industry (Harbor Slope Housing Project and Ridge Point War Dwellings); single-family residential properties are scattered along Innes Avenue and Hunters Point Boulevard. Gas and oil are stored at the corner of Innes Avenue and Hawes Street. Boat ways extend along the San Francisco Bay shoreline; Anderson & Cristofani Boat Building is located at the Site, whose facilities include two boat building structures, a paint shop, planing mill, machine shop, roofing warehouse, and multiple storage buildings. A water bottling facility is located across the street from the Site. Our Lady of Lourdes Church is located at the intersection of Innes Avenue and Hawes Street.

- The 1975 Sanborn Maps cover the same approximately two blocks of properties at the Site, following Innes Avenue and centered at the intersection of Innes Avenue and Griffith Street. Land use primarily consists of high-density residential properties (Harbor Slope Housing Project); single-family residential properties are scattered along Innes Avenue and Hunters Point Boulevard. Boat ways extend along the San Francisco Bay shoreline; Anderson & Cristofani Boat Building remains located at the Site, whose facilities include two boat building structures, a paint shop, planing mill, machine shop, sheet metal works, and multiple storage buildings. A water bottling facility is located across the street from the Site. Gas and oil are stored at the corner of Innes Avenue and Hawes Street. There are no churches observed near the Site.
- The 1987 Sanborn Maps cover the same approximately two blocks of properties at the Site, following Innes Avenue and centered at the intersection of Innes Avenue and Griffith Street. Land use primarily consists of high-density residential properties (Elouise Westbrooke Apartments); single-family residential properties are scattered along Innes Avenue and Hunters Point Boulevard. Boat ways extend along the San Francisco Bay shoreline; Anderson & Cristofani Boat Building remains located at the Site, whose facilities have been reduced to include one residence, a boat building structure, machine shop, two unknown structures, and multiple storage buildings. A water bottling facility is located across the street from the Site. A church is located at 836 Innes Avenue, and at the corner of Innes Avenue and Fitch Street near the Site.
- The 1989 Sanborn Maps cover the same approximately two blocks of properties at the Site, following Innes Avenue and centered at the intersection of Innes Avenue and Griffith Street. Our Lady of Lourdes Church is visible at the corner of Innes Avenue and Hawes Street. There are no other significant differences from the previous 1987 Sanborn Maps.

- The 1991 Sanborn Maps cover the same approximately two blocks of properties at the Site, following Innes Avenue and centered at the intersection of Innes Avenue and Griffith Street. There are no other significant differences from the previous 1987 and 1989 Sanborn Maps.
- The 1999 Sanborn Maps cover the same approximately two blocks of properties at the Site, following Innes Avenue and centered at the intersection of Innes Avenue and Griffith Street. Anderson & Cristofani has been renamed Pacific Ship & Boat House, whose facilities include one residence, a boat building structure, machine shop, one unknown structure, and a storage yard. There are no other significant differences from the previous 1991 Sanborn Maps.

### **3.2.5 City Directory**

A City Directory Abstract was provided by EDR (Appendix E), and it provides historical occupant information of the Site property addresses of 900 Innes Avenue and surrounding properties addresses obtained for the years ranging from 1910 to 2012. The full city directory list can be found in Appendix E. The following occupant information of the Site property address and surrounding properties was identified:

- Site Property:
  - 1910 – No information
  - 1915 – Inga and Frederick Siemer Jr. (Shipwright)
  - 1920 – No information
  - 1925 – No information
  - 1930 – No information
  - 1935 – Carl J. Jorgensen
  - 1940 – Carl J. Jorgensen (Radiomarine Corporation)
  - 1944 – Carl J. Jorgensen (Radiomarine Corporation)
  - 1949 – H. Jorgensen
  - 1953 – Carl J. Jorgensen
  - 1958 – Virginia A. Jorgensen
  - 1962 – Virginia A. Jorgensen
  - 1966 – Vacant
  - 1971 – Vacant
  - 1977 – No information
  - 1982 – No information
  - 1985 – No information
  - 1990 – No information
  - 1993 – No information
  - 2000 – M. Manuel
  - 2006 – No information
  - 2007 – No information
  - 2012 – No information

- Surrounding Properties:
  - 1910 – No information
  - 1915 – Henry P. Anderson Shipyard and Marineways
  - 1920 – H. P. R. Anderson
  - 1925 – Louise and Henry Bierman (Shipwright)
  - 1930 – Anderson and Cristofani Boat Builders
  - 1935 – Ernest R. Siemer
    - Anderson and Cristofani Boat Builders
    - Harry Anderson Boat Builder
  - 1940 – Multiple individuals
  - 1944 – Multiple individuals
  - 1949 – Regal Roofing Company
  - 1953 – Peterson Liquor Store
    - Regal Roofing Company
    - Anderson and Cristofani Boat Builders
  - 1958 – Peterson Liquor Store
    - Regal Roofing Company
    - Mountain Springs Water Company
    - Anderson and Cristofani Boat Builders
  - 1962 – Peterson Liquor Store
    - Regal Roofing Company
    - Mountain Springs Water Company
    - Anderson and Cristofani Boat Builders
  - 1966 – Surfside Liquors
    - Mountain Springs Water Company
    - Anderson and Cristofani Boat Builders
  - 1971 – Surfside Liquors
    - Tufts Sheet Metal
    - Mountain Springs Water Company
    - Anderson and Cristofani Boat Builders
  - 1977 – Our Lady of Lourdes Convent
    - Surfside Liquors
    - Frederick Meiswinkel Inc. Storage Yard
    - Mountain Springs Water Company
    - Anderson and Cristofani Boat Builders
    - Ableship Company
  - 1982 – No information
  - 1985 – Surfside Liquors
    - Meiswinkel Company
    - Mountain Springs Water Company
    - Anderson and Cristofani Boat Builders
  - 1990 – Surfside Liquors
    - Meiswinkel Company
    - Mountain Springs Water Company
    - Anderson and Cristofani Boat Builders
  - 1993 – Surfside Liquors

- DR DS Tire Service
- Meiswinkel Company
- Albion Mountain Springs Water Company
- Donco Industries, Inc.
- 2000 – Surfside Liquors
  - Meiswinkel Company
  - Albion Water
- 2006 – Surfside Liquors
  - Meiswinkel Company
  - Mountain Springs Water Company
  - Zebra Awning Company
  - Marketplace Fellowship Church
- 2007 – Meiswinkel Company
  - SF Mountain Springs Water Company
  - Security Service Iron Works
  - Zebra Awning Company
  - Doherty Painting and Construction
- 2012 – Surfside Liquors
  - Meiswinkel Company
  - Zebra Awning Company
  - Doherty Painting and Construction
  - Marketplace Fellowship Church

### **3.2.6 Environmental Lien Search**

An Environmental Lien Search was conducted by EDR to further categorize ownership history of the Site. There were no environmental liens identified for the Site.

## **3.3 Geology**

The following section presents a summary of the local and site topography and geology.

### **3.3.1 Local Topography**

The Site is located at an elevation of approximately 27 feet above mean sea level, along the shoreline of India Basin, situated northwest of Hunters Point Hill (approximately 245 feet above sea level). The South Basin of San Francisco Bay lies directly south of the Site, characterized by the presence of Yosemite Slough. The Hunters Point Naval Shipyard, a federal Superfund site, lies on a peninsula east of the Site.

Currently, the City of San Francisco does not participate in the National Flood Insurance Program (NFIP) managed by the Federal Emergency Management Agency (FEMA), having only a Preliminary Flood Insurance Rate Map (FIRM) created in September 2007. The site is classified as Flood Zone V – coastal areas determined to have a 1% annual chance of flooding, and an additional hazard associated with storm-induced waves.

### **3.3.2 Site Geology**

The Site is located on alluvial, colluvial, and estuarine deposits within the California Coast Ranges province. The Franciscan Complex, consisting of deformed and metamorphosed rock units, makes up the underlying bedrock. There are five primary geologic units underlying the site; artificial fill (Qaf), artificial fill over tidal flat (Qaf/uf), slope debris and ravine fill (Qsr), undifferentiated sedimentary deposits (Qu), and Franciscan Complex (KJs). Artificial fill and artificial fill over tidal flat consists of a mixture of sand, gravel, clay, and debris including wood, glass, and brick. Slope debris and ravine fill consists of undifferentiated deposits of alluvium/colluvium, including clay to sandy clay, sandy silt, clayey to silty sand, clean sand, and silty gravel. Undifferentiated sedimentary deposits consist of interbedded alluvial and marine deposits, including shell fragments and Colma Formation (Qc). Franciscan Complex consists of primarily shale bedrock. North of Yosemite Slough, in the Hunters Point Shear Zone often referred to as Hunters Point Hill, lithology is primarily comprised of serpentine.

Deep alluvium soil comprised of inter-bedded stiff clays, silts, gravel, and sands of Pleistocene and Holocene age are estimated to be at least 600 feet thick. Beneath the unconsolidated alluvium is the Franciscan Formation (bedrock). The alluvium is comprised of soil either derived from the eastern hills or marine deposits from the San Francisco Bay. The native soil in the vicinity of the Site is the Clear Lake group classified as clay with very slow infiltration rates and poorly drained.

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), has classified soils in the project area into the following type; Urban Land – Orthents Complex. Urban Land – Orthent Complexes are described as variable surficial soils and silty clay / clay deeper soils. They are classified as Hydrologic Soil Group D, well-drained with low (about 3.5 inches) available water capacity.

### **3.4 Hydrogeologic Conditions**

While the Bay Area climate is characterized as dry-summer subtropical (Mediterranean), the City of San Francisco experiences cool, cloudy summers due to its proximity to coastal waters. Annual temperatures, averaged over a period of nearly one hundred years, range from a minimum of 51.0°F to a maximum of 63.6°F. Annual rainfall, averaged over a period of nearly one hundred years, averages approximately 21.1 inches, with most rainfall occurring between the months of November and March.

The site is located in the South San Francisco Groundwater Basin within the San Francisco Bay Hydrologic Region. The basin is broadly comprised of unconsolidated sediment and bedrock of the Franciscan Complex. The unconsolidated sediment functions as the primary water-bearing strata, consisting of dune sand, the Colma Formation, bay mud and clay, and artificial fill. The artificial fill is comprised of mostly dune sand, with lesser amounts of silt and clay, as well as some manmade debris.

Groundwater is typically encountered from 2 to 12 feet below the ground surface. Groundwater flow is generally east toward India Basin of the San Francisco Bay. The recharge of groundwater occurs via rainfall infiltration, landscape irrigation, and leakage from water and sewer pipes. The bay mud acts as an aquitard between the surficial and lower aquifers. Groundwater levels have typically remained stable over time.

The Site is positioned about one mile south of the Islais Creek Channel, which extends one mile toward India Basin from Highway 280 along Piers 90 through 92. The Site is also generally located about two miles south of two major drainages; Castro Creek (also referred to as Wildcat Creek) flowing west-northwest for approximately 13 miles from Lake Anza to San Pablo Bay, and San Pablo Creek flowing west for approximately 19 miles from the Briones Reservoir to San Pablo Bay. The two drainages discharge into San Pablo Creek Marsh, a 300-acre wetlands abundant with wildlife including endangered species such as the California Clapper Rail and Salt Marsh Harvest Mouse.

### **3.5 Water Well Summary**

There are no active or inactive water wells within 1 mile of the Site. More information about wells can be found in Appendix G.

## **4. INVESTIGATIVE NARRATIVE**

### **4.1 Methods and Evaluation Criteria**

The methods and evaluation criteria used to conduct this combined Phase I/II Site Assessment are based on information gathered by a visual site reconnaissance, a review of an environmental database report supplied by EDR, and interviews and file reviews with environmental regulatory agency personnel. A copy of the EDR database is included in Appendix G. The WESTON environmental assessment focused on the following areas of potential concern:

- Hazardous materials handling and storage including fuel storage and underground storage tanks (USTs)
- Water and wastewater
- Non-hazardous and hazardous wastes
- Potential impacts from surrounding properties

In addition, a review of federal, state, and local government agency databases was conducted to locate sites with hazardous materials releases that could potentially impact the subject property.

### **4.2 Agency Database Review**

The objective of consulting the ASTM standard environmental record sources is to identify recognized environmental conditions on or in the vicinity of the subject property that may have an environmentally related effect on the subject property. The EDR report includes a map of the Site locations, showing sites within a specific radius which have been identified in one or more of the environmental regulatory agency databases (Appendix G).

The remainder of this section provides a discussion of the environmental regulatory agency listings and the specific sites on these listings within ½ mile of the Site, as identified by EDR and other state and county databases.

#### **4.2.1 Federal NPL**

The National Priority List provided by the United States EPA, also referred to as Superfund, is a database of sites identified for priority cleanup under the Superfund program. A review of the NPL database identified one site within ½ mile of the Site:

- Hunters Point Naval Shipyard (EDR Map ID: 29) – Large facility located at Hunters Point. Established in 1869, the shipyard was the first privately owned dry dock on the Pacific Coast. The Navy first used the installation in 1919 to construct, maintain, and repair ships; operations generated a wide variety of solid and liquid wastes including paints, solvents, fuels,

acids, bases, metals, PCBs, and asbestos. As of November 1989, sampling is underway as part of a remedial investigation/feasibility study to determine the type and extent of contamination at the site and identify alternatives for remedial action.

#### **4.2.2 EPA CERCLIS**

The EPA CERCLIS list is a compilation of the sites that the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). A review of the CERCLIS database identified three sites within ½ mile of the Site:

- Hunters Point Naval Shipyard (EDR Map ID: 0) – Large facility located at Hunters Point. Established in 1869, the shipyard was the first privately owned dry dock on the Pacific Coast. The Navy first used the installation in 1919 to construct, maintain, and repair ships; operations generated a wide variety of solid and liquid wastes including paints, solvents, fuels, acids, bases, metals, PCBs, and asbestos. As of November 1989, sampling is underway as part of a remedial investigation/feasibility study to determine the type and extent of contamination at the site and identify alternatives for remedial action.
- Donco Industries, Inc. (EDR Map ID: A7) – Located at 894 Innes Avenue. As of July 2002, the Site does not qualify to be listed on the NPL and has been referred to NFRAP.
- India Basin Boatyard (EDR Map ID: A9) – Located at 894 Innes Avenue. In December 2001 the site was listed as a Removal Only Site, and does not qualify to be listed on the NPL.

#### **4.2.3 EPA CERC-NFRAP**

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites and no further remedial action planned (NFRAP). Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site. A review of the database found no CERC-NFRAP sites within ½ mile of the Site.

#### **4.2.4 RCRA List**

The EPA Resource Conservation and Recovery Act (RCRA) program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities Database is a compilation by the EPA of reporting facilities that generate, treat, store, or dispose of hazardous waste. This list was reviewed to determine if the any properties or any site within ½ mile of the Site was permitted to treat, store or dispose of hazardous waste. In addition, this list was reviewed to determine any properties within ½ mile of the Site are registered as a small or large quantity generator of hazardous waste.

RCRAInfo is EPA's comprehensive information system, providing access to data supporting RCRA of 1976 and the Hazardous and Solid Waste Amendments of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the RCRA.

A large quantity RCRA generator is a business that generates more than 1,000 kilograms per month of non-acutely hazardous waste, or one kilogram per month of acutely hazardous waste. The database found one RCRA registered large-quantity generator (RCRA-LQG) site within ½ mile of the Site:

- Hunters Point Redevelopment Project (EDR Map ID: D26) – Located at 690 Hudson Avenue, registered as large-quantity generator in August 2005, operated by Lennar Homes of California. Hazardous waste reported as lead, no violations reported.

A small quantity RCRA generator is a business that generates more than 100 kilograms per month but less than 1,000 kilograms per month of non-acutely hazardous waste. The database found three RCRA registered small-quantity generator (RCRA-SQG) sites within ½ mile of the Site:

- Hunters Point Naval Shipyard (EDR Map ID: 0) – Located at Hunters Point, registered as small-quantity generator in Septmeber 1996, no violations reported.
- Donco Industries, Inc. (EDR Map ID: A7) – Located at 894 Innes Avenue, registered as small-quantity generator in June 1982. Six violations occurred October 1991 resulting in Initial 3008(A) Compliance enforcement actions and an evaluation as Significant Non-Complier. Compliance was achieved September 1996 resulting in Final 3008(A) Compliance Orders and an evaluation as Not a Significant Non-Complier.
- Odaco, Inc. (EDR Map ID: B16) – Located at Building 134, Hunters Point, registered as small-quantity generator in June 1989, no violations reported.

A site identified as a RCRA non-generator does not presently generate hazardous waste. The database found two RCRA non-generator (RCRA-NonGen) site within ½ mile of the Site:

- The Mil Spec House (EDR Map ID: B14) – Located at Hunters Point Naval Shipyard, transporter of hazardous waste, registered as non-generator in April 1986, no violations reported.
- Steven Mitchell Trucking (EDR Map ID: 24) – Located at 50 Reardon Rd, transporter of hazardous waste, registered as non-generator in January 2001, no violations reported.

#### **4.2.5 Solid Waste Facilities / Landfill Sites**

The Solid Waste Facilities / Landfill Sites (SWF / LF) database contains an inventory of solid waste disposal facilities or landfills in California, with data provided by the Integrated Waste Management Board's Solid Waste Information System database. A search of the SWF / LF database indicated that there is one facility within ½ mile of the Site.

- Hunters Point (EDR Map ID: 41) – Located at 37.72460° N latitude / 122.37560° W longitude, listed as a military solid waste disposal facility, status indicates facility has been closed.

In addition to the solid waste disposal facilities and landfills of the SWF / LF database, SWRCY is a database of recycling facilities in the State of California. A search of the SWRCY database indicated that there are no facilities within ½ mile of the Site.

The California State Water Resources Control Board provides a system for program tracking and inventory of waste management units, referred to as the Waste Management Unit Database System (WMUDS / SWAT). A search of the WMUDS / SWAT database indicated that there are no sites within ½ mile of the Site.

#### **4.2.6 Historic CORTESE List**

The CORTESE database is no longer updated by the State Water Resource Control Board. The HIST CORTESE database is a list of historic CORTESE sites, last updated in April of 2001. A review of this database identified the following five sites within ½ mile of the Site:

- MEE Corporation (EDR Map ID: A11) – Located at 895 Innes Avenue, no report on waste generated.
- George Paizi Trustee (EDR Map ID: B13) – Located at 966 Innes Avenue, no report on waste generated.
- Hunters Point Power Plant (EDR Map ID: E27) – Located at 1000 Evans Avenue, no report on waste generated.
- Marelich Mechanical (EDR Map ID: G34) – Formerly located at 200 Jennings Street, no report on waste generated.
- Blakeway Metal Works (EDR Map ID: I38) – Location unreported, no

report on waste generated.

#### **4.2.7 Leaking Underground Storage Tank Sites**

The leaking underground storage tanks (LUST) incident reports contain an inventory of leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information Listing. A review of the LUST database identified the following incidents within ½ mile of the Site:

- RFJ Meiswinkel Corporation (EDR Map ID: A10) – Located at 930 Innes Avenue. Gasoline leak confirmed and remediated, case was closed in November 2006, San Francisco County LOP operating as lead agency, no further action.
- MEE Corporation (EDR Map ID: A11) – Located at 895 Innes Avenue. Gasoline leak affecting Islais Basin confirmed August 1995, case was closed in January 1996, San Francisco County LOP operating as lead agency, no further action.
- Vacant (EDR Map ID: C17) – Located at 996 Innes Avenue. Gasoline leak due to structural failure confirmed November 1989, case was closed in January 1996, San Francisco County LOP operating as lead agency, no further action.
- Hunters Point Power Plant (EDR Map ID: E27, E28) – Located at 1000 Evans Avenue. Diesel release to groundwater reported in May 1998 due to tank failure, Islais Basin affected by diesel fuel oil, case was closed in July 1999, San Francisco County LOP operating as lead agency, no further action.
- Commercial Property (EDR Map ID: D25) – Located at 690 Hudson Avenue. Enforcement actions occurred June 2009 after diesel leak discovery, case was closed in January 2010, Contra Costa County LOP operating as lead agency, no further action.
- Commercial Property (EDR Map ID: F31, F32, F33) – Located at 50 Crisp Road. Diesel release to soil discovered September 2000 due to failure of the tank structure, Islais Basin affected by diesel release, case was closed in February 2001 after excavation remediation actions, San Francisco County LOP operating as lead agency, no further action.
- Marelich Mechanical (EDR Map ID: G34, G35) – Located at 200 Jennings Street. Diesel release after structural failure in March 1981 and discovered July 1992, Islais Basin affected by diesel release. Leak was stopped January 1992 and the case closed in late March 1995, San Francisco County LOP operating as lead agency, no further action.
- Pacific Fan & Blower Corporation, Inc. (EDR Map ID: H36, H37) – Located at 1132 Quesada Avenue. Gasoline leak due to corrosion discovered and remediated, case was closed in June 2004, San Francisco County LOP operating as lead agency, no further action.
- Blakeway Metal Works (EDR Map ID: I38, I39) – Located at 101 Cargo

Way. Gasoline leak reported to soil, case was closed in December 1996, San Francisco County LOP operating as lead agency, no further action.

- Bonelli Enterprises (EDR Map ID: I40) – Located at 101 Cargo Way. Unreported leak, case was closed.

#### **4.2.8 California Facility Inventory Database**

The California Facility Inventory Database, or CA FID UST, is a list of active and inactive underground storage tanks, provided by the State Water Resources Control Board. A review of the CA FID UST database identified the following two sites within ½ mile of the Site:

- Naval Shipyard (EDR Map ID: B15) – Located at 1 Hunters Point Boulevard. Site is listed as *active*.
- Vacant (EDR Map ID: E24) – Located at 996 Innes Avenue. Site is listed as *active*.

#### **4.2.9 Underground Storage Tanks**

The Underground Storage Tank (UST) database is a collection of registered USTs, regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). Data is provided by the State Water Resources Control Board's Hazardous Substance Storage Container database. A search of the UST database within ½ mile of the Site identified the following four properties:

- RFJ Meiswinkel Corporation (EDR Map ID: A10) – Site located at 930 Innes Avenue.
- MEE Corporation (EDR Map ID: A12) – Site located at 895 Innes Avenue.
- Vacant (EDR Map ID: C18) – Site located at 996 Innes Avenue.
- Avis (EDR Map ID: 21) – Site located at 230 Harbor Way.

The HIST UST database is simply a list of historic registered underground storage tanks, dated before October 15, 1990. A review of this database failed to identify any following properties within ½ mile of the Site.

#### **4.2.10 SWEEPS UST**

The SWEEPS UST database, also referred to as the Statewide Environmental Evaluation and Planning System, was a proprietary list contracted by the State Water Resources Control Board that is no longer updated or maintained; the last update to the database was June of 1994. A search of the SWEEPS UST database within ½ mile of the Site resulted in the following sites:

- Naval Shipyard (EDR Map ID: B15) – Located at 1 Hunters Point Boulevard, 25 active tanks of various sizes containing gasoline and diesel fuel.
- Vacant (EDR Map ID: C19) – Located at 996 Innes Avenue, three active 1,000 gallon tanks containing unspecified product.

#### **4.2.11 Aboveground Storage Tanks**

The AST database is a current list of aboveground storage tanks, provided by the State Water Resource Control Board's Hazardous Substance Storage Container Database. A search of the AST database did not locate any sites with an aboveground storage tank within ½ mile of the Site.

#### **4.2.12 Spills, Leaks, Investigations and Cleanups**

The Spills, Leaks, Investigations and Cleanups (SLIC) program, also referred to as the Site Cleanup Program, is responsible for managing the investigation and remediation of current or historic unauthorized non-federal discharge sites. A search of the SLIC database revealed one site within ½ mile of the Site:

- PG&E Hunters Point Power Plant (EDR Map ID: 30) – Power generating facility, unreported leak and remediation efforts.

#### **4.2.13 LIENS, VCP, and RESPONSE**

The Department of Toxic Substances Control (DTSC) serves to protect the State of California, as well as its occupants, from exposures to hazardous waste. The DTSC is responsible for managing remediation efforts, regulating and enforcing the storage, treatment, and disposal of hazardous waste, and promoting waste reuse and recycling programs. In support of their efforts, the DTSC maintains a number of databases, including, but not limited to LIENS, VCP, and RESPONSE.

The DTSC maintains a database, referred to as LIENS, of properties in California of which they are a lien holder. A search of the LIENS database within ½ mile of the Site did not locate any sites.

The Voluntary Cleanup Program (VCP) database lists properties that have contacted the DTSC and requested an investigation into an unconfirmed toxic release or cleanup of confirmed hazardous waste. There was one site identified in the VCP database within ½ mile of the Site.

- PG&E Hunters Point Power Plant (EDR Map ID: 23) – 30.3 acre site previously used as electric generation facility, located at 1000 Evans Avenue. Preliminary Assessment conducted in April 1997 and Site Characterization conducted in August 1999, Voluntary Cleanup

Agreement signed by PG&E in March 2007 for investigation and cleanup of the Hunters Point Power Plant. Remedial Investigation Report approved September 2009, Feasibility Study Report approved by the DTSC in December 2009, Site Characterization Workplan approved August 2010, Remedial Action Completion Report submitted for Area H in May 2012, Remedial Action Completion Report submitted for Area A and Area B in July 2012, for contaminated soils. As of March 2007, status remains active.

RESPONSE is a database containing high-priority sites where the DTSC has been involved in the remediation of confirmed hazardous waste releases. There was one site identified in the RESPONSE database within ½ mile of the Site.

- Bay Area Drum (EDR Map ID: 42) – 2 acre site previously used for drum reconditioning, located at 1212 Thomas Avenue. Site Inspections conducted July 1982 and July 1984, Remedial Investigation Reports completed December 1986 and April 1987, Site Screening completed March 1987, additional Remedial Investigation/Feasibility Studies completed January and May 1992, Removal Action Completion Report was completed October 1993, Removal Action Workplan approved December 1998, Human Health Risk Assessment Report completed December 1999, Lien recorded for nearly \$4,000,000 for DTSC costs in August 2000, Remedial Action Completion Report completed June 2002, Preliminary Endangerment Assessment Report completed April 2003. As of June 2003, site status listed as certified.

#### **4.2.14 Hazardous Waste Transporters and Facilities**

The State of California prohibits the transportation of hazardous wastes without valid registration, issued by the Department of Toxic Substance Control. The HWT database lists these hazardous waste transporters, as identified by their unique transporter registration number. A search revealed there were no listings in the HWT database within ½ mile of the Site.

The DTSC is responsible for managing remediation efforts, regulating and enforcing the storage, treatment, and disposal of hazardous waste, and promoting waste reuse and recycling programs. In support of their efforts, the DTSC maintains the HAZNET database, an enormous collection of hazardous waste manifests submitted without correction to the DTSC each year. A search of the HAZNET database revealed one listing at the Site:

- Granite Excavation & Demolition Company (EDR Map ID: A4) – Located at 900 Innes Avenue, reported contact is Joe Cassidy. In 2011 reported 0.9174 tons of unspecified oil-containing waste.

#### **4.2.15 Emergency Response**

The Federal Emergency Response Notification System (ERNS) records and stores information on reported releases of oil and hazardous substances. The National Response Center and United States Coast Guard releases data annually, and is current through July 2013. A search revealed there were three listings in the ERNS database at the Site:

- 900 Innes Avenue (EDR ID: 2007324152) – In late August 2007, an unknown sheen on the San Francisco Bay was reported to be emanating from a nearby boat yard.
- 900 Innes Avenue (EDR ID: 2005746485) – In early January 2005, during the removal of a tug boat from San Francisco Bay a fuel storage tank in the bow of the vessel was punctured and approximately 25 gallons of diesel was reportedly discharged. Universal Environmental responded to the spill, and a containment boom was applied and absorbents used to remediate.
- 900 Innes Avenue (EDR ID: 2000522619) – In March 2010, a light brown unknown sheen was reported in India Basin of the San Francisco Bay. Foss Maritime responded to the spill and remediated the oily substance.

The State of California Office of Emergency Services maintains a database (CHMIRS) containing information on reported hazardous material incidents, including accidental releases or spills. A search revealed there were two listings in the CHMIRS database at the Site:

- 900 Innes Avenue (EDR ID: S109041046) – In late August 2007, an unknown sheen on the San Francisco Bay was reported to be emanating from a nearby boat yard.
- 900 Innes Avenue (EDR ID: S108400962) – In early January 2005, a fuel tank was ruptured after scraping the tug boat and approximately 15 - 20 gallons of diesel was reportedly discharged. Contractor responded to the spill with the application of booms and pads.

#### **4.2.16 ENVIROSTOR / HIST Cal-Sites**

The Site Mitigation and Brownfields Reuse Program (SMBRP), within the DTSC, is responsible for maintaining the EnviroStor database, or ENVIROSTOR. This database lists sites with known contamination, or sites in which further investigation might be necessary. Listings within the ENVIROSTOR database represent a variety of site types; Federal Superfund sites, State Response, Voluntary Cleanup, and School sites. Searching the ENVIROSTOR database for sites within ½ mile of the Site resulted in the following:

- Donco Industries, Inc. (EDR Map ID: A8) – Located at 894 Innes Avenue. Corrective Action managed by the DTSC, site located at 37.732089°N – 122.375837°W, site status is inactive as of June 2009, no completion data reported.
- 1633 Newcomb Street (EDR Map ID: 45) – Preliminary Endangerment Assessment Report managed by the DTSC SMBRP, 0.1 acre site of illegal dumping located at 37.73563°N – 122.39102°W (APN 5311025). Following debris removal in 1994, a Site Characterization in July 2001 determined existing soil contamination posed little threat to human health. As of late February 2003 City and County of San Francisco issued a No Further Action (NFA) warrant, building permit issued.
- PG&E Hunters Point (EDR Map ID: 23) – Former electric generation facility, located at 37.73771°N – 122.3782°W (APN 4570-024, 4571-001, -002, 4603A-005, 4623A-002, 4647A-010). Remedial Action Plan approved August 2012, contaminants of concern include petroleum hydrocarbons and asbestos. DTSC is the lead agency for remediation operations, Bay Area Air Quality Management District is providing oversight for air monitoring activities, site remains active.
- 1228 Underwood Avenue Site (EDR Map ID: 43) – Voluntary cleanup managed by the DTSC SMBRP, 0.23 acre site previously used as a junkyard located at 37.726397°N – 122.385337°W (APN 4807-018). Possible soil contamination with nickel and arsenic, Preliminary Endangerment Assessment Report completed in March 2009. As of March 2009, No Further Action required.
- Bay Area Drum (EDR Map ID: 42) – Two acre site located at 1212 Thomas Avenue [37.726665 N, 122.384144 W]; APN 4792-001B, 4792-022, 4792-023, 4792-024, 4792-025, 4792-025A, 4792-025B, 4792-026, 4792-027, 4792-028, and 4792-029. Also operated as Bedini Drum and Waymire Drums, functioned from 1948 to 1987 as a drum reconditioning facility, twenty-four confirmed contaminants of concern including PCBs, lead, pesticides (DDD), metals, solvents, oil and grease, volatile organics (PCE and TCE), chlordane, and toxaphene. Major actions listed chronologically include Determination of Non-Compliance (August 1986), Remedial Investigation Report (November 1986 – May 1987), Site Screening (March 1987), Human Health Risk Assessment Report (July 1987, December 1999), Removal Action Workplan (July 1987, December 1998, August 2000), Removal Action Completion Reports (February 1988, August 1990, June 2002), Remedial Investigation Study (January 1992, May 1992, March 2000), Cost Recovery Settlements (September 2007).
- Mobile Debris Box Service (EDR Map ID: J44) – Current status listed inactive as of July 2009, follow up is to be conducted by DTSC, 0.5 acre landfill site located at 1301 Yosemite Avenue [37.723571°N – 122.386610°W], APN 4846-001. Possible sediment and soil contamination, PA / SI Discovery conducted in April 2009.

- Buckeye Properties (EDR Map ID: J46) – Site referral by the Regional Water Quality Control Board, seven acre site located at 1296 Armstrong Avenue [37.723082 N, 122.385932 W], APN 4845-003. Previously functioned as a tidal flats landfill during and after World War II, between 1942 and 1965. In 1986 during the installation of a City sewer by San Francisco’s Department of Public Works, PCB, DCE, and benzene contamination was discovered in site soils and groundwater. Sensitive environment / habitat exists nearby the site, as well as nearby densely populated areas. Reassessment of the site occurred in July 1991 by an EPA Federal Inspection Team, and Site Screening was completed in March 1993; current status is unknown.
- Yosemite and Fitch Sewer Construction (EDR Map ID: J47) – Site of waste creosote and diesel fuel located at Hawes Street and Armstrong Avenue [37.722778°N – 122.386667°W]. Site screening conducted February 1990, and remediation occurred consisting of contaminated soil treatment (levels below 10 mg/kg TPH), and soil excavation and disposal operations (shipped to licensed hazardous waste treatment facility). As of February 1990, site was issued a No Further Action (NFA) warrant.
- 3950 3<sup>rd</sup> Street (EDR Map ID: 48) – Located at 37.74153°N – 122.3887°W (APN 5242042), not listed as NPL site, site was referred to Local Agency in September 1997.
- Hunters Point Naval Shipyard, Parcel F (EDR Map ID: 49) – Closed naval base and Federal Superfund site previously used as a shipyard, ship repair facility, dry docks, foundry, landfill, railroad maintenance shop, and radiological laboratories. Located at 37.71972°N – 122.3713°W (APN Unreported). Remedial Investigation conducted January 1989, ongoing soil and groundwater remediation and monitoring under EPA oversight; as of January 2013, site is active.

Prior to the creation of the EnviroStor (ENVIROSTOR) database, sites containing known and potentially hazardous substances were listed in a database known as ASPIS, updated and maintained by the California Department of Toxic Substance Control. These records were last updated in August of 2005, and are currently stored in a database referred to as HIST Cal-Sites. A search of the HIST Cal-Sites database identified two sites within ½ mile of the Site.

- Bay Area Drum (EDR Map ID: 42) – Located at 1212 Thomas Avenue, DTSC has certified the site as having been remediated satisfactorily; not listed as NPL site.
- Hunters Point Naval Shipyard, Parcel F (EDR Map ID: 49) – Closed military base, approximately 965 acres, DTSC has certified the site as having been remediated satisfactorily; not listed as NPL site.

#### **4.2.17 High Risk Historical and Other Ascertainable Records**

EDR compiled a selection of potential gas station / filling station / service station

sites (EDR US Hist Auto Stat) and a selection of potential dry cleaning sites (EDR US Hist Cleaners), from national collections of business directories that may not appear in current government records searches. A search of these databases identified two sites within ¼ mile of the Site:

- Seaside Service (EDR Map ID: C20) – Located at 998 Innes Avenue, operated as a service station from 1953 through 1966.
- Nick's Cleaners (EDR Map ID: 22) – Located at 714 Innes Avenue, operated as cleaners and dyers from 1949 through 1953, operated as clothes pressers and cleaners through 1958.

The FUDS database is a listing of locations where the US Army Corps of Engineers (USACE) is actively working, or will take necessary cleanup actions, at formerly used defense sites properties. A review of the FUDS list has identified one site within 1 mile of the Site:

- Hunters Point Shipyard Annex (EDR Map ID: 29) – 966.75 acres occupied by different agencies since used by the Department of Defense, Operated as a ship repair facility from 1940 until 1975, a fuel storage tank site is proposed as a CON/HTRW project.

The ROD database is a listing of Record of Decision documents, which mandate a permanent remedy at an NPL site containing technical and health information to aid the cleanup. A review of the ROD database has identified one site within 1 mile of the Site:

- US Navy Hunters Point Naval Shipyard (EDR Map ID: 0) – Various ROD documents pertaining to technical and health information to aid in the cleanup.

The California Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. This database (CA BOND EXP. PLAN) is not updated and is current through January 1989. A review of these listings has identified one site within 1 mile of the Site:

- Bay Area Drum (EDR Map ID: 42) – Former drum reconditioning operation involving the spillage of cleaning rinsate and drum residues in storage areas, contamination includes lead, pesticides, oil and grease, volatile organics and PCBs, removal and remediation activities in February and October 1988, additional groundwater investigations are continuing.

### **4.3 Orphan Sites**

The orphan sites summary included in the EDR report (Appendix G) is a listing of sites that could not be mapped by EDR due to insufficient address information. WESTON attempted to locate 36 orphan sites using electronic mapping programs. The 12 orphan sites identified by WESTON included Construction Sites, CALTRANS SF Site, Treasure Island – Site 6, Henry Broadcasting, CCSF Freeway Construction Site, Bayview Green Waste Management Company, Martini Trucking, Inc, and a vacant lot. Of the 12 orphan sites identified, only 5 were within 1 mile of the 900 Innes Avenue Site. None of the identified orphans were expected to impact conditions at the Site.

<b>Table 4-1: Located Orphan Sites within EDR Search Radius</b>				
<b>Property</b>	<b>EDR ID</b>	<b>EDR Address</b>	<b>Database</b>	<b>Description</b>
COMMERCIAL CONSTRUCTION SITE	S105688800	5300 3 <sup>RD</sup> ST	LUST	Gasoline leak reported November 1999, case closed December 1999 after excavation and disposal activities.
CONSTRUCTION SITE	U003976203	6 <sup>TH</sup> ST & HARRISON ST	UST	One tank reported, closed January 2001.
CONSTRUCTION SITE	U003976204	8 <sup>TH</sup> ST & BRYANT ST	UST	One tank reported, closed April 2001.
CALTRANS SF SITE	S113173082	1 <sup>ST</sup> ST & FOLSOM ST	HAZNET	Approximately 1.3 tons of contaminated soil from cleanup activities, reported 1993.
TREASURE ISLAND, SITE 6	U003976392	AVENUE M & 14 <sup>TH</sup> ST	UST	Two tanks reported, closed October 2002.
BAYVIEW GREEN WASTE MGT COMPANY	S107591769	1300 CARROL WAY	SWF/LF	Permitted January 2006, facility for composting, chipping and grinding activities, accepts green wastes.
COMMERCIAL (STREET)	S109285368	1200 EVANS & KEITH ST	LUST	Heating oil / fuel oil leak reported, case closed late October 2008.
MARTINI TRUCKING INC	1004678458	704 HUNTERS PT	RCRA NonGen, FINDS	Application received November 2001, transporter of hazardous waste, no violations found.
VACANT	S101592211	2225 INGALLS ST	LUST, CA FID UST, SWEEPS UST	Two tanks reported, gasoline leak reported November 1998, case closed December 1998 after excavation and disposal activities.
HENRY BROADCASTING	U003713822	2277 JERROLD AVE	LUST, SWEEPS UST, EMI	Report unavailable
CCSF FREEWAY CONSTRUCTION SITE	U003982457	OCTAVIA & LINDEN ST	UST	One tank reported, closed October 2004.
CONSTRUCTION SITE	U003976206	OWENS & 6 <sup>TH</sup> ST	UST	One tank reported, closed December 2002.

## **5. ASSESSMENT ACTIVITIES**

The objective of this investigation was to evaluate Site environmental concerns to facilitate redevelopment. WESTON reviewed available Site information to determine historic uses and identify hazardous substances that may be present on Site. WESTON used this information and Site history to determine the most effective sampling design to meet the project objectives within the schedule and budgetary constraints. Based on the Site history, selected soil samples were analyzed for CAM 17 metals via EPA Method 6010/7471A, TPH-g and TPH-d,mo via EPA Method 8015B, PCBs via EPA method 8082, SVOCs/PAHs by EPA Method 8270, organotins via Krone et al. / EPA Method 3550B, and asbestos via PLM CARB 435 Method. These selected AOCs are commonly associated with boatbuilding and ship repair facilities, and with the storage of construction equipment and heavy machinery.

At the request of the San Francisco Department of Public Health (SFDPH), samples were analyzed for additional analytes based upon governance outlined in Article 22A of the Health Code, Article 20 of the Public Works Code, and Section 106A.3.2.4 of the Building Code, collectively referred to as the Maher Ordinance. The Maher Ordinance, developed in 1986 and administered by SFDPH and the San Francisco Department of Building Inspection (SFDBI), require applicants for building permits to develop site histories and, if necessary, to test soils for hazardous substances and perform appropriate handling, clean-up or capping of contaminated sites. These additional AOCs include hexavalent chromium via EPA Method 7196A, fluorides via EPA Method 300.0, VOCs via EPA Method 8260B, CNs by SM4500CN-E Method, and pH levels via EPA Method 9040C.

Sample results were evaluated against Regional Screening Levels (RSLs), as defined in Section 6, to determine the risk to human health and the environment. The data collected during this Site investigation was used to evaluate environmental concerns at the Site and identify the potential impact on future development for residential housing and commercial development. The data was specifically used to determine if soil has been impacted by historic uses and to support redevelopment decisions.

A total of 41 soil and sediment samples, not including the equipment blank and duplicate samples, were collected from 33 sampling locations. The locations were identified using a Global Positioning System (GPS). Detailed rationale for the sample locations are presented below. Actual sample locations were recorded using a GPS and entered into the field logbook as sampling was completed. Sample locations, analytical parameters, and rationale are described and summarized in Table 5-1. Sample locations are shown in Figure 5-1.

The following potential sources of contamination were identified at the Site:

- Construction equipment storage and laydown yard – Currently, the Site is primarily utilized as storage for construction equipment. Several oily stains were observed at the Site related to heavy machinery, and general trash was scattered around the Site including open bins, buckets and drums. Disorganized containers of presumably oil and/or paint were found at the Site, and large piles of tires were present in multiple locations. Potentially hazardous wastes associated with these conditions include metals, SVOCs including PAHs, and constituents of gasoline, diesel and motor oil (TPH-g, TPH-d,mo).
- Boatbuilding and ship repair services – Historically, the Site has been the center of much boatbuilding and ship repair activities. Environmental contaminants typically associated with the shipbuilding and repair industry include those generated from vessel maintenance, general facility and yard operations, marine coatings and antifoulants, and abrasive blasting. These include metals, SVOCs including PAHs, organotins (biocides), waste engine fluids such as oil, hydraulic fluids, lubricants, and general solid wastes. The Site is currently located on land comprised of fill material of unknown origin which was added after 1946, and may present potential environmental impacts.
- Onsite structures – Four structures in various states of disrepair are located onsite, all constructed prior to 1979; the presence of asbestos and/or lead paint is likely. Common household waste has been dumped at the Site, resulting from intermittent occupancy by various homeless populations. The dump materials might typically be comprised of paints, used oil, batteries, pesticides, and other solid waste (PAHs, metals, TPH-d,mo). Additionally, four aboveground storage tanks, presumably associated with construction equipment storage and ship repair services, were identified at the Site along with visible staining around the tanks.
- Aboveground storage tank locations – One steel waste oil storage tank is located onsite, likely used in conjunction with the heavy construction equipment. Another steel fuel / oil storage tank, this one mobile and showing signs of leakage, was located at the Site during the Phase I Site Assessment conducted in 2011. Both steel tanks were identified to be in poor condition, with significant signs of wear apparent, and with oily staining identified around the base of the tanks. Two concrete tanks are located approximately 150 feet from the waste oil tank and both appear to be in good condition.

Sampling locations were chosen to evaluate potential sources of contamination, as stated above. Aerial photos obtained did not show additional areas that are obvious sampling locations. Judgmental surface soil, subsurface, and sediment sample locations were determined in the field based on observations and historical sampling results.

**Table 5-1: Sample Design and Rationale - Matrix – Soil / Sediment**

Sample ID	Depth (feet)	Analytical Parameter	Rationale	Sample ID	Depth (feet)	Analytical Parameter	Rationale
IA-01	0 – 0.5	Metals, TPH, PAHs	Probable dumping area, Household hazardous waste	IA-20	0 – 0.5	Metals, TPH, PCBs, PAHs	Construction equipment storage
IA-02A	0 – 0.5	Metals, TPH, PAHs	Probable dumping area, Household hazardous waste	IA-21D	0 – 0.5	Metals, TPH, PCBs, PAHs, Organotins	Paved surface / Boat launch, Boatbuilding / Ship Repair
IA-02B	3 – 4	Metals, TPH, PAHs	Assess extent of vertical contamination	IA-22	0 – 0.5	Metals, TPH, PCBs, PAHs	Construction equipment storage
IA-03	0 – 0.5	Metals, TPH, PCBs, PAHs	Probable dumping area, Construction equipment storage	IA-23D	0 – 0.5	Metals, TPH, PCBs, PAHs, Organotins	Paved surface / Boat launch, Boatbuilding / Ship Repair
IA-04	0 – 0.5	Metals, TPH, PAHs, ACM	Probable dumping area, Household hazardous waste	IA-24A	0 – 0.5	Metals, TPH, PCBs, PAHs	Paved surface / Parking lot, Construction equipment storage
IA-05	0 – 0.5	Metals, TPH, PAHs	Paved surface / Parking lot, Construction equipment storage	IA-24B	3 – 4	Metals, TPH, PCBs, PAHs	Assess extent of vertical contamination
IA-06	0 – 0.5	Metals, TPH, PCBs, PAHs, ACM	Probable dumping area, Construction equipment storage	IA-25D	0 – 0.5	Metals, TPH, PCBs, PAHs, Organotins	Paved surface / Boat launch, Boatbuilding / Ship Repair
IA-07	0 – 0.5	Metals, TPH, PCBs, PAHs, ACM	Paved surface / Parking lot, Construction equipment storage	IA-26	0 – 0.5	Metals, TPH, PCBs, PAHs	Construction equipment storage
IA-08A	0 – 0.5	Metals+, TPH, PCBs, PAHs, ACM, VOCs, CNS, pH	Probable dumping area, Household hazardous waste	IA-27	0 – 0.5	Metals, TPH, PCBs, PAHs, ACM	Construction equipment storage
IA-08B	3 – 4	Metals+, TPH, PCBs, PAHs, VOCs, CNS, pH	Assess extent of vertical contamination	IA-28	0 – 0.5	Metals, TPH, PCBs, PAHs	Construction equipment storage
IA-09	0 – 0.5	Metals, TPH, PAHs	Paved surface / Parking lot, Construction equipment storage	IA-29A	0 – 0.5	Metals+, TPH, PCBs, PAHs, VOCs, CNS, pH	Paved surface / Parking lot, Construction equipment storage
IA-10A	0 – 0.5	Metals+, TPH, PCBs, PAHs, VOCs, CNS, pH	Paved surface / Parking lot, Construction equipment storage	IA-29B	3 – 4	Metals, TPH, PCBs, PAHs	Assess extent of vertical contamination
IA-10B	3 – 4	Metals+, TPH, PCBs, PAHs, VOCs, CNS, pH	Assess extent of vertical contamination	IA-30	0 – 0.5	Metals, TPH, PCBs, PAHs	Construction equipment storage
IA-11A	0 – 0.5	Metals, TPH, PCBs, PAHs, ACM	Paved surface / Parking lot, Construction equipment storage	IA-31	0 – 0.5	Metals, TPH, PCBs, PAHs	Construction equipment storage
IA-11B	3 – 4	Metals, TPH, PCBs, PAHs	Assess extent of vertical contamination	IA-32D	0 – 0.5	Metals, TPH, PCBs, PAHs, Organotins	Assess surface sediments, Boatbuilding / Ship Repair
IA-12	0 – 0.5	Metals, TPH, PCBs, PAHs, ACM	Paved surface / Parking lot, Construction equipment storage	IA-33A	0 – 0.5	Metals, TPH, PCBs, PAHs	Construction equipment storage
IA-13D	0 – 0.5	Metals, TPH, PCBs, PAHs, Organotins	Paved surface / Boat launch, Boatbuilding / Ship Repair	IA-33B	3 – 4	Metals, TPH, PCBs, PAHs	Assess extent of vertical contamination

**Table 5-1 (continued): Sample Design and Rationale - Matrix – Soil / Sediment**

IA-14A	3 – 4	Metals+, TPH, PCBs, PAHs, Organotins, VOCs, CNS, pH	Paved surface / Boat launch, Construction equipment storage	IA-34	0 – 0.5	Metals, TPH, PCBs, PAHs, ACM	Duplicate IA-06
IA-14B	3 – 4	Metals+, TPH, PCBs, PAHs, Organotins, VOCs, CNS, pH	Assess extent of vertical contamination	IA-35B	3 – 4	Metals, TPH, PCBs, PAHs	Duplicate IA-08B
IA-15	0 – 0.5	Metals, TPH, PCBs, PAHs, ACM	Paved surface / Parking lot, Construction equipment storage	IA-37	0 – 0.5	Metals, TPH, PCBs, PAHs	Duplicate IA-10A
IA-16	0 – 0.5	Metals, TPH, PCBs, PAHs, Organotins	Paved surface / Boat launch, Boatbuilding / Ship Repair	IA-38D	0 – 0.5	Metals, TPH, PCBs, PAHs, Organotins	Duplicate IA-23D
IA-17	0 – 0.5	Metals, TPH, PCBs, PAHs, Organotins	Paved surface / Boat launch, Boatbuilding / Ship Repair	IA-39B	--	Metals, TPH, PCBs, PAHs	Duplicate IA-29B
IA-18	0 – 0.5	Metals, TPH, PCBs, PAHs	Paved surface / Parking lot, Construction equipment storage	IA-40	--	Metals+, TPH, PCBs, PAHs, Organotins, VOCs, Methanes, CNS, pH	Equipment Blank
IA-19D	0 – 0.5	Metals, TPH, PCBs, PAHs, Organotins	Paved surface / Boat launch, Boatbuilding / Ship Repair				

Surface and subsurface samples with the suffix “A” or “B” may be collected from different locations determined in the field based on visual surface soil contamination. *Italicized samples* indicate additional testing as per Maher Ordinance (Article 22A of the SF Health Code, Article 20 of the Public Works Code, and Section 106A.3.2.4 of the SF Building Code) Metals+ indicates analysis for CAM17 Metals, plus fluorides and hexavalent chromium

## **5.1 Soil Sampling**

A total of 35 soil samples, not including equipment blank and duplicate samples, were collected from 27 sampling locations. Surface soil and subsurface soil samples were each collected from 8 of the 27 sampling locations. All soil samples were collected in accordance with EPA Environmental Response Team (ERT) Soil Sampling Standard Operating Procedure (SOP) #2012, Geoprobe Operation SOP #2050, and SOP #2006 Sampling Equipment and Decontamination. SOP #2016 Sediment Sampling, SOP #2006 Sampling Equipment and Decontamination, SOP #2050 Geoprobe Operation, and SOP Discrete-Depth Groundwater Sampling During Drilling. A total of 6 sediment samples, not including equipment blank and duplicate samples, were collected from 6 sampling locations. All sediment samples were collected in accordance with EPA ERT Sediment Sampling SOP #2016 and Sampling Equipment and Decontamination SOP #2006.

Surface soil samples were collected from a depth of 0 to 6 inches bgs using a dedicated plastic trowel, transferred directly into a sample-dedicated paper bucket and homogenized, and then placed into a pre-labeled sample container for analyses. When necessary, surface soil samples were collected from 0 to 18 inches bgs using a direct-push technology drill rig and 2-inch diameter by 4-foot long steel soil sampler equipped with an acetate liner, operated by a subcontractor (Gregg Drilling and Testing, Inc.) under the supervision of WESTON. The soil sampler was advanced to 2-feet bgs (6 inches beyond the 0 to 18 inch sampling interval) to ensure adequate sample recovery. The upper 18 inches of soil sample was transferred to a sample-dedicated disposable paper bucket, homogenized, and transferred to appropriate sample containers for the requested analyses.

Subsurface samples soil samples were also collected using a direct push technology drill rig operated by a subcontractor under the supervision of WESTON. The soil sampler was advanced to 4-feet bgs, and the soil from the sampling interval of 3 to 4 feet was transferred to a sample-dedicated disposable paper bucket, homogenized, and transferred to appropriate sample containers for the requested analyses.

Surface sediment samples were collected using a petite ponar or dedicated plastic trowel to a depth of 0 to 6 inches, transferred directly into a sample-dedicated polyethylene bag and homogenized, and then placed into a pre-labeled sample container for analyses.

All sample containers were filled to the top, taking care to prevent soil from remaining in the lid threads prior to being closed to prevent potential contaminant migration to or from the sample. Samples were chilled immediately to 4°C, and processed for shipment to the Curtis and Tompkins laboratory in Berkeley, California.

Additional sample volume was collected at eight locations for use as laboratory QC. Five field duplicate samples were collected from selected locations, and three samples were identified for matrix spike/matrix spike duplicate (MS/MSD) analysis. An equipment blank was collected from non-dedicated sampling equipment to ensure acceptability of laboratory results during data validation.

At the request of the San Francisco Department of Public Health (SFDPH), samples will be analyzed for additional analytes based upon governance outlined in Article 22A of the Health Code, Article 20 of the Public Works Code, and Section 106A.3.2.4 of the Building Code, collectively referred to as the Maher Ordinance. The Maher Ordinance, developed in 1986 and administered by SFDPH and the San Francisco Department of Building Inspection (SFDBI), require applicants for building permits to develop site histories and, if necessary, to test soils for hazardous substances and perform appropriate handling, clean-up or capping of contaminated sites. These additional AOCs include: inorganic persistent and bioaccumulative toxic substances, volatile organic toxic pollutants, pH levels, cyanides, and methane and other flammable gases.

One surface sediment sampling location (IA-13D) was relocated in the field to obtain adequate sample volume after encountering a rock and rip rap substrate. One duplicate sample (IA-36) was discarded as unnecessary based on overall sample quantity. Figure 5-1 details the sampling locations for the Site.

## 6. ASSESSMENT RESULTS

All samples were analyzed by Curtis and Tompkins, Inc. in Berkeley, California. CalScience in Garden Grove, California was subcontracted for organotins analysis; Forensic Analysis in Hayward, California was subcontracted for asbestos analysis. The protection of those who will use the proposed San Francisco Blue Greenway public open space for recreational activities is pertinent to this Site use.

Soil sample results for metals, PCBs, organotins, PAHs were compared to EPA Region 9 Regional Screening Levels for residential soil (May 2013). However, planned redevelopment of the site for recreational use indicates the likelihood of a transient community of people using the proposed park. Less conservative regional screening levels might be more appropriate for this intermittent pattern of contact with the Site. For this reason, soil sample results were also compared to EPA Region 9 Regional Screening Levels for industrial soil (May 2013). Soil results for TPH-g and TPH-d,mo were compared to San Francisco Bay RWQCB residential land use standards from *Table A - Shallow Soil/Groundwater is a Current or Potential Source of Drinking Water (2007) Contamination of Soil action levels*.

At the request of the SFDPH, samples were analyzed for additional analytes based upon governance outlined in Article 22A of the Health Code, Article 20 of the Public Works Code, and Section 106A.3.2.4 of the Building Code, collectively referred to as the Maher Ordinance. These additional AOCs include hexavalent chromium, fluorides, VOCs, CNs, and pH levels. These action levels serve as a screening tool to help determine whether further characterization at the Site is necessary.

### 6.1 Sampling Results

Selected soil and sediment samples were analyzed for CAM 17 metals, also referred to as Title 22 metals from California Code of Regulations (CCR) Title XXII SVOCs; fluorides; hexavalent chromium; VOCs; organotins; pH; asbestos; PCBs; PAHs; TPH-g and TPH-d,mo. A total of 35 soil samples, 6 sediment samples, and 5 duplicate samples were collected at the Site. All samples were analyzed for CAM 17 metals, PAHs, and TPH-d,mo; 32 selected samples were analyzed for PCBs; 13 selected samples were analyzed for TPH-g; 9 selected samples were analyzed for organotins; 9 selected samples were analyzed for asbestos; 7 selected samples were analyzed for Maher Ordinance analytes.

The analytical results of the soil and sediment samples are summarized in Tables 6-1 through 6-4. Maps showing the location of samples exceeding action levels for metals, PAHs, PCBs, and petroleum hydrocarbons are shown in Figure 6-1, Figure 6-2, Figure 6-3 and Figure 6-4, respectively. The complete analytical laboratory data report is included in Appendix H.

- No elevated concentrations of asbestos above the established action levels were found in any of the 9 soil samples or duplicate samples. The analytical results for

asbestos are summarized in Table 6-4.

- No elevated concentrations of organotins above the established action levels were found in any of the 3 soil samples, 6 sediment samples, or duplicate samples. The analytical results for organotins are summarized in Table 6-4.
- No elevated concentrations of TPH-g above the established action level of 100 mg/kg were found in any of the 19 soil and sediment samples, or duplicate samples. Elevated concentrations of TPH-d above the established action level of 100 mg/kg were discovered in 15 soil samples, 4 sediment samples, and 2 duplicate samples. Elevated concentrations of TPH-mo above the established action level of 500 mg/kg were discovered in 11 soil samples and 2 sediment samples. The analytical results for TPH-g and TPH-d,mo are summarized in Table 6-3, and shown in Figure 6-4.
- Elevated concentrations of Aroclor-1254 above the established action level of 110 µg/kg were discovered in 7 soil samples. Elevated concentrations of Aroclor-1260 above the established action level of 220 µg/kg were discovered in 2 soil samples and 1 sediment sample. The analytical results for PCBs are summarized in Table 6-3, and shown in Figure 6-3.
- Elevated concentrations of arsenic above the established action level of 0.39 mg/kg were found in all 35 soil samples, 6 sediment samples, and 5 duplicate samples. Elevated concentrations of chromium were found in all 35 soil samples, 6 sediment samples, and 5 duplicate samples when compared to the action level of 0.29 mg/kg for hexavalent chromium. The analytical results for CAM 17 metals are summarized in Table 6-1.
- Elevated concentrations of cobalt above the established action level of 23 mg/kg was found in 19 soil samples, 1 sediment sample, and 4 duplicate samples. The analytical results for CAM 17 metals are summarized in Table 6-1.
- Elevated concentrations of lead above the established action level of 400 mg/kg was found in 7 soil samples, 3 sediment samples, and 2 duplicate samples. Elevated concentrations of mercury above the established action level of 1.0 mg/kg was found in 8 soil samples, 2 sediment samples, and 1 duplicate sample. Elevated concentrations of nickel above the established action level of 1,500 mg/kg was found in 1 soil sample and 1 sediment sample. Elevated concentration of copper above the established action level of 3,100 was found in 1 sediment sample. The analytical results for these four analytes of concern are summarized in Table 6-1, and shown in Figure 6-1.
- Elevated concentrations of benz(a)anthracene, benz(b)fluoranthene, benzo(a)pyrene, and indeno(1,2,3-cd)pyrene above their respective established action levels were found in both soil and sediment samples. Elevated concentrations of dibenz(a,h)anthracene, benzo(k)fluoranthene, and chrysene

above their respective established action levels were found in soil samples only. PAH concentrations above established action levels were found in 11 soil samples, 4 sediment samples, and 2 duplicate samples. The analytical results for PAHs are summarized in Table 6-2, and shown in Figure 6-2.

### **6.1.1 CAM 17 Metals Results**

Elevated concentrations of arsenic were present throughout the Site, detected above the established action level of 0.39 mg/kg in all samples and duplicate samples. Arsenic concentrations ranged from 1.4 to 55 mg/kg. Historical WET leachate analytical results, from the November 1993 sampling event, show arsenic concentrations ranging from 34 µg/L to 230 µg/L. Although these samples exceeded the established action levels, naturally occurring levels of arsenic in the region are regularly found to exceed the action levels. According to a comprehensive, scientific database containing background concentrations of 46 trace and major elements in California soils, background arsenic levels for regional soils are 9.6 mg/kg. Another report, from the City of Oakland's Survey of Background Metal Concentration Studies in 2001, states a background arsenic concentration of 15.7 mg/kg in soil of the San Pablo Group.

Elevated concentrations of total chromium were present throughout the Site, detected above the hexavalent chromium comparison screening level value of 0.29 mg/kg in all samples and duplicate samples. Total chromium concentrations ranged from 39 to 1,500 mg/kg. Two sediment samples (IA-19D and IA-21D) and one soil sample (IA-11A) show results significantly higher than other total chromium values obtained at the Site; total chromium concentrations were 470, 1,500, and 830 mg/kg, respectively. Historical WET leachate analytical results, from the November 1993 sampling event, show total chromium concentrations ranging from 240 µg/L to 2,400 µg/L. Hexavalent chromium was not detected in WET leachate analytical results from the November 1993 sampling event. Again, although the majority of samples exceeded the chromium(VI) comparison value, naturally occurring levels of chromium in the region are regularly found to exceed this comparison value. According to the database of background trace and major elements in California soils, background concentrations of chromium for regional soils are 73 mg/kg. Note, there is no established action level for total chromium; comparison to the established action level for the highly toxic chromium(VI) may provide inappropriate conclusions.

Cobalt was detected at concentrations exceeding the established action level of 23 mg/kg in nearly 49% of samples collected at the Site; 19 soil samples and 1 sediment sample. The concentrations ranged from 7.1 to 93 mg/kg. Historical WET leachate analytical results, from the November 1993 sampling event, show cobalt concentrations ranging from 130 µg/L to 7,300 µg/L.

Comparison to regional screening levels for industrial soils might be more appropriate for sites where interaction with the community is intermittent and of short duration; established action level for arsenic, chromium(VI) and cobalt in industrial soils is 1.6 mg/kg, 5.6 mg/kg and 300 mg/kg, respectively. Generally, the number of exceedances

did not decrease for either arsenic or chromium when compared to the less conservative regional screening levels for industrial soils. Cobalt concentrations, however, fell far below the established action level of 300 mg/kg.

Elevated concentrations of lead were present at the Site, detected above the established action level of 400 mg/kg in 7 soil samples, 3 sediment samples, and 2 duplicate samples. Lead concentrations ranged from 4.9 to 4,600 mg/kg. Historical WET leachate analytical results, from the November 1993 sampling event, show lead concentrations of 100 µg/L in the DS-08 sample.

Elevated concentrations of mercury were present at the Site, detected above the established action level of 1.0 mg/kg in 8 soil samples and 2 sediment sample (IA-13D and IA-19D), and 1 duplicate sample. Mercury concentrations ranged from 0.026 to 29 mg/kg. Mercury was not detected in WET leachate analytical results from the November 1993 sampling event.

Elevated concentrations of nickel were present at the Site, detected above the established action level of 1,500 mg/kg in 1 soil sample (IA-11A) and 1 sediment sample (IA-21D). Nickel concentrations ranged from 31 to 3,100 mg/kg. Historical WET leachate analytical results, from the November 1993 sampling event, show nickel concentrations ranging from 260 µg/L to 870 µg/L.

Elevated concentrations of copper were present at the Site, detected above the established action level of 3,100 mg/kg in 1 sediment sample (IA-13D). Copper concentrations ranged from 13 to 3,100 mg/kg. Historical WET leachate analytical results, from the November 1993 sampling event, show copper concentrations of 830 µg/L in the DS-02 sample.

### **6.1.2 Polychlorinated Biphenyls Results**

Of the seven aroclor analytes, only Aroclor-1254 was detected in soil samples, while both Aroclor-1254 and Aroclor-1260 was detected in sediment samples. All other aroclors were not detected during analysis. Concentrations of Aroclor-1254 exceeded established action level of 110 µg/kg in approximately 20% of soil samples and 17% of sediment samples; concentrations of Aroclor-1260 exceeded established action level of 220 µg/kg in approximately 6% of soil samples and 33% of sediment samples. Aroclor-1260 was detected in both the IA-23D sample and the duplicate sample, IA-38D.

Concentrations of Aroclor-1254 ranged from 22 to 5,200 µg/kg; concentrations of Aroclor-1260 ranged from 12 to 2,700 µg/kg. The maximum concentration of Aroclor-1254 was observed in sample IA-17; the maximum concentration of Aroclor-1260 was observed in sample IA-13D. High concentrations of PCBs for both Aroclor-1254 and Aroclor-1260 are notable in samples IA-17 and IA-30.

### **6.1.3 Extractable Fuel Hydrocarbons Results**

Analytical results indicated the presence of TPH-g, TPH-d and TPH-mo in surface and subsurface samples collected at the Site, although none of the samples contained concentrations above the established screening levels for gasoline range organics. Concentrations of TPH-g ranged from 0.49 to 1.8 mg/kg. Diesel range organics were detected in 100% of soil samples and 100% of sediment samples; motor oil range organics were detected in 94% of soil samples and 100% of sediment samples. TPH-d and TPH-mo were likewise detected in duplicate samples.

TPH-d exceeding established action levels was identified in a total of 19 samples; 15 soil samples and 4 sediment samples. At sampling locations with a collocated subsurface soil sample, TPH-d was present in both the surficial soil and the subsurface soils. However, TPH-d concentrations generally appear to exhibit attenuation with greater soil depth. Concentrations of diesel range organics ranged from 1.2 to 2,900 mg/kg in soils, and ranged from 40 to 470 mg/kg in sediments.

TPH-mo exceeding established action levels was identified in a total of 13 samples; 11 soil samples and 2 sediment samples. At sampling locations with a collocated subsurface soil sample, TPH-mo was usually present in both the surficial soil and the subsurface soils. However, like TPH-d, TPH-mo concentrations generally appear to exhibit attenuation with greater soil depth. Concentrations of motor oil range organics ranged from 8.7 to 15,000 mg/kg in soils, and ranged from 110 to 980 mg/kg in sediments.

#### **6.1.4 Polycyclic Aromatic Hydrocarbons Results**

Elevated concentrations of PAHs were detected throughout the Site, typically for benzo(b)fluoranthene and benzo(a)pyrene analytes. PAHs were identified in approximately 46% of the samples, and nearly 37% of the samples exceeded established action levels for residential use. Twelve distinct PAH analytes were identified at the Site, found in both surficial and subsurface soils; naphthalene was the only PAH analyte that was not detected at the Site. Excluding non-detect values, median concentrations of benz(a)anthracene, benzo(a)pyrene and dibenz(a,h)anthracene were 820 µg/kg, 900 µg/kg, and 1,145 µg/kg, respectively.

Benzo(b)fluoranthene concentrations exceeded the established action level of 150 µg/kg in 9 soil samples and 5 sediment samples, including 2 duplicate samples. Benzo(b)fluoranthene concentrations ranged from 130 to 50,000 µg/kg in soils, and ranged from 140 to 2,500 µg/kg in sediments.

Benzo(a)pyrene concentrations exceeded the established action level of 15 µg/kg in 9 soil samples and 3 sediment samples, including 2 duplicate samples. Benzo(a)pyrene concentrations ranged from 120 to 37,000 µg/kg in soils, and ranged from 230 to 1,500 µg/kg in sediments.

Benz(a)anthracene concentrations exceeded the established action level of 150 µg/kg in 7 soil samples and 1 sediment samples, including 2 duplicate samples. Benz(a)anthracene concentrations ranged from 110 to 40,000 µg/kg in soils, and reached a maximum of 650

µg/kg in sediments.

Indeno(1,2,3-cd)pyrene concentrations exceeded the established action level of 150 µg/kg in 5 soil samples and 1 sediment samples, including 1 duplicate samples. Indeno(1,2,3-cd)pyrene concentrations ranged from 790 to 23,000 µg/kg in soils, and reached a maximum of 610 µg/kg in sediments.

Dibenz(a,h)anthracene concentrations exceeded the established action level of 15 µg/kg in 4 soil samples, including 1 duplicate sample. Dibenz(a,h)anthracene concentrations at the Site ranged from 260 to 7,500 µg/kg.

Benzo(k)fluoranthene concentrations exceeded the established action level of 1,500 µg/kg in 2 soil samples and was detected in 1 duplicate sample. Benzo(k)fluoranthene concentrations ranged from 540 to 21,000 µg/kg in soils.

Additionally, chrysene was detected in soil sample IA-28 at a concentration of 46,000 µg/kg, exceeding the established action level of 15,000 µg/kg. Chrysene was not detected in any other surface soil, subsurface soil, or sediment samples at the Site.

Comparison to regional screening levels for industrial soils might be more appropriate for sites where interaction with the community is intermittent and of short duration; established action level for benz(a)anthracene, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene in industrial soils is 2,100 mg/kg. Exceedances greatly decreased for benz(a)anthracene, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene when compared to the less conservative regional screening levels for industrial soils. Benzo(a)pyrene, benzo(k)fluoranthene, and chrysene show a decrease in exceedances when compared to the regional screening levels for industrial soils, though less significantly.

### **6.1.5 Maher Ordinance**

At the request of the SFDPH, samples were analyzed for additional analytes based upon governance outlined in Article 22A of the Health Code, Article 20 of the Public Works Code, and Section 106A.3.2.4 of the Building Code, collectively referred to as the Maher Ordinance. These additional AOCs include hexavalent chromium, fluorides, VOCs, CNs, and pH levels.

#### **6.1.5.1 Metals Results**

Instead of comparison against the EPA RSLs for residential use, CAM 17 metals results were compared against TTLC action levels as determined by regulations outlined in the Maher Ordinance. Lead concentrations exceeded the TTLC action levels in approximately 15% of the sample locations; 4 soil samples and 2 sediment samples, including 1 duplicate sample. The maximum lead concentration was 4,600 mg/kg, observed at IA-04. Mercury concentrations exceeded the TTLC action levels in approximately 2% of the sample locations; 1 sediment sample only. The maximum mercury concentration was 29 mg/kg, observed at IA-13D. Nickel concentrations exceed

the TTLC action levels in approximately 5% of the sample locations; 1 soil sample and 1 sediment samples. The maximum nickel concentration was 3,100 mg/kg, observed at IA-21D.

#### **6.1.5.2 Volatile Organic Compounds Results**

No VOCs concentrations for any of the 7 samples analyzed exceeded the established action levels. Acetone, carbon disulfide, 2-butanone, 1,2,4-trimethylbenzene, para-isopropyl toluene, and naphthalene were the only analytes detected. These analytes were only detected in samples IA-14A and IA-14B. Maximum concentration for each analyte was 100, 7.2, 41, 5.5, 23, and 170 µg/kg, respectively.

#### **6.1.5.3 Other Analytes**

Fluoride concentrations did not exceed either the RSLs for residential use or the TTLC action levels for any of the seven samples analyzed. Concentration of fluoride ranged from 1.1 to 2.0 mg/kg. Total cyanide concentrations did not exceed either the RSLs for residential use or the TTLC action levels for any of the seven samples analyzed. Concentration of total cyanide ranged from 1.2 to 1.5 mg/kg. Hexavalent chromium concentrations did not exceed either the RSLs for residential use or the TTLC action levels for any of the seven samples analyzed; concentration of hexavalent chromium was consistently below the reporting limit. Measured pH values for the seven samples analyzed ranged from 7.2 to 11.4.

#### **6.1.6 Organotins**

Organotins were detected in all 9 samples including the duplicate sample, though concentrations did not exceed the established action levels. The minimum concentration for dibutyltin, monobutyltin, and tributyltin was 12 µg/kg, 5.3 µg/kg, and 3.4 µg/kg, respectively; the maximum concentration for dibutyltin, monobutyltin, and tributyltin was 690 µg/kg, 330 µg/kg, and 96 µg/kg, respectively.

#### **6.1.7 Asbestos**

Of the six types of asbestos included during analysis, chrysotile was the only type of asbestos detected. Chrysotile was detected, below the reporting limit of 0.25% asbestos/mass, in 6 of 9 soil samples. One soil sample (IA-11A) showed an asbestos concentration of 0.50%, although this value falls well below the TTLC action level of 1.0% asbestos/mass.

## **7. EXCEPTIONS, DELETIONS, AND DATA GAPS**

WESTON has performed this combined Phase I/II ESA in general conformance with the scope and limitations of ASTM E-1527-05 for the Site located in San Francisco, California. Exceptions to, or deletions from, this practice include:

- A chain-of-title report was not obtained for any of the properties in the project area, and no chain-of-title information was reviewed.

These exceptions are not thought to have a material impact on the findings and conclusions of the ESA.

## **8. FINDINGS, OPINIONS AND CONCLUSIONS**

WESTON, under contract with the USACE and in coordination with the EPA, has performed this TBA of the 900 Innes Avenue Brownfields Project in accordance with the scope and limitations of ASTM Practice E-1527-05.

WESTON has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of the 900 Innes Avenue Site. Any exceptions to, or deletions from, this practice are described in Section 7 of this report.

As shown in Figure 2-1, the Site is located in San Francisco County, California. Specifically, the Site is a cluster of eleven parcels centered at the 900 Innes Avenue property, at the intersection of Innes Avenue and Griffith Street, in the Bayview Neighborhood of San Francisco, California. The parcels are positioned adjacent to India Basin of the San Francisco Bay, directly south of India Basin Shoreline Park. The Site is partially paved, with two functional docks, approximately two boat launches, and an access road. Two rights-of-way are located among the parcels comprising the Site; one right-of-way connects the eastern and western reaches of Hudson Avenue, the other right-of-way continuing Griffin Street to India Basin (Figure 2-2). Excluding the rights-of-way, the Site occupies approximately 105,550 square feet (2.4 acres) and is partially fenced. The geographic coordinates for the centroid of the 900 Innes Avenue property is 122° 22' 32.88" west longitude and 37° 43' 55.92" north latitude. The map detailing the Site layout is presented in Figure 2-2.

The Site functioned as a boatbuilding and ship repair facility for several companies spanning more than 120 years, particularly through the historic 1875 to 1930 period of marine-based cargo transportation in San Francisco. The Site was abandoned in 1992 after the owner, Donco Industries, declared bankruptcy. The Site remained in its abandoned state for nearly a decade until 2001, when it was sold to Joe Cassidy Construction for construction equipment and heavy machinery storage. The Site was sold to the Tenderloin Housing Clinic in 2007, though the Site continues to function as a construction equipment storage facility and laydown yard.

The Site is located at an elevation of approximately 27 feet above mean sea level on coastal lowland area of the East Bay Plain. The Site is positioned about one mile north of Richmond Harbor, extending from the Santa Fe Channel to the Inner Harbor Basin. The Site is also located about two miles south of two major drainages; Castro Creek and San Pablo Creek. The two drainages discharge into San Pablo Creek Marsh. The native soil in the vicinity of the Site is the Clear Lake group, classified as clay with very slow infiltration rates and poorly drained.

The study area has a Mediterranean climate, and annual temperatures range from 51.0°F to 63.6°F. Annual rainfall, averaged over a period of nearly one hundred years, averages approximately 21.1 inches, with most rainfall occurring between the months of November and March. The depth to groundwater beneath the Site is estimated to be 2 to 12 feet below ground surface, and groundwater flows from high elevations to India Basin

and the San Francisco Bay in a direction roughly parallel to the topography. There are no active or inactive water wells within 1 mile of the Site.

The Site address has been listed in multiple databases of environmental records; ERNS, CHMIRS, and HAZNET. The surrounding sites within 1 mile of the Site have also been listed in multiple databases of environmental records; Federal NPL, CERCLIS, RCRA-SQG, RCRA-LQG, RCRA Non-Gen, SWF/LF, SLIC, HIST CORTESE, LUST, CA FID UST, UST, HIST UST, SWEEPS UST, AST, VCP, RESPONSE, ENVIROSTOR, FUDS, ROD, CA BOND EXP. PLAN, EDR US Hist Auto Stat, EDR US Hist Cleaners, and HIST Cal-Sites.

Sample results were evaluated against action levels to determine the risk to human health and the environment. The data collected during this Site investigation was used to evaluate environmental concerns at the Site and identify the potential impact on future development for recreational purposes. The data was specifically used to determine if soil and sediment have been impacted by historic uses and to support redevelopment decisions.

Historical aerial photos and satellite imagery did not show additional areas that were obvious sampling locations. Sampling locations were chosen to evaluate potential sources of contamination, as stated above, and final determinations were based upon conditions observed during sampling operations.

A total of 35 soil samples, not including equipment blank and duplicate samples, were collected from 27 sampling locations. Surface soil and subsurface soil samples were each collected from 8 of the 27 sampling locations. Sediment samples were collected from 6 sampling locations, not including equipment blank and duplicate samples. Sampling locations, analytical parameters, and rationale are described and summarized in Table 5-1. Sample locations are shown in Figure 5-1.

This assessment has revealed evidence of recognized environmental conditions in connection with the Site:

The Site, historically referred to as Donco Industries, has been the subject of a soil contamination investigation in 1993, coordinated by the EPA and the San Francisco Department of Health; soil sampling was conducted in early November 1993 and samples were analyzed in late November for California Title 26 Metals and hexavalent chromium. The WET leachate results identified antimony, arsenic, barium, cadmium, total chromium, cobalt, copper, lead, nickel, molybdenum, vanadium, and zinc at the Site.

It is the opinion of the Environmental Professional that a release of petroleum hydrocarbons, PCBs, PAHs, and metals occurred at the Site. The source of the environmental contamination appears to be from historical site activities related to ship repair services, and current site activities related to construction equipment and heavy machinery storage. The following items are considered to be recognized environmental conditions:

- Soil contamination of TPH-d and TPH-mo throughout the Site, potentially as a result of current site activities. Based on analytical results, a generalized release of petroleum hydrocarbons has been documented in the following areas:
  - Equipment / Machinery Storage and Staging Area (Northern Corner)
  - Vacant Storage Yard (Southwest Corner)
  - Sediments (Northern Shoreline)
  - Boat Launches (East and West)
  - Equipment Storage Building (Approximately Centrally Located)
- Soil contamination of PCBs throughout the Site, potentially as a result of historical and current site activities. Based on analytical results, a release of PCBs has been documented in the following areas:
  - Equipment / Machinery Storage and Staging Area (Northern Corner)
  - Vacant Storage Yard (Southwest Corner)
  - Boat Launch (West)
  - Equipment Storage Building (Approximately Centrally Located)
- Soil contamination of PAHs throughout the Site, potentially as a result of historical and current site activities. Based on analytical results, a generalized release of PAHs has been documented in the following areas:
  - Equipment / Machinery Storage and Staging Area (Northern Corner)
  - Vacant Storage Yard (Southwest Corner)
  - Sediments
  - Boat Launches (East and West)
- Soil contamination of metals (lead, copper, nickel, and mercury) throughout the Site, potentially as a result of historical and current site activities. Based on analytical results, a generalized release of metals has been documented in the following areas:
  - Equipment / Machinery Storage and Staging Area (Northern Corner)
  - Vacant Storage Yard (Southwest Corner)
  - Sediments (East and West Boat Launches)
  - Boat Launches (East and West)
  - Paved Roadways
  - Vacant Residential Structure (Southern Corner)
  - Equipment Storage Building (Approximately Centrally Located)
- Generalized soil contamination of arsenic and chromium throughout the Site, likely naturally occurring based upon background levels of arsenic and chromium present in the region.

Based upon the results from WESTON's investigation, soil throughout the Site has been impacted from historical and current activities. Redevelopment of the Site for proposed recreational purposes may require the construction of a physical barrier, excavation and disposal of contaminated soils, excavation and containment of contaminated soils onsite, or a combination of these cleanup alternatives. Each cleanup alternative will require subsequent confirmation and delineation sampling of the impacted areas.

Given the limited extent of current sampling activities, there may be additional releases that were not detected during this assessment. Further characterization of soil, sediment, and groundwater contamination at the Site would refine the suggested cleanup alternatives, allowing greater accuracy when estimating costs and ensuring greater confidence when discussing which alternative is most effective at protecting human health and safety. If the City of San Francisco chooses to redevelop the Site, they may seek funding through additional grants in order to further characterize the Site and for costs associated with cleanup alternatives.

## **8.1 Environmental Professional Statement**

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional, as defined in 40 CFR Part 312.10.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

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Alex Grubb  
Environmental Professional  
Weston Solutions, Inc.

## **9. DISCLAIMERS**

This Initial Site Assessment is based on the conditions existing on the date of the WESTON inspection Site investigation. Past conditions were considered on the basis of readily available records, interviews, and recollections. It is possible that past or existing contamination remains undiscovered.

The conclusions presented herein are based on information provided to WESTON, or reasonably available to WESTON.

WESTON does not warrant or guarantee the subject property suitable for any particular purpose, or certify the subject property as "clean".

Future regulatory modifications, agency interpretations, and/or policy changes may affect the compliance status of the subject alignment.

Detailed radon and wetland surveys, which require specialized expertise, were not requested nor included as part of this project.

WESTON does not warrant or guarantee the correctness, completeness, and/or how current the information contained in the environmental record sources used for this assessment. Such information is the product of independent investigation by parties other than WESTON and/or information maintained by government agencies.

## **10. QUALIFICATIONS**

WESTON utilized qualified professional staff, trained in performing the scope of work required for this Phase I/II Targeted Brownfields Assessment. This team included a project manager, a field manager, and an assistant field manager. Their roles and experience are described in more detail as follows:

- Joe DeFao, Program Manager - Mr. DeFao is responsible for the overall management of the contract including cost, schedule and technical quality. Mr. DeFao has over 10 years of experience in the environmental field.
- Ian Bruce, Project Manager - Mr. Bruce is responsible for all tasks assigned to WESTON by EPA; working with the EPA QAO to ensure project quality assurance goals are met; preparing the SAP; implementing the sampling design; collecting, handling, documenting, and transporting samples; and generating field documentation of sampling activities. Mr. Bruce has over 7 years of experience in the environmental field.
- Alex Grubb, Environmental Professional - Mr. Grubb is responsible for ensuring the final report meets all applicable standards as defined in the scope of work. Mr. Grubb has over 10 years of experience in the environmental field.

## **11. SELECTED REFERENCES**

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([http://commissions.sfplanning.org/hpcpackets/900\\_Innes\\_2613.pdf](http://commissions.sfplanning.org/hpcpackets/900_Innes_2613.pdf))

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**TABLES:**

**Table 6-1 through Table 6-4**

**Table 6-1**  
**Summary of Metals Analytical Data**  
**900 Innes Avenue Site**  
 (reported in mg/kg)

Analyte	RSLs <sup>1</sup>	TTL <sup>2</sup>	IA-01	IA-02A	IA-02B	IA-03	IA-04	IA-05	IA-06	IA-07
Antimony	31	500	2.3	<0.58	<0.51	1.5	1.6	2.7	<0.55	<0.51
Arsenic	0.39	500	<b>7.1</b>	<b>2.6</b>	<b>2.3</b>	<b>7.5</b>	<b>7.0</b>	<b>4.8</b>	<b>1.9</b>	<b>3.7</b>
Barium	15,000	10,000	160	120	69	170	940	170	77	310
Beryllium	160	75	0.23	0.32	0.34	0.27	0.28	0.24	0.28	0.71
Cadmium	70	100	1.5	0.38	<0.25	0.53	3.9	1.1	<0.27	0.35
Chromium	0.29*	2,500	<b>150</b>	<b>140</b>	<b>110</b>	<b>74</b>	<b>220</b>	<b>79</b>	<b>69</b>	<b>39</b>
Cobalt	23	8,000	<b>34</b>	<b>31</b>	<b>23</b>	13	<b>40</b>	11	9.5	<b>24</b>
Copper	3,100	2,500	150	63	13	200	290	190	16	170
Lead	400	1,000	260	230	5.2	300	<b>4,600</b>	150	42	85
Mercury	1.0	20	0.7	0.28	0.028	<b>1.4</b>	<b>1.7</b>	0.55	0.064	0.72
Molybdenum	390	3,500	12	<0.29	<0.25	1.3	0.5	4.9	<0.27	2.6
Nickel	1,500	2,000	470	560	710	120	700	110	58	45
Selenium	390	100	<0.52	<0.58	<0.51	<0.51	0.79	<0.55	<0.55	<0.51
Silver	390	500	<0.26	<0.29	<0.25	<0.25	<0.26	<0.28	<0.27	<0.25
Thallium	0.78	700	<0.52	<0.58	<0.51	<0.51	<0.52	<0.55	<0.55	<0.51
Vanadium	390	2,400	47	42	47	44	50	42	51	57
Zinc	23,000	5,000	460	170	38	350	1,100	780	79	170

Metals by EPA Method 6010B; Mercury by EPA Method 7471A

mg/kg = milligrams per kilogram

<# = Analyte concentration is below stated reporting limit.

RSL<sup>1</sup> = EPA Region 9 Regional Screening Levels for residential soil (May 2013) [mg/kg]

TTL<sup>2</sup> = Section 66261.24(a)(2)(A) of Title 22 of the California Code of Regulations (Maher Ordinance)

**Bold and Underlined** = Analytical result meets or exceeds screening levels

\* = There is no RSL for total chromium. The RSL Cr 6+ is provided for comparison only.

**Table 6-1**  
**Summary of Metals Analytical Data**  
**900 Innes Avenue Site**  
 (reported in mg/kg)

Analyte	RSLs <sup>1</sup>	TTL <sup>2</sup>	IA-08A	IA-08B	IA-09	IA-10A	IA-10B	IA-11A	IA-11B	IA-12
Antimony	31	500	<0.57	<0.60	<0.51	2.3	<0.63	<0.56	<0.68	<0.51
Arsenic	0.39	500	<b>3.7</b>	<b>1.9</b>	<b>3.8</b>	<b>6.2</b>	<b>1.4</b>	<b>2.0</b>	<b>3.5</b>	<b>6.0</b>
Barium	15,000	10,000	110	64	150	260	100	24	110	890
Beryllium	160	75	0.28	0.36	0.28	0.32	0.36	<0.11	0.38	0.16
Cadmium	70	100	0.34	<0.30	0.81	<0.29	<0.31	0.38	<0.34	0.62
Chromium	0.29*	2,500	<b>48</b>	<b>110</b>	<b>160</b>	<b>54</b>	<b>140</b>	<b>830</b>	<b>140</b>	<b>51</b>
Cobalt	23	8,000	15	<b>26</b>	<b>39</b>	11	<b>61</b>	<b>93</b>	<b>49</b>	7.1
Copper	3,100	2,500	140	16	130	100	15	20	30	110
Lead	400	1,000	180	4.9	320	170	6.7	24	19	<b>4,200</b>
Mercury	1.0	20	0.37	0.15	0.77	<b>1.3</b>	<0.020	0.11	0.2	0.18
Molybdenum	390	3,500	<0.28	<0.30	0.63	<0.29	<0.31	<0.28	<0.34	11
Nickel	1,500	2,000	140	740	640	72	760	<b>2,300</b>	540	56
Selenium	390	100	<0.57	<0.60	<0.51	<0.57	<0.63	<0.56	<0.68	<0.51
Silver	390	500	<0.28	<0.30	<0.26	<0.29	<0.31	<0.28	<0.34	<0.26
Thallium	0.78	700	<0.57	<0.60	<0.51	<0.57	<0.63	<0.56	<0.68	<0.51
Vanadium	390	2,400	47	41	45	34	47	32	45	27
Zinc	23,000	5,000	180	36	310	340	43	46	88	420

Metals by EPA Method 6010B; Mercury by EPA Method 7471A

mg/kg = milligrams per kilogram

<# = Analyte concentration is below stated reporting limit.

RSL<sup>1</sup> = EPA Region 9 Regional Screening Levels for residential soil (May 2013) [mg/kg]

TTL<sup>2</sup> = Section 66261.24(a)(2)(A) of Title 22 of the California Code of Regulations (Maher Ordinance)

**Bold and Underlined** = Analytical result meets or exceeds screening levels

\* = There is no RSL for total chromium. The RSL Cr 6+ is provided for comparison only.

**Table 6-1**  
**Summary of Metals Analytical Data**  
**900 Innes Avenue Site**  
 (reported in mg/kg)

Analyte	RSLs <sup>1</sup>	TTL <sup>2</sup>	IA-13D	IA-14A	IA-14B	IA-15	IA-16	IA-17	IA-18	IA-19D
Antimony	31	500	20	1.6	11	<0.52	<0.52	6.9	<0.57	4.5
Arsenic	0.39	500	<b>42</b>	<b>16</b>	<b>21</b>	<b>3.9</b>	<b>3.4</b>	<b>52</b>	<b>6.0</b>	<b>33</b>
Barium	15,000	10,000	480	990	1,400	76	88	350	98	410
Beryllium	160	75	<0.21	0.34	0.24	0.44	0.22	0.27	0.52	0.33
Cadmium	70	100	2.4	1.6	1.9	<0.26	<0.26	1.4	<0.29	2.6
Chromium	0.29*	2,500	<b>110</b>	<b>65</b>	<b>140</b>	<b>170</b>	<b>51</b>	<b>110</b>	<b>85</b>	<b>470</b>
Cobalt	23	8,000	21	<b>23</b>	<b>28</b>	<b>25</b>	7.5	20	22	<b>46</b>
Copper	3,100	2,500	<b>3,100</b>	1,100	2,600	95	31	2,600	79	550
Lead	400	1,000	<b>1,700</b>	<b>1,000</b>	<b>3,300</b>	69	150	<b>800</b>	80	<b>2,600</b>
Mercury	1.0	20	<b>29</b>	<b>5.1</b>	0.65	0.39	0.41	<b>19</b>	0.090	<b>1.4</b>
Molybdenum	390	3,500	13	0.59	<0.28	<0.26	<0.26	9	<0.29	<0.74
Nickel	1,500	2,000	110	70	390	400	37	160	240	670
Selenium	390	100	<1.0	0.94	<0.56	1.8	<0.52	3.2	1.4	<1.5
Silver	390	500	<0.52	<0.28	<0.28	<0.26	<0.26	<0.29	<0.29	<0.74
Thallium	0.78	700	<1.0	<0.56	<0.56	<0.52	<0.52	<0.58	<0.57	<1.5
Vanadium	390	2,400	54	57	36	50	51	43	40	97
Zinc	23,000	5,000	4,000	810	1,100	120	120	1,400	150	2,000

Metals by EPA Method 6010B; Mercury by EPA Method 7471A

mg/kg = milligrams per kilogram

<# = Analyte concentration is below stated reporting limit.

RSL<sup>1</sup> = EPA Region 9 Regional Screening Levels for residential soil (May 2013) [mg/kg]

TTL<sup>2</sup> = Section 66261.24(a)(2)(A) of Title 22 of the California Code of Regulations (Maher Ordinance)

**Bold and Underlined** = Analytical result meets or exceeds screening levels

\* = There is no RSL for total chromium. The RSL Cr 6+ is provided for comparison only.

**Table 6-1**  
**Summary of Metals Analytical Data**  
**900 Innes Avenue Site**  
 (reported in mg/kg)

Analyte	RSLs <sup>1</sup>	TTL <sup>2</sup>	IA-20	IA-21D	IA-22	IA-23D	IA-24A	IA-24B	IA-25D	IA-26
Antimony	31	500	<0.54	<1.6	1.0	<0.71	<0.51	<0.58	<1.2	<0.59
Arsenic	0.39	500	<b>5.3</b>	<b>9.8</b>	<b>13</b>	<b>5.7</b>	<b>7.1</b>	<b>3.8</b>	<b>10</b>	<b>3.0</b>
Barium	15,000	10,000	140	510	140	170	66	130	70	150
Beryllium	160	75	0.32	0.39	0.37	0.29	0.74	0.47	0.67	0.51
Cadmium	70	100	0.53	<0.82	1.1	1.2	<0.26	<0.29	<0.62	<0.29
Chromium	0.29*	2,500	<b>59</b>	<b>1,500</b>	<b>160</b>	<b>90</b>	<b>44</b>	<b>110</b>	<b>120</b>	<b>280</b>
Cobalt	23	8,000	12	150	<b>31</b>	17	14	20	17	<b>45</b>
Copper	3,100	2,500	81	440	870	270	51	72	160	36
Lead	400	1,000	100	<b>600</b>	140	64	19	97	80	7.6
Mercury	1.0	20	0.18	0.41	0.19	0.27	0.11	0.18	0.68	0.036
Molybdenum	390	3,500	1.4	<0.82	46	3.6	<0.26	<0.29	1.9	<0.29
Nickel	1,500	2,000	88	<b>3,100</b>	300	110	64	250	130	860
Selenium	390	100	<0.54	5.5	2.9	1.0	<0.51	<0.58	<1.2	0.73
Silver	390	500	<0.27	<0.82	<0.27	<0.35	<0.26	<0.29	<0.62	<0.29
Thallium	0.78	700	<0.54	<1.6	<0.55	<0.71	<0.51	<0.58	<1.2	<0.59
Vanadium	390	2,400	47	120	50	58	49	48	78	83
Zinc	23,000	5,000	210	520	430	160	68	130	200	56

Metals by EPA Method 6010B; Mercury by EPA Method 7471A

mg/kg = milligrams per kilogram

<# = Analyte concentration is below stated reporting limit.

RSL<sup>1</sup> = EPA Region 9 Regional Screening Levels for residential soil (May 2013) [mg/kg]

TTL<sup>2</sup> = Section 66261.24(a)(2)(A) of Title 22 of the California Code of Regulations (Maher Ordinance)

**Bold and Underlined** = Analytical result meets or exceeds screening levels

\* = There is no RSL for total chromium. The RSL Cr 6+ is provided for comparison only.

**Table 6-1**  
**Summary of Metals Analytical Data**  
**900 Innes Avenue Site**  
 (reported in mg/kg)

Analyte	RSLs <sup>1</sup>	TTL <sup>2</sup>	IA-27	IA-28	IA-29A	IA-29B	IA-30	IA-31	IA-32D	IA-33A
Antimony	31	500	<0.51	4.9	<0.48	<0.53	<0.51	<0.46	<1.1	<0.54
Arsenic	0.39	500	<b>13</b>	<b>55</b>	<b>3.4</b>	<b>2.8</b>	<b>2.8</b>	<b>7.4</b>	<b>11</b>	<b>1.4</b>
Barium	15,000	10,000	200	260	110	130	82	140	69	81
Beryllium	160	75	0.40	0.25	0.42	0.23	0.17	0.29	0.62	0.22
Cadmium	70	100	0.89	1.9	<0.24	0.51	0.28	0.78	<0.57	<0.27
Chromium	0.29*	2,500	<b>170</b>	<b>210</b>	<b>180</b>	<b>41</b>	<b>76</b>	<b>110</b>	<b>130</b>	<b>130</b>
Cobalt	23	8,000	<b>29</b>	<b>23</b>	<b>35</b>	8.1	10	17	16	<b>28</b>
Copper	3,100	2,500	350	680	32	31	58	260	170	25
Lead	400	1,000	230	<b>500</b>	11	200	100	150	88	18
Mercury	1.0	20	0.28	0.46	0.026	<b>1.3</b>	0.16	<b>1.0</b>	0.75	0.033
Molybdenum	390	3,500	11	33	<0.24	<0.27	2.8	3.9	<0.57	<0.27
Nickel	1,500	2,000	340	190	660	31	92	140	150	460
Selenium	390	100	2.0	4.5	0.89	<0.53	<0.51	1.5	<1.1	1.3
Silver	390	500	<0.25	<0.25	<0.24	<0.27	<0.26	<0.23	<0.57	<0.27
Thallium	0.78	700	<0.51	<0.51	<0.48	<0.53	<0.51	<0.46	<1.1	<0.54
Vanadium	390	2,400	57	45	52	51	36	48	74	60
Zinc	23,000	5,000	470	1,100	46	290	150	220	200	42

Metals by EPA Method 6010B; Mercury by EPA Method 7471A

mg/kg = milligrams per kilogram

<# = Analyte concentration is below stated reporting limit.

RSL<sup>1</sup> = EPA Region 9 Regional Screening Levels for residential soil (May 2013) [mg/kg]

TTL<sup>2</sup> = Section 66261.24(a)(2)(A) of Title 22 of the California Code of Regulations (Maher Ordinance)

**Bold and Underlined** = Analytical result meets or exceeds screening levels

\* = There is no RSL for total chromium. The RSL Cr 6+ is provided for comparison only.

**Table 6-1**  
**Summary of Metals Analytical Data**  
**900 Innes Avenue Site**  
 (reported in mg/kg)

Analyte	RSLs <sup>1</sup>	TTL <sup>2</sup>	IA-33B	IA-34	IA-35B	IA-37	IA-38D	IA-39B	IA-40
Antimony	31	500	2.9	<0.56	<0.55	2.0	<0.77	2.0	<10
Arsenic	0.39	500	<b>3.3</b>	<b>3.9</b>	<b>3.1</b>	<b>9.0</b>	<b>7.0</b>	<b>5.9</b>	<5.0
Barium	15,000	10,000	190	170	76	740	88	160	<5.0
Beryllium	160	75	0.31	0.28	0.35	0.29	0.32	0.43	<2.0
Cadmium	70	100	1.8	0.87	<0.28	5.7	<0.39	0.32	<5.0
Chromium	0.29*	2,500	<b>70</b>	<b>120</b>	<b>110</b>	<b>190</b>	<b>150</b>	<b>150</b>	<5.0
Cobalt	23	8,000	13	<b>34</b>	<b>34</b>	<b>40</b>	17	<b>30</b>	<5.0
Copper	3,100	2,500	96	140	14	310	230	93	<5.0
Lead	400	1,000	<b>500</b>	<b>400</b>	6.4	<b>1,900</b>	120	140	<5.0
Mercury	1.0	20	<b>2.0</b>	0.92	0.043	<b>13</b>	0.51	0.21	<0.20
Molybdenum	390	3,500	<0.28	0.87	<0.28	0.51	1.6	<0.29	<5.0
Nickel	1,500	2,000	140	480	740	670	190	350	<5.0
Selenium	390	100	<0.56	0.99	<0.55	<0.54	<0.77	1.4	<10
Silver	390	500	<0.28	<0.28	<0.28	<0.27	<0.39	<0.29	<5.0
Thallium	0.78	700	<0.56	<0.56	<0.55	<0.54	<0.77	<0.57	<10
Vanadium	390	2,400	48	43	57	48	55	56	<5.0
Zinc	23,000	5,000	520	320	39	1,000	150	190	<20

Metals by EPA Method 6010B; Mercury by EPA Method 7471A

mg/kg = milligrams per kilogram

<# = Analyte concentration is below stated reporting limit.

RSL<sup>1</sup> = EPA Region 9 Regional Screening Levels for residential soil (May 2013) [mg/kg]

TTL<sup>2</sup> = Section 66261.24(a)(2)(A) of Title 22 of the California Code of Regulations (Maher Ordinance)

**Bold and Underlined** = Analytical result meets or exceeds screening levels

\* = There is no RSL for total chromium. The RSL Cr 6+ is provided for comparison only.

**Table 6-2**  
**Summary of Polynuclear Aromatic Hydrocarbons Analytical Data**  
**900 Innes Avenue Site**  
 (reported in µg/kg)

Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-01	IA-02A	IA-02B	IA-03	IA-04	IA-05	IA-06	IA-07
Acenaphthene	3,400,000	33,000,000	<1,700	<73	<74	<720	<210	<3,400	<71	<710
Anthracene	17,000,000	170,000,000	<1,700	<73	<74	<720	670	<3,400	<71	<710
Benz(a)anthracene	150	2,100	<1,700	<73	<74	<u>780</u>	<u>1,700</u>	<3,400	120	<710
Benz(o)(b)fluoranthene	150	2,100	<1,700	<73	<74	<u>820</u>	<u>1,900</u>	<3,400	<u>170</u>	<710
Benz(o)(a)pyrene	15	210	<1,700	<73	<74	<u>790</u>	<u>1,700</u>	<3,400	<u>120</u>	<710
Dibenz(a,h)anthracene	15	210	<1,700	<73	<74	<720	<u>260</u>	<3,400	<71	<710
Benz(o)(k)fluoranthene	1,500	21,000	<1,700	<73	<74	<720	540	<3,400	<71	<710
Chrysene	15,000	210,000	<1,700	<73	<74	820	1,800	<3,400	130	<710
Fluoranthene	2,300,000	22,000,000	<1,700	77	<74	1,000	2,600	<3,400	200	<710
Fluorene	2,300,000	22,000,000	<1,700	<73	<74	<720	<210	<3,400	<71	<710
Indeno(1,2,3-cd)pyrene	150	2,100	<1,700	<73	<74	<720	<u>790</u>	<3,400	<71	<710
Pyrene	1,700,000	17,000,000	<1,700	89	<74	1,400	3,000	<3,400	220	<710
Naphthalene	3,600	18,000	<1,700	<73	<74	<720	<210	<3,400	<71	<710
Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-08A	IA-08B	IA-09	IA-10A	IA-10B	IA-11A	IA-11B	IA-12
Acenaphthene	3,400,000	33,000,000	<7,000	<76	<960	<72	<77	<74	<80	<6,800
Anthracene	17,000,000	170,000,000	<7,000	<76	<960	<72	<77	<74	<80	<6,800
Benz(a)anthracene	150	2,100	<7,000	<76	<960	110	<77	<74	<80	<6,800
Benz(o)(b)fluoranthene	150	2,100	<7,000	<76	<960	130	<77	<74	<80	<6,800
Benz(o)(a)pyrene	15	210	<7,000	<76	<960	<u>120</u>	<77	<74	<80	<6,800
Dibenz(a,h)anthracene	15	210	<7,000	<76	<960	<72	<77	<74	<80	<6,800
Benz(o)(k)fluoranthene	1,500	21,000	<7,000	<76	<960	<72	<77	<74	<80	<6,800
Chrysene	15,000	210,000	<7,000	<76	<960	130	<77	<74	<80	<6,800
Fluoranthene	2,300,000	22,000,000	<7,000	<76	1,300	150	<77	<74	<80	<6,800
Fluorene	2,300,000	22,000,000	<7,000	<76	<960	<72	<77	<74	<80	<6,800
Indeno(1,2,3-cd)pyrene	150	2,100	<7,000	<76	<960	<72	<77	<74	<80	<6,800
Pyrene	1,700,000	17,000,000	<7,000	<76	1,400	220	<77	<74	93	<6,800
Naphthalene	3,600	18,000	<7,000	<76	<960	<72	<77	<74	<80	<6,800

Table 6-2  
 Summary of Polynuclear Aromatic Hydrocarbons Analytical Data  
 900 Innes Avenue Site  
 (reported in µg/kg)

Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-13D	IA-14A	IA-14B	IA-15	IA-16	IA-17	IA-18	IA-19D
Acenaphthene	3,400,000	33,000,000	<390	<440	<780	<3,600	<130	<720	<1,500	<360
Anthracene	17,000,000	170,000,000	450	790	3,200	<3,600	<130	870	<1,500	<360
Benz(a)anthracene	150	2,100	<b>650</b>	<b>2,200</b>	<b>8,700</b>	<3,600	<130	<b>2,000</b>	<1,500	<360
Benz(b)fluoranthene	150	2,100	<b>2,500</b>	<b>2,800</b>	<b>10,000</b>	<3,600	<b>180</b>	<b>2,400</b>	<1,500	<b>570</b>
Benz(o)pyrene	15	210	<b>1,500</b>	<b>3,000</b>	<b>9,300</b>	<3,600	<b>140</b>	<b>1,800</b>	<1,500	<b>440</b>
Dibenz(a,h)anthracene	15	210	<390	<b>500</b>	<b>1,300</b>	<3,600	<130	<720	<1,500	<360
Benz(o)k)fluoranthene	1,500	21,000	860	1,200	<b>3,500</b>	<3,600	<130	800	<1,500	<360
Chrysene	15,000	210,000	1,200	2,700	11,000	<3,600	<130	2,300	<1,500	<360
Fluoranthene	2,300,000	22,000,000	980	3,400	12,000	<3,600	180	4,500	<1,500	460
Fluorene	2,300,000	22,000,000	<390	<440	2,200	<3,600	<130	<720	<1,500	<360
Indeno(1,2,3-cd)pyrene	150	2,100	<b>610</b>	<b>1,600</b>	<b>3,900</b>	<3,600	<130	<b>1,200</b>	<1,500	<360
Pyrene	1,700,000	17,000,000	3,500	3,800	14,000	<3,600	230	4,400	<1,500	640
Naphthalene	3,600	18,000	<390	<440	1,200	<3,600	<130	<720	<1,500	<360

Polynuclear Aromatic Hydrocarbons by EPA Method 8270C SIM

µg/kg = milligrams per kilogram; <# = Analyte concentration is below stated reporting limit

RSLs<sup>1</sup> = EPA Region 9 Regional Screening Levels for residential soil (May 2013) [µg/kg]

RSLs<sup>2</sup> = EPA Region 9 Regional Screening Levels for industrial soil (May 2013) [µg/kg]

**Bold and Underlined** = Analytical result meets or exceeds screening levels

**Table 6-2**  
**Summary of Polynuclear Aromatic Hydrocarbons Analytical Data**  
**900 Innes Avenue Site**  
 (reported in µg/kg)

Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-20	IA-21D	IA-22	IA-23D	IA-24A	IA-24B	IA-25D	IA-26
Acenaphthene	3,400,000	33,000,000	<3,300	<200	<680	<890	<1,100	<1,500	<150	<3,900
Anthracene	17,000,000	170,000,000	<3,300	<200	<680	<890	<1,100	<1,500	<150	<3,900
Benz(a)anthracene	150	2,100	<3,300	<200	<680	<890	<1,100	<1,500	<150	<3,900
Benzo(b)fluoranthene	150	2,100	<3,300	<b>270</b>	<680	<890	<1,100	<1,500	<b>150</b>	<3,900
Benzo(a)pyrene	15	210	<3,300	<b>230</b>	<680	<890	<1,100	<1,500	<150	<3,900
Dibenz(a,h)anthracene	15	210	<3,300	<200	<680	<890	<1,100	<1,500	<150	<3,900
Benzo(k)fluoranthene	1,500	21,000	<3,300	<200	<680	<890	<1,100	<1,500	<150	<3,900
Chrysene	15,000	210,000	<3,300	<200	<680	<890	<1,100	<1,500	<150	<3,900
Fluoranthene	2,300,000	22,000,000	<3,300	220	760	<890	<1,100	<1,500	210	<3,900
Fluorene	2,300,000	22,000,000	<3,300	<200	<680	<890	<1,100	<1,500	<150	<3,900
Indeno(1,2,3-cd)pyrene	150	2,100	<3,300	<200	<680	<890	<1,100	<1,500	<150	<3,900
Pyrene	1,700,000	17,000,000	<3,300	380	750	<890	<1,100	<1,500	200	<3,900
Naphthalene	3,600	18,000	<3,300	<200	<680	<890	<1,100	<1,500	<150	<3,900
Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-27	IA-28	IA-29A	IA-29B	IA-30	IA-31	IA-32D	IA-33A
Acenaphthene	3,400,000	33,000,000	<1,700	4,600	<2,900	<1,400	<1,300	<530	<140	<18,000
Anthracene	17,000,000	170,000,000	<1,700	12,000	<2,900	<1,400	<1,300	<530	<140	<18,000
Benz(a)anthracene	150	2,100	<1,700	<b>40,000</b>	<2,900	<1,400	<b>1,500</b>	<530	<140	<18,000
Benzo(b)fluoranthene	150	2,100	<1,700	<b>50,000</b>	<2,900	<1,400	<b>1,700</b>	<530	<b>170</b>	<18,000
Benzo(a)pyrene	15	210	<1,700	<b>37,000</b>	<2,900	<1,400	<1,300	<530	<140	<18,000
Dibenz(a,h)anthracene	15	210	<1,700	<b>7,500</b>	<2,900	<1,400	<1,300	<530	<140	<18,000
Benzo(k)fluoranthene	1,500	21,000	<1,700	<b>21,000</b>	<2,900	<1,400	<1,300	<530	<140	<18,000
Chrysene	15,000	210,000	<1,700	<b>46,000</b>	<2,900	<1,400	1,900	<530	<140	<18,000
Fluoranthene	2,300,000	22,000,000	<1,700	67,000	<2,900	<1,400	3,500	<530	240	<18,000
Fluorene	2,300,000	22,000,000	<1,700	4,100	<2,900	<1,400	<1,300	<530	<140	<18,000
Indeno(1,2,3-cd)pyrene	150	2,100	<1,700	<b>23,000</b>	<2,900	<1,400	<1,300	<530	<140	<18,000
Pyrene	1,700,000	17,000,000	<1,700	62,000	<2,900	<1,400	3,100	<530	240	<18,000
Naphthalene	3,600	18,000	<1,700	<3,400	<2,900	<1,400	<1,300	<530	<140	<18,000

**Table 6-2**  
**Summary of Polynuclear Aromatic Hydrocarbons Analytical Data**  
**900 Innes Avenue Site**  
 (reported in µg/kg)

Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-33B	IA-34	IA-35B	IA-37	IA-38D	IA-39B	IA-40
Acenaphthene	3,400,000	33,000,000	<1,500	<480	<75	<210	<1,900	<1,500	<9.8
Anthracene	17,000,000	170,000,000	<1,500	830	<75	610	<1,900	<1,500	<9.8
Benz(a)anthracene	150	2,100	<1,500	<u>910</u>	<75	<u>1,900</u>	<1,900	<1,500	<9.8
Benzo(b)fluoranthene	150	2,100	<1,500	<u>1,000</u>	<75	<u>2,300</u>	<1,900	<1,500	<9.8
Benzo(a)pyrene	15	210	<1,500	<u>830</u>	<75	<u>1,900</u>	<1,900	<1,500	<9.8
Dibenz(a,h)anthracene	15	210	<1,500	<480	<75	<u>290</u>	<1,900	<1,500	<9.8
Benzo(k)fluoranthene	1,500	21,000	<1,500	<480	<75	610	<1,900	<1,500	<9.8
Chrysene	15,000	210,000	<1,500	940	<75	2,100	<1,900	<1,500	<9.8
Fluoranthene	2,300,000	22,000,000	<1,500	2,000	<75	3,100	<1,900	<1,500	<9.8
Fluorene	2,300,000	22,000,000	<1,500	<480	<75	<210	<1,900	<1,500	<9.8
Indeno(1,2,3-cd)pyrene	150	2,100	<1,500	<480	<75	<u>960</u>	<1,900	<1,500	<9.8
Pyrene	1,700,000	17,000,000	<1,500	2,200	<75	3,700	<1,900	<1,500	<9.8
Naphthalene	3,600	18,000	<1,500	<480	<75	<210	<1,900	<1,500	<9.8

Polynuclear Aromatic Hydrocarbons by EPA Method 8270C SIM

µg/kg = milligrams per kilogram; <# = Analyte concentration is below stated reporting limit

RSLs<sup>1</sup> = EPA Region 9 Regional Screening Levels for residential soil (May 2013) [µg/kg]

RSLs<sup>2</sup> = EPA Region 9 Regional Screening Levels for industrial soil (May 2013) [µg/kg]

**Bold and Underlined** = Analytical result meets or exceeds screening levels

**Table 6-3**  
**Summary of Hydrocarbons and PCBs Analytical Data**  
**900 Innes Avenue Site**  
(Polychlorinated biphenyls reported in µg/kg, Hydrocarbons reported in mg/kg)

Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-01	IA-02A	IA-02B	IA-03	IA-04	IA-05	IA-06
<b>Extractable Fuel Hydrocarbons</b>									
Gasoline (C7-C12)	100	--	NA	<0.16	<0.19	NA	NA	<0.29	<0.19
Diesel Range Organics (C10-C24)	100	--	<b>130</b>	5.9	1.3	<b>100</b>	96	<b>240</b>	20
Motor Oil Range Organics (C24-C36)	500	--	410	17	<5.5	380	230	<b>720</b>	58
<b>Polychlorinated Biphenyls (PCBs)</b>									
Aroclor-1016	390	3,700	NA	NA	NA	<13	NA	NA	<13
Aroclor-1221	140	540	NA	NA	NA	<26	NA	NA	<26
Aroclor-1232	140	540	NA	NA	NA	<13	NA	NA	<13
Aroclor-1242	220	740	NA	NA	NA	<13	NA	NA	<13
Aroclor-1248	220	740	NA	NA	NA	<13	NA	NA	<13
Aroclor-1254	110	740	NA	NA	NA	<b>140</b>	NA	NA	<13
Aroclor-1260	220	740	NA	NA	NA	130	NA	NA	<13
Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-07	IA-08A	IA-08B	IA-09	IA-10A	IA-10B	IA-11A
<b>Extractable Fuel Hydrocarbons</b>									
Gasoline (C7-C12)	100	--	NA	<0.22	<0.17	NA	NA	NA	NA
Diesel Range Organics (C10-C24)	100	--	41	22	1.7	67	<b>180</b>	1.2	25
Motor Oil Range Organics (C24-C36)	500	--	160	190	8.7	350	330	<5.8	99
<b>Polychlorinated Biphenyls (PCBs)</b>									
Aroclor-1016	390	3,700	<13	<44	<14	NA	<13	<14	<13
Aroclor-1221	140	540	<25	<87	<27	NA	<26	<28	<27
Aroclor-1232	140	540	<13	<44	<14	NA	<13	<14	<13
Aroclor-1242	220	740	<13	<44	<14	NA	<13	<14	<13
Aroclor-1248	220	740	<13	<44	<14	NA	<13	<14	<13
Aroclor-1254	110	740	22	<44	<14	NA	<13	<14	<13
Aroclor-1260	220	740	<13	<44	<14	NA	76	<14	<13
Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-11B	IA-12	IA-13D	IA-14A	IA-14B	IA-15	IA-16
<b>Extractable Fuel Hydrocarbons</b>									
Gasoline (C7-C12)	100	--	NA	NA	NA	1.8	1.2	0.49	NA
Diesel Range Organics (C10-C24)	100	--	5.9	<b>2,900</b>	<b>470</b>	<b>410</b>	<b>570</b>	<b>1,000</b>	14
Motor Oil Range Organics (C24-C36)	500	--	8.8	<b>15,000</b>	<b>980</b>	<b>510</b>	<b>610</b>	<b>510</b>	150
<b>Polychlorinated Biphenyls (PCBs)</b>									
Aroclor-1016	390	3,700	<15	<170	NA	<13	<14	<13	<12
Aroclor-1221	140	540	<29	<340	NA	<26	<28	<26	<24
Aroclor-1232	140	540	<15	<170	NA	<13	<14	<13	<12
Aroclor-1242	220	740	<15	<170	NA	<13	<14	<13	<12
Aroclor-1248	220	740	<15	<170	NA	<13	<14	<13	<12
Aroclor-1254	110	740	<15	<b>250</b>	NA	70	<14	<13	<12
Aroclor-1260	220	740	<15	<170	<b>2,700</b>	97	<14	26	<12

**Table 6-3**  
**Summary of Hydrocarbons and PCBs Analytical Data**  
**900 Innes Avenue Site**  
(Polychlorinated biphenyls reported in µg/kg, Hydrocarbons reported in mg/kg)

Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-17	IA-18	IA-19D	IA-20	IA-21D	IA-22	IA-23D
<b>Extractable Fuel Hydrocarbons</b>									
Gasoline (C7-C12)	100	--	NA	NA	NA	<0.19	NA	NA	NA
Diesel Range Organics (C10-C24)	100	--	<b>240</b>	9.8	86	93	40	46	<b>100</b>
Motor Oil Range Organics (C24-C36)	500	--	390	70	250	<b>650</b>	110	260	<b>640</b>
<b>Polychlorinated Biphenyls (PCBs)</b>									
Aroclor-1016	390	3,700	<90	<13	NA	<9.7	NA	<9.7	<16
Aroclor-1221	140	540	<180	<27	NA	<19	NA	<19	<32
Aroclor-1232	140	540	<90	<13	NA	<9.7	NA	<9.7	<16
Aroclor-1242	220	740	<90	<13	NA	<9.7	NA	<9.7	<16
Aroclor-1248	220	740	<90	<13	NA	<9.7	NA	<9.7	<16
Aroclor-1254	110	740	<b>5,200</b>	<13	<b>300</b>	<9.7	NA	<b>120</b>	79
Aroclor-1260	220	740	<b>860</b>	<13	<b>300</b>	12	130	29	45
Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-24A	IA-24B	IA-25D	IA-26	IA-27	IA-28	IA-29A
<b>Extractable Fuel Hydrocarbons</b>									
Gasoline (C7-C12)	100	--	NA	NA	NA	NA	NA	NA	NA
Diesel Range Organics (C10-C24)	100	--	<b>120</b>	<b>140</b>	<b>150</b>	83	52	<b>580</b>	<b>320</b>
Motor Oil Range Organics (C24-C36)	500	--	310	320	300	<b>570</b>	440	<b>1,300</b>	<b>1,700</b>
<b>Polychlorinated Biphenyls (PCBs)</b>									
Aroclor-1016	390	3,700	<13	<13	<21	<11	<9.6	<9.6	<10
Aroclor-1221	140	540	<25	<26	<42	<23	<19	<19	<20
Aroclor-1232	140	540	<13	<13	<21	<11	<9.6	<9.6	<10
Aroclor-1242	220	740	<13	<13	<21	<11	<9.6	<9.6	<10
Aroclor-1248	220	740	<13	<13	<21	<11	<9.6	<9.6	<10
Aroclor-1254	110	740	<13	<13	<21	<11	<b>120</b>	<9.6	<10
Aroclor-1260	220	740	18	<13	140	<11	39	36	<10
Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-29B	IA-30	IA-31	IA-32D	IA-33A	IA-33B	IA-34
<b>Extractable Fuel Hydrocarbons</b>									
Gasoline (C7-C12)	100	--	NA	1.8	NA	NA	<0.18	<0.17	NA
Diesel Range Organics (C10-C24)	100	--	<b>120</b>	69	28	<b>140</b>	<b>260</b>	47	<b>110</b>
Motor Oil Range Organics (C24-C36)	500	--	<b>800</b>	380	240	320	<b>1,900</b>	400	450
<b>Polychlorinated Biphenyls (PCBs)</b>									
Aroclor-1016	390	3,700	<10	<33	<9.5	<20	<10	<11	NA
Aroclor-1221	140	540	<21	<66	<19	<41	<20	<21	NA
Aroclor-1232	140	540	<10	<33	<9.5	<20	<10	<11	NA
Aroclor-1242	220	740	<10	<33	<9.5	<20	<10	<11	NA
Aroclor-1248	220	740	<10	<33	<9.5	<20	<10	<11	NA
Aroclor-1254	110	740	<10	<b>270</b>	97	<20	<10	<b>430</b>	NA
Aroclor-1260	220	740	24	<b>730</b>	38	<b>220</b>	<10	32	NA

**Table 6-3**  
**Summary of Hydrocarbons and PCBs Analytical Data**  
**900 Innes Avenue Site**  
(Polychlorinated biphenyls reported in µg/kg, Hydrocarbons reported in mg/kg)

Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-35B	IA-37	IA-38D	IA-39B	IA-40
<b>Extractable Fuel Hydrocarbons</b>							
Gasoline (C7-C12)	100	--	<0.16	NA	NA	NA	<50
Diesel Range Organics (C10-C24)	100	--	1.7	<b><u>110</u></b>	67	<b><u>180</u></b>	<53
Motor Oil Range Organics (C24-C36)	500	--	5.9	180	420	430	<320
<b>Polychlorinated Biphenyls (PCBs)</b>							
Aroclor-1016	390	3,700	NA	NA	<14	<13	<0.49
Aroclor-1221	140	540	NA	NA	<28	<27	<0.98
Aroclor-1232	140	540	NA	NA	<14	<13	<0.49
Aroclor-1242	220	740	NA	NA	<14	<13	<0.49
Aroclor-1248	220	740	NA	NA	<14	<13	<0.49
Aroclor-1254	110	740	NA	NA	<14	<13	<0.49
Aroclor-1260	220	740	NA	NA	40	<13	<0.49

Extractable Fuel Hydrocarbons by EPA Method 8015B; Polychlorinated Biphenyls by EPA Method 8082

**Bold and Underlined** = Analytical result meets or exceeds screening levels

µg/kg = micrograms per kilogram (PCBs), mg/kg = milligrams per kilogram (Hydrocarbons)

<# = Analyte concentration is below stated reporting limit; NA = not analyzed

RSLs<sup>1</sup> = EPA Region 9 Regional Screening Levels for residential soil (May 2013) [µg/kg]

San Francisco Bay RWQCB Residential Land Use Standards from Table A (May 2013) - Hydrocarbons [mg/kg]

RSLs<sup>2</sup> = EPA Region 9 Regional Screening Levels for industrial soil (May 2013) [µg/kg]

**Table 6-4**  
**Summary of VOCs, Maher Ordinance Analytes, Organotins, and Asbestos Data**  
**900 Innes Avenue Site**

(VOCs and Organotins reported in µg/kg, Maher Ordinance Analytes reported in mg/kg)

Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-08A	IA-08B	IA-10A	IA-10B	IA-14A	IA-14B	IA-29A	IA-40
<b>Volatile Organic Compounds (VOCs)</b>										
Acetone	6,100,000	63,000,000	<16	<18	<16	<18	<1,200	100	<20	--
Carbon Disulfide	82,000	370,000	<4.0	<4.4	<4.1	<4.5	7.2	<5.6	<5.0	--
2-Butanone	2,800,000	20,000,000	<8.0	<8.8	<8.2	<8.9	41	40	<9.9	--
1,2,4-Trimethylbenzene	6,200	26,000	<4.0	<4.4	<4.1	<4.5	5.5	<5.6	<5.0	--
para-Isopropyl Toluene	--	--	<4.0	<4.4	<4.1	<4.5	23	19	<5.0	--
Naphthalene	3,600	18,000	<4.0	<4.4	<4.1	<4.5	170	140	<5.0	--

Analyte	RSLs <sup>1</sup>	TTLC <sup>3</sup>	IA-08A	IA-08B	IA-10A	IA-10B	IA-14A	IA-14B	IA-29A	IA-40
<b>Maher Ordinance (Fluoride, Hexavalent Chromium, Total Cyanide, pH)</b>										
Fluoride	310	18,000	1.1	<1.1	<5.4	<1.2	2.0	<1.2	1.8	<0.10
Total Cyanide	2.2	14	<1.1	<1.1	<1.1	<1.2	1.2	1.5	<1.1	<0.01
Hexavalent Chromium	0.29	500	<0.42	<0.46	<0.43	<0.47	<0.44	<0.47	<0.43	<0.01
pH	--	--	7.7	7.2	8.2	7.4	11.4	8.0	7.8	4.8

Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-13D	IA-14A	IA-16	IA-17	IA-19D
<b>Organotins</b>							
Dibutyltin	1,800	18,000	370	24	17	690	37
Monobutyltin	1,800	18,000	35	22	6.4	330	7.5
Tributyltin	1,800	18,000	96	5.4	3.4	49	7.7
Analyte	RSLs <sup>1</sup>	RSLs <sup>2</sup>	IA-21D	IA-23D	IA-25D	IA-32D	IA-38D
Dibutyltin	1,800	18,000	12	89	14	37	48
Monobutyltin	1,800	18,000	<3.0	12	<3.0	<3.0	5.3
Tributyltin	1,800	18,000	5.9	13	4.3	5.5	7.3

Type	TTLC <sup>3</sup>	IA-04	IA-06	IA-07	IA-08A	IA-09	IA-11A
<b>Asbestos (percent)</b>							
Chrysotile	1.0	<0.25	ND	ND	<0.25	<0.25	0.50
Amosite	1.0	ND	ND	ND	ND	ND	ND
Crocidolite	1.0	ND	ND	ND	ND	ND	ND
Tremolite	1.0	ND	ND	ND	ND	ND	ND
Anthophyllite	1.0	ND	ND	ND	ND	ND	ND
Actinolite	1.0	ND	ND	ND	ND	ND	ND
Type	TTLC <sup>3</sup>	IA-12	IA-15	IA-27	IA-34	IA-37	
Chrysotile	1.0	ND	<0.25	<0.25	<0.25	<0.25	
Amosite	1.0	ND	ND	ND	ND	ND	
Crocidolite	1.0	ND	ND	ND	ND	ND	
Tremolite	1.0	ND	ND	ND	ND	ND	
Anthophyllite	1.0	ND	ND	ND	ND	ND	
Actinolite	1.0	ND	ND	ND	ND	ND	

Volatile Organics by EPA Method 8260B; Organotins by EPA Method 3550B; Asbestos by PLM CARB 435 Method

**Bold and Underlined** = Analytical result meets or exceeds screening levels

µg/kg = micrograms per kilogram

<# = Analyte concentration is below stated reporting limit; ND = not detected

RSLs<sup>1</sup> = EPA Region 9 Regional Screening Levels for residential soil (May 2013) [µg/kg]

RSLs<sup>2</sup> = EPA Region 9 Regional Screening Levels for industrial soil (May 2013) [µg/kg]

TTLC<sup>3</sup> = Section 66261.24(a)(2)(A) of Title 22 of the California Code of Regulations (Maher Ordinance)

**FIGURES:**

**Figure 2-1 through Figure 6-4**



**SITE LOCATION MAP**

900 Innes Avenue Site  
 Targeted Brownfields Assessment  
 San Francisco, California

**FIGURE 2-1**





# SITE LAYOUT MAP

900 Innes Ave Site  
Targeted Brownfields Assessment  
San Francisco, California



FIGURE  
2-2

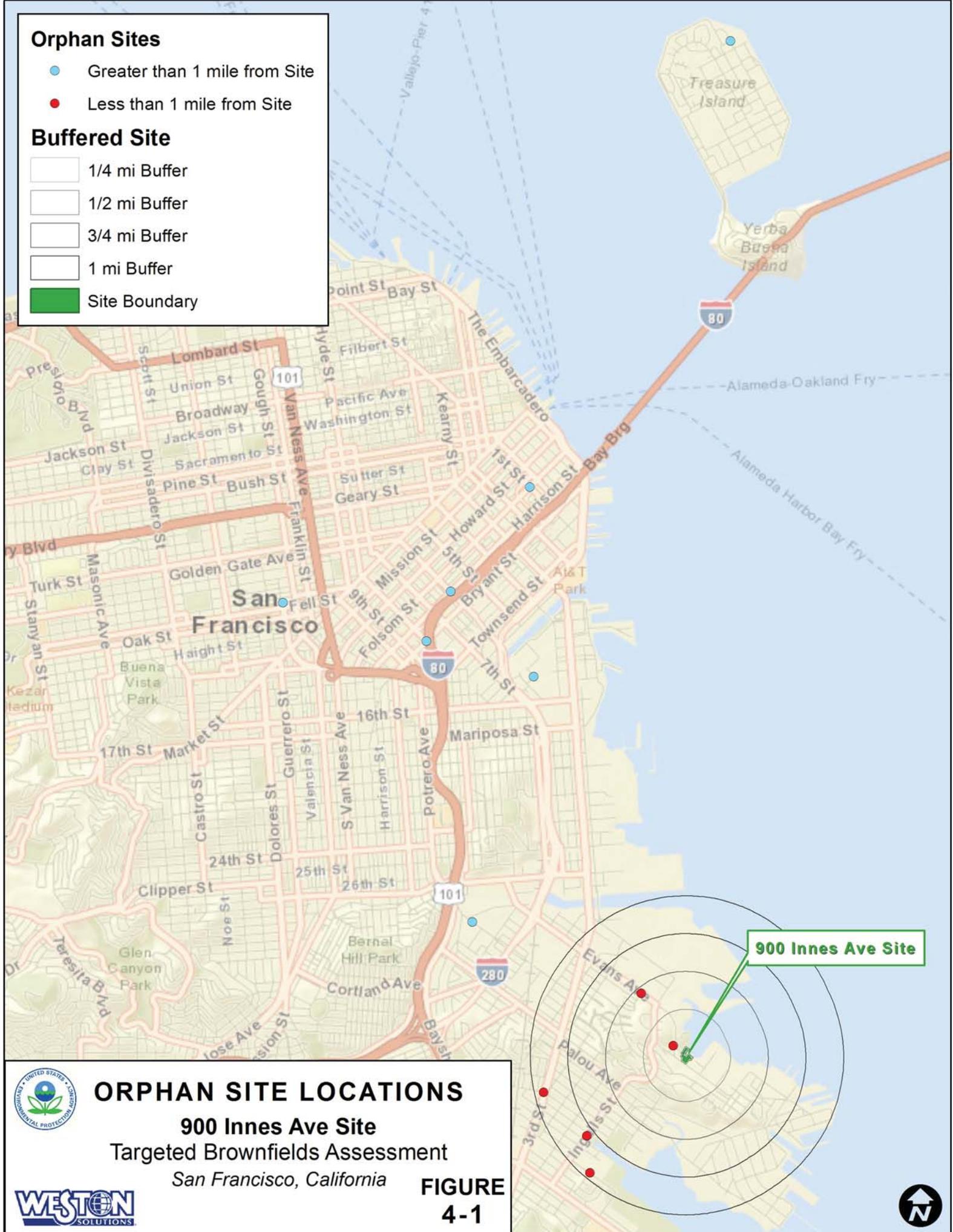


### Orphan Sites

- Greater than 1 mile from Site
- Less than 1 mile from Site

### Buffered Site

- 1/4 mi Buffer
- 1/2 mi Buffer
- 3/4 mi Buffer
- 1 mi Buffer
- Site Boundary



## ORPHAN SITE LOCATIONS

### 900 Innes Ave Site

Targeted Brownfields Assessment

San Francisco, California

FIGURE 4-1





# SAMPLE LOCATION MAP

## 900 Innes Ave Site

### Targeted Brownfields Assessment

San Francisco, California



# FIGURE 5-1



*Italicized samples* indicate additional testing as per Maher Ordinance (Article 22A of the SF Health Code, Article 20 of the Public Works Code, and Section 106A.3.2.4 of the SF Building Code)

### Sampling Locations

- Sediment Sample
- Soil Sample (Surface)
- Soil Sample (Subsurface)
- Site Boundary





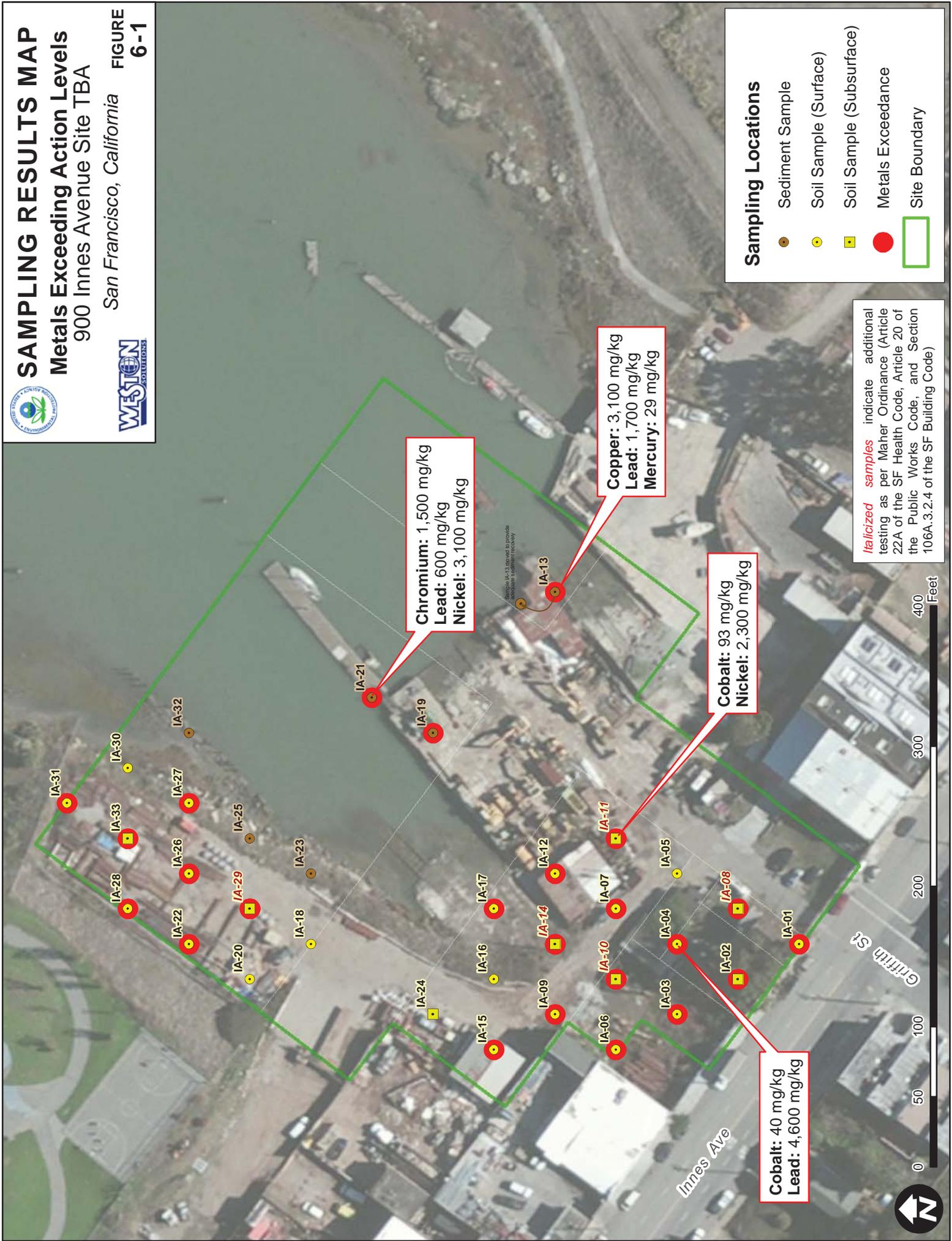
# SAMPLING RESULTS MAP

## Metals Exceeding Action Levels

900 Innes Avenue Site TBA



San Francisco, California  
FIGURE 6-1



# SAMPLING RESULTS MAP

## PAHs Exceeding Action Levels

### 900 Innes Avenue Site TBA

San Francisco, California **FIGURE 6-2**



### Sampling Locations

- Sediment Sample
- Soil Sample (Surface)
- Soil Sample (Subsurface)
- PAHs Exceedance
- Site Boundary

*Italicized samples* indicate additional testing as per Maher Ordinance (Article 22A of the SF Health Code, Article 20 of the Public Works Code, and Section 106A.3.2.4 of the SF Building Code)

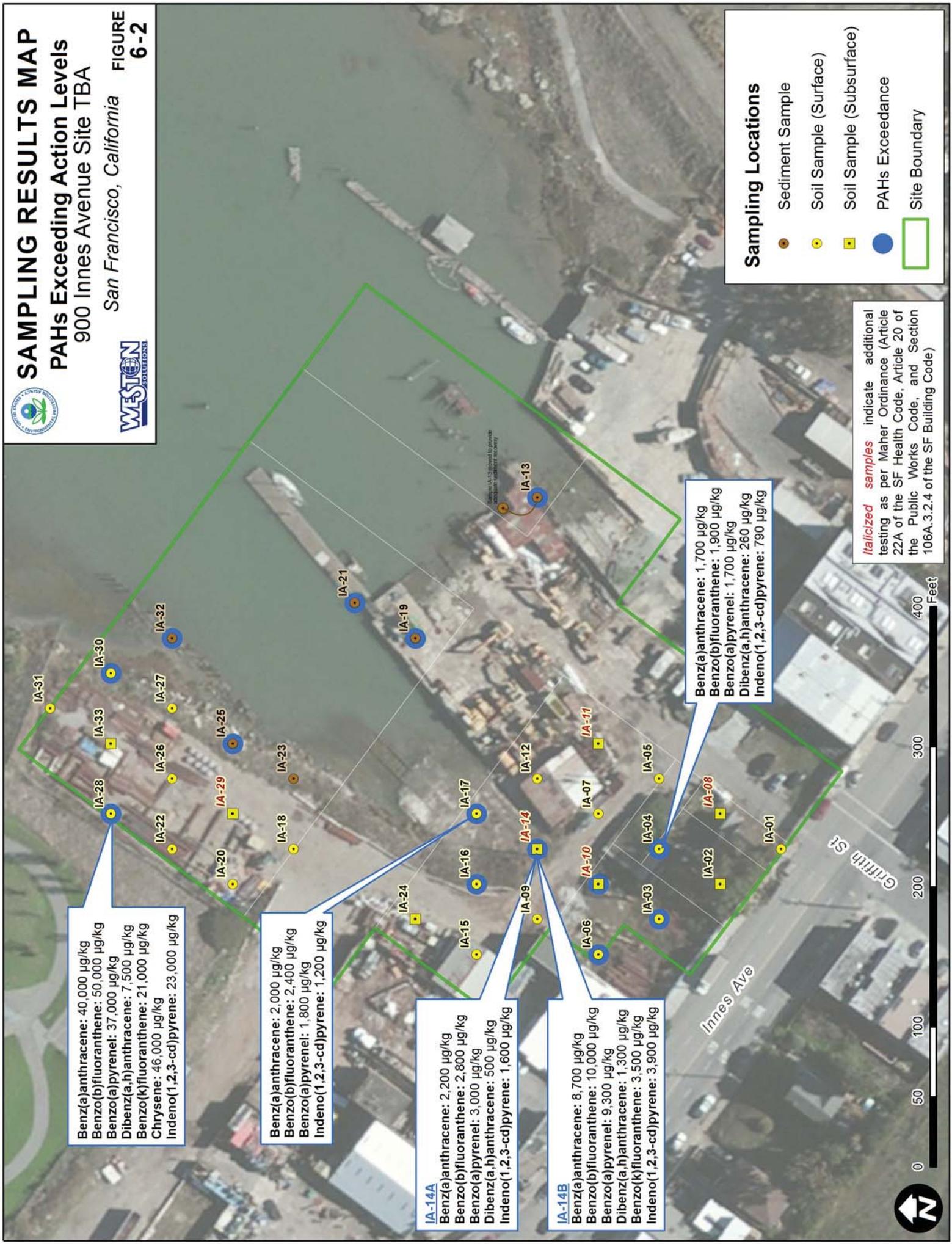
**IA-28**  
 Benz(a)anthracene: 40,000 µg/kg  
 Benzo(b)fluoranthene: 50,000 µg/kg  
 Benzo(a)pyrene: 37,000 µg/kg  
 Dibenzo(a,h)anthracene: 7,500 µg/kg  
 Benzo(k)fluoranthene: 21,000 µg/kg  
 Chrysene: 46,000 µg/kg  
 Indeno(1,2,3-cd)pyrene: 23,000 µg/kg

**IA-18**  
 Benz(a)anthracene: 2,000 µg/kg  
 Benzo(b)fluoranthene: 2,400 µg/kg  
 Benzo(a)pyrene: 1,800 µg/kg  
 Indeno(1,2,3-cd)pyrene: 1,200 µg/kg

**IA-14A**  
 Benz(a)anthracene: 2,200 µg/kg  
 Benzo(b)fluoranthene: 2,800 µg/kg  
 Benzo(a)pyrene: 3,000 µg/kg  
 Dibenzo(a,h)anthracene: 500 µg/kg  
 Indeno(1,2,3-cd)pyrene: 1,600 µg/kg

**IA-14B**  
 Benz(a)anthracene: 8,700 µg/kg  
 Benzo(b)fluoranthene: 10,000 µg/kg  
 Benzo(a)pyrene: 9,300 µg/kg  
 Dibenzo(a,h)anthracene: 1,300 µg/kg  
 Benzo(k)fluoranthene: 3,500 µg/kg  
 Indeno(1,2,3-cd)pyrene: 3,900 µg/kg

**IA-04**  
 Benz(a)anthracene: 1,700 µg/kg  
 Benzo(b)fluoranthene: 1,900 µg/kg  
 Benzo(a)pyrene: 1,700 µg/kg  
 Dibenzo(a,h)anthracene: 260 µg/kg  
 Indeno(1,2,3-cd)pyrene: 790 µg/kg





# SAMPLING RESULTS MAP

## PCBs Exceeding Action Levels

900 Innes Avenue Site TBA

San Francisco, California



FIGURE 6-3

**IA-33B**  
Aroclor-1254: 430 µg/kg

Aroclor-1254: 270 µg/kg  
Aroclor-1260: 730 µg/kg

Aroclor-1254: 5,200 µg/kg  
Aroclor-1260: 860 µg/kg

Aroclor-1260: 2,700 µg/kg

Location IA-13 shown to promote awareness of asbestos recovery

### Sampling Locations

- Sediment Sample
- Soil Sample (Surface)
- Soil Sample (Subsurface)
- PCBs Exceedance
- Site Boundary

*Italicized samples* indicate additional testing as per Maher Ordinance (Article 22A of the SF Health Code, Article 20 of the Public Works Code, and Section 106A.3.2.4 of the SF Building Code)

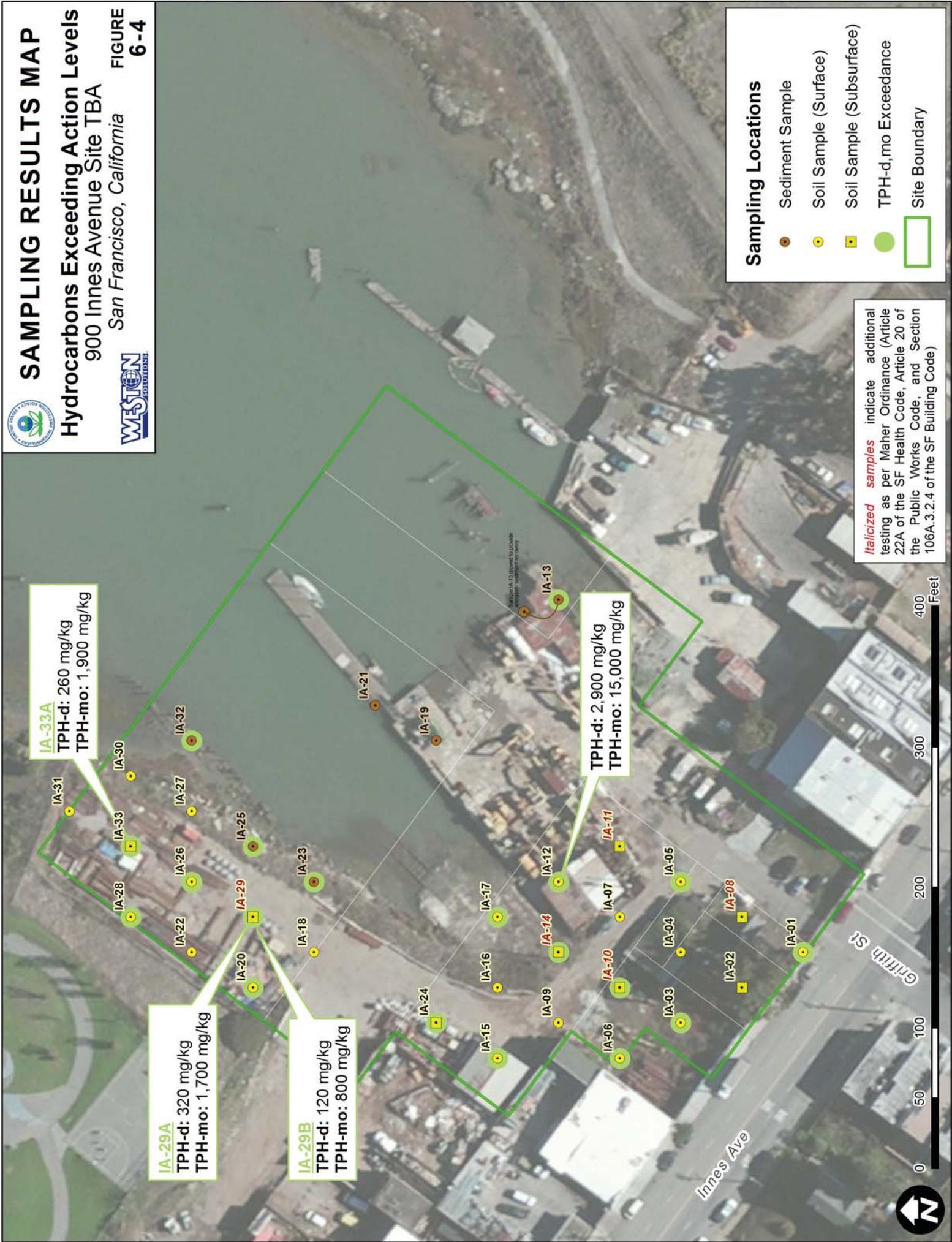




# SAMPLING RESULTS MAP

## Hydrocarbons Exceeding Action Levels 900 Innes Avenue Site TBA

San Francisco, California  
FIGURE 6-4



**IA-33A**  
 TPH-d: 260 mg/kg  
 TPH-mo: 1,900 mg/kg

**IA-29A**  
 TPH-d: 320 mg/kg  
 TPH-mo: 1,700 mg/kg

**IA-29B**  
 TPH-d: 120 mg/kg  
 TPH-mo: 800 mg/kg

**IA-12**  
 TPH-d: 2,900 mg/kg  
 TPH-mo: 15,000 mg/kg

*Italicized samples* indicate additional testing as per Maher Ordinance (Article 22A of the SF Health Code, Article 20 of the Public Works Code, and Section 106A.3.2.4 of the SF Building Code)

### Sampling Locations

- Sediment Sample
- Soil Sample (Surface)
- Soil Sample (Subsurface)
- TPH-d, mo Exceedance
- Site Boundary

0 50 100 200 300 400 Feet

## **APPENDIX A - SITE PHOTOGRAPHS**

<b>Project Name:</b> 900 Innes Ave		<b>Site Location:</b> San Francisco, CA	<b>Project No.</b> 20074.063.095.1340
<b>Photo No.</b> <b>1</b>	<b>Date:</b> August 2013		
<b>Direction Photo Taken:</b> Northeast			
<b>Description:</b> Site Overview from Griffith St Entrance			

<b>Photo No.</b> <b>2</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b> Northwest		
<b>Description:</b> Onsite Vacant Residential Structure from Griffith St Entrance		

<b>Photo No.</b> <b>3</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  North		
<b>Description:</b>  India Basin Park, North of Site		

<b>Photo No.</b> <b>4</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  Southeast		
<b>Description:</b>  Site Overview from Indian Basin Park		

<b>Photo No.</b> <b>5</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  Northeast	
<b>Description:</b>  Griffith St Site Entrance across Innes Ave	



<b>Photo No.</b> <b>6</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  North	
<b>Description:</b>  Griffith St Site Entrance Bus Stop	



<b>Photo No.</b> <b>7</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  Southeast	
<b>Description:</b>  Southeast Bound Innes Ave (Commercial Properties)	



<b>Photo No.</b> <b>8</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  Southeast	
<b>Description:</b>  Southeast Bound Innes Ave (Residential Properties)	



<b>Photo No.</b> <b>9</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  North	
<b>Description:</b>  Neighboring Businesses to the Southeast (Zebra Awning)	

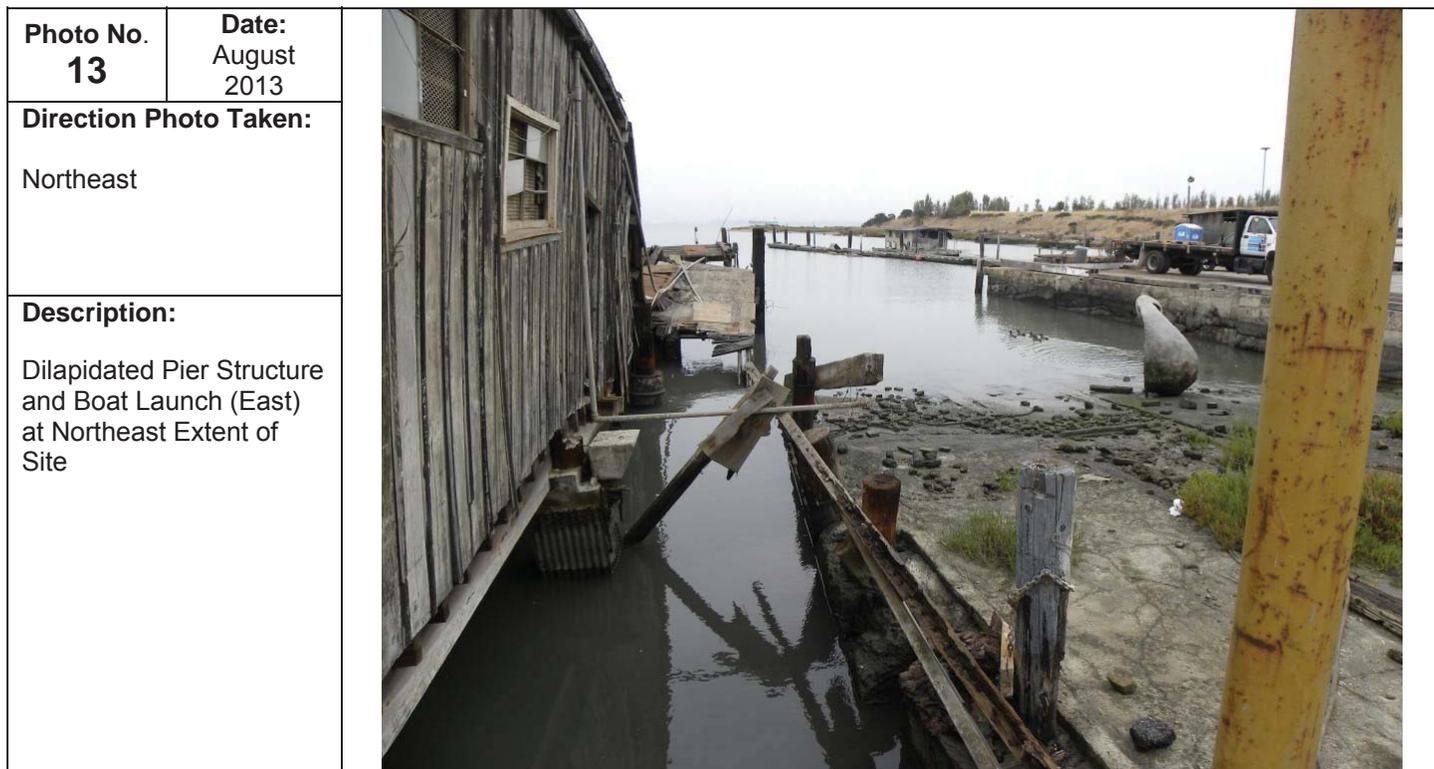


<b>Photo No.</b> <b>10</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  East	
<b>Description:</b>  Onsite Vacant Residential Structure along Innes Ave	



<b>Photo No.</b> <b>11</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  Northwest		
<b>Description:</b>  Storage Yard Area Northeast of House		

<b>Photo No.</b> <b>12</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  Southeast		
<b>Description:</b>  Equipment Northeast of Zebra Awning		



<b>Photo No.</b> <b>15</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  Northwest		
<b>Description:</b>  North Central Pier		

<b>Photo No.</b> <b>16</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  Southwest		
<b>Description:</b>  Rip Rap at Boat Launch (West)		

<b>Photo No.</b> <b>17</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  North		
<b>Description:</b>  North Banks and Shoreline		

<b>Photo No.</b> <b>18</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  Southwest		
<b>Description:</b>  Central Equipment Storage Building		

<b>Photo No.</b> <b>19</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  North		
<b>Description:</b>  Boat Launch (West)		

<b>Photo No.</b> <b>20</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  Northwest		
<b>Description:</b>  Western Shed Area		



<b>Photo No.</b> <b>23</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  West		
<b>Description:</b>  Western Shed Area Oil Filter Draining		

<b>Photo No.</b> <b>24</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  North		
<b>Description:</b>  Western Shed Area Waste Oil Tank (approximately 250-gal)		

<b>Photo No.</b> <b>25</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  Northwest	
<b>Description:</b>  Northwestern Area Fuel Tanks (500-gallon & 1,000-gallon)	



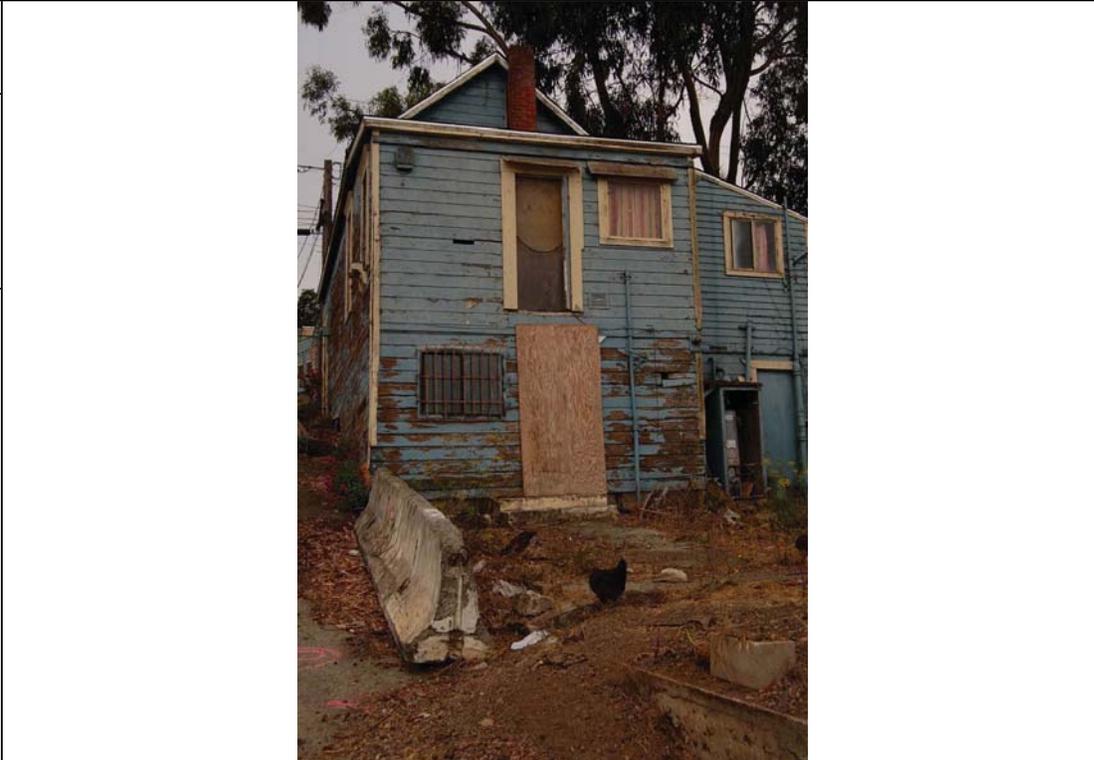
<b>Photo No.</b> <b>26</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  West	
<b>Description:</b>  Northwestern Area Fuel Tanks (500-gallon)	



<b>Photo No.</b> <b>27</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  Northeast		
<b>Description:</b>  Northwestern Area Storage		

<b>Photo No.</b> <b>28</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  North		
<b>Description:</b>  Central Area Staining / Spill		

<b>Photo No.</b> <b>29</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  Southwest		
<b>Description:</b>  Metal Piping Storage, Southwest Storage Yard Area		

<b>Photo No.</b> <b>30</b>	<b>Date:</b> August 2013	
<b>Direction Photo Taken:</b>  Southwest		
<b>Description:</b>  Onsite Vacant Residential Structure		

<b>Photo No.</b> <b>31</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  Southwest	
<b>Description:</b>  Waste Debris Pile, Southwest Storage Yard Area	



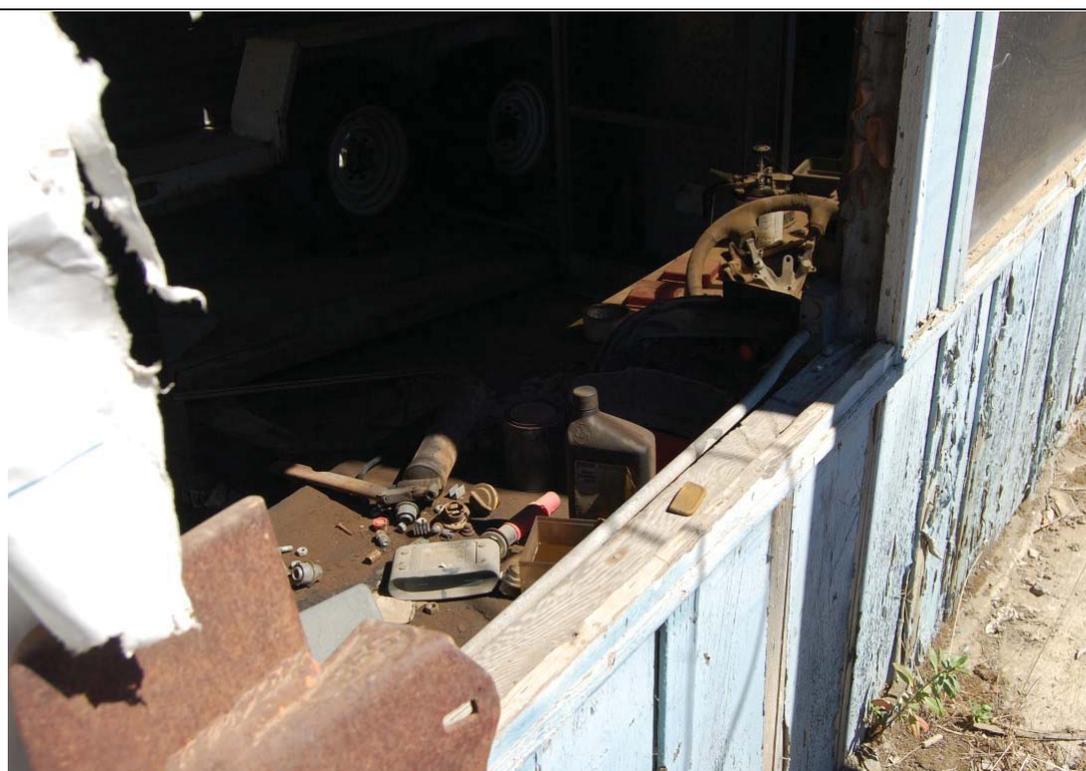
<b>Photo No.</b> <b>32</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  Northeast	
<b>Description:</b>  Dilapidated Pier Structure Collapsing into India Basin	



<b>Photo No.</b> <b>33</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  North	
<b>Description:</b>  Central Equipment Storage Building Interior	



<b>Photo No.</b> <b>34</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  East	
<b>Description:</b>  Central Equipment Storage Building Interior	



<b>Photo No.</b> <b>35</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  West	
<b>Description:</b>  Used/Broken Fluorescent Light Storage, Northwestern Staging Area	



<b>Photo No.</b> <b>36</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  West	
<b>Description:</b>  Subsurface Soil Sample Drilling	



<b>Photo No.</b> <b>37</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  North	
<b>Description:</b>  Subsurface Soil Sample Drilling near Boat Launch (West)	



<b>Photo No.</b> <b>38</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  N/A	
<b>Description:</b>  Subsurface Soil Sample Core	



<b>Photo No.</b> <b>39</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  N/A	
<b>Description:</b>  Subsurface Soil Sample Core	



<b>Photo No.</b> <b>40</b>	<b>Date:</b> August 2013
<b>Direction Photo Taken:</b>  N/A	
<b>Description:</b>  Subsurface Soil Sample Core	



## **APPENDIX B - HISTORICAL TOPOGRAPHIC MAPS**



**900 Innes Avenue Site**

900 Innes Ave

San Francisco, CA 94124

Inquiry Number: 3611816.4

May 21, 2013

# EDR Historical Topographic Map Report

# EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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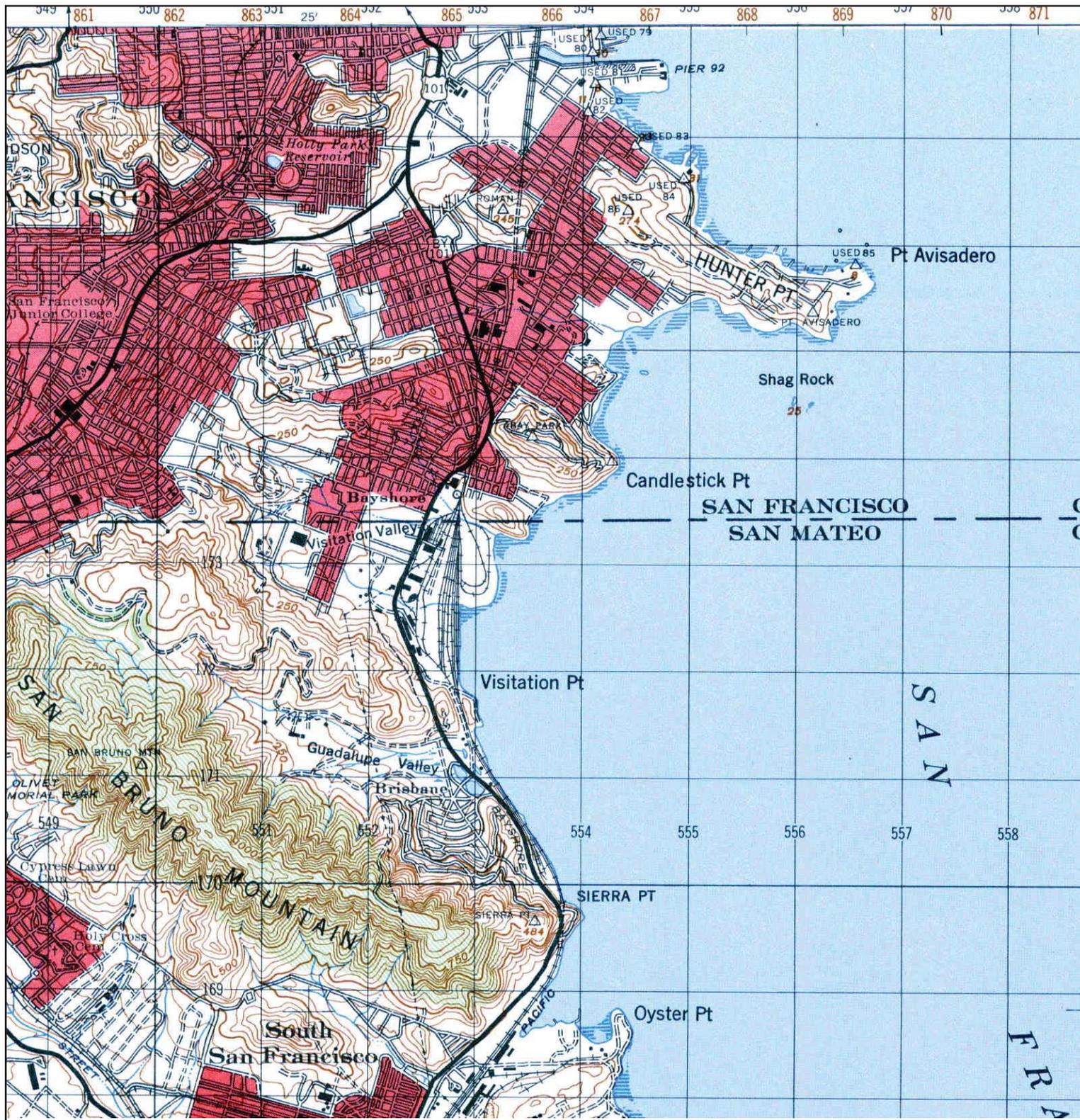
# Historical Topographic Map



<p>N ↑</p>	<p><b>TARGET QUAD</b>                  NAME: SAN MATEO                  MAP YEAR: 1899</p>	<p><b>SITE NAME:</b> 900 Innes Avenue Site  <b>ADDRESS:</b> 900 Innes Ave                  San Francisco, CA 94124  <b>LAT/LONG:</b> 37.7322 / -122.3758</p>	<p><b>CLIENT:</b> Weston Solutions, Inc.  <b>CONTACT:</b> Ian Bruce  <b>INQUIRY#:</b> 3611816.4  <b>RESEARCH DATE:</b> 05/21/2013</p>
	<p><b>SERIES:</b> 15</p>		
	<p><b>SCALE:</b> 1:62500</p>		



# Historical Topographic Map



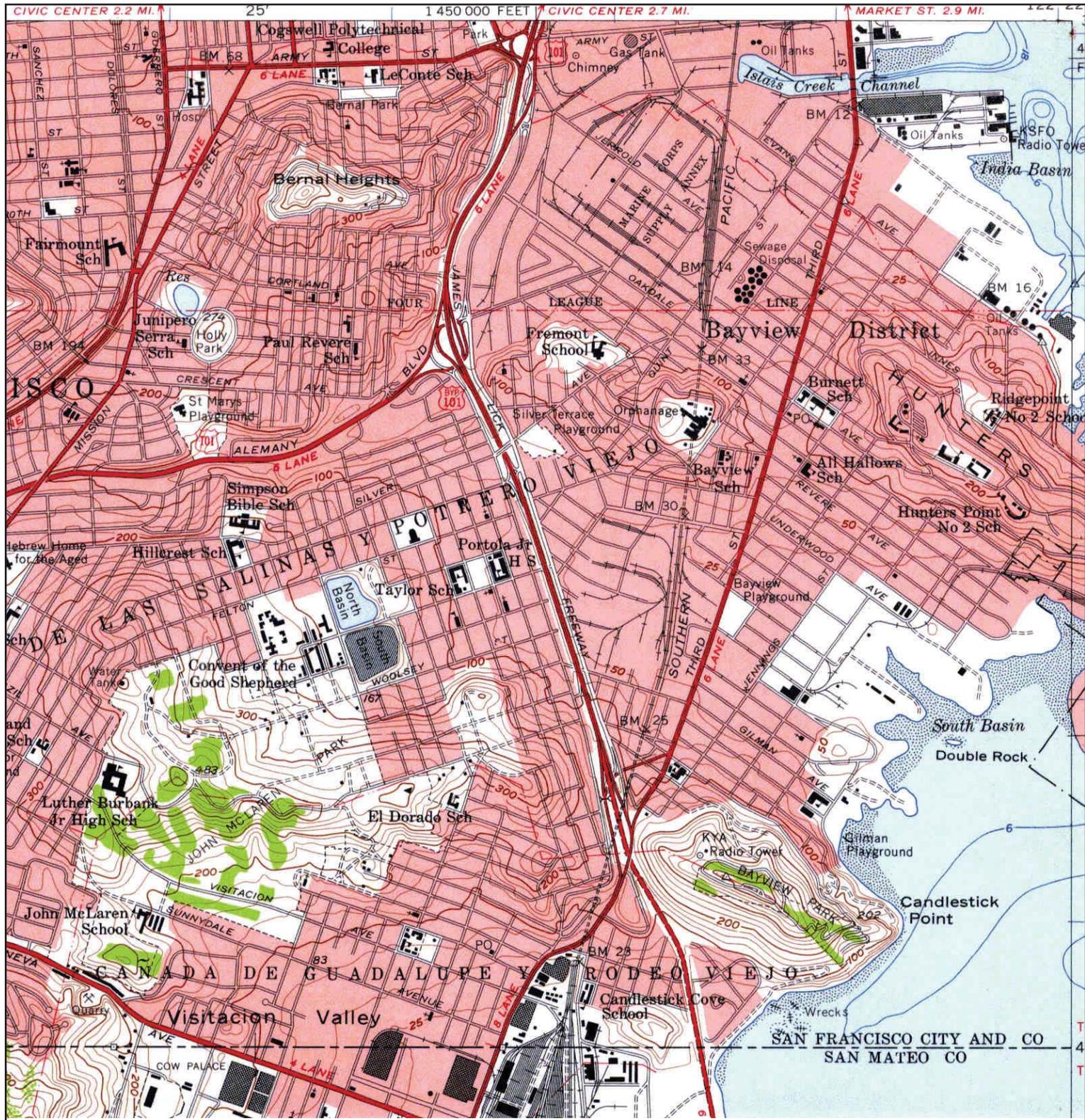
<p>N</p> 	<b>TARGET QUAD</b>	<b>SITE NAME:</b> 900 Innes Avenue Site	<b>CLIENT:</b> Weston Solutions, Inc.	
	<b>NAME:</b> SAN MATEO	<b>ADDRESS:</b> 900 Innes Ave	<b>CONTACT:</b> Ian Bruce	
	<b>MAP YEAR:</b> 1947	<b>LAT/LONG:</b> 37.7322 / -122.3758	<b>INQUIRY#:</b> 3611816.4	<b>RESEARCH DATE:</b> 05/21/2013
	<b>SERIES:</b> 15			
	<b>SCALE:</b> 1:50000			

# Historical Topographic Map



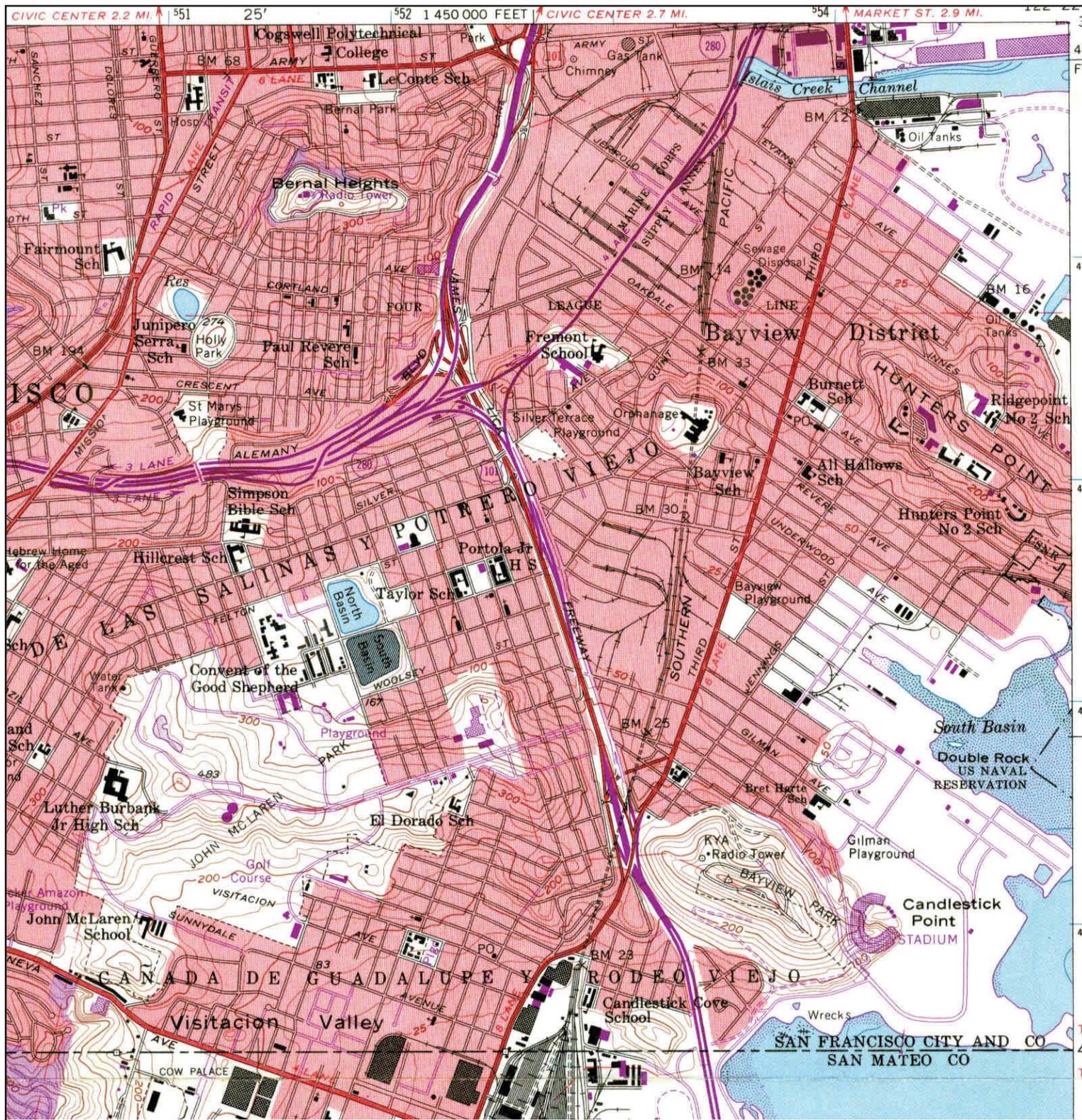
	<b>TARGET QUAD</b>	<b>SITE NAME:</b> 900 Innes Avenue Site	<b>CLIENT:</b> Weston Solutions, Inc.
	<b>NAME:</b> SAN FRANCISCO SOUTH	<b>ADDRESS:</b> 900 Innes Ave San Francisco, CA 94124	<b>CONTACT:</b> Ian Bruce
	<b>MAP YEAR:</b> 1950	<b>LAT/LONG:</b> 37.7322 / -122.3758	<b>INQUIRY#:</b> 3611816.4
	<b>SERIES:</b> 7.5		<b>RESEARCH DATE:</b> 05/21/2013
	<b>SCALE:</b> 1:24000		

# Historical Topographic Map



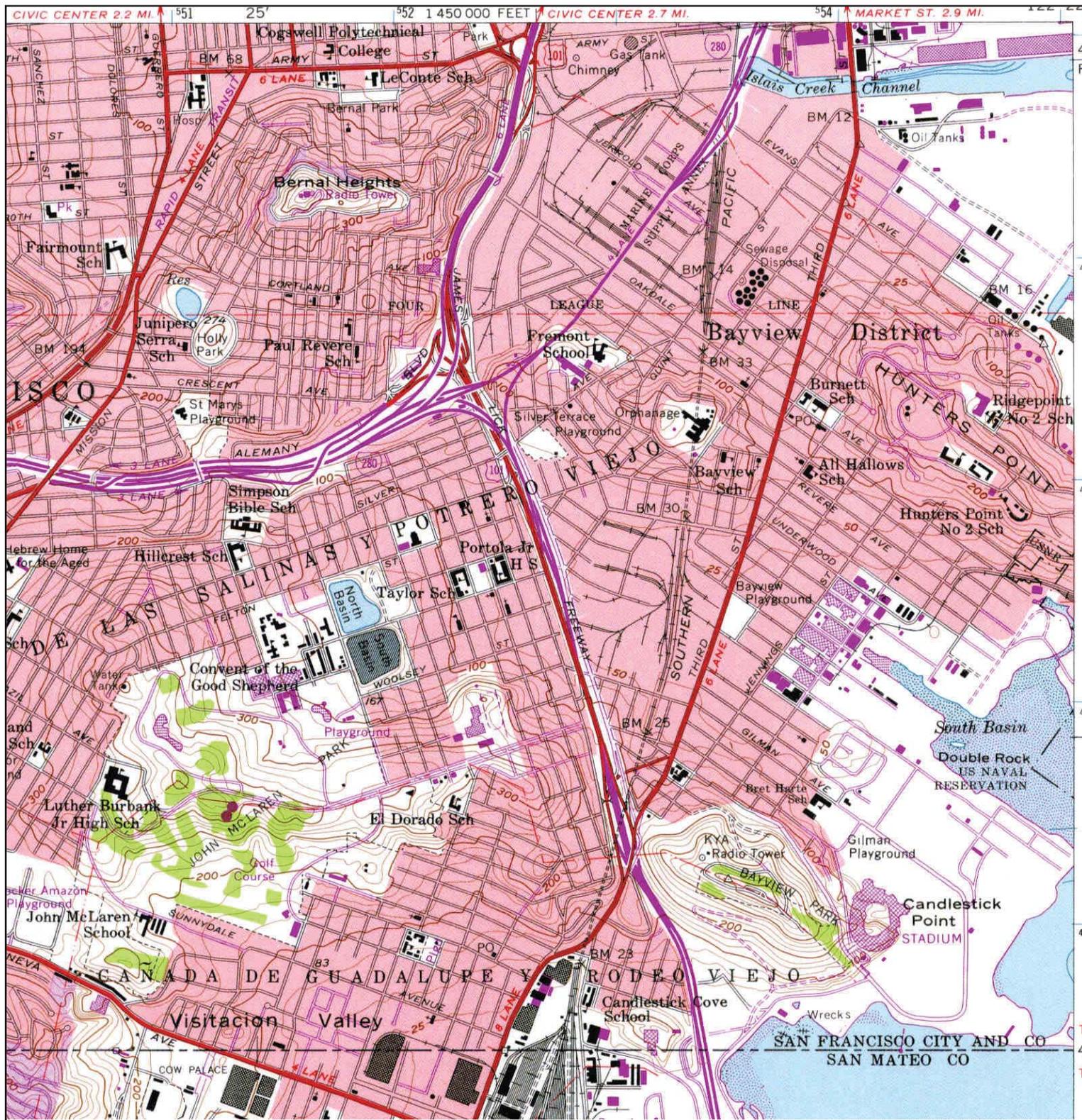
<p>N ↑</p>	<p><b>TARGET QUAD</b>                  NAME: SAN FRANCISCO SOUTH                  MAP YEAR: 1956</p>	<p><b>SITE NAME:</b> 900 Innes Avenue Site  <b>ADDRESS:</b> 900 Innes Ave                  San Francisco, CA 94124  <b>LAT/LONG:</b> 37.7322 / -122.3758</p>	<p><b>CLIENT:</b> Weston Solutions, Inc.  <b>CONTACT:</b> Ian Bruce  <b>INQUIRY#:</b> 3611816.4  <b>RESEARCH DATE:</b> 05/21/2013</p>
	<p>SERIES: 7.5                  SCALE: 1:24000</p>		

# Historical Topographic Map



<p>N ↑</p>	<p><b>TARGET QUAD</b>                  NAME: SAN FRANCISCO SOUTH                  MAP YEAR: 1968                  PHOTOREVISED FROM :1956                  SERIES: 7.5                  SCALE: 1:24000</p>	<p><b>SITE NAME:</b> 900 Innes Avenue Site  <b>ADDRESS:</b> 900 Innes Ave                  San Francisco, CA 94124  <b>LAT/LONG:</b> 37.7322 / -122.3758</p>	<p><b>CLIENT:</b> Weston Solutions, Inc.  <b>CONTACT:</b> Ian Bruce  <b>INQUIRY#:</b> 3611816.4  <b>RESEARCH DATE:</b> 05/21/2013</p>
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# Historical Topographic Map



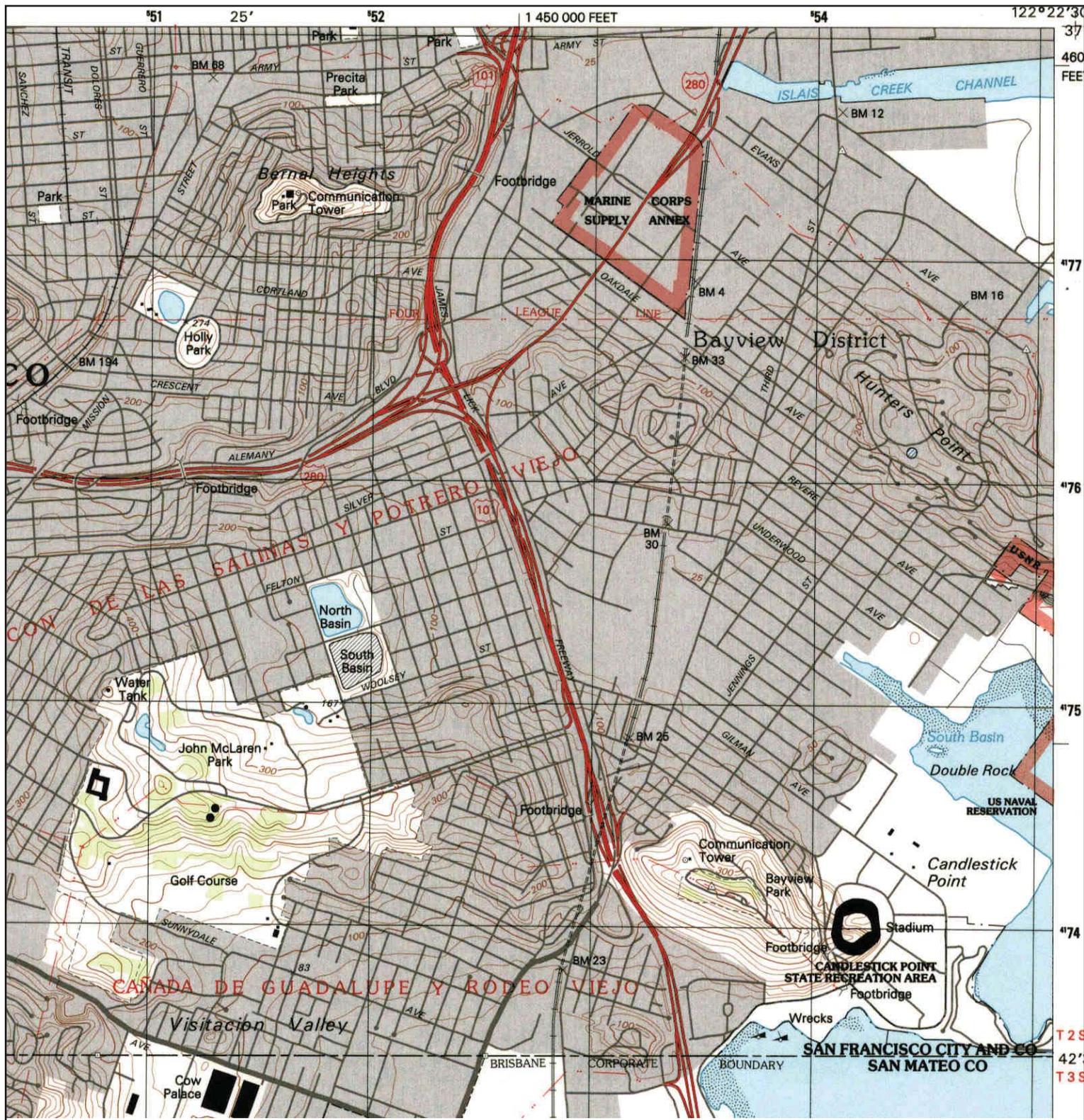
<p>N ↑</p>	<p>TARGET QUAD NAME: SAN FRANCISCO SOUTH</p>	<p>SITE NAME: 900 Innes Avenue Site ADDRESS: 900 Innes Ave San Francisco, CA 94124</p>	<p>CLIENT: Weston Solutions, Inc. CONTACT: Ian Bruce INQUIRY#: 3611816.4</p>
	<p>MAP YEAR: 1973</p>	<p>LAT/LONG: 37.7322 / -122.3758</p>	<p>RESEARCH DATE: 05/21/2013</p>
	<p>PHOTOREVISED FROM :1956</p>		
	<p>SERIES: 7.5</p>		
	<p>SCALE: 1:24000</p>		

# Historical Topographic Map



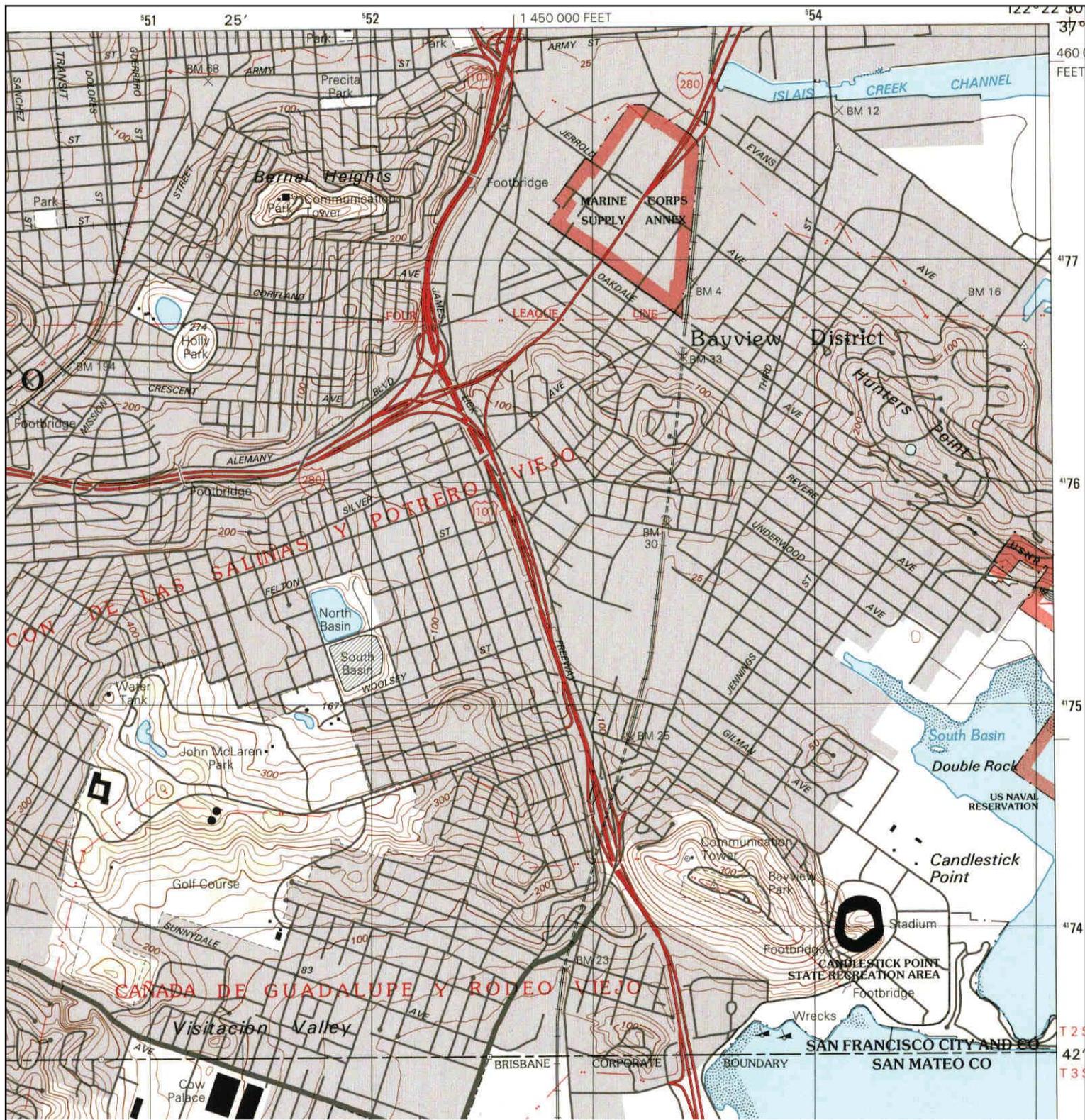
<p>N ↑</p>	<b>TARGET QUAD</b>	<b>SITE NAME:</b> 900 Innes Avenue Site	<b>CLIENT:</b> Weston Solutions, Inc.
	<b>NAME:</b> SAN FRANCISCO SOUTH	<b>ADDRESS:</b> 900 Innes Ave San Francisco, CA 94124	<b>CONTACT:</b> Ian Bruce
	<b>MAP YEAR:</b> 1980	<b>LAT/LONG:</b> 37.7322 / -122.3758	<b>INQUIRY#:</b> 3611816.4
	<b>PHOTOREVISED FROM :</b> 1956		<b>RESEARCH DATE:</b> 05/21/2013
	<b>SERIES:</b> 7.5		
	<b>SCALE:</b> 1:24000		

# Historical Topographic Map



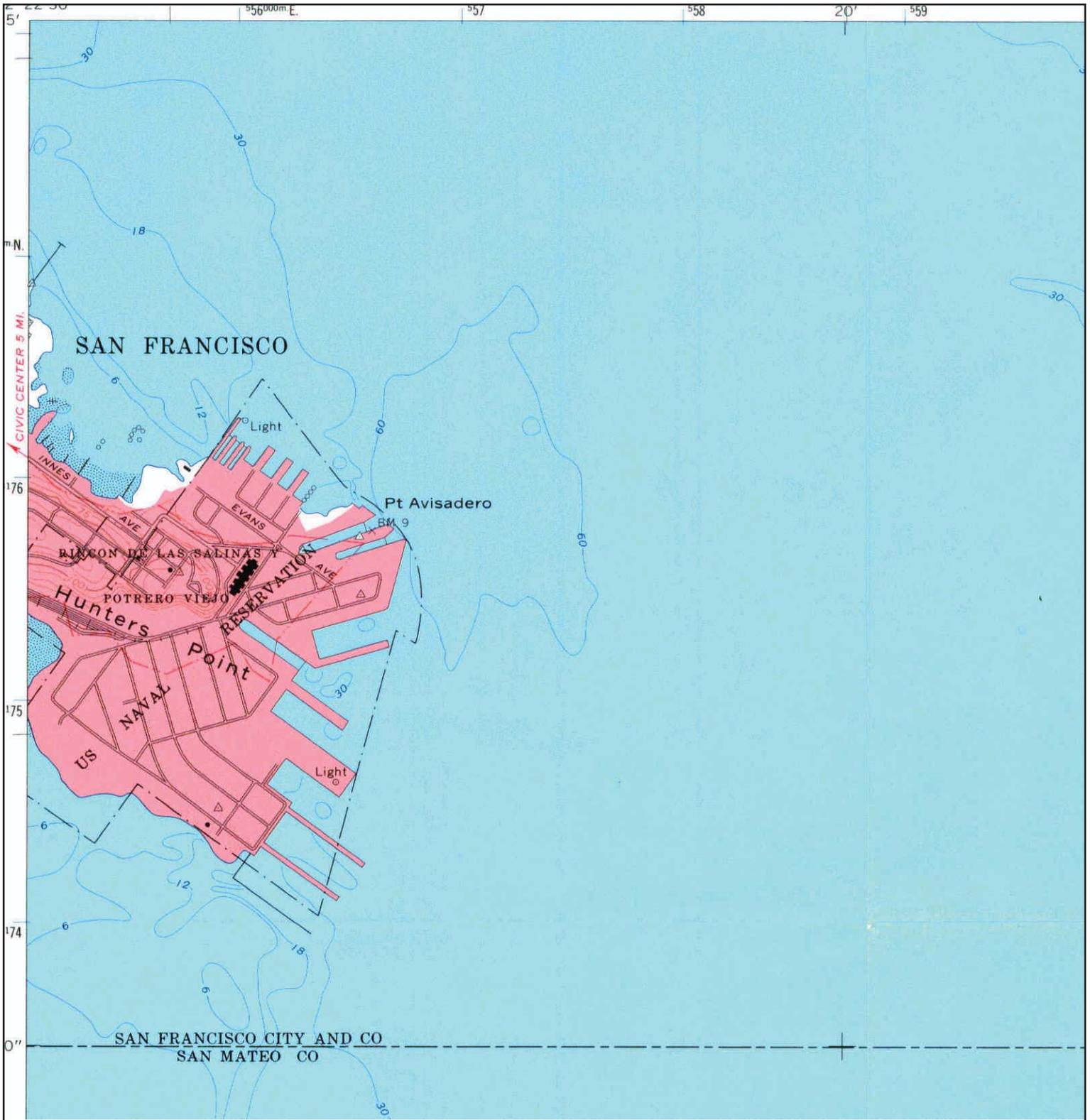
<p>N</p>	<b>TARGET QUAD</b>	<b>SITE NAME:</b> 900 Innes Avenue Site	<b>CLIENT:</b> Weston Solutions, Inc.
	<b>NAME:</b> SAN FRANCISCO SOUTH	<b>ADDRESS:</b> 900 Innes Ave San Francisco, CA 94124	<b>CONTACT:</b> Ian Bruce
	<b>MAP YEAR:</b> 1993	<b>LAT/LONG:</b> 37.7322 / -122.3758	<b>INQUIRY#:</b> 3611816.4
	<b>SERIES:</b> 7.5		<b>RESEARCH DATE:</b> 05/21/2013
	<b>SCALE:</b> 1:24000		

# Historical Topographic Map



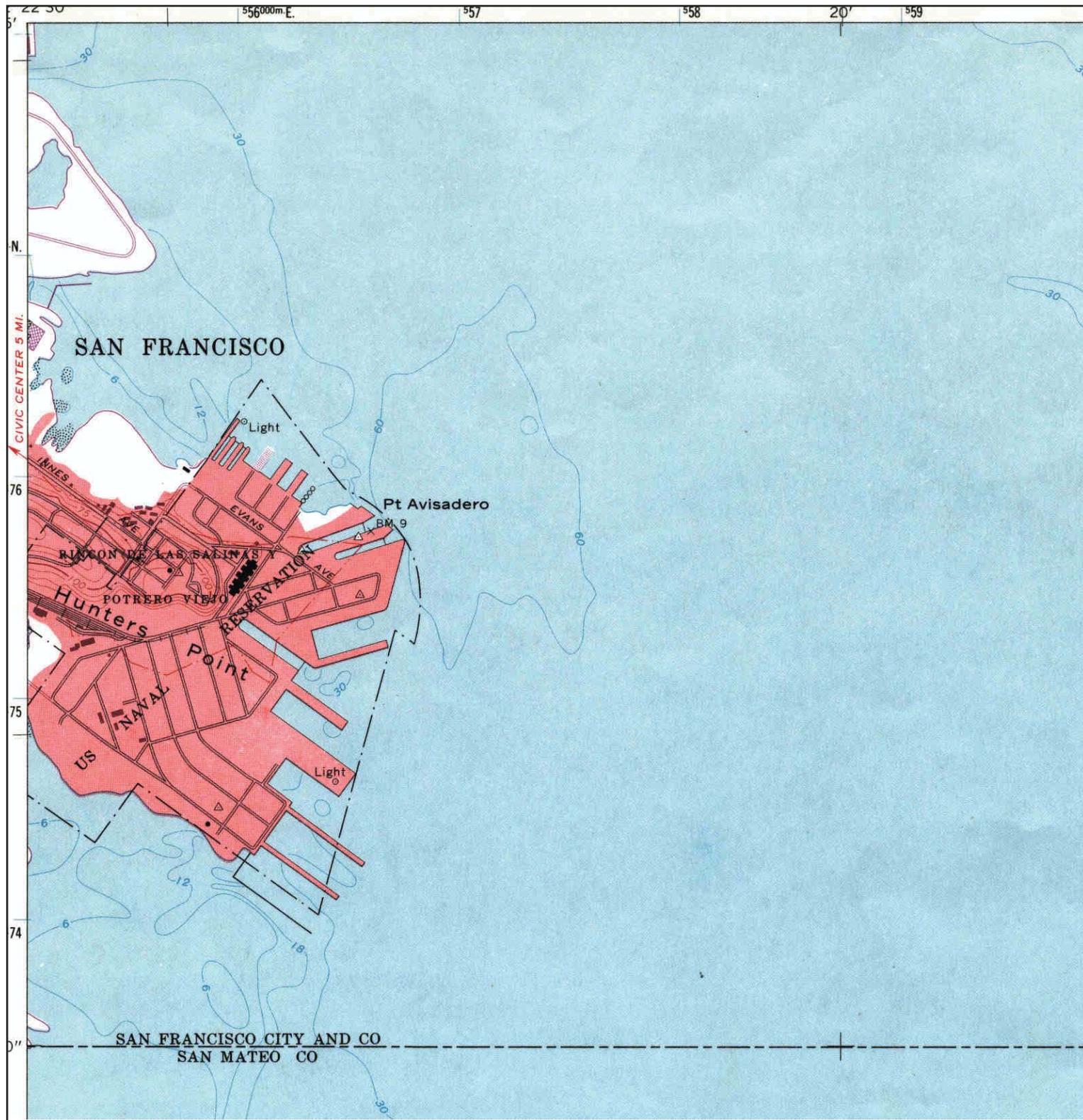
	<b>TARGET QUAD</b>	<b>SITE NAME:</b> 900 Innes Avenue Site	<b>CLIENT:</b> Weston Solutions, Inc.
	<b>NAME:</b> SAN FRANCISCO SOUTH	<b>ADDRESS:</b> 900 Innes Ave San Francisco, CA 94124	<b>CONTACT:</b> Ian Bruce
	<b>MAP YEAR:</b> 1995	<b>LAT/LONG:</b> 37.7322 / -122.3758	<b>INQUIRY#:</b> 3611816.4
	<b>SERIES:</b> 7.5		<b>RESEARCH DATE:</b> 05/21/2013
	<b>SCALE:</b> 1:24000		

# Historical Topographic Map



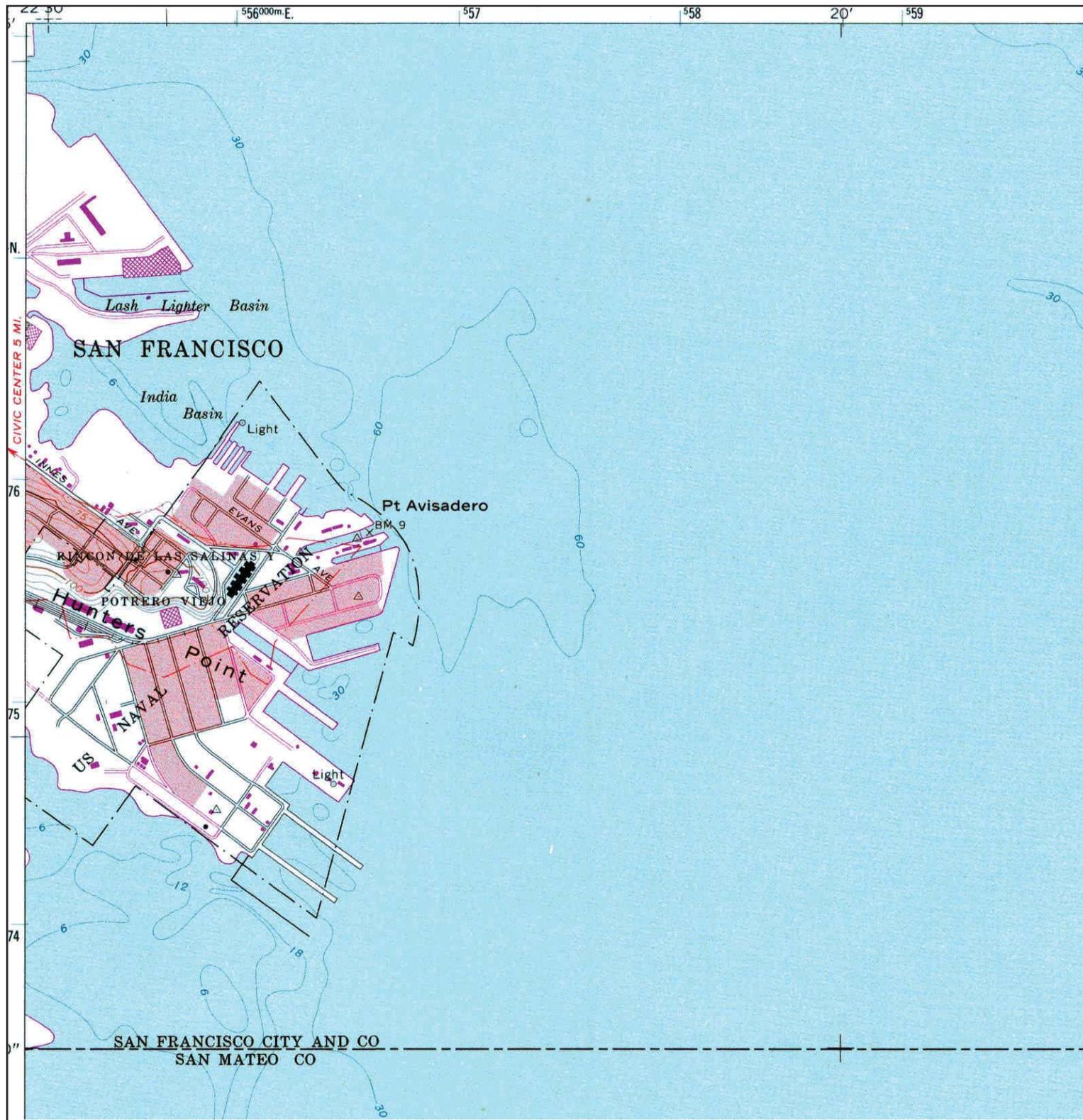
<b>N</b> 	<b>ADJOINING QUAD</b> NAME: HUNTERS POINT MAP YEAR: 1956	SITE NAME: 900 Innes Avenue Site ADDRESS: 900 Innes Ave San Francisco, CA 94124	CLIENT: Weston Solutions, Inc. CONTACT: Ian Bruce INQUIRY#: 3611816.4 RESEARCH DATE: 05/21/2013
	SERIES: 7.5 SCALE: 1:24000	LAT/LONG: 37.7322 / -122.3758	

# Historical Topographic Map



<b>N</b> 	<b>ADJOINING QUAD</b>	<b>SITE NAME:</b>	900 Innes Avenue Site	<b>CLIENT:</b>	Weston Solutions, Inc.	
	<b>NAME:</b>	HUNTERS POINT	<b>ADDRESS:</b>	900 Innes Ave	<b>CONTACT:</b>	Ian Bruce
	<b>MAP YEAR:</b>	1968		San Francisco, CA 94124	<b>INQUIRY#:</b>	3611816.4
	<b>PHOTOREVISED FROM :</b>	1956	<b>LAT/LONG:</b>	37.7322 / -122.3758	<b>RESEARCH DATE:</b>	05/21/2013
	<b>SERIES:</b>	7.5				
	<b>SCALE:</b>	1:24000				

# Historical Topographic Map



<p>N</p> 	<b>ADJOINING QUAD</b>			
	NAME:	HUNTERS POINT	SITE NAME:	900 Innes Avenue Site
	MAP YEAR:	1980	ADDRESS:	900 Innes Ave
	PHOTOREVISED FROM :	1956		San Francisco, CA 94124
	SERIES:	7.5	LAT/LONG:	37.7322 / -122.3758
	SCALE:	1:24000		
		CLIENT:	Weston Solutions, Inc.	
		CONTACT:	Ian Bruce	
		INQUIRY#:	3611816.4	
		RESEARCH DATE:	05/21/2013	

# Historical Topographic Map



<p><b>N</b></p>	<b>ADJOINING QUAD</b>	<b>SITE NAME:</b>	900 Innes Avenue Site	<b>CLIENT:</b>	Weston Solutions, Inc.	
	<b>NAME:</b>	HUNTERS POINT	<b>ADDRESS:</b>	900 Innes Ave	<b>CONTACT:</b>	Ian Bruce
	<b>MAP YEAR:</b>	1993		San Francisco, CA 94124	<b>INQUIRY#:</b>	3611816.4
	<b>SERIES:</b>	7.5	<b>LAT/LONG:</b>	37.7322 / -122.3758	<b>RESEARCH DATE:</b>	05/21/2013
	<b>SCALE:</b>	1:24000				

## **APPENDIX C - HISTORICAL AERIAL PHOTOGRAPHS**



**900 Innes Avenue Site**

900 Innes Ave

San Francisco, CA 94124

Inquiry Number: 3611816.5

May 23, 2013

## The EDR Aerial Photo Decade Package

# EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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**Date EDR Searched Historical Sources:**

Aerial Photography May 23, 2013

**Target Property:**

900 Innes Ave

San Francisco, CA 94124

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
1943	Aerial Photograph. Scale: 1"=500'	Flight Year: 1943	Aero
1946	Aerial Photograph. Scale: 1"=500'	Flight Year: 1946	Jack Ammann
1956	Aerial Photograph. Scale: 1"=500'	Flight Year: 1956	USGS
1968	Aerial Photograph. Scale: 1"=500'	Flight Year: 1968	USGS
1974	Aerial Photograph. Scale: 1"=500'	Flight Year: 1974	USGS
1982	Aerial Photograph. Scale: 1"=500'	Flight Year: 1982	USGS
1993	Aerial Photograph. Scale: 1"=500'	/DOQQ - acquisition dates: 1993	EDR
1998	Aerial Photograph. Scale: 1"=500'	Flight Year: 1998	USGS
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	EDR
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	EDR
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	EDR
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	EDR



**INQUIRY #:** 3611816.5

**YEAR:** 1943

| = 500'





INQUIRY #: 3611816.5

YEAR: 1946

| = 500'





**INQUIRY #:** 3611816.5

**YEAR:** 1956

| = 500'





**INQUIRY #:** 3611816.5

**YEAR:** 1968

| = 500'



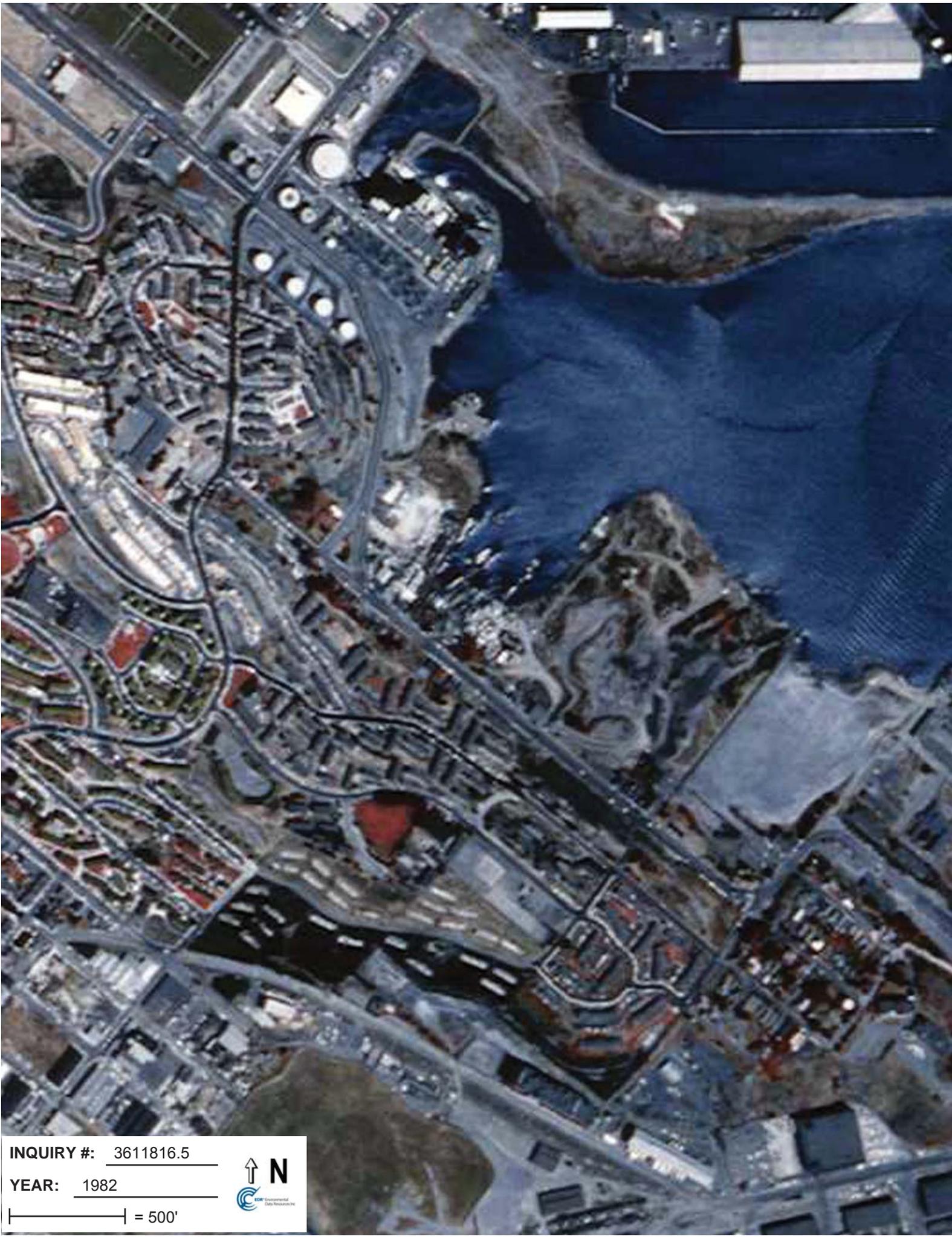


INQUIRY #: 3611816.5

YEAR: 1974

| = 500'





INQUIRY #: 3611816.5

YEAR: 1982

| = 500'





INQUIRY #: 3611816.5

YEAR: 1993

| = 500'





INQUIRY #: 3611816.5

YEAR: 1998

| = 500'





**INQUIRY #:** 3611816.5

**YEAR:** 2005

| = 500'





**INQUIRY #:** 3611816.5

**YEAR:** 2009

| = 500'





**INQUIRY #:** 3611816.5

**YEAR:** 2010

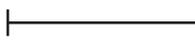
| = 500'





**INQUIRY #:** 3611816.5

**YEAR:** 2012

 = 500'



 ES&S Environmental Data Resources

**APPENDIX D - SANBORN MAPS**



**900 Innes Avenue Site**

900 Innes Ave

San Francisco, CA 94124

Inquiry Number: 3611816.3

May 21, 2013

## Certified Sanborn® Map Report

# Certified Sanborn® Map Report

5/21/13

**Site Name:**

900 Innes Avenue Site  
900 Innes Ave  
San Francisco, CA 94124

**Client Name:**

Weston Solutions, Inc.  
428 13th Street  
Oakland, CA 94612

EDR Inquiry # 3611816.3

Contact: Ian Bruce



The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Weston Solutions, Inc. were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting [www.edrnet.com/sanborn](http://www.edrnet.com/sanborn) and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

## Certified Sanborn Results:

**Site Name:** 900 Innes Avenue Site  
**Address:** 900 Innes Ave  
**City, State, Zip:** San Francisco, CA 94124  
**Cross Street:**  
**P.O. #** NA  
**Project:** 900 Innes Avenue Properties  
**Certification #** E17D-4573-8576



Sanborn® Library search results  
Certification # E17D-4573-8576

**Maps Provided:**

1999	1950
1991	1914
1989	1900
1987	
1975	
1966	

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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**Sanborn Sheet Thumbnails**

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



**1999 Source Sheets**



Volume 8, Sheet 806



Volume 8, Sheet 899c

**1991 Source Sheets**



Volume 8, Sheet xxxx



Volume 8, Sheet 899c

**1989 Source Sheets**



Volume 8, Sheet 806



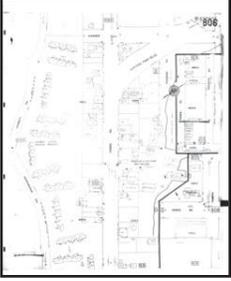
Volume 8, Sheet 899c

**1987 Source Sheets**



Volume 8, Sheet 806

**1975 Source Sheets**



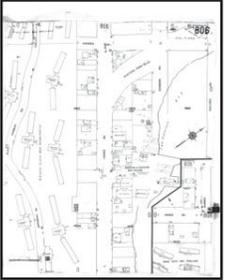
Volume 8, Sheet 806

**1966 Source Sheets**



Volume 8, Sheet 806

**1950 Source Sheets**



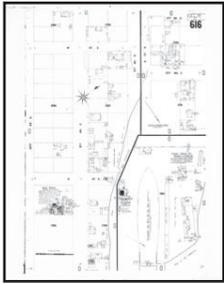
Volume 8, Sheet 806

**1914 Source Sheets**



Volume 8, Sheet 806

**1900 Source Sheets**



Volume 5, Sheet 616

# 1999 Certified Sanborn Map

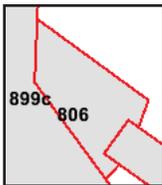
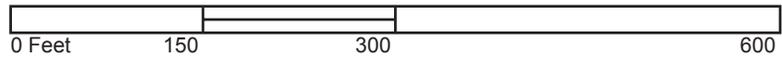
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 Address: 900 Innes Ave  
 City, ST, ZIP: San Francisco CA 94124  
 Client: Weston Solutions, Inc.  
 EDR Inquiry: 3611816.3  
 Order Date: 5/21/2013 11:08:00 AM  
 Certification #: E17D-4573-8576  
 Copyright: 1999



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Certification # E17D-4573-8576

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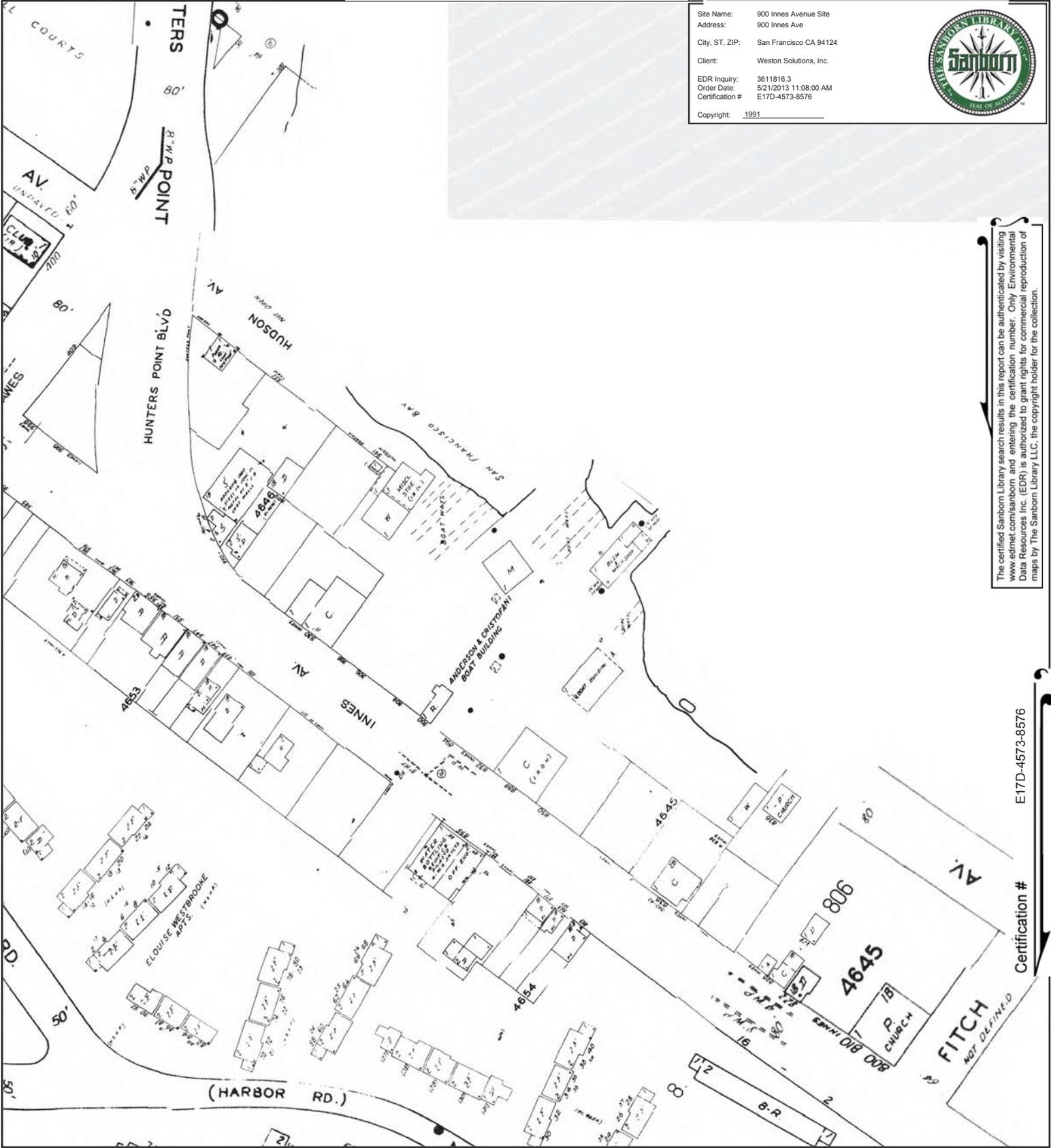


Volume 8, Sheet 806  
 Volume 8, Sheet 899c



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 Copyright: 1991

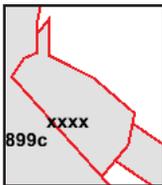
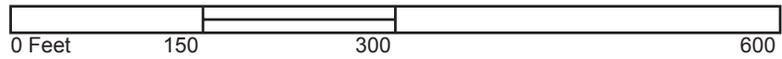


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 Outlined areas indicate map sheets within the collection.



Volume 8, Sheet xxxx  
 Volume 8, Sheet 899c

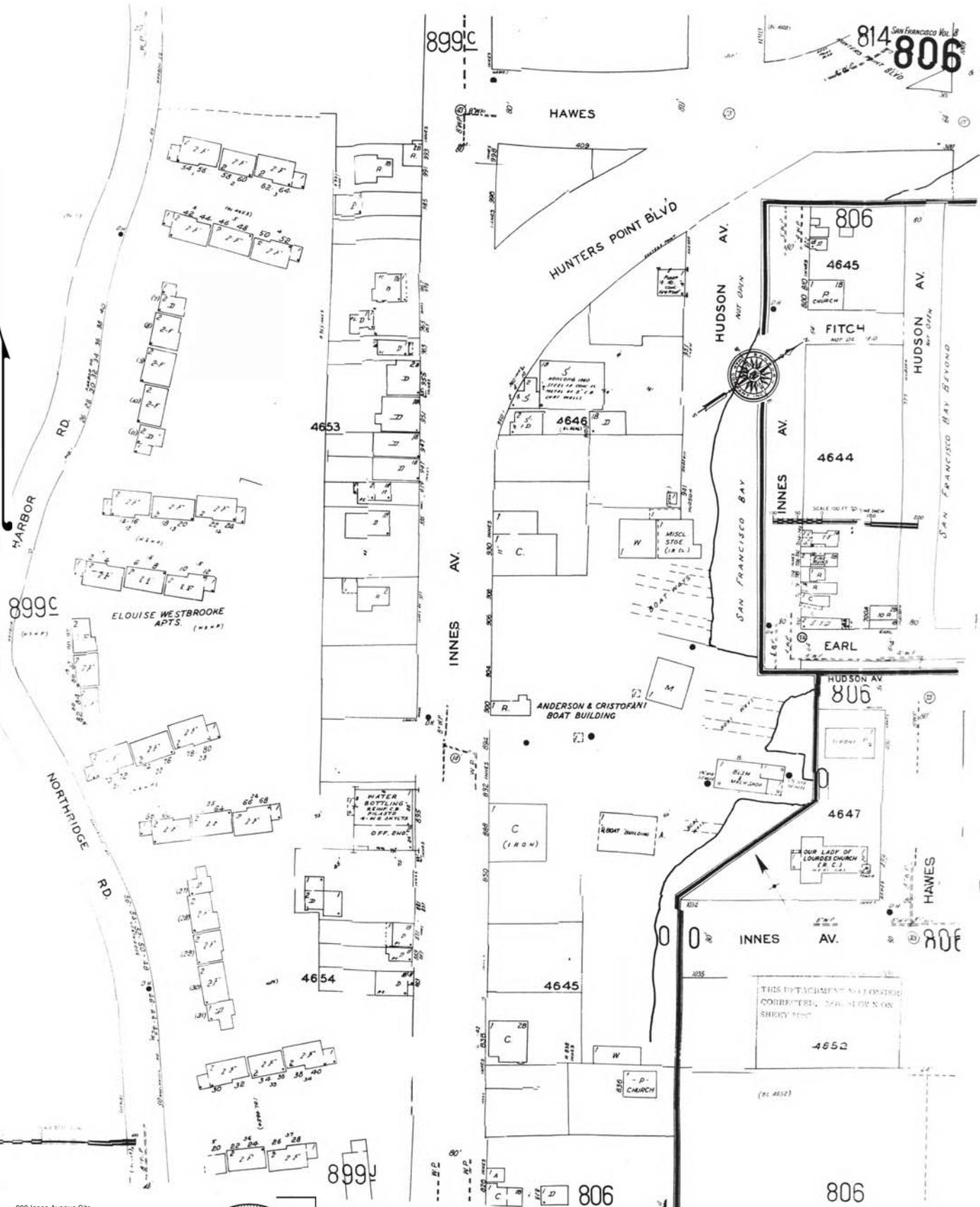


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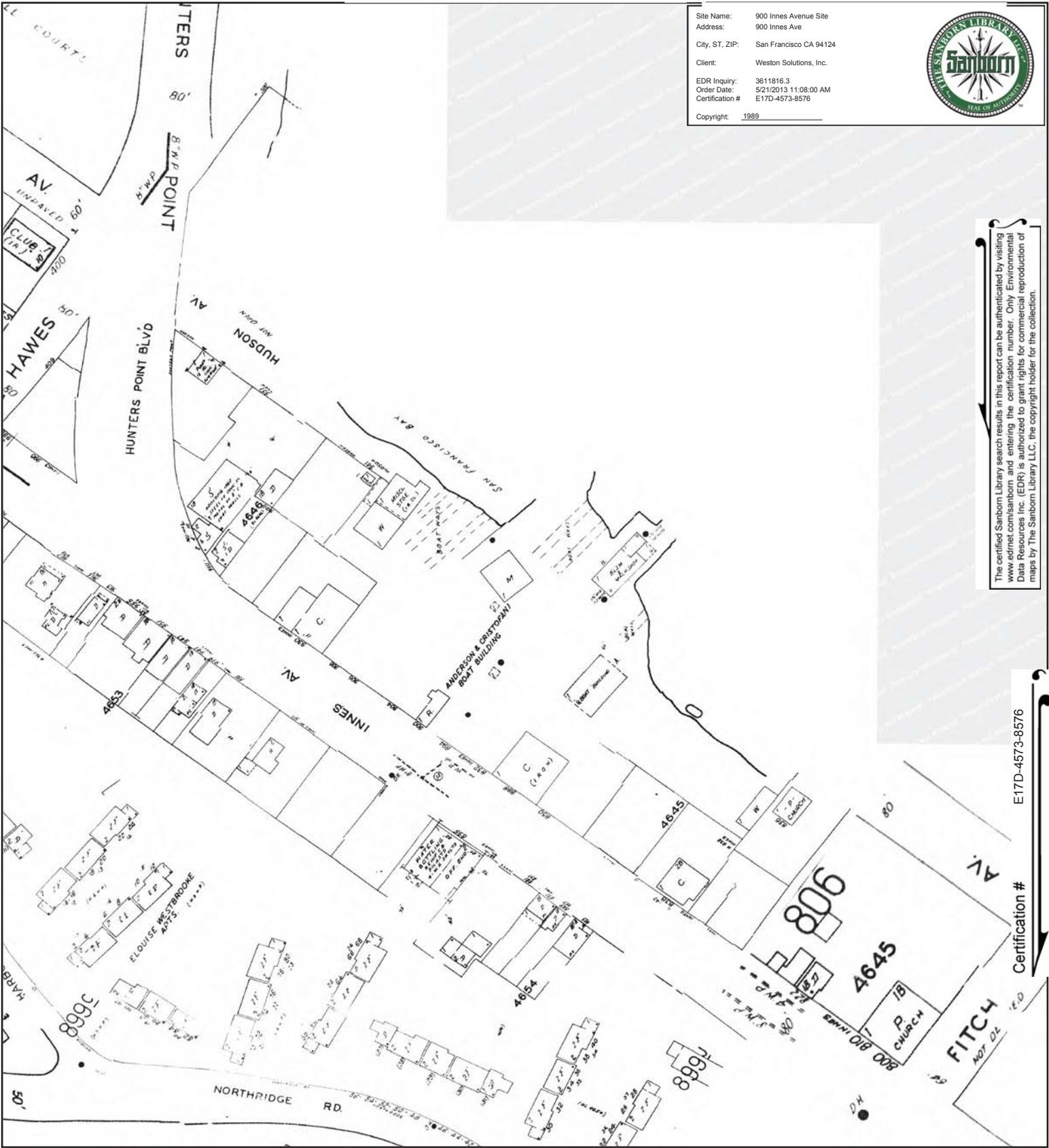
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 City, ST, ZIP: San Francisco CA 94124  
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 EDR Inquiry: 3611816.3  
 Order Date: 5/21/2013 11:08:00 AM  
 Certification # E17D-4573-8576  
 Copyright: 1989



# 1989 Certified Sanborn Map

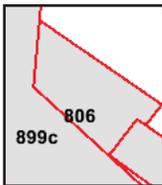
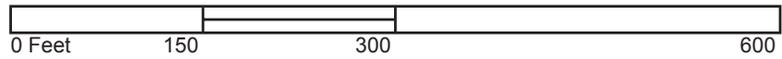
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Certification # E17D-4573-8576

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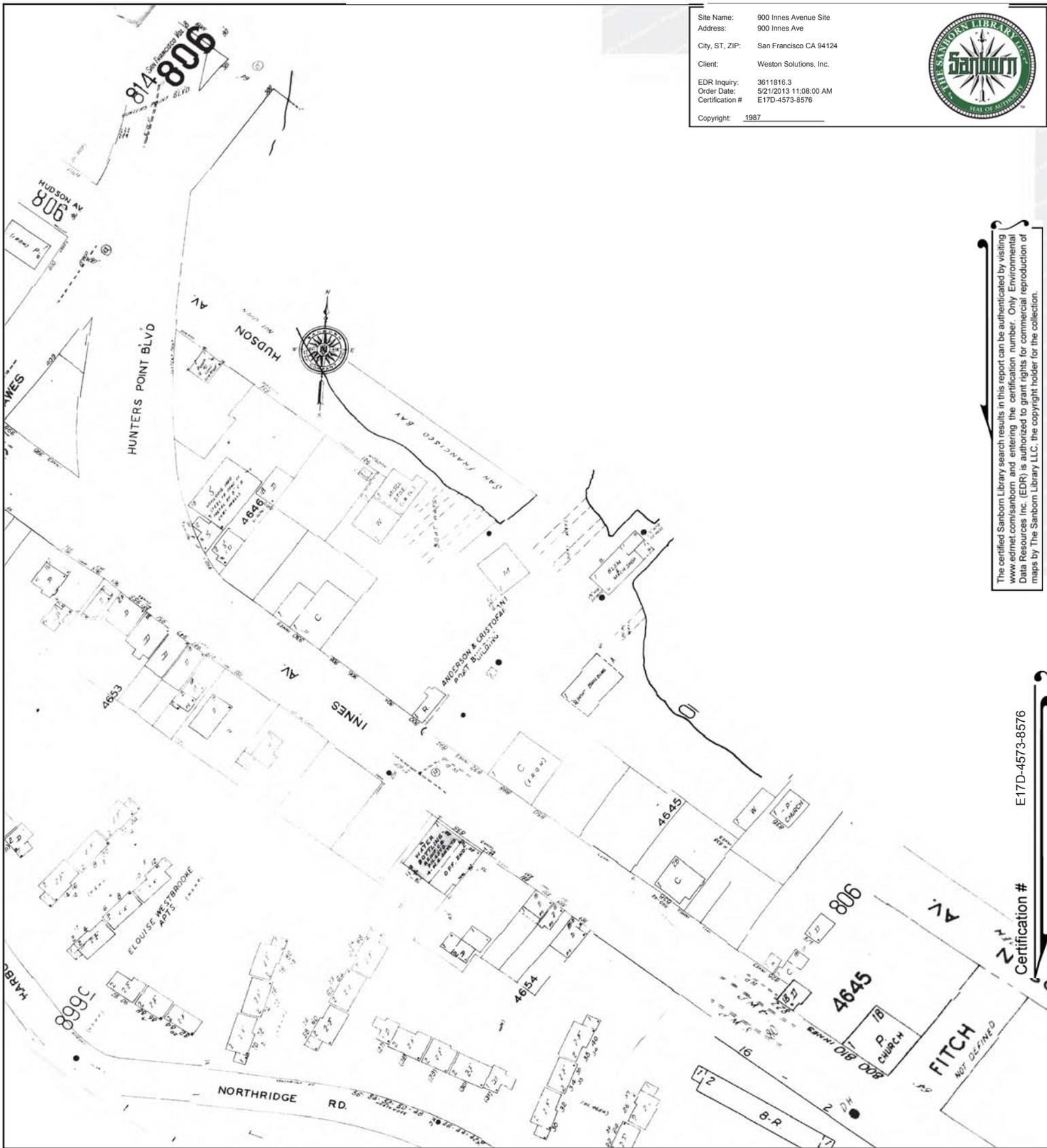


Volume 8, Sheet 806  
 Volume 8, Sheet 899c



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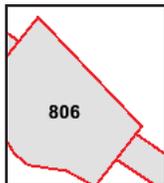
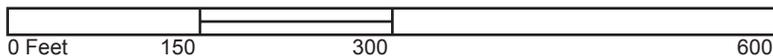
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 Order Date: 5/21/2013 11:08:00 AM  
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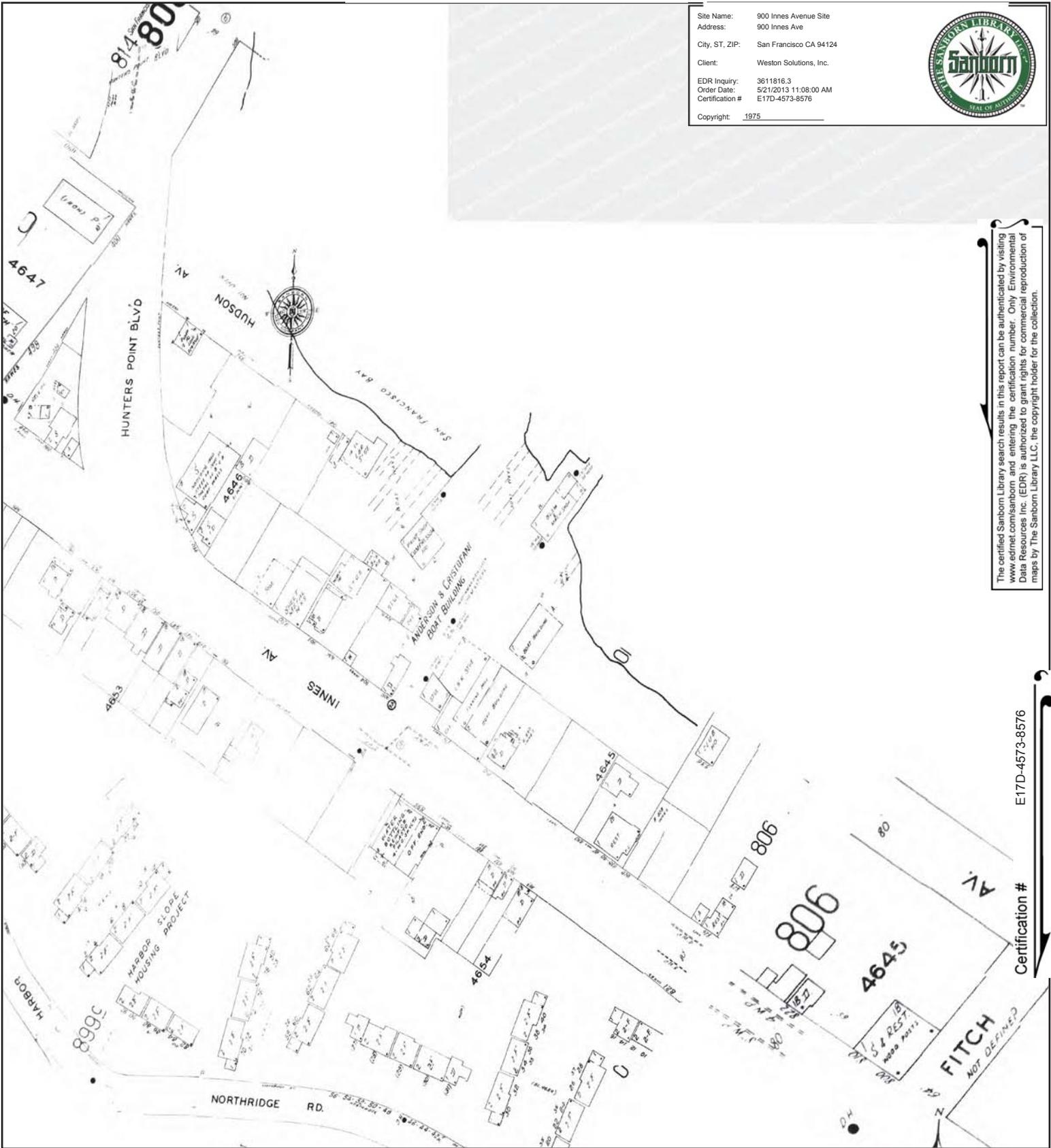


Volume 8, Sheet 806



# 1975 Certified Sanborn Map

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 EDR Inquiry: 3611816.3  
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 Copyright: 1975

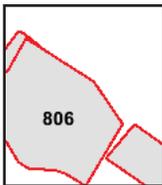
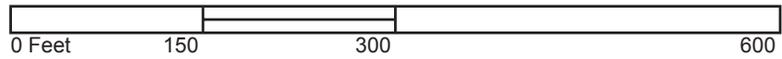


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Volume 8, Sheet 806



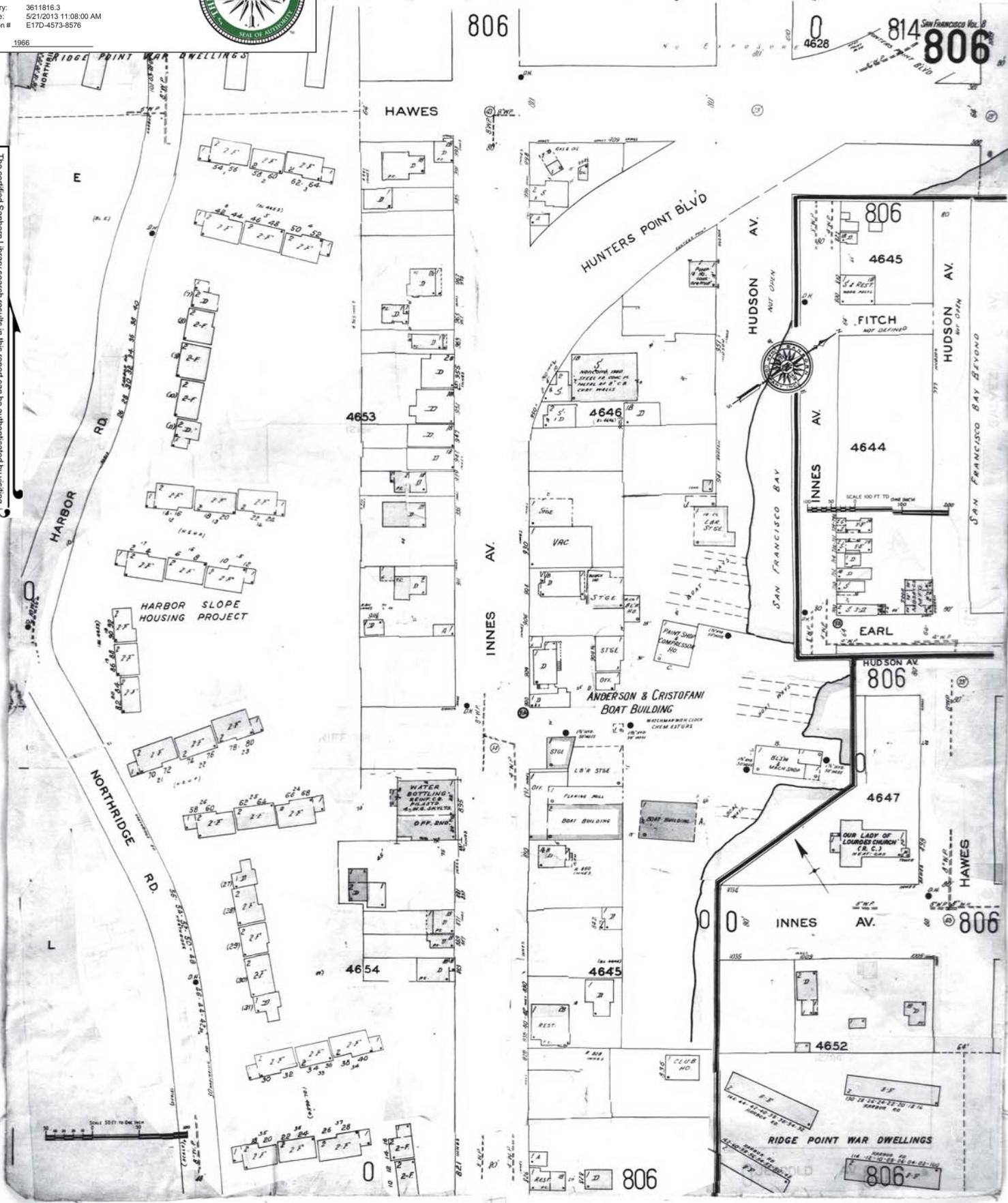
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Order Date: 5/21/2013 11:08:00 AM  
Certification #: E17D-4573-8576  
Copyright: 1968



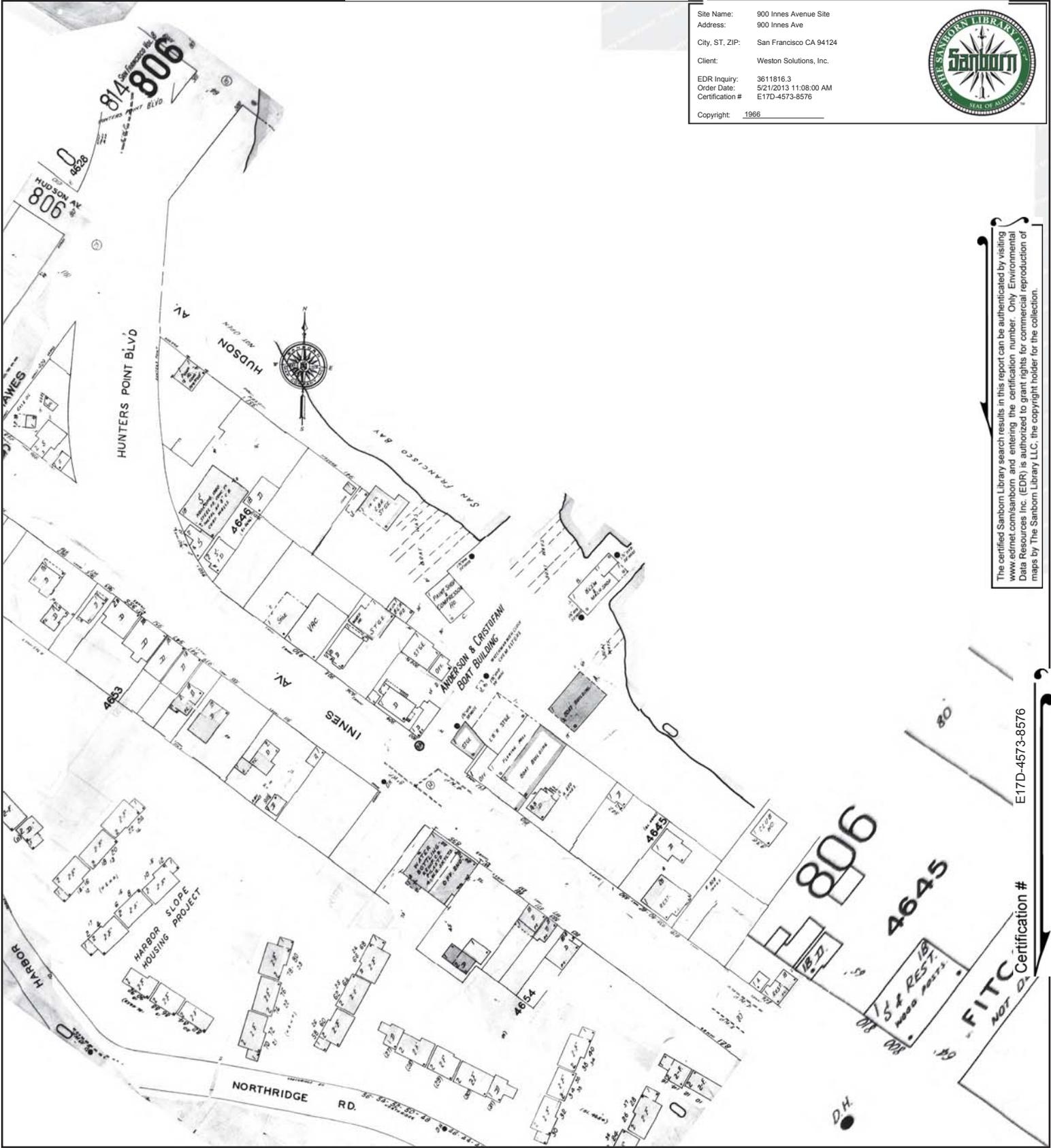
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Certification # E17D-4573-8576



# 1966 Certified Sanborn Map

Site Name: 900 Innes Avenue Site  
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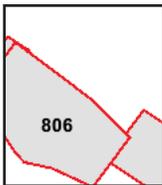
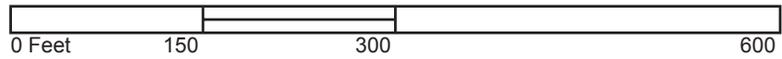


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E17D-4573-8576

Certification #

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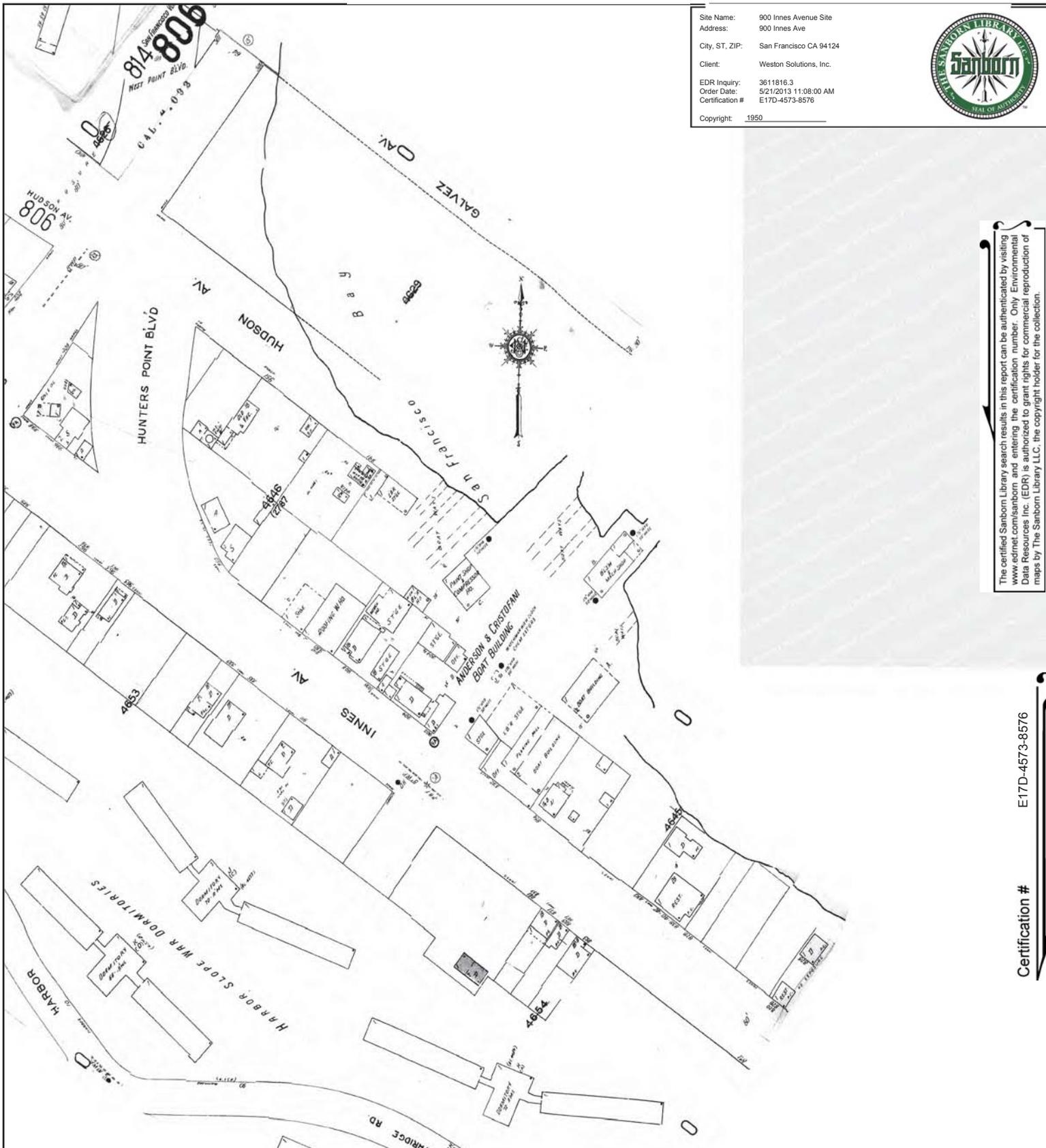


Volume 8, Sheet 806



# 1950 Certified Sanborn Map

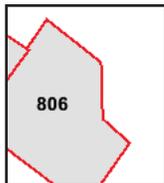
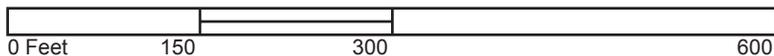
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 EDR Inquiry: 3611816.3  
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 Certification #: E17D-4573-8576  
 Copyright: 1950



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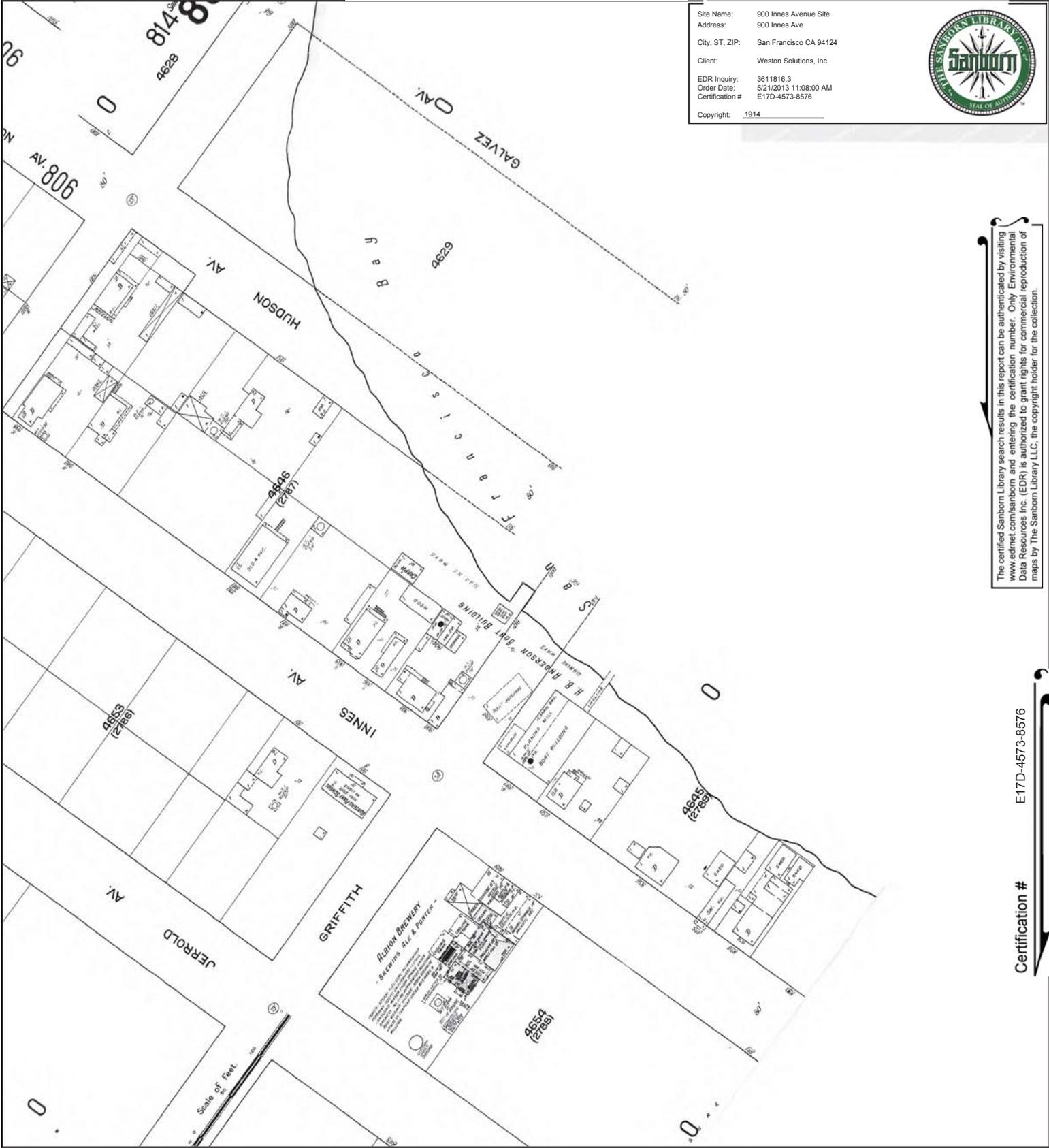


Volume 8, Sheet 806



# 1914 Certified Sanborn Map

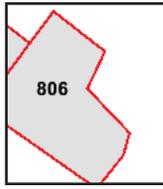
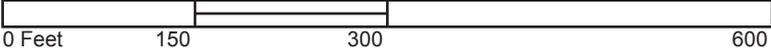
Site Name: 900 Innes Avenue Site  
 Address: 900 Innes Ave  
 City, ST, ZIP: San Francisco CA 94124  
 Client: Weston Solutions, Inc.  
 EDR Inquiry: 3611816.3  
 Order Date: 5/21/2013 11:08:00 AM  
 Certification #: E17D-4573-8576  
 Copyright: 1914



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Certification # E17D-4573-8576

This Certified Sanborn Map combines the following sheets. Outlined areas indicate map sheets within the collection.



Volume 8, Sheet 806



# 1900 Certified Sanborn Map

Site Name: 900 Innes Avenue Site  
 Address: 900 Innes Ave  
 City, ST, ZIP: San Francisco CA 94124  
 Client: Weston Solutions, Inc.  
 EDR Inquiry: 3611816.3  
 Order Date: 5/21/2013 11:08:00 AM  
 Certification #: E17D-4573-8576  
 Copyright: 1900

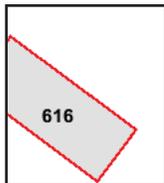
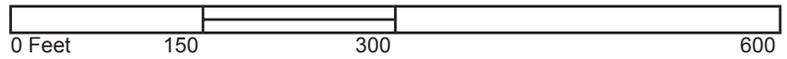


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Certification # E17D-4573-8576

This Certified Sanborn Map combines the following sheets. Outlined areas indicate map sheets within the collection.



Volume 5, Sheet 616



## **APPENDIX E - CITY DIRECTORY**

**900 Innes Avenue Site**

900 Innes Ave  
San Francisco, CA 94124

Inquiry Number: 3611816.6  
May 20, 2013

# The EDR-City Directory Abstract

## TABLE OF CONTENTS

### SECTION

Executive Summary

Findings

*Thank you for your business.*

Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

### DESCRIPTION

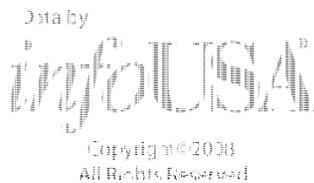
Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1910 through 2012. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 332 feet of the target property.

A summary of the information obtained is provided in the text of this report.

### RECORD SOURCES

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### RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
2012	Cole Information Services	-	X	X	-
2007	Cole Information Services	-	X	X	-
2006	Haines Company, Inc.	-	X	X	X
2000	Haines & Company	X	X	X	X
1993	Pacific Bell	-	X	X	-
1990	Pacific Bell	-	X	X	-
1985	Pacific Bell	-	X	X	-
1982	R. L. Polk Co.	-	-	-	-
1977	Pacific Telephone	X	X	X	-
1971	Pacific Telephone	X	X	X	-
1966	R. L. Polk & Co.	X	X	X	X
1962	R. L. Polk & Co.	X	X	X	X
1958	R. L. Polk & Co.	X	X	X	X
1953	R. L. Polk & Co.	X	X	X	X
1949	R. L. Polk & Co.	X	X	X	-

## EXECUTIVE SUMMARY

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
1944	R. L. Polk & Co.	X	X	X	-
1940	R. L. Polk & Co.	X	X	X	-
1935	R. L. Polk & Co.	X	X	X	-
1930	R. L. Polk & Co.	-	X	X	-
1925	R. L. Polk & Co.	-	X	X	-
1920	Pacific Telephone	-	X	X	-
1915	H. S. Crocker Co.	X	X	X	-
1910	H. S. Crocker Co.	-	-	-	-

## EXECUTIVE SUMMARY

### MAP INFORMATION

The Overview Map provides information on nearby property parcel boundaries. Properties on this map that were selected for research are listed below the map.



### SELECTED ADDRESSES

The following addresses were selected by the client. Detailed findings are contained in the findings section. An "X" indicates where information was identified.

<u>Address</u>	<u>Type</u>	<u>Findings</u>
900 Innes Ave	Map ID: 1	X
INNES AVE	Map ID: 10	
930 INNES AVE	Map ID: 11	X
904 INNES AVE V	Map ID: 2	
900 INNES AVE	Map ID: 3	X
908 INNES AVE V	Map ID: 4	
INNES AVE	Map ID: 5	

## EXECUTIVE SUMMARY

<b><u>Address</u></b>	<b><u>Type</u></b>	<b><u>Findings</u></b>
808 INNES AVE	Map ID: 6	X
896 INNES AVE V	Map ID: 7	
930 INNES AVE	Map ID: 8	X
888 INNES AVE	Map ID: 9	X

# FINDINGS

## TARGET PROPERTY INFORMATION

### ADDRESS

900 Innes Ave  
San Francisco, CA 94124

### FINDINGS DETAIL

Target Property research detail.

### INNES AVE

#### 900 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2000	MANUELM	Haines & Company	Image pg. A3

### Innes Ave

#### 900 Innes Ave

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1977	No Return	Pacific Telephone	

### INNES AVE

#### 900 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1971	VACANT	Pacific Telephone	

### Innes Ave

#### 900 Innes Ave

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1966	Vacant	R. L. Polk & Co.	Image pg. A5

### INNES AVE

#### 900 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1962	Jorgensen Virginia A Mrs	R. L. Polk & Co.	Image pg. A6
1958	Jorgensen Virginia A Mrs	R. L. Polk & Co.	Image pg. A7

## FINDINGS

### Innes Ave

#### 900 Innes Ave

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1953	Jorgensen Carl J	R. L. Polk & Co.	Image pg. A8

### INNES AVE

#### 900 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1949	JORGENSEN H	R. L. Polk & Co.
1944	JORGENSEN CARL J (VIRGINIA) INSPR RADIOMARINE CORPR	R. L. Polk & Co.
1940	CARL J (VIRGINIA) WITH RADIOMARINE CORP H	R. L. Polk & Co.
1935	JUBGENSEN CARL (VIRGINIA) SEAMNH	R. L. Polk & Co.

### Innes Ave

#### 900 Innes Ave

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1915	Siemer Fredk Jr Inga shipwright h	H. S. Crocker Co.

## FINDINGS

### ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

#### GRIFFITH ST

##### 530 GRIFFITH ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	LAZOLeo	Haines Company, Inc.	Image pg. A1

##### 540 GRIFFITH ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	HICKMANMaxine	Haines Company, Inc.	Image pg. A1

##### 550 GRIFFITH ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	e OKORIEAJphonsus	Haines Company, Inc.	Image pg. A1

##### 560 GRIFFITH ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	o VEGA Nelson	Haines Company, Inc.	Image pg. A1

#### INNES

##### 850 INNES

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1920	AUSTIN MRS DAVID C R	Pacific Telephone	

##### 871 INNES

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1940	VOISIN ADRIEN (FRANCES) SCULPTORH	R. L. Polk & Co.	

##### 906 INNES

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1920	MIX MISS FRANCES E R	Pacific Telephone	

##### 908 INNES

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1935	FRANK R	R. L. Polk & Co.	

## FINDINGS

### **INNES AVE**

#### **808 INNES AVE**

Map ID: 6

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2000	MANUELM	Haines & Company	Image pg. A4

#### **847 INNES AVE**

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1977	No Return	Pacific Telephone	
1971	VACANT	Pacific Telephone	
1962	Segel Augustine	R. L. Polk & Co.	Image pg. A6
1958	Eshevorria Antonio	R. L. Polk & Co.	Image pg. A7

#### **848 INNES AVE**

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1915	Borg Louis lab r	H. S. Crocker Co.

#### **849 INNES AVE**

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	MACKJulius	Haines Company, Inc.	Image pg. A2
2000	NWAOKOROAn lionalt	Haines & Company	Image pg. A4
1962	Brooks Carlton	R. L. Polk & Co.	Image pg. A6
1958	Mack James A	R. L. Polk & Co.	Image pg. A7

#### **850 INNES AVE**

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2000	No Current Listings	Haines & Company	Image pg. A4
1977	Percy Ollie	Pacific Telephone	
1971	NO RETURN	Pacific Telephone	
1966	Jones Alma Mrs	R. L. Polk & Co.	Image pg. A5
1962	Jones Alma Mrs	R. L. Polk & Co.	Image pg. A6
1958	Jones Alma Mrs	R. L. Polk & Co.	Image pg. A7
1953	Jones Alma	R. L. Polk & Co.	Image pg. A8
1949	JONES F A M MRS WITH ANDERSON & CRISTOFA	R. L. Polk & Co.	
	JONES ALMA MRS OFEC SEC ANDERSON & CRISTOFANIH	R. L. Polk & Co.	
1940	JONES FRANK A M (ALMA L) PRODUCTION ENG	R. L. Polk & Co.	
	ANDERSON HARRY W CAULKERR	R. L. Polk & Co.	
1935	ANDERSON WALTERR	R. L. Polk & Co.	
	ANDERSON HARRY BOAT BLDRH	R. L. Polk & Co.	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1935	ANDERSON ALMAR	R. L. Polk & Co.
1930	AUSTIN DOROTHY C R	R. L. Polk & Co.
	AUSTIN DAVID C (ELFRIDA) MSTR MARINER H	R. L. Polk & Co.
1920	ANDERSON H P R	Pacific Telephone
1915	Austin David C Elfrida mstr mar h	H. S. Crocker Co.
	Andersons Ship Yard and Marine Ways	H. S. Crocker Co.
	Anderson Henry P Anderson Ship Yard & Marine Ways h	H. S. Crocker Co.

### 851 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	GRAFFLaumata	Haines Company, Inc.	Image pg. A2
2000	MARK Kizzy	Haines & Company	Image pg. A4
1971	WILSON WILLARD G	Pacific Telephone	
1966	Donaldson H	R. L. Polk & Co.	Image pg. A5
1962	Percy Ralph	R. L. Polk & Co.	Image pg. A6
1958	Percy Ralph F	R. L. Polk & Co.	Image pg. A7

### 853 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2000	No Current Listings	Haines & Company	Image pg. A4
1977	Price Crotier Mrs	Pacific Telephone	
1971	PRICE CROTIER MRS	Pacific Telephone	
1962	Vacant	R. L. Polk & Co.	Image pg. A6
1958	Collors DePree	R. L. Polk & Co.	Image pg. A7

### 855 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2000	No Current Listings	Haines & Company	Image pg. A4
1993	Terry Joe	Pacific Bell	
1990	WALKER MARTHA	Pacific Bell	
	TERRY JOE	Pacific Bell	
1985	WALKER MARTHA	Pacific Bell	
	TERRY JOE	Pacific Bell	
1977	Walker Martha	Pacific Telephone	
1971	NO RETURN	Pacific Telephone	
1966	Walker Martha V Mrs	R. L. Polk & Co.	Image pg. A5
1962	Mc Cormick Almarine	R. L. Polk & Co.	Image pg. A6
1958	Wong Mike	R. L. Polk & Co.	Image pg. A7

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1958	Lane Elsie Mrs	R. L. Polk & Co.	Image pg. A7

### 857 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	CROWTHER Monique	Haines Company, Inc.	Image pg. A2
2000	CROWTHER Monique	Haines & Company	Image pg. A4
1977	Rowe Rosie L	Pacific Telephone	
1971	NO RETURN	Pacific Telephone	
1966	Green Pamela Mrs	R. L. Polk & Co.	Image pg. A5
1962	Felder Thelma	R. L. Polk & Co.	Image pg. A6
1958	Feider Thelma	R. L. Polk & Co.	Image pg. A7

### 859 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1977	Demartra Mae W	Pacific Telephone	
1971	GONZALEZ NANCY MRS	Pacific Telephone	
1966	Kimball Elorna smstrs	R. L. Polk & Co.	Image pg. A5
1962	Kimball E J	R. L. Polk & Co.	Image pg. A6
1958	Kimball E J	R. L. Polk & Co.	Image pg. A7

### 860 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2012	MARKETPLACE FELLOWSHIP CHURCH	Cole Information Services	
	FAMILY RESTORATION HOUSE	Cole Information Services	
2006	CHURCH	Haines Company, Inc.	Image pg. A2
	MARKETPLACE	Haines Company, Inc.	Image pg. A2
	FELLOWSHIP	Haines Company, Inc.	Image pg. A2
2000	DOHERTYPatrick	Haines & Company	Image pg. A4

### 861 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	ZAMIIORANOJorge	Haines Company, Inc.	Image pg. A2
1977	Johnson Orea Mrs	Pacific Telephone	
1971	JOHNSON FLOWERS E MRS	Pacific Telephone	
1966	Sims Sandra	R. L. Polk & Co.	Image pg. A5
	Johnson Oree	R. L. Polk & Co.	Image pg. A5
1962	Jeffery Chas	R. L. Polk & Co.	Image pg. A6
1958	Boyd Robt C	R. L. Polk & Co.	Image pg. A7

## FINDINGS

### 863 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	KOCKS Matthew	Haines Company, Inc.	Image pg. A2
2000	KOCKS Mattlihew	Haines & Company	Image pg. A4
1990	LONG PEARL C	Pacific Bell	
1985	LONG PEARL C	Pacific Bell	
1977	Long Pearl C	Pacific Telephone	
1971	VACANT	Pacific Telephone	
1966	Percy Ralph	R. L. Polk & Co.	Image pg. A5
1962	Mc Gurfey Leuel	R. L. Polk & Co.	Image pg. A6
1958	Morrison Phillip L	R. L. Polk & Co.	Image pg. A7
1953	Sales Bernard	R. L. Polk & Co.	Image pg. A8
1949	SALES BERTHA W (WID BERNARD) MAIDH	R. L. Polk & Co.	
	VELASQUES ROSELLE WTR MRS E B BURGARDR	R. L. Polk & Co.	

### 869 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	JONES Jimmie	Haines Company, Inc.	Image pg. A2
	KOCKS Mathew	Haines Company, Inc.	Image pg. A2
2000	KOCKS Matthew	Haines & Company	Image pg. A4
1977	Vickers Robt	Pacific Telephone	
1971	VICKERS ROBT	Pacific Telephone	
1966	Vickers Robt	R. L. Polk & Co.	Image pg. A5
1962	Vickers Robt	R. L. Polk & Co.	Image pg. A6
1958	Vickers Robt	R. L. Polk & Co.	Image pg. A7
1953	Vickers Robt	R. L. Polk & Co.	Image pg. A8
1949	ANDREOTTI ALDO 3J (ROSELLA) LABH	R. L. Polk & Co.	

### 870 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	HOUSE RLM DEVELOPMENT	Haines Company, Inc.	Image pg. A2
	RESTORATION	Haines Company, Inc.	Image pg. A2
	FAMILY	Haines Company, Inc.	Image pg. A2
2000	CONSTR&DEVLP INC	Haines & Company	Image pg. A4
	MCCURN Roberd	Haines & Company	Image pg. A4
	COASTPACIFIC	Haines & Company	Image pg. A4

### 871 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	GONZALESRuIno	Haines Company, Inc.	Image pg. A2

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2000	GONZALESRuino	Haines & Company	Image pg. A4
	SANDOVALMar lo	Haines & Company	Image pg. A4
1990	MACHADO ROMEO M	Pacific Bell	
1985	MORAN ELMER	Pacific Bell	
1977	Vacant	Pacific Telephone	
1971	JENKINS BERNIA	Pacific Telephone	
1966	No Return	R. L. Polk & Co.	Image pg. A5
1962	Nation Lucile	R. L. Polk & Co.	Image pg. A6
1958	Vacant	R. L. Polk & Co.	Image pg. A7
1953	Vacant	R. L. Polk & Co.	Image pg. A8
1949	PASTORETE PRIMO B (ROSANLLA A) MACHH	R. L. Polk & Co.	

### 880 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2012	DOHERTY PAINTING & CONSTRUCTION INC	Cole Information Services	
2007	DOHERTY PAINTING & CONSTRUCTION INC	Cole Information Services	
2000	CONSTR&SERV	Haines & Company	Image pg. A4
	WARDSALL PHASE	Haines & Company	Image pg. A4
	MAINTENANCE INC	Haines & Company	Image pg. A4

### 881 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	SMITH Kathleen	Haines Company, Inc.	Image pg. A2
2000	PELLETIERJeffrey	Haines & Company	Image pg. A3
	HIGGSEric J	Haines & Company	Image pg. A3
1985	LOPES MANUEL A	Pacific Bell	
1977	Lopes Manuel A	Pacific Telephone	
1971	VOISIN ADRIEN A	Pacific Telephone	
1966	Voison Adrien A	R. L. Polk & Co.	Image pg. A5
1962	Voisin Adrien A	R. L. Polk & Co.	Image pg. A6
1958	Voisin Adrien	R. L. Polk & Co.	Image pg. A7
1953	Voisin Adrien A	R. L. Polk & Co.	Image pg. A8

### 888 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2012	ZEBRA AWNING CO	Cole Information Services	
	ZEBRA AWNING CO	Cole Information Services	
2007	ZEBRA AWNING CO INC	Cole Information Services	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2007	ZEBRA AWNING CO INC	Cole Information Services	
2006	ZEBRAAWNING CO	Haines Company, Inc.	Image pg. A2

### 890 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1935	ANDERSON & CRISTOFANI (W A ANDERSON ALFD CRIO TOFANI) BOAT BIDRS	R. L. Polk & Co.
1930	ANDERSON & CRISTOFANI (W A ANDERSON ALFD CRISTOFANI) BOAT BLDRS	R. L. Polk & Co.

### 894 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2000	XXXX 00 Q	Haines & Company	Image pg. A3
1993	DONCO INDUSTRIES INC	Pacific Bell	
1990	ANDERSON & CRISTOFANI	Pacific Bell	
1985	ANDERSON & CRISTOFANI	Pacific Bell	
1977	Ableship Company	Pacific Telephone	
	Anderson & Criatofani Marine Ways boat repr yd	Pacific Telephone	
	Anderson Walter A	Pacific Telephone	
	Anderson & Cristofani boat bldre	Pacific Telephone	
1971	ANDERSON WALTER A	Pacific Telephone	
	ANDERSON & CRISTOFANI BOAT BLDRS	Pacific Telephone	
1966	Anderson & Cristofani boat bldrs	R. L. Polk & Co.	Image pg. A5
1962	Anderson & Cristofani boat bldra	R. L. Polk & Co.	Image pg. A6
1958	Anderson Cristofani boat bldrs	R. L. Polk & Co.	Image pg. A7
1953	Anderson & Cristofani boat bldrs	R. L. Polk & Co.	Image pg. A8

### 895 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2012	NUEVA CASTILLA CO	Cole Information Services	
2007	S F MOUNTAIN SPRINGS WATER CO	Cole Information Services	
	SECURITY SERVICE IRON WORKS	Cole Information Services	
2006	Victor	Haines Company, Inc.	Image pg. A2
	GODINEZCubillo	Haines Company, Inc.	Image pg. A2
	CASTILLO NUEVA	Haines Company, Inc.	Image pg. A2
2000	COMPANY	Haines & Company	Image pg. A3
	MOUNTAINSPRINGS	Haines & Company	Image pg. A3
	WATER CO	Haines & Company	Image pg. A3

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2000	ALBION WATER	Haines & Company	Image pg. A3
1993	ALBION MOUNTAIN SPRINGS WATER CO	Pacific Bell	
1990	LT MOUNTAISPRNCS WAJERCO	Pacific Bell	
1985	MOUNTAIN SPRINGS WATER CO	Pacific Bell	
	MOUNTAIN SPRINGS WATER CO	Pacific Bell	
1977	Mountain Springs Water Co	Pacific Telephone	
1971	MOUNTAIN SPRINGS WATER CO	Pacific Telephone	
1966	Mountair Springs Water Co	R. L. Polk & Co.	Image pg. A5
1962	Mountain Springs Water Co water	R. L. Polk & Co.	Image pg. A6
1958	Mountain Springs Water Co water distr	R. L. Polk & Co.	Image pg. A7

### 904 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1971	VACANT	Pacific Telephone	
1966	904 08 Vacant	R. L. Polk & Co.	Image pg. A5
1958	Siemer Ernest R	R. L. Polk & Co.	Image pg. A7
1953	Siemer Ernest R	R. L. Polk & Co.	Image pg. A8
1949	SIEMER ERNEST R (MYRTLE A) CLK SPCOH	R. L. Polk & Co.	
1944	ERNEST R (MYRTLE) CLK SPCO R	R. L. Polk & Co.	
1940	SIEMER ERNEST R (MYRTLE) ELK SPCOH	R. L. Polk & Co.	
1930	HAMILTON NORMA E STEN SWETT & CRAWFORDR	R. L. Polk & Co.	
1925	JORGENSEN INGEBORP (WID C J) H	R. L. Polk & Co.	
1915	Jorgensen Pred painter r	H. S. Crocker Co.	
	Jorgensen Carl wireless opr ir	H. S. Crocker Co.	

### 906 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1915	Mix Juliana wid Frank h	H. S. Crocker Co.

### 908 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2000	No Current Listings	Haines & Company	Image pg. A3
1977	Bearing Lucillie	Pacific Telephone	
1971	BARRON MONA LISA	Pacific Telephone	
1966	904 08 Vacant	R. L. Polk & Co.	Image pg. A5
1962	Hudman Arth	R. L. Polk & Co.	Image pg. A6
1958	Bradshaw Jas J	R. L. Polk & Co.	Image pg. A7
1953	Bradshaw Jas J	R. L. Polk & Co.	Image pg. A8

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1949	JOS J (PERLA) JAN H	R. L. Polk & Co.
1940	PE DONALD F (PAULINE) STEELWKRH	R. L. Polk & Co.
1935	MIX JULIA (WID FRANK)R PAULINE MRSH	R. L. Polk & Co. R. L. Polk & Co.
1930	MIX JULIA (WID FRANK)H	R. L. Polk & Co.
1925	MIX JULIANA (WID FRANK)H MIX PAULINE LAB ASST LANGLEY & MICHAELS COR	R. L. Polk & Co. R. L. Polk & Co.
1920	BIGOGS MRS CHAS R	Pacific Telephone

### 911 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2007	COVAY CAB	Cole Information Services	
2006	BROWN Paul COVAYCab	Haines Company, Inc. Haines Company, Inc.	Image pg. A2 Image pg. A2
2000	BROWN Paul COVAY Cab	Haines & Company Haines & Company	Image pg. A3 Image pg. A3
1993	Brown Paul	Pacific Bell	
1990	BROWN PAUL COVAY CAB HEISLER K	Pacific Bell Pacific Bell Pacific Bell	
1985	BROWN PAUL COVAY CAB HEISLER K	Pacific Bell Pacific Bell Pacific Bell	
1977	Jenkins Coranza	Pacific Telephone	
1971	JENKINS CORANZA	Pacific Telephone	
1966	Jenkins Coranza	R. L. Polk & Co.	Image pg. A5
1962	Jenkins Coranza	R. L. Polk & Co.	Image pg. A6
1958	Jenkins Coranza	R. L. Polk & Co.	Image pg. A7
1953	Jenkins Coranda	R. L. Polk & Co.	Image pg. A8
1949	BIERMAN HENRY P (MARIE)R BIERMAN HENRY Q (ROSALAND) DR J F BURNS DRAYINGR BIERMAN HENRY W (LOUISE)H	R. L. Polk & Co. R. L. Polk & Co. R. L. Polk & Co. R. L. Polk & Co.	
1940	R BIERMAN HENRY W (LOUISE) CARPH	R. L. Polk & Co. R. L. Polk & Co.	
1935	R BIERMAN HENRY LABR BIERMAN HENRY W (LOUISE)H	R. L. Polk & Co. R. L. Polk & Co. R. L. Polk & Co.	
1930	BIEMAN HENRY W SHIPBLDRH	R. L. Polk & Co.	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	BIERMAN HENRY (LOUISE) SHIPWRIGHLITH	R. L. Polk & Co.
1915	Gable Richard lab r	H. S. Crocker Co.
	Gable Thos Jane tmstr h	H. S. Crocker Co.
	Goble Richard lab r	H. S. Crocker Co.
	Goble Thos Jane tmstr h	H. S. Crocker Co.

### 915 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2000	No Current Listings	Haines & Company	Image pg. A3

### 927 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1935	SIEMER ERNEST R CLK SPCOR	R. L. Polk & Co.

### 930 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2012	MEISWINKEL RFJ	Cole Information Services	
	MEISWINKEL RFJ	Cole Information Services	
	MEISWINKEL RFJ	Cole Information Services	
2007	RFJ CORP	Cole Information Services	
	RFJ MEISWINKEL CO	Cole Information Services	
	RFJ CORP	Cole Information Services	
	RFJ MEISWINKEL CO	Cole Information Services	
	RFJ CORP	Cole Information Services	
	RFJ MEISWINKEL CO	Cole Information Services	
2006	MEISWINKELRFJ	Haines Company, Inc.	Image pg. A2
	RESIDENTIAL RFJ MEISWINKEL COMPANY	Haines Company, Inc.	Image pg. A2
	MEISWINKELRFJ	Haines Company, Inc.	Image pg. A2
	RESIDENTIAL RFJ MEISWINKEL COMPANY	Haines Company, Inc.	Image pg. A2
2000	MEISWINKEL COMPANY	Haines & Company	Image pg. A3
	R F J MEISWINKEL COMPANY	Haines & Company	Image pg. A3
	MEISWINKEL COMPANY	Haines & Company	Image pg. A3
	R F J MEISWINKEL COMPANY	Haines & Company	Image pg. A3
1993	MEISWINKEL COMPANY	Pacific Bell	
	MEISWINKEL COMPANY	Pacific Bell	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1990	MEWINKETI COMPANY CONTE	Pacific Bell	
	MEWINKETI COMPANY CONTE	Pacific Bell	
1985	MEISWINKEL COMPANY CON ITR	Pacific Bell	
	MEISWINKEL COMPANY CON ITR	Pacific Bell	
1977	Meiswinkel Frederick Inc Stge Yd	Pacific Telephone	
	Meiswinkel Frederick Inc Stge Yd	Pacific Telephone	
1971	TUFTS SHEET METAL	Pacific Telephone	
	TUFTS SHEET METAL	Pacific Telephone	
1966	0 Vacant	R. L. Polk & Co.	Image pg. A5
	0 Vacant	R. L. Polk & Co.	Image pg. A5
1962	Regal Roofing Co	R. L. Polk & Co.	Image pg. A6
	Regal Roofing Co	R. L. Polk & Co.	Image pg. A6
1958	Regal Roofing Co Inc	R. L. Polk & Co.	Image pg. A7
	Regal Roofing Co Inc	R. L. Polk & Co.	Image pg. A7
1953	Regal Roofing Co	R. L. Polk & Co.	Image pg. A8
	Regal Roofing Co	R. L. Polk & Co.	Image pg. A8
1949	L (MARSE) WITH J D & A B SPRECKELS CO H	R. L. Polk & Co.	
	L (MARSE) WITH J D & A B SPRECKELS CO H	R. L. Polk & Co.	

### 931 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1930	CONNOLLEY DANL L (LILLY M) MACHH	R. L. Polk & Co.	
1915	Willson Wilmer W Hilda elk S P Co h	H. S. Crocker Co.	

### 935 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	TOLBERTOrlean	Haines Company, Inc.	Image pg. A2
2000	TOLBERTOrean	Haines & Company	Image pg. A3
1977	Wooden Fannie	Pacific Telephone	
1971	HULBERT RICH D	Pacific Telephone	
1966	Varize Anthony J	R. L. Polk & Co.	Image pg. A5
1962	Lacey Howard J	R. L. Polk & Co.	Image pg. A6
1958	Lacey Howard J	R. L. Polk & Co.	Image pg. A7
1953	Lacey Howard J	R. L. Polk & Co.	Image pg. A8
1949	LACEY HOWARD J (ELIZ) IRONWKRH	R. L. Polk & Co.	
1940	SIMPSON ARTH W (NETTIE) CARP	R. L. Polk & Co.	

## FINDINGS

### 937 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1930	SIEMER FREDK (ANGA) SHIPWRIGHT BRUER & SBLEMER CO H INNES AVE	R. L. Polk & Co.
	SIEMER ERNEST R ELK R INNES AVE	R. L. Polk & Co.
	SIEMER RUTH R INNES AVE	R. L. Polk & Co.

### 939 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	o ANDERSON Danny	Haines Company, Inc.	Image pg. A2
2000	ANDERSON Danny	Haines & Company	Image pg. A3
1985	DE VILLE AJ	Pacific Bell	
	DE VILLE AGNES	Pacific Bell	
1977	De Ville A J	Pacific Telephone	
1971	DE VILLE A J	Pacific Telephone	
1966	Hines Anderson	R. L. Polk & Co.	Image pg. A5
	De Ville A J	R. L. Polk & Co.	Image pg. A5
1962	Pruitt Adam	R. L. Polk & Co.	Image pg. A6
	De Ville A J	R. L. Polk & Co.	Image pg. A6
1958	Hunter Frances	R. L. Polk & Co.	Image pg. A7
1953	Hunter Frances Mrs	R. L. Polk & Co.	Image pg. A8
1949	BURGARD EVA B MRS RESTR HUNTER KENNETH (FRANCES)H	R. L. Polk & Co. R. L. Polk & Co.	

### 940 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1925	HARRY WM (CARRIE) LABH STOTT ETHEL (WID HARRY)R	R. L. Polk & Co. R. L. Polk & Co.
1915	Hartmann Wm Carrie lab h Stott Ethel Mrs r	H. S. Crocker Co. H. S. Crocker Co.

### 941 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1935	ECKMAN GUSH	R. L. Polk & Co.

### 943 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	FLEMING Albert	Haines Company, Inc.	Image pg. A2
2000	DAVIS Oon	Haines & Company	Image pg. A3
1977	No Return	Pacific Telephone	
1971	NO RETURN	Pacific Telephone	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1966	Cangson Richd	R. L. Polk & Co.	Image pg. A5
1962	Chan Wah	R. L. Polk & Co.	Image pg. A6
1958	Chan Wah	R. L. Polk & Co.	Image pg. A7

### 947 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	a HURTADOMartza	Haines Company, Inc.	Image pg. A2
2000	HE Wei	Haines & Company	Image pg. A3
1993	He Wei	Pacific Bell	
1977	Reed Charles	Pacific Telephone	
1971	BALIS MERLE L	Pacific Telephone	
1966	Grinberg Robt	R. L. Polk & Co.	Image pg. A5
1962	Grinberg Robt	R. L. Polk & Co.	Image pg. A6
1958	Camilli Warren B	R. L. Polk & Co.	Image pg. A7
1953	Vacant	R. L. Polk & Co.	Image pg. A8

### 950 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2012	SURFSIDE LIQUORS	Cole Information Services	
2006	SURFSIDE LIQUORS	Haines Company, Inc.	Image pg. A2
2000	SURFSIDE LIQUORS	Haines & Company	Image pg. A3
	PINKARD Robert	Haines & Company	Image pg. A3
1993	DR DS TIRE SERVICE	Pacific Bell	
	SURFSIDE LIQUORS	Pacific Bell	
1990	SURFSIDE LIQUORS	Pacific Bell	
1985	SURFSIDE LIQUORS	Pacific Bell	
1977	Brown Joe	Pacific Telephone	
	Surfside Liquors	Pacific Telephone	
1971	BROWN JOE	Pacific Telephone	
	SURFSIDE LIQUORS	Pacific Telephone	
1966	Surfside Liquors	R. L. Polk & Co.	Image pg. A5
1962	Peterson Liquor Store	R. L. Polk & Co.	Image pg. A6
	Peterson Lester A	R. L. Polk & Co.	Image pg. A6
1958	Peterson Liquor Store	R. L. Polk & Co.	Image pg. A7
	Peterson Lester A	R. L. Polk & Co.	Image pg. A7
1953	Peterson Lester A	R. L. Polk & Co.	Image pg. A8
	Peterson Liquor Store	R. L. Polk & Co.	Image pg. A8
1949	PETERSON LESTER A (SYBIL) LAUNCH OPRH	R. L. Polk & Co.	

## FINDINGS

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1949	PETERSON LESTER JR	R. L. Polk & Co.
1940	SAHLIN GEO A (MABEL) LABH	R. L. Polk & Co.

### 951 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	ENES I Kristne	Haines Company, Inc.	Image pg. A2
1985	WALDRON C	Pacific Bell	
1977	Our Lady Or Lourdes Convent	Pacific Telephone	
1971	LOVELACE FANNIE	Pacific Telephone	
1966	Limm Jennie Q Mrs	R. L. Polk & Co.	Image pg. A5
1962	Limm Peter	R. L. Polk & Co.	Image pg. A6
1958	Limm Peter	R. L. Polk & Co.	Image pg. A7
1953	Limm Peter	R. L. Polk & Co.	Image pg. A8
1935	DELIA (WID PETER)H	R. L. Polk & Co.	

### 954 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1962	Vacant	R. L. Polk & Co.	Image pg. A6

### 955 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
2006	HAYWARDAntolne	Haines Company, Inc.	Image pg. A2
	JACOBS Joanne	Haines Company, Inc.	Image pg. A2
2000	ANTOINE Hayward	Haines & Company	Image pg. A3
1993	Benton David J	Pacific Bell	
1977	Black C W Rev	Pacific Telephone	
1971	NO RETURN	Pacific Telephone	
1966	Wong Mike	R. L. Polk & Co.	Image pg. A5
1962	Wong Mike	R. L. Polk & Co.	Image pg. A6
1958	Wong Mike	R. L. Polk & Co.	Image pg. A7

### 956 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1962	Vacant	R. L. Polk & Co.	Image pg. A6

### 966 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1966	a Juhl Melvin R	R. L. Polk & Co.	Image pg. A5
1962	a Juhl Melvin R	R. L. Polk & Co.	Image pg. A6

## FINDINGS

### 970 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1940	H	R. L. Polk & Co.

### 974 INNES AVE

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1940	ROSEEN LAWRENCE (JANICE) ELKH	R. L. Polk & Co.

### INNES/GRIFFITH

#### INNES/GRIFFITH

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1966	INNES/GRIFFITH	R. L. Polk & Co.	Image pg. A5
1962	INNES/GRIFFITH	R. L. Polk & Co.	Image pg. A6
1958	INNES/GRIFFITH	R. L. Polk & Co.	Image pg. A7
1953	INNES/GRIFFITH	R. L. Polk & Co.	Image pg. A8

### INNES/GRIFFITH ST

#### INNES/GRIFFITH ST

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1977	INNES/GRIFFITH ST	Pacific Telephone
1971	INNES/GRIFFITH ST	Pacific Telephone

## FINDINGS

### TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

#### Address Researched

900 Innes Ave

#### Address Not Identified in Research Source

2012, 2007, 2006, 1993, 1990, 1985, 1982, 1930, 1925, 1920, 1910

### ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

#### Address Researched

INNES AVE

2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

INNES AVE

2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

INNES/GRIFFITH

2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

INNES/GRIFFITH ST

2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

530 GRIFFITH ST

2012, 2007, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

540 GRIFFITH ST

2012, 2007, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

550 GRIFFITH ST

2012, 2007, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

560 GRIFFITH ST

2012, 2007, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

808 INNES AVE

2012, 2007, 2006, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

847 INNES AVE

2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1966, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

848 INNES AVE

2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1910

849 INNES AVE

2012, 2007, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

850 INNES

2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1915, 1910

850 INNES AVE

2012, 2007, 2006, 1993, 1990, 1985, 1982, 1944, 1925, 1910

851 INNES AVE

2012, 2007, 1993, 1990, 1985, 1982, 1977, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

853 INNES AVE

2012, 2007, 2006, 1993, 1990, 1985, 1982, 1966, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

855 INNES AVE

2012, 2007, 2006, 1982, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

857 INNES AVE

2012, 2007, 1993, 1990, 1985, 1982, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

859 INNES AVE

2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

860 INNES AVE

2012, 2007, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910

## FINDINGS

### Address Researched

### Address Not Identified in Research Source

860 INNES AVE	2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
861 INNES AVE	2012, 2007, 2000, 1993, 1990, 1985, 1982, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
863 INNES AVE	2012, 2007, 1993, 1982, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
869 INNES AVE	2012, 2007, 1993, 1990, 1985, 1982, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
870 INNES AVE	2012, 2007, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
871 INNES	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1935, 1930, 1925, 1920, 1915, 1910
871 INNES AVE	2012, 2007, 1993, 1982, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
880 INNES AVE	2012, 2007, 2006, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
880 INNES AVE	2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
881 INNES AVE	2012, 2007, 1993, 1990, 1982, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
888 INNES AVE	2012, 2007, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
888 INNES AVE	2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
888 INNES AVE	2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
890 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1925, 1920, 1915, 1910
894 INNES AVE	2012, 2007, 2006, 1982, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
895 INNES AVE	2012, 2007, 1982, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
895 INNES AVE	2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
896 INNES AVE V	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
904 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1962, 1935, 1920, 1910
904 INNES AVE V	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
906 INNES	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1915, 1910
906 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1910
908 INNES	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1930, 1925, 1920, 1915, 1910
908 INNES AVE	2012, 2007, 2006, 1993, 1990, 1985, 1982, 1944, 1915, 1910
908 INNES AVE V	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
911 INNES AVE	2012, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
911 INNES AVE	2012, 2007, 1982, 1944, 1920, 1910
915 INNES AVE	2012, 2007, 2006, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
927 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1930, 1925, 1920, 1915, 1910

## FINDINGS

### Address Researched

### Address Not Identified in Research Source

930 INNES AVE	2012, 2007, 1982, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
930 INNES AVE	2012, 2007, 1982, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
930 INNES AVE	2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
930 INNES AVE	2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
930 INNES AVE	2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
931 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1925, 1920, 1910
935 INNES AVE	2012, 2007, 1993, 1990, 1985, 1982, 1944, 1935, 1930, 1925, 1920, 1915, 1910
937 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1925, 1920, 1915, 1910
939 INNES AVE	2012, 2007, 1993, 1990, 1982, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
940 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1920, 1910
941 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1930, 1925, 1920, 1915, 1910
943 INNES AVE	2012, 2007, 1993, 1990, 1985, 1982, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
947 INNES AVE	2012, 2007, 1990, 1985, 1982, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
950 INNES AVE	2012, 2007, 1982, 1944, 1935, 1930, 1925, 1920, 1915, 1910
950 INNES AVE	2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
951 INNES AVE	2012, 2007, 2000, 1993, 1990, 1982, 1949, 1944, 1940, 1930, 1925, 1920, 1915, 1910
954 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
955 INNES AVE	2012, 2007, 1990, 1985, 1982, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
956 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
966 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1958, 1953, 1949, 1944, 1940, 1935, 1930, 1925, 1920, 1915, 1910
970 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1935, 1930, 1925, 1920, 1915, 1910
974 INNES AVE	2012, 2007, 2006, 2000, 1993, 1990, 1985, 1982, 1977, 1971, 1966, 1962, 1958, 1953, 1949, 1944, 1935, 1930, 1925, 1920, 1915, 1910

## **Source Page Images Appendix**

GRIFFITH ST 2006

SAN FRANCISCO

THE HAINES COMPANY DIRECTORY

2006

261 GROVE ST

STEINER ST

2253 MCMCKING Blvd 00 4
2254 BERTA Patel 00 2
2272 CHAN Shui 00 0
2273 XOOX 00 0
2274 CRULL Tim 415-346-9036

HALES ST

2253 HALEN PHOTOGRAPHER 415-771-3223 +6
2254 POWERS Scott 415-599-9068 4
2255 MANKOFF Steven 415-474-2313 +6
2256 KIM FIBSUC 415-474-2313 +6
2257 ONE MINUTE TAN 415-440-2330 4
2258 ELBICK Christian 415-603-1960 +6
2259 MCGRATH Richard 00 0
2260 LUCIO Vales 415-776-9611 +6
2261 GUARAGLIA Wilfredo 00 0
2262 BENACON N 415-776-9611 +6
2263 MING Brian 00 0
2264 WESSELD Karl 415-891-9028 4
2265 OLIVANTI Steve 415-621-6445 7
2266 DYSTRAN Ann 00 0
2267 MATE Frank 00 0
2268 POWER Garrett 415-622-1313 +6
2269 FLEISHMAN Richard 00 0
2270 MURPHY Edward 415-621-3304 3
2271 YUEN Don 00 0
2272 BRODY Anne 00 0
2273 PANTER Samuel 00 0
2274 GLOTTZBA Matthew 415-738-7102 4
2275 GERALD Gus 00 0
2276 TRUSSELL Stephanie 415-473-7266 +6
2277 QUAN Edward 00 0
2278 REGGIAN Catherine 415-730-1330 +6
2279 WALLACE D 415-821-8303 +6
2280 WALLACE J 415-821-8303 +6
2281 MORGESON Maureen 00 0
2282 SOLOMON Glenn B 415-821-4320 +6
2283 MORGESON Estelle 00 0
2284 CASEY Joyce 00 0
2285 MCGARY Pamela 415-202-2211 3
2286 YUEN Yui 415-446-2330 +6

PIERCE ST

2400 EMERAC HEALTH 415-446-4484 3
2401 CHIH Hwa 00 0
2402 GASPARI Edw 415-467-4377 4
2403 CHOW Hui Yeh 415-601-9000 +6
2404 CHANG Alfred 00 0
2405 CHANG Terence 00 0
2406 THACHOUDSKY Isabella 00 0
2407 CHRISTMAN Hilary 415-811-9168 +6
2408 HARRISON Thomas 415-811-9168 +6
2409 LANNON GROUP THE 415-821-4285 0
2410 BAUER Bernard 00 0
2411 ROYCE Gerald 415-851-5857 +6
2412 HARRISON Thos 415-851-5857 +6
2413 GAMBONA CRISTO 415-821-1482 3
2414 DIETRICH David 415-441-4837 +6
2415 DYSTRAN Ann 00 0
2416 COPPIN Wilam 415-811-9168 +6
2417 GURTA Vincent D 415-811-9168 +6
2418 HADAWAY Charles E 415-441-1486 1
2419 JACKSON Chris 415-821-2431 +6
2420 CONNOR Richard 415-441-3231 3
2421 BOCK Katherine 415-346-2270 +6
2422 LANEVA 415-811-9168 +6
2423 KECOA Curtis 415-811-9168 +6
2424 GROSS Douglas 415-811-9168 +6

APARTMENTS

202 ANGELOV Dian 415-740-1138 3
203 BILL Mamas 415-414-5233 4
204 BUCHE Charles 415-441-6837 +6
205 BUNDSOJKI Kathleen 415-414-2838 +6
206 BONES Renee 415-414-2838 +6
207 MALANI Mahesh 415-414-0614 4
208 PADGUG Dana 415-414-8075E
209 KONG John D 415-414-3525

SCOTT ST

2214 GIORGI Agnese 00 0
2215 MAMMOUD Mahmoud 415-202-6400
2216 DI Oro Marco 00 0
2217 MANNAN Vincent J 415-202-6400
2218 POLEY Spencer 415-821-7288 +6
2219 GARREY Robin 415-441-3377 4
2220 SOLIMON Evie 415-202-7273 +6
2221 HALEY Janet 00 0
2222 SOLIMON Robert 00 0
2223 BLUMBERG Peter 415-603-8979 +6
2224 BROWN David 415-603-8979 +6
2225 FRIEDMAN A 415-440-4765 +6
2226 FRIEDMAN Lm 415-440-4765 +6
2227 TAYLOR Thomas C 415-440-4765 +6
2228 NICKERSON Tam 415-346-3203 1
2229 ROSS Rod 415-408-9433 +6
2230 SAUTSKY Ellen 415-622-4123 +6
2231 SAUTSKY Ellen 415-622-4123 +6
2232 SAUTSKY ELLEN RELETTA 415-622-4123 +6
2233 BOWMAN H B 415-622-9143
2234 EMMONS Don A 415-622-9143
2235 LAYTON Andrew E 415-447-5533 1
2236 FLOTTI 415-622-3738
2237 WARCZYNSKI 415-346-1111
2238 DWYER 415-346-9639 2
2239 REESE B B 415-346-9639 2
2240 PESSIC Radovan 415-346-9639 2
2241 PADO T 415-346-9639 2
2242 TRONTY CAPITAL CORP 415-346-9192 5
2243 SOFFRY Start 00 0
2244 SOFFRY Kathryn E 415-358-0462 +6
2245 SHANNON East 00 0
2246 PETERSON Kat 00 0
2247 CHAU Peter 00 0
2248 STEINSC 415-441-4451
2249 OGDEN D 415-421-4349
2250 REESE B B 415-346-9639 2
2251 VIVANT I 415-474-1870 4
2252 EISENHAUT Sarah 415-821-2121 3
2253 JOHNSON T D 415-460-5272 6

DIVISADERO ST

2601 KULLER Margaret 415-521-6164 +6
2602 OLMEYD Ryan 415-423-8566 +6
2603 SILVER Joseph 415-467-3566 4
2604 BENEDICT Jack 415-441-8157 +6
2605 BENEDICT Jack 415-441-8157 +6
2606 WILLIAMS Alma 415-346-8858 5
2607 WETZEL Jonathan 00 0
2608 BARRON-THOMAS 00 0
2609 SMITH Jerry 00 0
2610 BROCKE John 415-749-1941 7
2611 WAGNER Christopher 415-467-3812 +6
2612 ALLEN Katherine 415-467-3812 +6
2613 KAMELZAIN Lemuel 415-901-9005 +6
2614 WOLK Katherine 415-907-3009 +6

APARTMENTS

303 WELLSIDE MOUNTAIN BERRY I 415-776-5098 7
304 PACOY Joseph 415-292-7081 2
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306 WELLSIDE MOUNTAIN BERRY I 415-776-5098 7
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GREENWOOD DR 94080 SOUTH SAN FRANCISCO

2648 TRUBAI Daniel 00 0
2652 CASASSA Fred 00 0
2653 LATINO GEAR 415-863-8919 3
2654 CRUMPLER Robert 415-931-5555 4
2655 GORDANA Valerio 415-674-4025 +6
2656 LAUTERBACH Eric 00 3
2657 WALKER C S 415-922-4030 0
2658 LANG Natalie 415-922-4030 +6
2659 WICKER John 415-929-0437 0
2660 WATSON John 415-929-0437 0
2661 FENIMORE Miriam 415-921-1521 4
2662 WELLS Don 415-409-6306 1
2663 WATSON John 415-921-1521 4
2664 BUTTON Ernest 00 0
2665 WATSON John 415-929-0437 0
2666 BENTON Wendy 00 0
2667 LOPEZ Carlos 00 0
2668 WATSON John 415-929-0437 0
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2700 WATSON John 415-929-0437 0

APARTMENTS

103 BRADY Catherine 415-963-5310
304 ERIEN Katherine 415-409-4836 +6
203 PETERSON Courtney 415-963-5217 +6
GURUN Gil 415-963-5811 +6
MURPHY Gannon 415-409-4715 +6
204 NGUYEN Belle B 415-440-0449 5
2695 WATSON John 415-929-0437 0
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2700 WATSON John 415-929-0437 0

BRODERICK ST

2708 MINGLOLO James 00 0
2710 BETH Ann 00 0
2712 SHIRON Barbara 00 0
2713 WATSON John 415-929-0437 0
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APARTMENTS

311 FOX Alexander 415-441-9610 4
MCGHEE Ryan 415-441-9610 4
312 FOX Alexander 415-441-9610 4
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398 FOX Alexander 415-441-9610 4
399 FOX Alexander 415-441-9610 4
400 FOX Alexander 415-441-9610 4

BAKER ST

2801 DOVE Aaron 415-891-8929 +6
2802 WATSON John 415-929-0437 0
2803 CUTTERS 415-929-0437 0
2804 WATSON John 415-929-0437 0
2805 WATSON John 415-929-0437 0
2806 WATSON John 415-929-0437 0
2807 WATSON John 415-929-0



INNES AVE 2000

280 INNES AV

Table listing businesses at Innes Ave, including PHOGS Eric J, PELLER Jeffrey, ALBION WATER COMPANY, MOUNTAIN SPRINGS WATER CO, MANUEL M, etc.

INNES AV 3RD

Table listing businesses at Innes Av 3rd, including ALVARADO'S ROOFING, NIAN'S AUTO REPAIR, TRUCKING EQUIPMENT, etc.

INNSFREE DR 94015 DALY CITY

Table listing businesses at Innsfree Dr 94015, including GAZDI Raah, BROWN Mike A, BROWN Mike A, etc.

INVERNESS DR 94132 SAN FRANCISCO

WEALTH CODE 8.0

Table listing businesses at Inverness Dr 94132, including SLOAT BLVD, X 7 NEW ABLT, X 8 ROSEBUD, etc.

INVERNESS DR 94044 PACIFICA

WEALTH CODE 8.0

Table listing businesses at Inverness Dr 94044, including HICKEY BLVD, X ANDERSON, X 303 HANGS THONG, etc.

INVERNESS DR 94044 CONT.

Table listing businesses at Inverness Dr 94044 Cont., including X 480 GURBA, X 471 HORLES END, etc.

INYO 94005 BRISBANE

WEALTH CODE 7.0

Table listing businesses at Inyo 94005, including X AV, X 10 WINDSPORT, X 15 SCOMAT, etc.

IOWA 94107 SAN FRANCISCO

WEALTH CODE 8.0

Table listing businesses at Iowa 94107, including X MARIPOSA, X 0 B US 14 RES 8 NEW, etc.

IRIS AV 94118 SAN FRANCISCO

WEALTH CODE 8.0

Table listing businesses at Iris Av 94118, including X FOREST VIEW DR, X MAYFAIR DR, etc.

IRIS AV 94118 CONT.

Table listing businesses at Iris Av 94118 Cont., including X 10 POG M, X 10 COOPER, etc.

IRONSPRING PLAZA 94111 SAN FRANCISCO

WEALTH CODE 8.0

Table listing businesses at Ironspring Plaza 94111, including X PRECEE F Robt, X 38 XXXX, etc.

IRVING 94122 SAN FRANCISCO

WEALTH CODE 8.0

Table listing businesses at Irving 94122, including X LARCH AV, X ARGUELLO BLVD, etc.

IRVING 94122 CONT.

Table listing businesses at Irving 94122 Cont., including X 3RD AV, X 200 APARTMENTS, X 200 GRIFPH Courtney, etc.

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INNES AVE 2000

THE HAINES DIRECTORY

Table listing businesses in the IMPERIAL WAY area, including TAM Wines, TANNHANA, TUCKER, VALDEZ, and various other establishments.

Table listing businesses in the MANDARIN DR area, including KROWN COLORES, HERNANDEZ, and various other establishments.

Table listing businesses in the CROWN COLONY APTS area, including ALVARADO, CALIA, CHAN, and various other establishments.

Table listing businesses in the INCA LN 94115 SAN FRANCISCO area, including RIDEAU, STEWART, CHAI, and various other establishments.

Table listing businesses in the INCA CT 94112 SAN FRANCISCO area, including CRAMP, DANIEL, LEWIS, and various other establishments.

Table listing businesses in the ZIP CODE 94124 SAN FRANCISCO area, including 1601 XXXX, 1603, and various other establishments.

Table listing businesses in the INDUSTRIAL 94124 SAN FRANCISCO area, including X I-280, X OAKDALE AV, and various other establishments.

Table listing businesses in the INCA LN 94115 SAN FRANCISCO area, including X QUESADA AV, X REVERE AV, and various other establishments.

Table listing businesses in the INDUSTRIAL WAY 94005 BRISBANE area, including X MARIPOSA, X CITY STORAGE, and various other establishments.

Table listing businesses in the INCA CT 94112 SAN FRANCISCO area, including X HICKEY BLVD, X CROWN COLONY, and various other establishments.

Table listing businesses in the INDUSTRIAL WAY (92) 94080 S SAN FRANCISCO area, including X LAGRANDE AV, X AGRO, and various other establishments.

Table listing businesses in the INFANTRY TER 94129 SAN FRANCISCO area, including X ARGUELLO BLVD, X LAWRENCE, and various other establishments.

Table listing businesses in the INGALLS 94124 SAN FRANCISCO area, including X EGEBERT AV, X PRICHARD, and various other establishments.

Table listing businesses in the INGALLS 94124 SAN FRANCISCO area, including X KISKA RD, X MAY, and various other establishments.

Table listing businesses in the INGALLS 94124 SAN FRANCISCO area, including X GEORGE CT, X WOLFGANG, and various other establishments.

Table listing businesses in the INGALLS 94124 SAN FRANCISCO area, including X OAKDALE AV, X BRANTLEY, and various other establishments.

Table listing businesses in the INGALLS 94124 SAN FRANCISCO area, including X PALOU AV, X QUESADA AV, and various other establishments.

Table listing businesses in the INGALLS 94124 SAN FRANCISCO area, including X ARMSTRONG AV, X GOMEZ, and various other establishments.

Table listing businesses in the INGALLS 94124 SAN FRANCISCO area, including X BANCROFT AV, X CARROLL AV, and various other establishments.

Table listing businesses in the INGALLS 94124 SAN FRANCISCO area, including X MORAGA AV, X MORAGA, and various other establishments.

Table listing businesses in the INGALLS 94124 SAN FRANCISCO area, including X HOLLISTER AV, X INGERSON AV, and various other establishments.

Table listing businesses in the INGERSON AV 94124 SAN FRANCISCO area, including X GIANTS DR, X GILMAN AV, and various other establishments.

Table listing businesses in the INNES AV 94124 SAN FRANCISCO area, including X GRIFFITH, X CORONADO, and various other establishments.

Table listing businesses in the INNES AV 94124 SAN FRANCISCO area, including X INGALLS, X ARMSTRONG AV, and various other establishments.

Table listing businesses in the INNES AV 94124 SAN FRANCISCO area, including X BANCROFT AV, X CARROLL AV, and various other establishments.

Table listing businesses in the INNES AV 94124 SAN FRANCISCO area, including X MORAGA AV, X MORAGA, and various other establishments.

Table listing businesses in the INNES AV 94124 SAN FRANCISCO area, including X HOLLISTER AV, X INGERSON AV, and various other establishments.

Table listing businesses in the INNES AV 94124 SAN FRANCISCO area, including X GIANTS DR, X GILMAN AV, and various other establishments.

Table listing businesses in the INNES AV 94124 SAN FRANCISCO area, including X GRIFFITH, X CORONADO, and various other establishments.

INNES AVE 1966

498

INDIANA—Contd
Tulare intersects
1500 Fyr-Fyter Co The fire equip mfrs 824-6355
1570 Peterson Sup Inc 285-1331
1575 Peninsula Linen exch MIB-9266
1580 Barrecrafters-Hampshire-Western Co 647-2260

INDUSTRIAL—From Oakdale av west, Selby southwest to Boutwell
Barneveld av intersects
Loomis intersects
Palou av intersects
75 Bruning Chas Co (Div Addressograph-Multigraph Corp) copying machs 824-4300
85 Diamond Drilling & Sup VA6-3919
Production Tool & Machy AT2-2770
Westco Pump Sls Co VA6-5104
141 Am Optical Co whol VA6-8300
155 Vacant
185 Vacant
186 Lion Uniform Inc mfrs 285-5131
200 Apparel City Chevron Serv gas sta VA4-9680
211 Square D Co elec equip mfrs JU7-4590
225 Scatena York Co air conditioning sups JU6-2324
233 Kaemper & Barrett household appls JU5-6200
240 Friden Inc business machs VA6-2525
250 Terminix of Northern Cal Inc pest control 648-8933

INGALLS—From India bet Hawes and Jennings southwest
Innes av intersects
Arthur av intersects
1301 Morgan Leonard MIB-0064
1303 Vacant
1307 Jordan Henry AT2-9186
1309 Vacant
1311 Mims Wm E @ AT2-8611
1315 Woods Edna Mrs
1317 Richardson Sammie MIB-4621
1319 Stanley Monroe VA4-1940
1320 Vacant
1321 Berry Hersey 824-8740
1322 Mitchell Wayman Mrs 648-1387
1323 Green Litwood
1325 Turnage Sarah T Mrs VA6-6893

1329 Alexander Coney E
1331 Humphery Jas
1332 Vacant
1333 Gregory Luther VA6-1831
1334 Vacant
1335 Howard Geo
1337 Vacant
1339 Moore Jas WVA4-5399
1340 Waller Doyle C
1341 Vacant
1342 AnoaI Tuma
1343 Love Morell
1344 Whitehead W B VA4-3711
1345 Kemp Eddie jr MIB-8258
1346 Moore Earl F 718-7566
1347 Lewis Otis VA4-4427
1348 Gatlin Cleo MIB-8302
1349 Davison Theopolis MIB-4138
1352 Jones Cleveland AT2-5779
1353 Katlik Gus A @ 825-1198
1354 Garrett Richd jr VA4-2440
Oakdale av intersects
1400 Cook Wurth A @ VA6-9272
1410 Derrn Geo @ VA4-7460
1418 Caviel Wm @ AT2-4518
1421 Parkers Radio & TV repr 826-1119
Parker A D 647-2190
1424 Baldwin Malachi W @ VA4-7586
1430 Smith Forace @ AT2-9032
1436 Andrada Valentino P @ AT2-2337
1442 Beauchamp Arth E @ 278

Palou av intersects
1527 Stewart Eddy D @ AT2-0789
1533 Domingue Jas B @ AT2-7425
1539 Alexander Florabelle L Mrs @
1545 Carter Willie AT8-1251
1550 Crouchett Chester J @ VA6-1948
Quesada av intersects
1600 Robinson Willy @ VA4-2808
1608 Hutchinson Chas @ VA6-3407
1616 Lambert Novella W Mrs @ 648-9251

1622 Harts Sherman @ MIB-4995
1625 Vacant
Revere av intersects
1725 Taylor Stella E Mrs @ VA6-0722
1731 King Henry @ VA6-4871
Shafter av intersects
1824 Patania Domenica Mrs @
1827 Brassens Chas L @ MIB-6275
Wallace intersects
2101 Vacant
2200 Toys Anonymous whol AT2-7606
2201-05 Dempnook Lettering Co sign ptrs VA6-6311
2220 Standard Labys & Sup Co jan sup VA6-8181
2225 Durkee V L Draying Co VA6-5551
2233 Douglas Insulation Co (whse) 282

Yosemite av intersects
2600 Cleasby-Wittig Co Inc roofing equip MIB-3500
2655 Industrial Chem Co of SF Inc chn compound mfrs 824-4978
2800 Ditleveson Harold R @ MIB-3066
2814 Conte Anne Mrs @ VA4-8985
2818 Bianchi Ida @ VA4-7078
2825 VanderCourt Oliver @
2826 Pieralde Jos M @ AT2-4841
2830 Double Rock gro MIB-4261
2841 Martinez Emery MIB-2139
2843 Cottonham Sinnie Mrs @ AT2-7557
2847 Self Serv Landry
Gilman av intersects
2920 Singleton Floyd @ VA6-3427
2926 Connor Joe F @ VA6-5191
2932 Williams Gomez @ MIB-5280
2938 Corpuz Faustino C @ VA4-1267
2944 Jones Howard M @ MIB-4350

Hollister intersects
Ingerson av intersects
3019 Perl Maria Mrs MIB-9133
3030 Vacant
3101a Braner H W Gray Sherman 586-2190
3101b Reynolds John 467-8913
3201 Bacon Sarah J @ JU4-9254
3212 Patterson Clarence H 467-9482
3217 Ferrato John J @ DE3-2687
3224 Garner Cath Mrs @ JU7-0529
3225 Bosso Louis @ JU5-1054
3231 Pierucci Arth B @ JU4-1884
3236 Vacant
3237 Jordan Clemon H Thompson LaVerne @ 467-6647
3238 Chang Harry DE3-4182
3239 Holloway Elma C @ JU5-7496
Jamestown av intersects 284

INGERSON AV—From county line bet Hollister av and Jamestown av southwest to 3d

3d intersects
Griffith intersects
783 Thomas Henry
793 Lindon Adam 587-3811
823 McEldry Priscilla 467-9077
875 Burch Willie L Mrs DE3-0865
877 Vacant
879 McHand Isaac @ JU5-7974
Hawes intersects
900 Cordoni Margarita Mrs @ JU5-2635
906 Mathews Dailey jr 467-9224
906a Wise Johnny 585-9623
914 Lott Walter K 467-9080
917 Vacant
918 Benavidez Ben O @ 584-5698
919 Robinson Wm @ JU6-5473
921 Broom Jimmie C 467-9037
922 Fisher Mitchell @ 467-9150
923 Bradley Eddy @ JU5-4684
926-30 Vacant
934 Lasagna Margherita Mrs JU4-3747
938 West John L @ JU7-5633
942a-b Hudson L Herman JU5-8749
946 Lott Mason 467-9039
950 Davis John
954 Corodoni Fred JU5-8419
962 Jackson Gladys B Mrs @ JU6-1912
966 Ortiz Rosendo @ JU4-6541
970 Dantzer Eddie B @ 585-9734
971 Johnson Jos
974 Minix Howard @
979 Potts Jas @ JU5-9186
981 Taylor Luther B jr JU6-2333
986 Crenshaw Annie L Mrs @ 586-3004
990 Danner Edw @ JU4-8270
994 Gray Harry DE4-8537

Ingalls intersects
1000 Morish Aldonia Mrs 334-5120
1001 Tonedato Reno @ DE3-7346
1006 Pelleritti Frank L @ DE3-7660
1010 Mallegni Dorina Mrs @
1010a Brovero Ricardo
1018 Lee Louis @ 587-4289
1019 Hardiman Alvina Mrs @ JU7-2499
1022 Stanlotes Eliz A @ DE3-6931
1023 Greenup LaSalle A @ JU5-5482
1026 Osborne Prince @ DE3-5705
1027 Belfortino Gabriel C @
1030 Vacant
1033 Latham Chas E DE4-2773
1034 Federighi Orazio @ DE3-9624
1035 King Leona A 585-1319
1038 Pellegrini Gino @ JU5-8201
1042 Valado Louis B @ JU5-3237
1043 Lombardi Naomi M @ JU7-7707
1045 Vacant
1046 Belcher Greene @ 587-8606
1047 McGee Johnnie B @ JU4-3975
1050 Leconsay Joaquin L @ 467-9337
1054 Colon Mario E DE3-5168
1055 Ely Wilbur @ DE4-5408
1058 Vacant
1062 Beasley Elmo DE4-1877
1063 Reed Jas R DE4-4321
1066 Meshack Dallas @ 585-4646
1067 Harrell Wilbur @ DR3-3705
1070 Cable Dock @ JU6-0941
Galloway Inez Mrs
1071 Green Annibell 467-9570
1074 Federighi Jos @ DE3-0236
1075 Jones Roscoe F JU7-6607
1079 Green Leonard JU5-4376
1082 Borruso Julio @ JU5-1745
1086 Colombo Aldo A @ JU7-0790

Jennings intersects
1100 Rivers Melvin 467-8967
1114 Under Constn
1120 Andrews Florence J Mrs @ 467-9387
1121 Crenshaw Chas G 334-4361
1124 Wilson Edgar @ JU7-6721
1124a No Return
1125 Regalia Pierina Mrs JU7-4319
1129 Lopez John L
1130 Whitaker Alvin @ 584-6474
1135 Calabro Vincent @ DE3-7994
1140 Toro Ramiro @ DE3-5911
1144 Cocchin John
1148 Perez Domingo @ JU5-7848
1151 Washington Adam @ 333-7842
1152 Frierson Lee E DE3-2307
1153 Agas Feliciano D JU4-2663
1155 Lofton Frank @ JU7-7127
1161 King Walter @ JU7-9553
1162 Galeano Efrain E
1173 Tamboury Floyd
1173a Ruby Chas K

3d intersects
End Onorato S E Inc parking lot MIB-9797
San Francisco Giants baseball club JU6-8000
Stevens of Cal Enterprises Inc catering serv JU6-8110

INNES AV—From Water front bet Hudson av and Jernold av north-west

Ridge Point intersects
3d intersects
Boalt intersects
Coleman intersects
Donahue intersects
Harbor rd intersects
658 Bayside Market gro MIB-1631
662-64 Vacant
666 Lawson Greg 174
Earl intersects
700 Vacant
710 G&E Liquors VA4-5618
714 Nicholson Richd W jr @
718 Miller Niel
724 Vacant
730 Lipscomb Willie C
732 Steen Beulah
732b No Return
736 Scott Clifford J
738 Vacant
740 Williams Marjorie Mrs
742 Dark Wm AT2-9763
744 Golden Clipper Barber Shop MIB-9718
746 Vacant
Fitch intersects
800 Vacant
822 No Return
826 Shan-Ti Restr VA6-6655
826a Scotness Julius
826b Peterson Lester
826c Bowman Albert

828 Grace Baptist Church VA4-9564
830 Glazier Clifford
840 Hunters Point Restr MIB-9746
850 Jones Alma Mrs @ VA4-0467
851 Donaldson H
851 Walker Martha V Mrs
857 Green Pamela Mrs VA4-2095
859 Kimball Elorna smstrs 648-4430
861 Sims Sandra VA4-3054
Johnson Oree VA4-3054
863 Percy Ralph VA4-7637
869 Vickers Robt @ AT2-2585
871 No Return
881 Volson Adrien A @ AT2-2830
894 Anderson & Cristofani boat bldrs MIB-6960
895 Mountain Springs Water Co water VA4-1131

Griffith intersects
900 Vacant
904-08 Vacant
911 Jenkins Coranza @ MIB-7964
930 Vacant
935 Variz Anthony J @ 826-9478
939 DeVille A J @ MIB-3993
Hines Anderson @
943 Cangson, Richd AT5-2177
947 Grinberg Robt VA6-8944
950 Surfside Liquors VA6-5244
951 Limm Jennie Q Mrs @ MIB-4120
955 Wong Mike VA4-7740
963 Floridan John @ 826-3154
966a Juhl Melvin R @ MIB-2269
967 Stemer Ruth Mrs AT2-2573
985 Myers Robt G

Wilmerly Wm L
991 Willie Jas O @ MIB-0960
993 Fenley Rudolph MIB-8690
996 OK Gro AT2-7200
998 Seaside Serv gas sta MIB-9774
Hawes intersects
1005 Adkins Marie 647-3718
1009 Vacant
1062 Brooks Tammy 282-9875
1068 Wilson Agusta Mrs Wilson Lola I Mrs
1080 Allemand John A @ MIB-7675
1086 Trion Fred W @ VA4-3081
1092 Anderson Alice D AT2-1582

Ingalls intersects
Jennings intersects
Keith intersects
Lane intersects
1410 Crane Jas @ VA4-2474
1414 Pruitt Jack @ 285-3836
1418 Johnson Roy T @ AT2-8778
1424 Henry Albert 282-0257
1430 Turner Bell W 648-2786
1433 Nolan Chas E @ 637-1358
Scott Eli
1434 Williams Claudie D 647-3877
1435 Gillis Chas @ VA4-6202
1437 Mack Maudie Mrs @ VA4-0695
1438 Johnson Pinkney
1444 Phipps Plummer VA6-8429
1445 Bruce Berry @ VA6-2327
1446 Hawthorne Robt
1455 Riley Warren G @ VA4-2828
1455 1/2 Wafer Allen MIB-9044
1456 Johnson Ruth Rev @ VA6-5936

1456b Vacant
1456c Wilson Chas V jr
1456d Taylor Carrie Mrs
1457 Vera Anton @ MIB-1052
1461 Calloway Archie AT8-1972
1462 Williams Helen Mrs rear Shoemaker Rosia Mrs
1465 Under Constn
1469 Turner Darnisha Mrs @ MIB-7033
1473 Cherry Talarten Mrs @ VA4-0234
1474 Vacant
1481 Guadalupe Peter AT5-4439
1485 Tubbs John L @ 824-2887
1491 Powell Dayton @ MIB-0877 172

Mendell intersects
1500 McIntyre Robt E VA6-9216
Pelty Wm
1501 Baugh Pauletta Mrs @ AT2-0993
1507 DeLeon Baldomero @ MIB-6608
1511 Varella Thos O @ VA6-4622
1514 Rizzatto ASDrubale VA6-4034
1515 Apodac Lucia Mrs @
1518 Rizzatto Umberto S @ MIB-8688
1519 Elliott John O
1522 Gok Horn G @ VA6-2846
1523 Vacant
1526 Betti Anthony @ MIB-9721
1527 Arcelona Esteban @ VA6-2031
1530 Piazza Jos @ VA6-1296
1531 Neves Jos H @ VA6-3202
1534 Tanti Edw @

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PHONE: 776-0880

TOURIST DELIVERY HEADQUARTERS
1600 VAN NESS AVENUE, SAN FRANCISCO

INNES AVE 1962

493

INA COURT--Contd
45 Gonzalez Demetria @ JU5-9334
46 Anzoin Nancy L Mrs @ DE3-3439
48 Dyer Harley E
50 McDavitt Julian F JU5-6594
53 Spediacci Raymond J @ JU5-1457
54 Gallatin Willis P @ JU7-8436
57 Kearney Melvin B @ DE3-7406
58 Schweida Warren L @ DE3-6118
61 Valverde John @ JU4-7754
62 Knauf Wm J @ JU7-3500
65 Mattos Harold R @ JU7-9174
66 Gravino Michl @ JU4-6538
69 Strambi Wm N @ JU7-2774
70 Laine Geo A JU5-3317
73 Korbus Robt J @ DE3-3697
74 Carlson Robt M @ DE3-4420
77 Benson Lawrence A DE4-6369
78 Vacant
81 Erickson Clarence @ DE3-0096
82 Carrillo Jos J @ JU6-0328
85 Hasto John T @ DE4-2159
86 Starkey John S @
89 Durmanich John J @ JU4-7461
90 Coffey Edw S @ JU6-8540
93 Chostner Helen D @ DE3-5674
95 Williams Walter E @ JU7-2726

INDIA--North, south and west side of India Basin 174

INDIANA--From Mariposa bet Minnesota and Iowa south
Mariposa intersects
18th intersects
500 Beverly Coat Hanger Co mfrs MIA1-2051
550 Feedstuff's Processing Co feed mfrs UNI-8507
580 Bartells E J Co fire brick AT2-9166
600 Custom-Aire Prods Div of Pacific Ind Inc furnace mfrs VA6-7171
653 Shoko Co exporters VA6-4413
19th intersects
711 Armor Galvanizing Wks Inc (plant) VA4-8627
800 Castle A M & Co steel jobbers AT2-6920

20th intersects
800 Castle A M & Co steel dlrs AT2-6920
22d intersects
935 Jenks J A Co Inc spice mfrs MI8-3414
951 Roberts & Porter Inc (br) photog equip MI8-8110
955 Columbus McKinnon Corp chain mfrs AT5-0350
965 Triangle Trucking Co MI8-8020
975 Vacant
998 Western Paper Stock Co AT2-0067

23d intersects
1200 O'Brien Margt M Mrs @ AT2-6395
1204 Ramirez Louis
1206 Vacant
1220 Grippi Carlo @
1258 Pandozzi D VA6-6216
1270 Villar Justino @ MI7-6021
1280 Vacant
1320 Atlas Auto Wreckers MI8-0633

25th intersects
Tulare intersects 186

INDUSTRIAL--From Oakdale av west, Selby southwest to Boutwell

Barneveld av intersects
Loomis intersects
Palou av intersects
75 Bruning Chas Co Inc eng sups VA4-4300
85 Westco Pump Sis Co VA6-5104
141 Am Optical Co whol VA6-8300
145 Pacific Tile & Porcelaine Co mfrs VA6-8330 and JU3-6492
155 Ewing Turf Products Sprinkler equip AT2-4400
185 Genl Cable Corp mfrs MI8-4140
200 Apparel City Chevron Serv VA4-9680
211 Square D Co elec equip mfrs JU7-4590
225 Scatena York Co Inc air conditioning sups JU6-2324
233 Kaemper & Barrett hsehold appls JU5-6200
240 Friden Inc business machs VA6-2525

250 Terminix of Northern Calif Inc UN3-1773

INGALLS--From India bet Hawes and Jennings southwest
Innes av intersects
Arthur av intersects
1300-02 Benjamin Jas
1301 Morgan Leonard MI8-0064
1303 Jordan Henry AT2-9186
1304 Weathersby Danl MI8-0205
1305 No Return
1306 Yeldell Robt VA4-6412
1307 Williams Larry V
1308 Frazier Curley D MI8-3794
1309 Edwards Ivory
1310 Valentino Carlos
1311 Mims Wm E AT2-8611
1312 Gregory Maddie
1314 Allen Aurelia Mrs MI8-0514
1315 Chatman D W MI8-2069
1316 Tartt Leo VA4-2593
1317 Richardson Sammie MI8-4621
1318 Blankenship Tom L AT2-9753
1319 Stanley Monroe VA4-1940
1320 Lewis Clarence MI7-6179
1321 Perry Vennia Mrs
1322 Brannan Ethel M Mrs
1323 Greene Linewood E VA6-0436
1324 Vacant
1325 Turnage Sarah T Mrs VA6-6893
1326 Brown Alfonso MI7-1790
1327 King Eliz Mrs MI8-8754
1328 Isom Hugh MI8-7794
1329 Alexander Conley E
1330 Carr Eddie VA6-8166
1331 Coleman Sam MI7-0490
1332 Jackson Elliott VA6-2999
1333 Gregory Luther VA6-1831
1334 Dow Morris L MI8-6428
1335 Hurt Ira T MI7-4139
1336 Goodspeed Al Danl VA6-7493
1337 Sewart Johnny MI7-9218
1338 Westley Sylvester
1339 Shelton Willie D VA6-3338
1340 Rimes Joe C VA6-8703
1341 Franklin Linnian M VA4-8496
1342 Murray Leslie C MI8-6349
1343 Latimer Fred
1344 Whitehead W B VA4-3711
1345 Kemp Eddie jr MI7-8258
1346 Vacant
1347 Braneon Aug AT2-3538
1348 Gatlin Cleo MI7-8302
1349 Davison Theopolis MI8-4138
1350 Moore Earl F MI8-7566
1352 Calloway J D VA6-9522
1354 Garrett Richd jr VA4-2440
1356 Dudley Ira L AT2-6467
1358 Beckstrom Lawrence W
1360 Smith Mildred Mrs AT2-8757
1362 Pope Emmett E MI8-3653

Oakdale av intersects
1400 McDaniel Robt @ MI8-5433
1410 Dern Geo @ VA4-7460
1418 Cairel Wm @ AT2-4518
1421 Parker A D @ MI7-2190
rear Vacant
1424 Baldwin Malachi W @ VA4-7586
1430 Smith Horace @ AT2-9032
1436 Andrada Valentino @ AT2-2337
1442 Beauchamp Arth E @

Palou av intersects
1527 Stewart Eddy D @ AT2-0799
1533 Brown Robt G MI7-3906
1539 Alexander Florabelle L Mrs @
1545 Carter Willie AT8-1251
1550 Crouchett Chester J Rev @ VA6-1948

Quesada av intersects
1600 Robinson Willy @ VA4-2808
1608 Hutchinson Chas @ VA6-3407
1616 Lumbert Novella Mrs @ MI7-8712
1622 No Return
1625 Zubol John @ AT8-0427
Reverse av intersects
1725 Taylor Graham D @ VA6-0722
1731 King Henry @ VA6-4871
Shafter av intersects
1827 Brasseur Chas L @ MI7-6275

Yosemite av intersects
2655 Industrial Chem Co of SF Inc chn compound mfrs VA4-4978
2800 Ditlevson Harold R @ MI7-3066
2814 Conte Jos D @ VA4-8985
2818 Bianchi Ida @ VA4-7078
2825 VanDerCourt Oliver C @
2826 Pieralde Jos M @ AT2-4841
2830 Double Rock gro MI7-4261
2841 Martinez Emery MI7-2738
2843 Carter Willard @ AT2-7557
2847 Self Serv Lndry
Gilman av intersects

2920 Singleton Floyd @
2926 Connor Joe F @ VA6-5191
2932 Williams Gomez @ MI8-5280
2938 Corpuz Faustino C @ VA4-1267
2944 Jones Howard M @ MI7-4350
Hollister av intersects
Ingerson av intersects
3019 Perli Giovanni @
3030 Bay View Winery JU7-3957
3101 Ramos Frank VJU4-0933
3101a Ward Jas C JU6-4672
3101b Burnett Lee
3212 Holloway Elma C @ JU5-7496
3217 Ferrato Cath Mrs @ DE3-2687
3224 Garnero Cath Mrs @ JU7-0529
3225 No Return
3231 Pierucci Arth B @ JU4-1984
3236 Tong Edmond JU7-5027
3237 Hopkins Chas W Rev @ DE3-8519
3238 Chang Harry DE3-4182
Jamestown av intersects

INGERSON AV--from County Line bet Hollister av and Jamestown av southwest to 3d
3d intersects
Griffith intersects
783 McDougall Betty J DE4-2883
793 Lindon Adam @ JU7-3811
823 Steen Herman H
875 Berch Willie L Mrs
877 Robinson Arlene DE3-1713
879 McHand Isaac @ JU5-7974
Hawes intersects
900 Cordoni Magarita Mrs @ JU5-2635
906 Davis H Harold JU6-2488
906a Williams Wm M JU4-0757
914 Chiotti Cath Mrs @ JU4-2026
918 Benavidez Ben O @ JU4-3027
919 Robinson Wm @ JU6-0617
921 Stewart Norris
922 Brown Clarence @ DE3-4647
923 Bradley Eddy @ JU5-7937
934 Lasagna Margherita Mrs JU4-3747
938 West John L @ DE4-0702
942 Allione Milton S JU7-0200
946 Flowers Estelle D Mrs @ JU5-7233

950 Green Henderson @ JU6-6092
954 Cordoni Fred JU5-8419
962 Jackson Gladys B Mrs @ JU6-1912
966 Ortiz Rosendo @ JU4-6541
970 Dantzler Eddie B @ JU5-9734
971 No Return
974 Minix Howard @
979 Potts Jas @ JU5-9186
981 Bacon Sarah J Mrs @ JU4-9264
986 Crenshaw Kitt @ JU6-3871
990 Scott Chas E @ JU4-1896
Ingalls intersects
1000 Bryant Oscar jr JU6-9343
1001 Tonegato Reno O @ DE3-7348
1006 Pelleriti Frank L @ DE3-7660
1010 Mallegni Dorina Mrs @
1010a Brovero Ricardo
1018 Lee Mary Mrs @ JU7-4289
1018a Lee Louis @ JU7-4289
1018b Vacant
1019 Hardiman Frank L @ JU7-2499
1022 Stanitoes Eliz A Mrs @ DE3-6931

1023 Geunup LaSalle A @ JU5-5482
1026 Osborne Prince @ DE3-5705
1027 Belfortino Gabriel C @
1033 Latham Chas E DE4-2773
1034 Federighi Orazio @ DE3-9624
1035 Topps Edw jr DE3-2010
1038 Pellegrini Gino JU5-8201
1042 Ladadao Louis B @ JU5-3237
1043 Lombardi Naomi M @ JU7-7707
1047 Castellanos Angelo
1050 Castellanos Rudolph P @
1054 Colon Mario E DE3-5168
1055 Ely Wilbur @ DE4-5408
1058 Vacant
1062 Sciutti Andrew J JU7-0568
1063 Dardi Marcello J @ JU4-7580
1066 Tognetti Natale @ JU5-1541
1067 Harrell Wilbur @ DE3-3705
1070 Cable Dock @ JU6-0941
Galloway Inez
1071 Hayter Lois JU4-6422
1074 Federighi Jos @ DE3-0236
1079 McAfee Wilma Mrs @ DE3-0199
1082 Borruso Julio @ JU5-1745
1086 Colombo Aldo A @ JU7-0790
Jennings intersects
1100 Ward Fred T JU4-0900
1121 Vacant
1124 Wilson Edgar @ JU7-6721
1125 Ragalla John J @ JU7-4331
1129 Rivera Joe
1130 Brady Mathew P @ JU5-3589
1135 Calabro Vincent @ DE3-7994

1140 Toro Ramiro @ DE3-5911
1144 Cornac Justin @ JU7-3379
1148 Perez Domingo @ JU5-7848
1152 Frierson Lee E DE3-2307
1153 Agas Feliciano D JU4-2663
1155 Lofton Frank @ JU7-7127
1161 King Walter @ JU7-9553
1162 Marsetti Jos @ JU6-6776
1173 Tamboury Floyd
1173a Jinks Jas M DE4-5236
3d intersects
Riley intersects
end Candestick Park
San Francisco Giants baseball club JU6-8000
Onorato S E Inc parking lot MI7-9797
Stevens Calif Enterprises Inc catering serv JU6-8110

INNES AV--From Water Front bet Hudson av and Jernold av north-west
Ridge Point intersects
3d intersects
Boalt intersects
Coleman intersects
Donahue intersects
Harbor rd intersects
658 Bayside Market gro MI7-1631
662 Vacant
664 Vacant
666 Keinrath F C AT2-4224

Earl intersects
700 Vacant
710 G&E Liquors VA4-5618
714 Vacant
718 Vacant
724 Nicks Square Deal Liquors MI7-6161
726 Vacant
728 Dark Nolen VA6-9430
730 Lipscomb Willie C
732b Vacant
736 Thomas Irene Mrs
738 Brown Clara Mrs VA6-3709
740 Edwards LaMar
742 Dark Wm AT2-9763
744 Golden Clipper Barber Shop
746 Vacant

Fitch intersects
800 Shrimp Boat The restr MI8-9831
810 Thrimp Boat Mkt The meats AT2-4100
822 Quinn Dan
826 Shan-Ti Restr VA4-9883
826a Glaser Clifford
826b Christiansen Wm
826c Alexanderson Jewell Mrs AT2-5525
830 Shafer Lee VA4-6137
838 Hunters Point Restr (dining rm)
840 Hunters Point Restr MI8-9746
847 Segel Augustine
848 Brooks Carlton
850 Jones Alma Mrs @ VA4-0467
851 Percy Ralph VA4-7637
853 Vacant
855 McCormick Almarine
857 Felder Thelma
859 Kimball E J MI8-4430
861 Jeffery Chas
863 McGurfey Leuel
869 Vickers Robt @ AT2-2585
871 Nation Lucile MI8-1415
881 Voisin Adrienne A @ AT2-2830
894 Anderson & Cristofani boat bldrs MI7-8960

895 Mountain Springs Water Co water VA4-1131
Griffith intersects
900 Jorgensen Virginia A Mrs @ VA4-7313
908 Hudman Arth VA4-8450
911 Jenkins Coranza @
930 Regal Roofing Co VA4-3261
935 Lacey Howard J @ MI7-4210
939 DeVille A J @ MI7-3993
Fruitt Adam AT2-2835
943 Chan Wah @ AT2-3896
947 Grinberg Robt VA6-8944
950 Peterson Liquor Store VA6-5244
Peterson Lester A @ AT2-5369
951 Limm Peter @ MI7-4120
954 Vacant
955 Wong Mike VA4-7740
956 Vacant
963 Nason Lucille MI8-1485
965 Vacant
968a Juhl Melvin R @
967 Selmer Inga K Mrs AT2-2573
985 Myers Robt G
Wimberly Wm L
991 Burton Billy
Smith Marvin

# INNES AVE 1958

## 100 Sansome St.

**ILLINOIS—Cont'd**  
 1445 Bonded Drayage Service  
 Δ MI 86060  
 Moore's Portable Truck Lubrica-  
 tion Δ VA 62047  
 Moore Sidney M  
 Coast Mtee Co auto wash  
 Δ MI 71131  
 Navajo Freight Lines Δ AT 29520  
 Peters Truck Lines Δ MI 82230  
 MI 86292  
 1495 Antoni Truck Lines Δ MI 81991

**ILS LANE—From west side Columbus  
 av between Washington and Jackson**

**IMPERIAL AVENUE — From south  
 side Greenwich between Franklin  
 and Gough**  
 1 Bruna Battista Δ GR 41105  
 2 Pagano Jas F Δ PR 64858  
 3 Bartolozzi Danl C Δ TU 56784  
 4 Renovich Wm Δ PR 66181  
 5 Phillips Michael Δ TU 54672  
 5 Galatolo Emil Δ GR 47028  
 6 Macario Albert L Δ GR 45833  
 7 DeRossi Olivia Mrs Δ GR 48963  
 8 Clarke Ray E Δ PR 57582  
 9 Patrick Frank Δ OR 80140  
 9 1/2 Bernal Alf Δ GR 44871  
 10 Barbera Marlo A  
 11 Anti Elw J Δ PR 50322  
 12 Howard Joan Δ OR 30537  
 14 Granelli Antonio A  
 Δ PR 51753

**INA COURT—An extension of Munich to  
 LaGrande av**  
 1 Sheals Guss S Δ JU 63286  
 2 Ghiglietti Arth J Δ JU 49650  
 6 Nelson Walter E Δ JU 43819  
 11 Ryan The F Δ DE 38405  
 14 Hauser Geo A Δ JU 59331  
 18 Chonopolis Geo Δ DE 33712  
 22 Pugliese Michl Δ JU 65126  
 25 Grillo Arth L Δ JU 62736  
 25  
 26 Kiehl Robt L  
 29 Bautista Crispulo V  
 30 Smith Geo P Δ JU 77183  
 31 Clarke Alan E Δ DE 37225  
 34 Burkston Gordon V  
 Δ DE 35599  
 37 Streich Herbert W Δ JU 55977  
 38 Foley Michl B Δ DE 39513  
 41 Murphy Patk J Δ DE 43917  
 45 No return  
 46 Anzoin Wm C Δ DE 33439  
 49 Munive Sebastian Δ JU 48008  
 50 Verdola Jos P Δ JU 46178  
 53 Spellacci Raymond J  
 Δ JU 51467  
 54 Gallatin Willis P Δ JU 78436  
 57 Kearney Melvin B Δ DE 37406  
 58 Schweida Warren L  
 61 Warren Totl J Δ JU 47909  
 62 Knauf Wm J Δ JU 73500  
 65 Mattos Harold R Δ JU 79174  
 66 Gravino Michl Δ JU 46538  
 69 Pritchard Jas L Δ JU 45134  
 70 Laine Geo A Δ JU 53317  
 73 Parker Jas W Δ JU 53077  
 74 Carlson Robt M Δ DE 34420  
 77 Rhodes Clarence C Δ JU 73976  
 78 Carrillo Jack  
 81 Erickson Clarence Δ JU 30096  
 82 Leok Gordon S Δ JU 78479  
 85 Shurter Curtis W Δ DE 28950  
 88 Starkey John S Δ AT 55849  
 89 Durmanich John J  
 Δ JU 47461  
 90 Edwards Jas J Δ JU 76695  
 93 Chostner John H Δ DE 35674

**INDIA—North, south and west side of  
 India Basin**

**INDIANA—From Mariposa bet Minne-  
 sota and Iowa, south**  
 Mariposa intersects  
 500 Beverly Cost Hanger Co  
 Δ MA 12051  
 501 Vacant  
 550 Feedstuff Processing feed mfrs  
 Δ UN 15807  
 580 Bartells E J Co fire brick  
 Δ AT 29166  
 600 Custom Aire Products Div  
 Furnace mfrs Δ VA 64413  
 653 Shoke Co exporters Δ VA 64413  
 700 Hay-Holbrook Inc (wise)  
 Δ MA 18600  
 711 Armor Galvanizing Wks plant  
 Δ VA 48627  
 800 Castle A M & Co steel jobbers  
 Δ AT 26920  
 800 Castle A M & Co steel  
 Δ AT 26920  
 998 Western Paper Stock Co  
 Δ AT 20067  
 1200 O'Brien Margt M Mrs Δ  
 Δ AT 26395  
 1204 Rainey Louis  
 1206 Nitz Eloya Mrs  
 1220 Greppi Antonio Δ MI 77477  
 1258 Pillanueva Jesse Δ MI 86327  
 Wilson Joseph Δ VA 44019  
 1270 Villar Justino Δ  
 1275 Electric Smelting Co Δ AT 22643  
 1280 Specialty Papers Co wax paper  
 mfrs Δ MI 83072

**168 25th intersects  
 Tulare intersects**  
 1320 Atlas Auto Wreckers Δ MI 81811

**INDUSTRIAL—From Oakdale av west  
 Selby southwest to Boutwell  
 Barnesfeld av intersects  
 Lomis intersects**  
 33 Wong's Bryant Auto Serv Sta  
 Δ AT 24554  
 75 Bruning Chas C eng sups  
 Δ VA 44300  
 85 McCullough Mach Wks  
 Ewing Turf Products sprinkler  
 equip Δ AT 24400  
 Pac Copy Corp photog sups  
 Δ MI 77124  
 Sparling Meter Co water meters  
 Δ MU 76359  
 Westco Pump Sls Co  
 185 General Cable Corp Δ MI 84140  
 200 Appare City Chevron Serv  
 Δ VA 49680  
 211 Square D Co elec equip mfrs  
 Δ JU 74590  
 233 Kaemper & Barrett hsehold  
 appls Δ JU 66200  
 240 Friden Calculating Mach Co  
 Inc business machs  
 Δ VA 62525  
 250 Owen Equip Co agrl impls  
 Δ A 66768

**INGALLS — From India bet Hawes  
 and Jennings southwest**

1047 Harten Virginia Mrs  
 Innes av intersects  
 1301 Morgan Leonard M Δ AT 86080  
 1302 Thomas John W Δ MI 82806  
 1303 Jordan Henry  
 1304 Weathersby Danl Δ MI 80205  
 1305 Tucker Agnes Mrs Δ MI 73614  
 1306 Scastrunk Glad S Δ VA 62842  
 1307 Williams Larry V  
 1308 Frazier Curley D Δ MI 83704  
 1309 Edwards Ivory  
 1310 Holloway Herbert Δ MI 80183  
 1311 Mims Wm E Δ AT 28611  
 1312 Vacant  
 1314 Lee Jos Δ VA 47339  
 1315 Carter Abr J Δ VA 48112  
 1316 McNeal Estelle Mrs  
 1317 Smith Mary Mrs Δ MI 71578  
 1318 Blankenship Tom L Δ MI 83689  
 1319 Stanley Motrore Δ VA 41940  
 1320 Vacant  
 1321 Pete Truly Mrs Δ MI 71785  
 1322 Powell Hannah Δ AT 28604  
 1323 Cherry Alf Δ MI 79252  
 1324 Vacant  
 1325 Turnage Jim Δ VA 66893  
 1326 Vacant  
 1327 Hill Elverson W Δ VA 40652  
 1328 Vacant  
 1329 Alexander Conley E Δ MI 81417  
 1330 Woods Clarence Δ MI 84285  
 1331 Coleman Sara  
 1332 Williams Saml M Δ VA 65159  
 1333 Gregory Luther Δ AT 21540  
 1334 Sims Fred Δ VA 63171  
 1335 Hurt Ira T Δ MI 74139  
 1336 Brown Robt L Δ AT 23397  
 1337 No return  
 1338 Westley Sylvester  
 1339 Bullocks Willie D Δ VA 63388  
 1340 Armstead Jas W  
 1341 Franklin Lillian M Mrs  
 Δ VA 46710  
 1342 Murray L C Δ MI 86349  
 1343 Foster Thos A Δ VA 46539  
 1344 Whitehead W B Δ VA 43711  
 1345 Kemp Edite Jr Δ MI 78258  
 1346 Dickerson Wm Δ VA 42659  
 1347 Brancey Ave Δ AT 23538  
 1348 Gatlin Cleo Δ MI 78302  
 1349 Davison Theopolis Δ MI 84138  
 1350 Johnson Foster Δ MI 82177  
 1352 Webb John E Δ VA 66413  
 1353 Garrett Richd Jr Δ VA 42440  
 1354 Dudley Ira L Δ AT 26497  
 1358 Backstrom Lawrence W  
 1360 Williams Leon E  
 1362 Pope Emmett E Δ MI 83653

**Oakdale av intersects**

1400 First Pentecostal Church  
 McDaniels Henry Δ MI 85433  
 1310 DeVera Agripino V  
 Δ VA 62108  
 1418 Seawood Don E Δ AT 26619  
 1421 Roberts Elmo Δ MI 83227  
 1422 Rogers Edite N Δ AT 23053  
 1422 Baldwin Malachi W  
 Δ VA 47586  
 1430 Smith Horace Δ AT 29032  
 1436 Andrada Valentino  
 Δ AT 22387  
 1442 Chan Robt Y Δ MI 76759  
 1527 Stewart Eddie D Δ AT 20799  
 1533 Dalton Fred W Δ AT 26186  
 1539 Alexander Rufus Jr Δ MI 72480  
 1545 Carter Bill E Δ AT 81251  
 1600 Nery Manuel Δ MI 79176  
 1608 Tone Minnie M Mrs  
 Δ VA 63407  
 1616 Lumert Novella Mrs  
 Δ MI 78712  
 1622 Keys Brady Δ AT 82109  
 1625 Zubol John Δ AT 80427  
 1725 Taylor Graham D Δ AT 80722  
 1731 McKenna Harry H Δ VA 64304  
 1824 Pantania Dominic Δ VA 60317  
 1827 Brassen Chas L Δ MI 76275  
 282  
 2800 Ditlevson Harold R  
 Δ MI 73066  
 2814 Conte Jos D Δ VA 48985  
 2818 Bianchi Ida Δ VA 60708

2825 Vandercourt Oliver Jr  
 2826 Pieralle Jos M Δ AT 24841  
 2830 Double Rock ers Δ MI 74261  
 2841 Martinez Emery Δ MI 72738  
 2843 Colon John Δ AT 81389  
 2847 Voken Ted Δ VA 63440

**2820 Singleton Lloyd Δ AT 20945**  
 2926 Connor Joe F Δ VA 65191  
 2932 Williams Gomez Δ MI 85280  
 2938 Corpuz Faustino C Δ VA 41267  
 2944 Nanzano Stanley H Δ AT 24137  
**Ingerson av intersects**  
 3019 Alparone Pat Δ AT 21324  
 3030 Bay View Winery whol and ret  
 Δ JU 73957  
 3101 Ramon Frank Δ JU 40933  
 3212 Cahler Nellie Mrs  
 Δ DE 31002  
 3217 Ferrato Antonio Δ DE 32866  
 3218 Vacant  
 3224 Farmers Cath Mrs Δ JU 70529  
 3225 Basso Louis Δ JU 51054  
 3231 Pierucci Arth B Δ JU 41984  
 3236 Tong Edmond Δ JU 75027  
 3237 Hopkins Chas W Rev  
 Δ DE 38519  
**Jamestown av intersects**

**INGERSON AV—From County Line bet  
 Hollister av and Jamestown av south-  
 west to 3d**

783 Yakas Jas T Δ JU 71900  
 793 Lindon Adam Δ JU 73811  
 823 Steen Herman H  
 877 Brown Jas T Δ JU 51128  
 879 Blkoff Raymond Δ JU 61906  
**Hawes intersects**  
 900 Corloni Margherita Mrs  
 Δ JU 59355  
 906 Davis Henry S Δ JU 62488  
 906a Brooks Jack D Δ DE 36423  
 914 Chiotti Cath Mrs Δ JU 42026  
 917 Hunt John W Δ JU 49473  
 918 Beauvieux Ben C  
 Δ JU 43027  
 919 Robinson Wm Δ JU 55343  
 921 Ahney James H Δ TU 44073  
 922 Brown Clarence Δ DE 36860  
 923 Bradley Eddy Δ JU 57937  
 934 Lassague Margherita Mrs  
 Δ JU 43747  
 940 Under construction  
 942 Allison Milton S Δ JU 70200  
 946 Flowers Estelle D Δ JU 57233  
 947 Flyer Clarence Δ JU 59301  
 950 Bringham Brlee Δ JU 74735  
 Green Henderson  
 Δ JU 66092  
 954 Coridon Grocery Δ JU 58419  
 Coridon Ruth Mrs Δ JU 58419  
 Spenser Wm  
 962 Jackson Gladys B Mrs  
 Δ JU 49040  
 966 Ortiz Rosendo Δ JU 46541  
 970 Danczer Estelle B Δ JU 50372  
 971 No return  
 974 Minix Howard  
 979 Vacant  
 981 Bacon Howard Δ JU 49264  
 986 Creshaw Khl Δ JU 69871  
 990 Ramirez Luis Δ JU 53919  
**Ingalls intersects**  
 1000 Hall J C Δ JU 64166  
 1001 Tuncogato Reno O Δ DE 37348  
 1006 Pelleriti Frank L Δ DE 37660  
 1010 Mallegni Doenia Mrs  
 1010a Brovero Ricario  
 1018 Lee Louis Δ JU 74289  
 1018a Moore Dora Ann  
 1019 Harriman Frank L  
 Δ JU 74299  
 1022 Stanlots Eliz A Mrs  
 Δ DE 39931  
 1023 Greenup LaSalle A Δ JU 55482  
 1026 Osborne Prince Δ DE 35705  
 1027 Delterino Gabriel C  
 1033 Felder Robt Δ JU 44496  
 1034 Federighi Orazio  
 1035 Vacant  
 1038 Pellegrini Gino Δ JU 58201  
 1042 Valadas Louis B Δ JU 53237  
 1043 Lombardi Nannol M  
 Δ JU 77707  
 1047 Castellanos Esther Mrs  
 Δ JU 44355  
 1050 Castellanos Rudolph P  
 1054 Battalon Edw Δ JU 55243  
 1055 Heinsen Frank  
 1058 Jensen J P  
 1062 Scullitt Andrew J Δ JU 70568  
 1063 Darrell Marcello J Δ JU 47580  
 1065 Pozzetti Natalo Δ JU 51541  
 1067 Harrell Wilbur Δ DE 33705  
 1070 Barsotti Ralph Δ JU 53906  
 1071 Hayter Lois Δ JU 46422  
 1074 Johnson Wm Δ JU 54764  
 1075 Federighi Jos Δ DE 30236  
 1079 McAtfee Wilma Mrs  
 Δ DE 30199  
 1082 Borruco Julio Δ JU 61745  
 1086 Colombo Aldo Δ JU 70790  
**Jennings intersects**  
 1100 Ward Fred J Δ JU 40900  
 1121 Tucker Otis Δ JU 64602  
 1124 Wilson Edgar Δ JU 76721  
 1125 Regalla John J Δ JU 74319  
 1126 Vacant  
 1130 Brady Mathew P Δ JU 53589  
 1135 Calabro Maria Mrs Δ DE 37994  
 1140 Toro Ramiro Δ DE 35911  
 1144 Cornac Justin Δ JU 73379  
 1145 Perez Domingo Δ JU 57848  
 1151 Larry Andrew Δ JU 76979  
 1152 Frierson Lee E Δ DE 32307  
 1153 Smith Stewart H Δ JU 43947  
 1158 Brousal Emma G Δ JU 82875  
 1161 King Walter Δ JU 79553  
 1162 Baglito Nicholas Δ JU 45529

1173 Calle Guan Δ JU 56887  
 1173a Seamster Robt Δ JU 59623  
 3d intersects  
 Riley intersects

**INNES AV—From Water Front bet Hud-  
 son av and Jernold av northwest**  
 Ridge Point intersects  
 3d intersects  
 Bonit intersects  
 Coleman intersects  
 Donahue intersects  
 Harbor rd intersects

612 Vacant  
 634 Vacant  
 658 Bayside Market Δ MI 71631  
 663 Vacant  
 666 Vacant  
**Earl intersects**  
 700 Center Mkt gro Δ AT 23115  
 710 G & E Liquors Δ VA 45018  
 712 Nicholson Riehd W Jr  
 Δ MI 74050  
 714 Nick's Cms Δ MI 76161  
 718 Miller Leo R Δ VA 61595  
 724 Nick's Square Deal Liquors  
 ret Δ MI 76161  
 726 Lawson Benj F Δ AT 39412  
 728 Davis J J Δ VA 65047  
 730 Broussard Joseph B  
 732 Goolsby Anthony B Δ MI 78557  
 736 Lipscomb Willie L  
 738 Lewis Clara Mrs Δ VA 63709  
 740 Cooke Chas E Δ VA 61595  
 742 Travers Bernard S Δ MI 71223  
 744 Golden Clipper Barber Shop  
 746 Vacant  
**Fifth intersects**

cor Hunter's Point Boat House  
 Δ VA 44298  
 800 Bross Jos Δ VA 44208  
 800 Shirrap Beat The Restr  
 Δ MI 80831

812 Shirrap Beat Mt Tho  
 Δ AT 24100  
 822 Duery Paul Δ VA 48670  
 826 Scottless Julius Δ MI 72473  
 826 Shan-Ti Restr Δ VA 49883  
 826a Wing Gar Cln  
 826 Handley Geo  
 826e Alexander Ernest Δ AT 25525  
 829 Shear Pln Club  
 830 Shafer Lee Δ VA 46137  
 838 Vacant  
 847 Tiley Restaurant  
 847 Escheverria Antonio Δ MI 78762  
 849 Mack James A Δ AT 81863  
 850 Jones Anna Mrs Δ VA 40467  
 851 Perry Talph F Δ VA 47636  
 853 Collier Bernice Δ VA 48840  
 855 Lane Elsie Mrs Δ AT 20458  
 Wong Mike Δ VA 47740  
 857 Felder Thelma  
 859 Klimani E J Δ MI 80326  
 863 Boyd Robt Δ AT 80320  
 863 Morrison Phillip L Δ ME 75640  
 869 Vickers Robt Δ AT 22585  
 871 Vacant  
 881 Volsin Ardlen Δ AT 22830  
 894 Anderson A Cristofani beat bidrs  
 Δ MI 76960  
 895 Mountain Springs Water Co  
 water distr Δ VA 41131

**Griffith intersects**  
 900 Jorgensen Virginia A Mrs  
 Δ VA 47313  
 904 Siemer Ernest R  
 908 Bradshaw Jas J Δ MI 79583  
 911 Jenkins Coranza Δ MI 84495  
 930 Regal Roofing Co Inc Δ VA 43261  
 935 Lacey Howard J Δ MI 74210  
 939 Hunter Frances Δ AT 28262  
 943 Chan Wall Δ AT 28896  
 947 Camilli Warren B  
 950 Peterson Liquor Store Δ VA 65244  
 Peterson Lester A Δ AT 25369

951 Linn Peter Δ MI 74120  
 955 Wong Mike Δ VA 47740  
 963 Maso Lucille Mrs  
 965 Hash J A Δ MI 84601  
 967 Siemer Fred Δ AT 22573  
 985 Perallo Joseph  
 Peterson Lester J  
 991 Alton Roy E Δ MI 74304  
 993 Vacant  
 996 O K Gro Δ AT 27200  
 996a Juhl Melvin Δ MI 82269  
 998 Leuch & Harris Souleils Serv  
 Sta Δ MI 89801

**Hawes intersects**  
 1005 Willis Jas Δ MI 70813  
 1009 Apartments  
 1 Rock Fredk J  
 2 Woe Chas  
 3 Calhoun J L Δ VA 68464  
 4 Vacant  
 1062 Vacant

1068 Lyon Carleton Δ VA 47023  
 1100 Allmond John A Δ MI 77675  
 1086 Brown Luther L  
 1092 Anderson Alice D Mrs  
 Δ AT 21582  
**Ingalls intersects**  
 Jennings intersects  
 1220 Hale Carl W Δ AT 29484  
 1222 Ross Silas E Δ MI 81899  
 1224 Dougherty Paul C Δ AT 21356  
 1226 Strickland Perry Jr  
 1228 Salazar Delfin  
 1230 Dougherty Walter M Δ AT 21034  
 1232 Smith Elma Δ VA 61551  
 1234 Alberts Roy E Δ AT 81310  
 1236 Edwards Frank Δ VA 61526  
 1238 Adams Minnie M Δ VA 64648  
 1240 Norris Jas W Δ VA 41674  
 1242 Franklin Bennie F Δ AT 82632  
 1244 Miller Matthew A Δ VA 44902  
 1244a Romero Augustin  
 1246 Vacant  
 1246a Batts Davis T  
 1248 Thomas Johnny T Δ VA 43650  
 1250 Jackson Tommy Δ AT 22659  
 1252 Danczer Arth D Δ AT 28957  
 1254 Evans Jas Δ MI 80834

INNES AVE 1953

INDIANA—From Mariposa bet Minnesota and Iowa, south to Tulare

- 2008 Medina Joel VA66149
2102 Byrum Chas D AT23687
2103 Cont. Frank A AT20178
2104 Melcher Allen F Mrs
2106 Rimes Vance E
2107 Couer Wm D
2108 Adams Pauline Mrs
2109 Zupan Russell J MI70315
2111 Parson Franklin J AT20273
2117 Smith Anicia M Mrs VA63903
2119 German Louis F
2121 Smith Richd E AT20854
2125 Gardner David
2129 Robbins Roland B VA45233
2131 Conn Leonard C
2133 Timko Michl Jr AT24047
2135 Yee Yim VA40206
2137 Russo Jas D MI70619
2141 DeLapaz Feliciano VA49194
2143 Apodaca Frank E
2203 Liston Clarence W MI31392
2209 Sanchez Thos C
2209 Gordon Clyde T VA65894
2209a Howard Conrad R AT29206
2211 Ramirez Julian AT28630
2212 Berg Glenn E AT28975
2217 Eberhart Jerry D MI83446
2219 Howard Eug
2227 Hicks Annie M VA43174
2242 Dwyer Will VA42927
2233 Broussard Frank L AT27724
2236 Criswell Senior VA62927
2237 Loyd Bobbie VA45556
2238 Watkins Jas
2240 Tyus Ruth L Mrs
2241 Randall Rosie VA64791
2243 Cook Willie D
2243 Washington Horace AT25680
2300 Judkins Sam VA62743
2301 Fobbs Eddie VA65560
2302 Thomas Leroy MI83493
2302 Tucker R Belle
2303 Ross McKinley MI24462
2304 Childs Odlar AT26235
2305 Thomas Helen L AT24528
2306 Holland Jas E
2307 Keith Zebadiah AT24792
2308 Wilson Saul VA66557
2309 Jones Jas L
2310 Harrol Florence
2311 Harrol Dorris VA66542
2312 Harlow Fred
2315 Jackson Cyrus AT23719
2317 Nesbitt Albert F
2319 Johnson John C AT24853
2321 Gardner Louis VA66254
2323 Davis Russell VA64192
2324 Smith Mrs VA66124
2327 Redman Clara V MI73118
2329 Phillips O D VA65924
2331 Caron Parker A Jr
2332 Caulton Harry VA66251
2401 Fore Jos B VA65455
2403 Rayfield Erwin VA66385
2405 Young Claude MI82991
2407 Williams D L VA41815
2409 Sanford Arth MI85536
2411 Hall Eddie AT23154
2412 Chicks Willie B VA65456
2417 Walker Norris AT66668
2419 Johnson Paul B AT27116
2421 Granger Marshall W VA44126
2422 Irons Nath
2427 Tanksey Lucius AT28457
2429 Williams Jos L AT28143
2433 Wiggins Ernest MI83832
2435 Jackson Andrew VA66588
2437 McQuittaro John
2438 Metts Ben VA45103
2439 Jackson Andrew W
2440 Whitley Wm VA66444
2441 Smith Timothy L
2442 Metts Mattie C Mrs VA45103
2443 Walker John E AT22636
2444 Vandier Albes
2445 Smith Georgia Mrs VA66438
2446 Mallory Jos MI80966
2447 Hoff Jas D VA49347
2448 Brooks Ellis Jr MI74578
Egbert av intersects

INDUSTRIAL—From Oakdale av west of Selby southwest to Boutwell

- 55 Kenner Truck Line VA62525
85 Vacant
200 Apparel City Chevron Serv VA49680
211 Square D elec equip and sup mfrs JU74590
223 Everett Junius A prntr JU54988
233 Under construction
230 Owen Cement Co agrl impls VA66768

INGALLS—From India bet Hawes and Jennings southwest to Jennings

- 1300 Vacant
1301 Blatz Lena Mrs VA66060
1302 Thomas John W MI82806
1303 Brown Nehemiah VA63633
1304 Weatherly Robt whsmn MI82173
1305 Smith Martin MI74091
1306 Hayes Louis L AT29618
1307 Cox Lucy Mrs MI86649
1308 Frazier Curley D VA60119
1309 Edwards Ivory MI86053
1310 Leblance Sanders VA49143
1311 Levington Myles VA64040
1312 Abbott Freddie AT21198
1314 Lee Jos Mrs VA47338
1315 Ne return
1318 Henderson Clifford VA62350
1319 Milburn Hilda B VA65456
1319 Burns Jas VA42460
1319 Gowan Lawrence VA65868
1320 Morris Chas
1321 Mackey Edmah
1322 Chatham Robt VA62387
1323 Jones Robt VA47003
1324 Johnson Jos VA65839
1325 Turner John VA49393
1326 March Edw AT 80894
1327 Jackson Willie
1328 Clark Jesse Lee Mrs MI85571
1329 Cummins Herman VA65907
1330 Woods Clarence
1331 Gregory Luther VA63233
1332 Williams Saml
1333 Howard Chas O MI84370
1334 Brown Jake AT29475
1335 Hurt Ira T MI74139
1336 Watkins Dorothy L Mrs AT80489
1337 Hines E Anderson Rev AT29370
1338 Westley Sylvester MI80991
1339 Cole Tony MI78328
1340 Jones Lawrence AT27404
1341 Brooks Monroe
1342 Brown Jessie B VA66861
1343 Foster Thos A mech VA46539
1344 Whitehead Willis B VA40348
1345 Kemp Edw
1346 Dickerson Wm VA64140
1347 Braneau Aug AT35538
1348 Veray Edgar M VA60133
1349 Riley Homer AT29798
1350 Jackson Thos W AT28723
1352 Roberts John VA65177
1354 Derrick R Thos VA41062
1358 Cunningham Robt A MI81877
1360 Ambler John L VA60111
1362 Pope Emmett MI70077

1400 No return

- 1410 DeVera Agripino
1418 Gipson Victor A
1421 No return
1424 Baldwin Malachi W @VA47588
1430 Smith Horace AT29032
1436 Andrada Valentino AT29032
1442 Chan Robt Y MI79759
1527 Stewart Eddie D @AT20799
1533 Beavers Fred W Jr
1539 Alexander Rufus Jr @AT81956
1569 Carter Willie E VA42851
1600 Nery Manuel @MI79176
1608 Brady Jos O @AT26661
1616 Lumber Leon J @MI78712
1622 Simpson Bert VA49503
1625 Zubol Jack @AT80427
1725 Taylor Graham D @AT80722
1807 McKenzie Harry H @VA64304
1810 Castro Rosendo
1824 D'Patania Domenic @
1827 Branszen Chas L @MI76275

2038 Metters Ullyses AT28778

- 2039 Riddle Leo R VA63053
2041 Fair Robt E MI78093
2042 Emerson Clifford N AT29844
2043 Hall Glenn A
2044 Ragler Demarache
2046 Kelly John W
2047 Martindale Robt L VA64387
2048 Ryans Dalpus AT24297
2050 Zwald G J VA66194
2051 Solomon Saml
2052 Walker Wm J
2053 Jarschke Eug F
2054 Greenfield Wm T MI75109

- 3101 No return
3102 Jackson Thos AT28723
3212 Callier Nellie @DE32866
3217 Ferrato Antonio @DE32866
3218 Wachtler John
3224 Gardner Domencia Mrs @JU70529
3225 Bosso Louis @JU51054
3231 Pierucci Arth B @JU41984
3236 Mallman Jas A JU59773
3247 Erickson Wm @JU3202
3238 Chang Harry DE34182

Jamestown av intersects

INGERSON AV—From County Line bet Hollister av and Jamestown av southwest to 3d

- 783 Yakas Jas T JU71900
793 Burnett Clinton L @JU42855
824 Steen Herz Fred @DE38518
877 Alexander John F @JU54427
879 Beverly LeRoy
Hawes intersects
900 Cordoni Jos @JU52655
906 Pustirino Jos A JU42500
914 Chlotoff Cath Mrs @JU42026
918 Hunt Jas E @JU49473
918 Bernavidez Abe @
919 Robinson Wm @JU55343
921 Bryce John @JU57731
924 Bradley Wm @JU5937
925 Maier Kath JU44703
934 Lasagna Dominic @JU43747
942 Christensen Hans @DE35126
948 Flowers Moses @JU50365
950 Jones Henderson @
954 Cordoni Ruth E JU58419
962 Jackson Gladys B Mrs @JU49040
966 Ortiz Rosendo @JU46541
971 Wallace Bernice @
979 Potts Jas @JU50186
980 Leon Howard @JU42864
986 Crenshaw Kirt @JU63871
990 Ramirez Luis @
Ingalls intersects

- 1000 Hall Jesse @JU64165
1008 Tancigello @DE37348
1006 Pellert Frank L @DE37660
1010 Mallegoni Dorina Mrs @
1018 Zentraf Chas H JU55355
1026 deKand John @MI81113
1019 Harellman Frank L @JU72499
1022 Stanlotes Eliz Mrs @DE36931
1023 Greenup LaSalle A @JU54482
1027 Delfortino Gabriel C @
1033 Vacant
1034 Federighi Orazio @DE39624
1035 William Irving @DE31369
1038 Pellegrini Gino @JU52901
1042 Valadao Louis B @JU53237
1043 Lombardi Naomi M @
1047 Castellanos Esteban Mrs @
1050 Castellano Rudolph P @JU44355
1054 Comulada Francisco C JU77317
1055 Fieck Oscar B
1058 Jensen Jens P @
1062 Sciutti Andy JU70568
1063 Martinotta Peter JU62033
1066 Tognetti Natalie @JU51541
1067 Harrell Wilber @DE33705
1070 No return
1071 Hayter Lois JU46422
1074 Federighi Jos @DE33332
1075 Berrios John @JU70799
1086 Colombo Aldo E @JU70799

Jennings intersects

- 1100 Nicholson Earl J JU62264
1121 Gaspar Steve J JU79856
1124 Adams Manu P @JU52043
1125 Regalia John J @JU74319
1129 Swanson Thale @
1130 Brad Mathew @JU53589
1133 Calabro Maria Mrs @DE37994
1135 Calabro Vincent Jr @DE37994
1140 Pagnelli Mary M @DE35511
1144 Corne Justin @JU73379
1147 Metcalf Lucille Mrs DE31790
1148 Perez Domingo @JU57848
1151 Walton Mary E JU63256
1152 No return
1153 Smith Stewart H @JU43947
1155 Broussal Emme G Mrs @
1164 Baglio Paul AT28329
1173 Blumer Ida S Mrs JU46557
1173a Kausler Frieda E Mrs JU46557

3d intersects

INNES AV—From Water Front bet Hudson av and Jerrold av northwest to Toland

- 612 Dewall Lester E MI74710
634 Ferranti Vincent J AT24202
644 Baylde Mkt MI4631
662 B & B Genl Store MI74751
666 Madero Albert A @VA48905
700 Center Mkt gro
710 G & E Liquors VA45618
712 Nicholson Richd W Jr MI74056
714 Nick's Cms MI74056
718 Miller L R
722 Centner's Barbecue VA65295
724 Vacant
729 Lavesen Ben F AT29412
728 Bradley Ida V VA49483
730 Jackson J Mae Mrs MI72836
732 Golsby Anthony B MI8557
736 Cent John VA62571
738 Johnson Nola B Mrs AT27632
740 Banks Saml VA41812
742 Boyd Chas T VA57585
746 Bay Television Serv AT81235

Fitch intersects

- 822 Brack Marie
826 Shan-Ti Rest VA49883
828 Anderson Max J MI71445
826b Solarie Eug A MI80217
830 Stadler Frank AT29733
838 Zahn Kath
844 Evin's Rest VA64761
842 No return
850 Jones Alma
863 Sales Bernard @VA44252
871 Vacant
881 Veislin Adrien A AT22830

- 894 Anderson & Cristofani beat bids MI76960
Griffith intersects
900 Jorgensen Carl J VA47713
904 Sumner Ernest R
905 Bradshaw Jas J MI79583
911 Jenkins Coranda @MI84495
930 Regal Roofing Co VA43261
935 Lacey Howard J @MI74210
939 Hunter Frances Mrs AT28262
947 Vacant
950 Peterson Lester A AT23369
954 Peterson Liquor Store VA65244
951 Limm Peter @MI74120
963 Lambeth Hollis
965 Hach J A
965 Siermer Fred @AT22573
985 Murphy Thos MI79209
988 Hupner's Point Serv Sta
991 Hagemeier Harlan D
Roberts Edgar S MI72998
993 Trojo Park MI77517
998 O'K Gro AT27200
998 Oliver's Hunter's Point Serv Sta VA40391

Hawes intersects

- 1005 Morris Jos AT21484
1009 Burman Lester MI82492
Casas Theresa VA64208
Irion Adelle Mrs MI71898
1082 Johnson Gladys T Mrs VA63910
1088 Dutter Robt E AT80613
1080 Allemand John A MI77675
1086 Davis Jos B @VA65445
1092 Anderson Alice D Mrs
Jennings intersects
1224 Abba Francis L VA45306
1238 Rich Dorothy VA44489
1246 Vacant
1248 Thomas John VA43650
1250 William Eleanor Mrs MI79374
1252 Besiric Edna Mrs MI80120
1254 Evans Jas MI80834
1256 Price Emmett VA60104
1258 Franklin Gladys E Mrs MI76698
1260 Brown Ozella AT24478
1262 Sims Robt MI75259
1266 Lewis Harry Mrs VA41690
1268 Jones Irene Mrs
1270 Hall Dave T VA63254
1272 Manlon Robt AT29633
1274 Robinson Ora VA40100
1276 Johnson Robt A
1285 Bralley Jas R AT22302
1287 Santos Jose AT81123
1289 Holte Knute L VA44663
1291 Johnson Robt A
1293 Eggers Arth W MI75216
1295 Augustine Nichols J VA64302
1297 Lane Wm H MI76932
1299 Grager Jos S MI74537

Keith intersects

- 1301 Burdick Wm I MI72530
1302 Janda Robt VA48422
1305 Cortella Miguel
1307 Loo Joe Liang MI86513
1309 McCarter Kenneth
1312 Westcott Olga T MI75010
1315 Shaw Allen
1317 Leis Edgar S
1332 Draper Saml A MI73457
1334 Lavioles Jos J
1336 Stewart Ellis AT27517
1338 Reagan Neugene MI81863
1340 Harlawy Armsted AT27337
1342 Basley Lawrence E VA48564
1344 Williams Marion
1346 Williams Raymond AT22865
1348 Wright Ben L AT20836
1350 Barr East MI75623
1352 Evans Clytie AT20218
1354 Whitehead Johnnie AT81182
1356 Brown Mrs T AT25571
1358 Wallace Albert N VA47142
1360 Semien Jas A
1362 Whillock Nathl MI73404
1364 Harris Lee AT80493
1366 Godfrey Lula M Mrs AT20739
1368 Winder Mansfield
1370 Carter Willie L MI84231
1372 Lubin Louis
1374 Elliott Jos C AT81732
1376 Jefferson Walter
1378 McCormack Lucille Mrs MI86292
1384 Thompson Jas L AT24903
1382 Franklin Willis VA41619
1384 Howard Aug AT81186
1385 Parker Dewey A MI77666
1388 Robertson Manuel MI81909
1390 Morris Gordon J VA48243
1392 Jackson Timothy MI72848
1394 Brown Henry VA48113

Lans intersects

- 1414 Squaglia Chessa Mrs VA41703
1418 Grillo Patsy V AT23124
1424 Taylor Robt VA41748
1434 Moore Jas P @
1437 Peck Marlin MI74405
1438 Mack Orel VA40695
1439 Sibusan Andre B @MI44407
1442 Turner U VA49241
1445 Holt Jas H MI77058
1446 Westmoreland Vertas Mrs @VA44203
1455 Spade Wilmer @AT80289
1456 Johnson Ruth @VA65836
1457 deCastro Edw VA63093
1461 Vacant
1462 Eastman Harry M
Squaglia Martino VA40647
1469 Turner Darnisha Mrs @MI77033
1473 Irving Warren @VA41473
1474 Squaglia Victor @VA41703
1477 Poggi Henrietta Mrs MI74399
Mendell intersects
1500 Cohen Saml MI81594
1501 Ellis Harmon @VA63932
1507 deLeon Baldomero @MI76608
1511 Varela Thos O @VA64622
1512 Rizzuto Asdrubale VA64034
1515 Apodaca Raymond @AT29024
1519 Elliott John O VA48743
1522 Gok Horn G VA62846
1523 Embrador Max @AT28453
1526 Betti Anthony @MI74807
1527 Arcelona Steve @VA62003
1530 Fianza Jose VA64892
1531 Naves Jos H @VA63203
1534 Cataldo Jos M VA42895
1535 Zanetti Jos @MI73917
1536 Ventimiglia Anna Mrs AT26157
1539 Riegrert Fredk T @MI70701
1542 Portillo Henry @AT22769
1543 Bow Johnny @AT80312

- 1624 DeWitt
1625 DeWitt
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1700 DeWitt

**APPENDIX F - ENVIRONMENTAL LIEN SEARCH**

**APPENDIX G - EDR DATABASE REPORT**

**Available on attached CD**

**900 Innes Avenue Site**

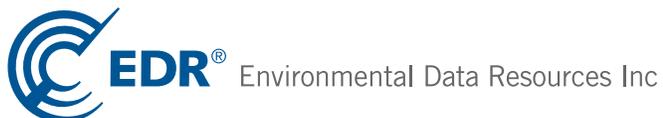
900 Innes Ave

San Francisco, CA 94124

Inquiry Number: 3611816.2s

May 20, 2013

# The EDR Radius Map™ Report with GeoCheck®



440 Wheelers Farms Road  
Milford, CT 06461  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

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*Thank you for your business.*  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

900 INNES AVE  
SAN FRANCISCO, CA 94124

#### COORDINATES

Latitude (North): 37.7322000 - 37° 43' 55.92"  
Longitude (West): 122.3758000 - 122° 22' 32.88"  
Universal Transverse Mercator: Zone 10  
UTM X (Meters): 555003.4  
UTM Y (Meters): 4176081.0  
Elevation: 27 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 37122-F4 SAN FRANCISCO SOUTH, CA  
Most Recent Revision: 1999  
  
East Map: 37122-F3 HUNTERS POINT, CA  
Most Recent Revision: 1980

### AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year: 2012  
Source: USDA

### TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

<u>Site</u>	<u>Database(s)</u>	<u>EPA ID</u>
900 INNES AVE 900 INNES AVE SAN FRANCISCO, CA	CHMIRS	N/A
900 INNES AVE 900 INNES AVE SAN FRANCISCO, CA	ERNS	N/A
900 INNES 900 INNES SAN FRANCISCO, CA 94952	CHMIRS	N/A

## EXECUTIVE SUMMARY

GRANITE EXCAVATION & DEMOLITION C 900 INNES AVE SAN FRANCISCO, CA 94124	HAZNET	N/A
900 INNES STREET 900 INNES STREET SAN FRANCISCO (County), CA	ERNS	N/A
900 INNES AVE 900 INNES AVE SAN FRANCISCO, CA 0	ERNS	N/A

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

### STANDARD ENVIRONMENTAL RECORDS

#### ***Federal NPL site list***

Proposed NPL..... Proposed National Priority List Sites  
NPL LIENS..... Federal Superfund Liens

#### ***Federal Delisted NPL site list***

Delisted NPL..... National Priority List Deletions

#### ***Federal CERCLIS list***

FEDERAL FACILITY..... Federal Facility Site Information listing

#### ***Federal CERCLIS NFRAP site List***

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

#### ***Federal RCRA CORRACTS facilities list***

CORRACTS..... Corrective Action Report

#### ***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

#### ***Federal RCRA generators list***

RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

## EXECUTIVE SUMMARY

### ***Federal institutional controls / engineering controls registries***

LUCIS..... Land Use Control Information System

### ***State and tribal leaking storage tank lists***

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

### ***State and tribal registered storage tank lists***

AST..... Aboveground Petroleum Storage Tank Facilities

INDIAN UST..... Underground Storage Tanks on Indian Land

FEMA UST..... Underground Storage Tank Listing

### ***State and tribal voluntary cleanup sites***

INDIAN VCP..... Voluntary Cleanup Priority Listing

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### ***Local Brownfield lists***

US BROWNFIELDS..... A Listing of Brownfields Sites

#### ***Local Lists of Landfill / Solid Waste Disposal Sites***

ODI..... Open Dump Inventory

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

WMUDS/SWAT..... Waste Management Unit Database

SWRCY..... Recycler Database

HAULERS..... Registered Waste Tire Haulers Listing

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

#### ***Local Lists of Hazardous waste / Contaminated Sites***

US CDL..... Clandestine Drug Labs

SCH..... School Property Evaluation Program

Toxic Pits..... Toxic Pits Cleanup Act Sites

CDL..... Clandestine Drug Labs

US HIST CDL..... National Clandestine Laboratory Register

#### ***Local Lists of Registered Storage Tanks***

HIST UST..... Hazardous Substance Storage Container Database

#### ***Local Land Records***

LIENS 2..... CERCLA Lien Information

LIENS..... Environmental Liens Listing

DEED..... Deed Restriction Listing

#### ***Records of Emergency Release Reports***

HMIRS..... Hazardous Materials Information Reporting System

## EXECUTIVE SUMMARY

LDS..... Land Disposal Sites Listing  
MCS..... Military Cleanup Sites Listing  
SPILLS 90..... SPILLS 90 data from FirstSearch

### ***Other Ascertainable Records***

DOT OPS..... Incident and Accident Data  
DOD..... Department of Defense Sites  
CONSENT..... Superfund (CERCLA) Consent Decrees  
UMTRA..... Uranium Mill Tailings Sites  
US MINES..... Mines Master Index File  
TRIS..... Toxic Chemical Release Inventory System  
TSCA..... Toxic Substances Control Act  
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)  
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing  
SSTS..... Section 7 Tracking Systems  
ICIS..... Integrated Compliance Information System  
PADS..... PCB Activity Database System  
MLTS..... Material Licensing Tracking System  
RADINFO..... Radiation Information Database  
FINDS..... Facility Index System/Facility Registry System  
RAATS..... RCRA Administrative Action Tracking System  
RMP..... Risk Management Plans  
UIC..... UIC Listing  
NPDES..... NPDES Permits Listing  
Cortese..... "Cortese" Hazardous Waste & Substances Sites List  
CUPA Listings..... CUPA Resources List  
Notify 65..... Proposition 65 Records  
DRYCLEANERS..... Cleaner Facilities  
WIP..... Well Investigation Program Case List  
ENF..... Enforcement Action Listing  
EMI..... Emissions Inventory Data  
INDIAN RESERV..... Indian Reservations  
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing  
COAL ASH DOE..... Steam-Electric Plant Operation Data  
COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List  
HWT..... Registered Hazardous Waste Transporter Database  
HWP..... EnviroStor Permitted Facilities Listing  
Financial Assurance..... Financial Assurance Information Listing  
LEAD SMELTERS..... Lead Smelter Sites  
2020 COR ACTION..... 2020 Corrective Action Program List  
US AIRS..... Aerometric Information Retrieval System Facility Subsystem  
PRP..... Potentially Responsible Parties  
WDS..... Waste Discharge System  
EPA WATCH LIST..... EPA WATCH LIST  
US FIN ASSUR..... Financial Assurance Information  
PCB TRANSFORMER..... PCB Transformer Registration Database  
PROC..... Certified Processors Database  
MWMP..... Medical Waste Management Program Listing

### **EDR HIGH RISK HISTORICAL RECORDS**

#### ***EDR Exclusive Records***

EDR MGP..... EDR Proprietary Manufactured Gas Plants

## EXECUTIVE SUMMARY

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### STANDARD ENVIRONMENTAL RECORDS

#### ***Federal NPL site list***

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 02/01/2013 has revealed that there is 1 NPL site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>USNAVY HUNTERS POINT NAVAL SHI</i></b>	<b><i>HUNTERS POINT NAVAL SHI</i></b>	<b><i>SE 1/8 - 1/4 (0.215 mi.)</i></b>	<b><i>0</i></b>	<b><i>12</i></b>

#### ***Federal CERCLIS list***

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 02/04/2013 has revealed that there are 3 CERCLIS sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b><i>USNAVY HUNTERS POINT NAVAL SHI</i></b>	<b><i>HUNTERS POINT NAVAL SHI</i></b>	<b><i>SE 1/8 - 1/4 (0.215 mi.)</i></b>	<b><i>0</i></b>	<b><i>12</i></b>
<b><i>DONCO INDUSTRIES INC</i></b>	<b><i>894 INNES AVE</i></b>	<b><i>SSE 0 - 1/8 (0.005 mi.)</i></b>	<b><i>A7</i></b>	<b><i>52</i></b>
<b><i>INDIA BASIN BOATYARD</i></b>	<b><i>894 INNES AVE</i></b>	<b><i>SSE 0 - 1/8 (0.005 mi.)</i></b>	<b><i>A9</i></b>	<b><i>62</i></b>

## EXECUTIVE SUMMARY

### ***Federal RCRA generators list***

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 02/12/2013 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HUNTERS POINT REDEVELOPMENT PR	690 HUDSON AVE	ESE 1/8 - 1/4 (0.233 mi.)	D26	145

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/12/2013 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>USNAVY HUNTERS POINT NAVAL SHI</i>	<i>HUNTERS POINT NAVAL SHI</i>	<i>SE 1/8 - 1/4 (0.215 mi.)</i>	<i>0</i>	<i>12</i>
<i>DONCO INDUSTRIES INC</i>	<i>894 INNES AVE</i>	<i>SSE 0 - 1/8 (0.005 mi.)</i>	<i>A7</i>	<i>52</i>
<i>ODACO INC</i>	<i>BLDG 134 HUNTERS POINT</i>	<i>WNW 0 - 1/8 (0.038 mi.)</i>	<i>B16</i>	<i>84</i>

### ***Federal institutional controls / engineering controls registries***

US ENG CONTROLS: A listing of sites with engineering controls in place.

A review of the US ENG CONTROLS list, as provided by EDR, and dated 03/14/2013 has revealed that there is 1 US ENG CONTROLS site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>USNAVY HUNTERS POINT NAVAL SHI</i>	<i>HUNTERS POINT NAVAL SHI</i>	<i>SE 1/8 - 1/4 (0.215 mi.)</i>	<i>0</i>	<i>12</i>

US INST CONTROL: A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

A review of the US INST CONTROL list, as provided by EDR, and dated 03/14/2013 has revealed that there is 1 US INST CONTROL site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>USNAVY HUNTERS POINT NAVAL SHI</i>	<i>HUNTERS POINT NAVAL SHI</i>	<i>SE 1/8 - 1/4 (0.215 mi.)</i>	<i>0</i>	<i>12</i>

## EXECUTIVE SUMMARY

### **State- and tribal - equivalent NPL**

RESPONSE: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

A review of the RESPONSE list, as provided by EDR, and dated 03/13/2013 has revealed that there is 1 RESPONSE site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>BAY AREA DRUM</b>	<b>1212 THOMAS AVENUE</b>	<b>SW 1/2 - 1 (0.600 mi.)</b>	<b>42</b>	<b>180</b>

### **State- and tribal - equivalent CERCLIS**

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 03/13/2013 has revealed that there are 10 ENVIROSTOR sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>DONCO INDUSTRIES INC</b> Status: Inactive - Needs Evaluation	<b>894 INNES AVE</b>	<b>SSE 0 - 1/8 (0.005 mi.)</b>	<b>A8</b>	<b>59</b>
1633 NEWCOMB STREET Status: No Further Action	1633 NEWCOMB STREET	WNW 1/2 - 1 (0.823 mi.)	45	224
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>PG &amp; E HUNTERS POINT</b> Status: Active	<b>1000 EVANS AVE HUNTERS</b>	<b>N 1/8 - 1/4 (0.186 mi.)</b>	<b>23</b>	<b>93</b>
<b>BAY AREA DRUM</b> Status: Certified	<b>1212 THOMAS AVENUE</b>	<b>SW 1/2 - 1 (0.600 mi.)</b>	<b>42</b>	<b>180</b>
<b>1228 UNDERWOOD AVENUE SITE</b> Status: No Further Action	<b>1228 UNDERWOOD AVE.</b>	<b>SW 1/2 - 1 (0.666 mi.)</b>	<b>43</b>	<b>221</b>
MOBILE DEBRIS BOX SERVICE Status: Inactive - Needs Evaluation	1301V YOSEMITE AVENUE	SW 1/2 - 1 (0.818 mi.)	J44	223
BUCKEYE PROPERTIES Status: Refer: RWQCB	1296 ARMSTRONG AVENUE	SW 1/2 - 1 (0.860 mi.)	J46	226
<b>YOSEMITE AND FITCH SEWER CONST</b> Status: No Further Action	<b>HAWES AND ARMSTRONG ST</b>	<b>SW 1/2 - 1 (0.862 mi.)</b>	<b>J47</b>	<b>227</b>
3950 3RD STREET Status: Refer: 1248 Local Agency	3950 3RD STREET	NW 1/2 - 1 (0.890 mi.)	48	229
<b>HUNTERS POINT NAVAL SHIPYARD,</b> Status: Active Status: Certified	<b>965 ACRES; SE PORTION O</b>	<b>SSE 1/2 - 1 (0.969 mi.)</b>	<b>49</b>	<b>230</b>

## EXECUTIVE SUMMARY

### **State and tribal landfill and/or solid waste disposal site lists**

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 02/18/2013 has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HUNTERS POINT	HUNTER'S POINT NAVAL SH	S 1/4 - 1/2 (0.499 mi.)	41	179

### **State and tribal leaking storage tank lists**

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 03/18/2013 has revealed that there are 16 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>RFJ MEISWINKEL CO.</b> Status: Completed - Case Closed	<b>930 INNES AV</b>	<b>WNW 0 - 1/8 (0.007 mi.)</b>	<b>A10</b>	<b>65</b>
<b>MEE CORP.</b> Status: Completed - Case Closed	<b>895 INNES AVE</b>	<b>SSE 0 - 1/8 (0.007 mi.)</b>	<b>A11</b>	<b>70</b>
<b>VACANT</b> Status: Completed - Case Closed	<b>996 INNES AVE</b>	<b>WNW 0 - 1/8 (0.077 mi.)</b>	<b>C17</b>	<b>86</b>
<b>HUNTERS POINT POWER PL</b> Status: Completed - Case Closed	<b>1000 EVANS AVE</b>	<b>NNW 1/4 - 1/2 (0.289 mi.)</b>	<b>E27</b>	<b>147</b>
<b>HUNTERS POINT POWER PLANT</b>	<b>1000 EVANS AVE</b>	<b>NNW 1/4 - 1/2 (0.289 mi.)</b>	<b>E28</b>	<b>152</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
COMMERCIAL PROPERTY Status: Completed - Case Closed	690 HUDSON AVE	ESE 1/8 - 1/4 (0.233 mi.)	D25	144
COMMERCIAL PROPERTY Status: Completed - Case Closed	50 CRISP ROAD	SSE 1/4 - 1/2 (0.394 mi.)	F31	166
COMMERCIAL PROPERTY	50 CRISP ROAD	SSE 1/4 - 1/2 (0.394 mi.)	F32	167
COMMERCIAL	50 CRISP ROAD	SSE 1/4 - 1/2 (0.394 mi.)	F33	167
<b>MARELICH MECHANICAL (FORMER)</b> Status: Completed - Case Closed	<b>200 JENNINGS STREET</b>	<b>NNW 1/4 - 1/2 (0.402 mi.)</b>	<b>G34</b>	<b>169</b>
MARELICH MECHANICAL (FORMER)	200 JENNINGS STREET	NNW 1/4 - 1/2 (0.402 mi.)	G35	171
<b>PACIFIC FAN &amp; BLOWER CO., INC.</b> Status: Completed - Case Closed	<b>1132 QUESADA AVE</b>	<b>SW 1/4 - 1/2 (0.430 mi.)</b>	<b>H36</b>	<b>172</b>
PACIFIC FAN & BLOWER	1132 QUESADA AVENUE	SW 1/4 - 1/2 (0.430 mi.)	H37	175
<b>BLAKEWAY METAL WORKS</b> Status: Completed - Case Closed	<b>101 CARGO WAY</b>	<b>N 1/4 - 1/2 (0.457 mi.)</b>	<b>I38</b>	<b>175</b>
BLAKEWAY METAL	101 CARGO WAY	N 1/4 - 1/2 (0.457 mi.)	I39	176
<b>BONELLI ENTERPRISES</b>	<b>101 CARGO WAY</b>	<b>N 1/4 - 1/2 (0.457 mi.)</b>	<b>I40</b>	<b>178</b>

## EXECUTIVE SUMMARY

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 03/18/2013 has revealed that there is 1 SLIC site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
P G & E HUNTER'S POINT POWER P		N 1/4 - 1/2 (0.301 mi.)	30	165

### ***State and tribal registered storage tank lists***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 03/18/2013 has revealed that there are 4 UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>RFJ MEISWINKEL CO.</b>	<b>930 INNES AV</b>	<b>WNW 0 - 1/8 (0.007 mi.)</b>	<b>A10</b>	<b>65</b>
MEE CORPORATION	895 INNES AV	SSE 0 - 1/8 (0.007 mi.)	A12	73
VACANT	996 INNES AV	WNW 0 - 1/8 (0.077 mi.)	C18	89
AVIS	230 HARBOR WAY	WNW 1/8 - 1/4 (0.157 mi.)	21	93

### ***State and tribal voluntary cleanup sites***

VCP: Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

A review of the VCP list, as provided by EDR, and dated 03/13/2013 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>PG &amp; E HUNTERS POINT</b>	<b>1000 EVANS AVE HUNTERS</b>	<b>N 1/8 - 1/4 (0.186 mi.)</b>	<b>23</b>	<b>93</b>

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Lists of Hazardous waste / Contaminated Sites***

HIST Cal-Sites: Formerly known as ASPIS, this database contains both known and potential hazardous substance sites. The source is the California Department of Toxic Substance Control. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

A review of the HIST Cal-Sites list, as provided by EDR, and dated 08/08/2005 has revealed that there are 2 HIST Cal-Sites sites within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>BAY AREA DRUM</b>	<b>1212 THOMAS AVENUE</b>	<b>SW 1/2 - 1 (0.600 mi.)</b>	<b>42</b>	<b>180</b>

## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>HUNTERS POINT NAVAL SHIPYARD,</i>	<i>965 ACRES; SE PORTION O</i>	<i>SSE 1/2 - 1 (0.969 mi.)</i>	<i>49</i>	<i>230</i>

### **Local Lists of Registered Storage Tanks**

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 2 CA FID UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>NAVAL SHIPYARD</i>	<i>1 HUNTERS POINT BLVD</i>	<i>WNW 0 - 1/8 (0.037 mi.)</i>	<i>B15</i>	<i>76</i>
<i>VACANT</i>	<i>996 INNES AVE</i>	<i>WNW 0 - 1/8 (0.077 mi.)</i>	<i>C17</i>	<i>86</i>

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 2 SWEEPS UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>NAVAL SHIPYARD</i>	<i>1 HUNTERS POINT BLVD</i>	<i>WNW 0 - 1/8 (0.037 mi.)</i>	<i>B15</i>	<i>76</i>
<i>VACANT</i>	<i>996 INNES AVE V</i>	<i>WNW 0 - 1/8 (0.077 mi.)</i>	<i>C19</i>	<i>91</i>

### **Other Ascertainable Records**

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 02/12/2013 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>MIL SPEC HOUSE THE</i>	<i>HUNTERS POINT NAVAL SHI</i>	<i>NW 0 - 1/8 (0.032 mi.)</i>	<i>B14</i>	<i>75</i>
<i>STEVEN MITCHELL TRUCKING</i>	<i>50 REARDON RD STE 110</i>	<i>SSW 1/8 - 1/4 (0.190 mi.)</i>	<i>24</i>	<i>143</i>

## EXECUTIVE SUMMARY

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 12/31/2011 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HUNTERS POINT SHIPYARD ANNEX		SSE 1/4 - 1/2 (0.298 mi.)	29	164

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 12/18/2012 has revealed that there is 1 ROD site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>USNAVY HUNTERS POINT NAVAL SHI</i>	<i>HUNTERS POINT NAVAL SHI</i>	<i>SE 1/8 - 1/4 (0.215 mi.)</i>	<i>0</i>	<i>12</i>

CA BOND EXP. PLAN: Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

A review of the CA BOND EXP. PLAN list, as provided by EDR, and dated 01/01/1989 has revealed that there is 1 CA BOND EXP. PLAN site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>BAY AREA DRUM</i>	<i>1212 THOMAS AVENUE</i>	<i>SW 1/2 - 1 (0.600 mi.)</i>	<i>42</i>	<i>180</i>

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSTATES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 5 HIST CORTESE sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>MEE CORP.</i>	<i>895 INNES AVE</i>	<i>SSE 0 - 1/8 (0.007 mi.)</i>	<i>A11</i>	<i>70</i>
<i>GEORGE PAIZI TRUSTEE</i>	<i>966 INNES</i>	<i>WNW 0 - 1/8 (0.030 mi.)</i>	<i>B13</i>	<i>74</i>
<i>HUNTERS POINT POWER PL</i>	<i>1000 EVANS AVE</i>	<i>NNW 1/4 - 1/2 (0.289 mi.)</i>	<i>E27</i>	<i>147</i>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>MARELICH MECHANICAL (FORMER)</i>	<i>200 JENNINGS STREET</i>	<i>NNW 1/4 - 1/2 (0.402 mi.)</i>	<i>G34</i>	<i>169</i>
<i>BLAKEWAY METAL WORKS</i>	<i>101 CARGO WAY</i>	<i>N 1/4 - 1/2 (0.457 mi.)</i>	<i>I38</i>	<i>175</i>

## EXECUTIVE SUMMARY

### EDR HIGH RISK HISTORICAL RECORDS

#### ***EDR Exclusive Records***

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there is 1 EDR US Hist Auto Stat site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SEASIDE SERVICE	998 INNES AVE	WNW 0 - 1/8 (0.080 mi.)	C20	92

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there is 1 EDR US Hist Cleaners site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NICK S CLEANERS	714 INNES AV	SE 1/8 - 1/4 (0.173 mi.)	22	93

## EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 36 records.

<u>Site Name</u>	<u>Database(s)</u>
SITE DEVELOPMENT AND HABITAT IMPRO VACANT	NPDES LUST, CA FID UST, SWEEPS UST, LOS ANGELES CO. HMS
HENRY BROADCASTING	LUST, SWEEPS UST, EMI
CANDLESTICK PT STATE REC AREA	CERC-NFRAP
ISLAIS CREEK AREA	CERC-NFRAP
BAY VIEW GREEN WASTE MGT. COMPANY	SWF/LF
SF PIER 98 INDIA BASIN	SWF/LF
COMMERCIAL COSNSTRUCTION SITE	LUST
COMMERCIAL (STREET)	LUST
CONSTRUCTION SITE	UST
CONSTRUCTION SITE	UST
TREASURE ISLAND, SITE 6	UST
BUILDING 116	UST
BUILDING 118 (FORMER)	UST
BUILDING 203	UST
BUILDING 205	UST
BUILDING 211	UST
BUILDING 231	UST
BUILDING 251	UST
BUILDING 272	UST
BUILDING 281	UST
BUILDING 308	UST
BUILDING 709	UST
BUILDING 253	UST
US GOVERNMENT	UST
CONSTRUCTION SITE	UST
CCSF FREEWAY CONSTRUCTION SITE	UST
CONSTRUCTION SITE	UST
PRESIDIO/FILL SITE 5	UST
CALTRANS SF SITE	HAZNET
U S S MEYERKORD F F1058 EX U S S M	RCRA-SQG
USS LANG EX USS LANG WMAC INC	RCRA-SQG
USS GREY SF1054 SUSF GREY WMAC INC	RCRA-SQG
U S S LOCKWOOD FF1064 EX LOCKWOOD-	RCRA-SQG
MARTINI TRUCKING INC	RCRA NonGen / NLR, FINDS
FEELY TRUCKING CORPORATION	RCRA NonGen / NLR, FINDS

# OVERVIEW MAP - 3611816.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

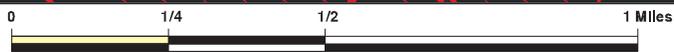
County Boundary

Power transmission lines

Oil & Gas pipelines from USGS

National Wetland Inventory

Areas of Concern



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 900 Innes Avenue Site  
 ADDRESS: 900 Innes Ave  
 San Francisco CA 94124  
 LAT/LONG: 37.7322 / 122.3758

CLIENT: Weston Solutions, Inc.  
 CONTACT: Ian Bruce  
 INQUIRY #: 3611816.2s  
 DATE: May 20, 2013 6:01 pm

# DETAIL MAP - 3611816.2s



Target Property

Sites at elevations higher than or equal to the target property

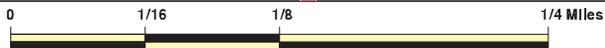
Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites



Indian Reservations BIA

County Boundary

Power transmission lines

Oil & Gas pipelines from USGS

National Wetland Inventory

Areas of Concern



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 900 Innes Avenue Site  
 ADDRESS: 900 Innes Ave  
 San Francisco CA 94124  
 LAT/LONG: 37.7322 / 122.3758

CLIENT: Weston Solutions, Inc.  
 CONTACT: Ian Bruce  
 INQUIRY #: 3611816.2s  
 DATE: May 20, 2013 6:02 pm

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b>STANDARD ENVIRONMENTAL RECORDS</b>								
<b><i>Federal NPL site list</i></b>								
NPL	1.000		0	1	0	0	NR	1
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
<b><i>Federal Delisted NPL site list</i></b>								
Delisted NPL	1.000		0	0	0	0	NR	0
<b><i>Federal CERCLIS list</i></b>								
CERCLIS	0.500		2	1	0	NR	NR	3
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
<b><i>Federal CERCLIS NFRAP site List</i></b>								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
<b><i>Federal RCRA CORRACTS facilities list</i></b>								
CORRACTS	1.000		0	0	0	0	NR	0
<b><i>Federal RCRA non-CORRACTS TSD facilities list</i></b>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<b><i>Federal RCRA generators list</i></b>								
RCRA-LQG	0.250		0	1	NR	NR	NR	1
RCRA-SQG	0.250		2	1	NR	NR	NR	3
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
<b><i>Federal institutional controls / engineering controls registries</i></b>								
US ENG CONTROLS	0.500		0	1	0	NR	NR	1
US INST CONTROL	0.500		0	1	0	NR	NR	1
LUCIS	0.500		0	0	0	NR	NR	0
<b><i>Federal ERNS list</i></b>								
ERNS	TP	3	NR	NR	NR	NR	NR	3
<b><i>State- and tribal - equivalent NPL RESPONSE</i></b>								
RESPONSE	1.000		0	0	0	1	NR	1
<b><i>State- and tribal - equivalent CERCLIS ENVIROSTOR</i></b>								
ENVIROSTOR	1.000		1	1	0	8	NR	10
<b><i>State and tribal landfill and/or solid waste disposal site lists</i></b>								
SWF/LF	0.500		0	0	1	NR	NR	1
<b><i>State and tribal leaking storage tank lists</i></b>								
LUST	0.500		3	1	12	NR	NR	16

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC	0.500		0	0	1	NR	NR	1
INDIAN LUST	0.500		0	0	0	NR	NR	0
<b>State and tribal registered storage tank lists</b>								
UST	0.250		3	1	NR	NR	NR	4
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
<b>State and tribal voluntary cleanup sites</b>								
VCP	0.500		0	1	0	NR	NR	1
INDIAN VCP	0.500		0	0	0	NR	NR	0
<b>ADDITIONAL ENVIRONMENTAL RECORDS</b>								
<b>Local Brownfield lists</b>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<b>Local Lists of Landfill / Solid Waste Disposal Sites</b>								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
<b>Local Lists of Hazardous waste / Contaminated Sites</b>								
US CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	2	NR	2
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
<b>Local Lists of Registered Storage Tanks</b>								
CA FID UST	0.250		2	0	NR	NR	NR	2
HIST UST	0.250		0	0	NR	NR	NR	0
SWEEPS UST	0.250		2	0	NR	NR	NR	2
<b>Local Land Records</b>								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
<b>Records of Emergency Release Reports</b>								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP	2	NR	NR	NR	NR	NR	2
LDS	TP		NR	NR	NR	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
<b>Other Ascertainable Records</b>								
RCRA NonGen / NLR	0.250		1	1	NR	NR	NR	2
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	1	0	NR	1
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	1	0	0	NR	1
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	1	NR	1
UIC	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500		2	0	3	NR	NR	5
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
HAZNET	TP	1	NR	NR	NR	NR	NR	1
EMI	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PROC	0.500		0	0	0	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0

### EDR HIGH RISK HISTORICAL RECORDS

#### ***EDR Exclusive Records***

EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		1	0	NR	NR	NR	1
EDR US Hist Cleaners	0.250		0	1	NR	NR	NR	1

#### NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s) EDR ID Number  
EPA ID Number

A1  
Target 900 INNES AVE  
Property SAN FRANCISCO, CA

CHMIRS S109041046  
N/A

Site 1 of 12 in cluster A

Actual:  
27 ft.

CHMIRS:  
OES Incident Number: 07-5161  
OES notification: 08/28/2007  
OES Date: Not reported  
OES Time: Not reported  
Incident Date: Not reported  
**Date Completed: Not reported**  
Property Use: Not reported  
Agency Id Number: Not reported  
Agency Incident Number: Not reported  
Time Notified: Not reported  
Time Completed: Not reported  
Surrounding Area: Not reported  
Estimated Temperature: Not reported  
Property Management: Not reported  
Special Studies 1: Not reported  
Special Studies 2: Not reported  
Special Studies 3: Not reported  
Special Studies 4: Not reported  
Special Studies 5: Not reported  
Special Studies 6: Not reported  
More Than Two Substances Involved?: Not reported  
Resp Agncy Personel # Of Decontaminated: Not reported  
Responding Agency Personel # Of Injuries: Not reported  
Responding Agency Personel # Of Fatalities: Not reported  
Others Number Of Decontaminated: Not reported  
Others Number Of Injuries: Not reported  
Others Number Of Fatalities: Not reported  
Vehicle Make/year: Not reported  
Vehicle License Number: Not reported  
Vehicle State: Not reported  
Vehicle Id Number: Not reported  
CA/DOT/PUC/ICC Number: Not reported  
Company Name: Not reported  
Reporting Officer Name/ID: Not reported  
Report Date: Not reported  
Comments: Not reported  
Facility Telephone: Not reported  
Waterway Involved: Not reported  
Waterway: San Francisco Bay  
Spill Site: Not reported  
Cleanup By: Unknown  
Containment: Not reported  
What Happened: Not reported  
Type: Not reported  
Measure: Not reported  
Other: Not reported  
Date/Time: Not reported  
Year: 2007  
Agency: NRC  
Incident Date: 8/27/2007 12:00:00 AM  
Admin Agency: Not reported  
Amount: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

(Continued)

S109041046

Contained:	Unknown
Site Type:	Ship/Harbor/Port
E Date:	Not reported
Substance:	Unknown Oil
Quantity Released:	Not reported
BBLs:	0
Cups:	0
CUFT:	0
Gallons:	0.000000
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
Description:	Quoting the NRC report, "Caller is reporting an unknown sheen on the San Francisco Bay that appears to be coming from the boat yard in the area." Per the NRC report this sheen was discovered yesterday evening at 1800 Hours.

A2

Target 900 INNES AVE  
 Property SAN FRANCISCO, CA

ERNS 2007324152  
 N/A

Site 2 of 12 in cluster A

Actual:  
 27 ft.

[Click this hyperlink](#) while viewing on your computer to access additional ERNS detail in the EDR Site Report.

A3

Target 900 INNES  
 Property SAN FRANCISCO, CA 94952

CHMIRS S108400962  
 N/A

Site 3 of 12 in cluster A

Actual:  
 27 ft.

CHMIRS:	
OES Incident Number:	05-0143
OES notification:	01/07/2005
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
<b>Date Completed:</b>	<b>Not reported</b>
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

(Continued)

S108400962

Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agency Personnel # Of Decontaminated:	Not reported
Responding Agency Personnel # Of Injuries:	Not reported
Responding Agency Personnel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Not reported
Waterway:	San Francisco Bay
Spill Site:	Not reported
Cleanup By:	Contractor
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2005
Agency:	Bouchard Industrial Metal
Incident Date:	1/7/200512:00:00 AM
Admin Agency:	San Francisco County Health Department
Amount:	Not reported
Contained:	Yes
Site Type:	Ship/Harbor/Port
E Date:	Not reported
Substance:	Diesel #2
Quantity Released:	Not reported
BBLS:	0
Cups:	0
CUFT:	0
Gallons:	15-20
Grams:	0
Pounds:	0
Liters:	0
Ounces:	0
Pints:	0
Quarts:	0
Sheen:	0
Tons:	0
Unknown:	0
Evacuations:	0
Number of Injuries:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

(Continued)

S108400962

Number of Fatalities: 0  
Description: Substance was released when a fuel tank was ruptured while scraping the tug boat. Booms and pads have been applied. Spill contractor is on site.

**A4**  
Target **GRANITE EXCAVATION & DEMOLITION CO**  
Property **900 INNES AVE**  
**SAN FRANCISCO, CA 94124**

**HAZNET** **S112991858**  
**N/A**

Site 4 of 12 in cluster A

Actual:  
27 ft.

HAZNET:  
Year: 2011  
Gepaid: CAC002673917  
Contact: JOE CASSIDY  
Telephone: 6507378701  
Mailing Name: Not reported  
Mailing Address: 160 S LINDEN AVE  
Mailing City,St,Zip: SOUTH SAN FRANCISCO, CA 94080  
Gen County: Not reported  
TSD EPA ID: CAD980887418  
TSD County: Not reported  
Waste Category: Unspecified oil-containing waste  
Disposal Method: Discharge To Sewer/Potw Or Npdes(With Prior Storage--With Or Without Treatment)  
Tons: 0.9174  
Facility County: San Francisco

**A5**  
Target **900 INNES STREET**  
Property **SAN FRANCISCO (County), CA**

**ERNS** **2005600522**  
**N/A**

Site 5 of 12 in cluster A

Actual:  
27 ft.

[Click this hyperlink](#) while viewing on your computer to access additional ERNS detail in the EDR Site Report.

**A6**  
Target **900 INNES AVE**  
Property **SAN FRANCISCO, CA 0**

**ERNS** **2000522619**  
**N/A**

Site 6 of 12 in cluster A

Actual:  
27 ft.

[Click this hyperlink](#) while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**NPL**  
**Region**  
**SE**  
**1/8-1/4**  
**1134 ft.**

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4**  
**HUNTERS POINT NAVAL SHIPYARD**  
**SAN FRANCISCO, CA 94124**

**NPL** 1000403627  
**CERCLIS** CA1170090087  
**RCRA-SQG**  
**US ENG CONTROLS**  
**US INST CONTROL**  
**ROD**  
**PRP**

**NPL:**

EPA ID: CA1170090087  
EPA Region: 09  
Federal: Y  
Final Date: 1989-11-21 00:00:00

**Category Details:**

NPL Status: Currently on the Final NPL  
Category Description: Depth To Aquifer-<= 10 Feet  
Category Value: 7

NPL Status: Currently on the Final NPL  
Category Description: Distance To Nearest Population-> 0 And <= 1/4 Mile  
Category Value: 10

**Site Details:**

Site Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Site Status: Final  
Site Zip: 94124  
Site City: SAN FRANCISCO  
Site State: CA  
Federal Site: Yes  
Site County: SAN FRANCISCO  
EPA Region: 09  
Date Proposed: 07/14/89  
Date Deleted: Not reported  
Date Finalized: 11/21/89

**Substance Details:**

NPL Status: Currently on the Final NPL  
Substance ID: Not reported  
Substance: Not reported  
CAS #: Not reported  
Pathway: Not reported  
Scoring: Not reported

NPL Status: Currently on the Final NPL  
Substance ID: A020  
Substance: CHROMIUM AND COMPOUNDS  
CAS #: Not reported  
Pathway: SURFACE WATER PATHWAY  
Scoring: 2

NPL Status: Currently on the Final NPL  
Substance ID: A046  
Substance: POLYCHLORINATED BIPHENYLS  
CAS #: 1336-36-3  
Pathway: NO PATHWAY INDICATED  
Scoring: 1

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

NPL Status: Currently on the Final NPL  
Substance ID: A054  
Substance: TRICHLOROBENZENE, 1,2,4-  
CAS #: 120-82-1  
Pathway: GROUND WATER PATHWAY  
Scoring: 2

NPL Status: Currently on the Final NPL  
Substance ID: C049  
Substance: ETHYLBENZENE  
CAS #: 100-41-4  
Pathway: GROUND WATER PATHWAY  
Scoring: 2

NPL Status: Currently on the Final NPL  
Substance ID: C178  
Substance: COPPER AND COMPOUNDS  
CAS #: Not reported  
Pathway: SURFACE WATER PATHWAY  
Scoring: 2

NPL Status: Currently on the Final NPL  
Substance ID: C247  
Substance: ZINC AND COMPOUNDS  
CAS #: Not reported  
Pathway: NO PATHWAY INDICATED  
Scoring: 1

NPL Status: Currently on the Final NPL  
Substance ID: C385  
Substance: PYRENE  
CAS #: 129-00-0  
Pathway: SURFACE WATER PATHWAY  
Scoring: 2

NPL Status: Currently on the Final NPL  
Substance ID: D008  
Substance: LEAD (PB)  
CAS #: 7439-92-1  
Pathway: GROUND WATER PATHWAY  
Scoring: 3

NPL Status: Currently on the Final NPL  
Substance ID: D008  
Substance: LEAD (PB)  
CAS #: 7439-92-1  
Pathway: SURFACE WATER PATHWAY  
Scoring: 4

NPL Status: Currently on the Final NPL  
Substance ID: U071  
Substance: DICHLOROBENZENE, 1,3-  
CAS #: 541-73-1  
Pathway: GROUND WATER PATHWAY  
Scoring: 2

NPL Status: Currently on the Final NPL

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Distance  
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**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

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Substance ID: U072  
Substance: DICHLOOROBENZENE, 1,4-  
CAS #: 106-46-7  
Pathway: GROUND WATER PATHWAY  
Scoring: 2

NPL Status: Currently on the Final NPL  
Substance ID: U101  
Substance: DIMETHYLPHENOL, 2,4-  
CAS #: 105-67-9  
Pathway: GROUND WATER PATHWAY  
Scoring: 2

NPL Status: Currently on the Final NPL  
Substance ID: U120  
Substance: BENZO(J,K)FLUORENE  
CAS #: 206-44-0  
Pathway: SURFACE WATER PATHWAY  
Scoring: 2

NPL Status: Currently on the Final NPL  
Substance ID: U188  
Substance: PHENOL  
CAS #: 108-95-2  
Pathway: GROUND WATER PATHWAY  
Scoring: 2

Summary Details:

Conditions at proposal July 14, 1989): Hunters Point Annex of Treasure Island Naval Station, formerly the Hunters Point Naval Shipyard, encompasses 936 acres 522 acres dry land and 414 acres submerged in San Francisco Bay) in the southeast corner of San Francisco, California. Established in 1869, the shipyard was the first privately owned dry dock on the Pacific Coast. The Navy first used the installation in 1919 to construct, maintain, and repair ships, and in 1939 purchased it from California Dry Dock Co. Triple A Machine Shop leased the facility from the Navy during 1976-87, subleasing numerous buildings to private tenants. The Navy regained possession of the shipyard from Triple A in 1987, but continues the subleasing. Operations of the facility over many decades generated a wide variety of solid and liquid wastes, including paints, solvents, fuels, acids, bases, metals, PCBs, and asbestos. Hunters Point Annex is participating in the Installation Restoration Program (IRP), established in 1978. Under this program, the Department of Defense seeks to identify, investigate, and clean up contamination from hazardous materials. The Navy has identified a number of potentially contaminated areas, including Industrial Landfill, Bay Fill Area, Pickling and Plating Yard, Battery and Electroplating Shop, Old Transformer Storage Yard, Power Plant, Oil Reclamation Ponds, Tank Farm, numerous spill areas, and areas leased by Triple A. These areas are potential sources of contaminant migration into ground water and into San Francisco Bay. In the past, wastes and waste water were directly discharged into San Francisco Bay. Benzene, PCBs, toluene, and phenols have been detected in on-site ground water in IRP tests conducted in 1987. A bottling company draws ground water from springs within 3 miles of hazardous substances on the annex. The company serves 19,000 people. Sediments contain elevated levels of heavy metals and polyaromatic hydrocarbons. Area surface waters are used for recreational activities, commercial navigation, and fishing. The Navy is continuing IRP studies and has undertaken some interim cleanup

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**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

measures. Status November 21, 1989): Workplans for additional interim measures are being developed. Sampling is underway as part of a remedial investigation/feasibility study to determine the type and extent of contamination at the site and identify alternatives for remedial action. Sampling is scheduled to continue into 1991.

Site Status Details:

NPL Status: Final  
Proposed Date: 07/14/1989  
Final Date: 11/21/1989  
Deleted Date: Not reported

Narratives Details:

NPL Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
City: SAN FRANCISCO  
State: CA

CERCLIS:

Site ID: 0902722  
EPA ID: CA1170090087  
Facility County: SAN FRANCISCO  
Short Name: TREASURE ISLAND NAVAL STA  
Congressional District: 08  
IFMS ID: 09P3  
SMSA Number: 7360  
USGC Hydro Unit: 18050004  
Federal Facility: Federal Facility  
DMNSN Number: 936.00000  
Site Orphan Flag: N  
RCRA ID: Not reported  
USGS Quadrangle: Not reported  
Site Init By Prog: Not reported  
NFRAP Flag: Not reported  
Parent ID: Not reported  
RST Code: Not reported  
EPA Region: 09  
Classification: Not reported  
Site Settings Code: UR  
NPL Status: Currently on the Final NPL  
DMNSN Unit Code: ACRE  
RBRAC Code: Not reported  
RResp Fed Agency Code: USNV  
Non NPL Status: Not reported  
Non NPL Status Date: / /  
Site Fips Code: 06075  
CC Concurrence Date: / /  
CC Concurrence FY: Not reported  
Alias EPA ID: Not reported  
Site FUDS Flag: Not reported

CERCLIS Site Contact Name(s):

Contact ID: 9271184.00000  
Contact Name: Karen Jurist  
Contact Tel: (415) 972-3219  
Contact Title: Site Assessment Manager (SAM)

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Direction  
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MAP FINDINGS

Site

Database(s)

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**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Contact Email: Not reported

Contact ID: 13003854.00000  
Contact Name: Leslie Ramirez  
Contact Tel: (415) 972-3978  
Contact Title: Site Assessment Manager (SAM)  
Contact Email: Not reported

Contact ID: 13003858.00000  
Contact Name: Sharon Murray  
Contact Tel: (415) 972-4250  
Contact Title: Site Assessment Manager (SAM)  
Contact Email: Not reported

Contact ID: 13004003.00000  
Contact Name: Carl Brickner  
Contact Tel: Not reported  
Contact Title: Site Assessment Manager (SAM)  
Contact Email: Not reported

Contact ID: 13004199.00000  
Contact Name: Craig Cooper  
Contact Tel: (415) 947-4148  
Contact Title: Remedial Project Manager (RPM)  
Contact Email: Not reported

**CERCLIS Site Alias Name(s):**

Alias ID: 101  
Alias Name: TRIPLE A SHIPYARD-HUNTERS PT DIV  
Alias Address: Not reported  
CA

Alias ID: 201  
Alias Name: HUNTERS POINT NAVAL SHIPYARD  
Alias Address: Not reported  
CA

Alias ID: 301  
Alias Name: NAVAL STA TREASURE ISL HUNTERS PT ANNEX  
Alias Address: Not reported  
CA

Alias ID: 302  
Alias Name: TREASURE ISLAND NAVAL STATION-HUN PT AN  
Alias Address: HUNTERS PT NAVAL SHIPYARD  
SAN FRANCISCO, CA 941242996

Alias ID: 303  
Alias Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Alias Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

Alias ID: 9270116  
Alias Name: TREASURE ISLAND NAVAL STATION HUNTERS POINT ANNEX  
Alias Address: SHIPYARD  
SAN FRANCISCO, CA 92020

Alias ID: 101  
Alias ID: 301  
Alias ID: 201  
Alias Comments: PREVIOUS EPA ID# AZD 981 416 977PREVIOUS EPA ID# AZD 981 416 977PREVIOUS EPA ID# AZD 981 416 977

Site Description: Treasure Island Naval Station, Hunters Point Annex (HPA), is located on a

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

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promontory in southeast San Francisco. The promontory is bounded on the north and east by the San Francisco Bay and on the south and west by the Bayview-Hunters Point district of the City of San Francisco. The entire HPA covers 936 acres, 493 of which are on land and 443 of which are under water.

HPA was first developed for dry dock use in 1867. The Navy acquired title to the land in 1940 and began developing the area for various shipyard activities. In 1942, the Navy began using HPA for shipbuilding, repair and maintenance. The Navy discontinued activities at HPA in 1974, and the shipyard remained relatively unused until 1976. From 1976 to 1986, the Navy leased 98 percent of HPA to a private ship repair company, which vacated the property in March 1987. In 1986, the Navy reoccupied portions of the property. The Navy began environmental studies at the HPA in 1984, under the Installation Restoration Program. Between 1984 and 1991, the Navy performed a series of installation-wide investigations, including ambient air monitoring and radiation investigations to identify potential sources of contamination. In 1989, the Environmental Protection Agency (EPA) added HPA to the National Priorities List. In 1990, the Navy, EPA, and the State entered into a Federal Facilities Agreement to coordinate environmental activities at HPA. In 1991, the U.S. Department of Defense designated HPA for closure as an active military base. To facilitate the environmental investigation and remediation, and ultimate transfer of the property, HPA was divided into several parcels (Parcels A through F). Operable Unit 1 (OU1): Parcel A covers approximately 88 acres and consists of the upland area of HPA and a portion of the lowlands. No wetlands or surface water are located at Parcel A. Limited quantities of groundwater are present in localized fractures of the bedrock. However, Parcel A groundwater is not suitable as a potential source of drinking water because of low well yield. No underground storage tanks (UST), aboveground tanks, drums, or hazardous materials storage areas remain on Parcel A. Under the local reuse authority's current land-use plan, Parcel A will be used for residential as well as for light commercial purposes, upon transfer of the property by the Navy. Throughout its history, both the Navy and Triple A used Parcel A primarily for residential purposes. In addition, the Navy used one building on Parcel A as a radiation laboratory. Most of the other structures were used as offices and warehouses. The Navy conducted a site inspection (SI) at seven discrete sites at Parcel A in 1993. Based on these investigations, the Navy concluded that no further action was required at the seven sites, and the State and EPA concurred with this decision. The Navy conducted a remedial investigation (RI) of the groundwater underlying Parcel A (referred to as the IR-59 site) and sandblast grit waste containing paint chips in the backfill of a sanitary sewer line in a lot along Jerrold Avenue (referred to as the IR-59 JAI site). The draft RI was completed in 1995, and a Record of Decision (ROD) was signed in November 1995 for no action at the IR-59 and IR-59 JAI sites. OU2: Parcel B covers approximately 63 acres and is located in the lowlands portion of HPA. Most of Parcel B is covered with concrete or asphalt and buildings. No surface waters exist on Parcel B; however, Parcel B is adjacent to San Francisco Bay. No wetlands exist on the parcel. Two aquifers (the A-aquifer and the B-aquifer) and one water-bearing zone (bedrock) have been identified at HPA, but only the A-aquifer and the bedrock water-bearing zone are present throughout Parcel B. The Navy and the State agree that neither the A-aquifer nor the bedrock water-bearing zone have been or are likely to be used for drinking water. Under the local reuse authority's current land use plan, Parcel B will be used primarily for an industrial complex, an educational complex, a mixed residential/retail complex, and a cultural/historical district, upon transfer of the property by the Navy. The Navy used Parcel B for such purposes as office and commercial buildings, warehousing, fuel storage and distribution, and machining and metal fabrication. Triple A conducted similar activities on Parcel B. Currently,

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Distance  
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**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

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portions of Parcel B are leased for such uses as artists' studios, storage, and cabinet making. A preliminary assessment/SI was conducted at all 17 potential source areas identified on Parcel B; 15 of the 17 sites were further investigated in a RI. The draft final RI and Feasibility Study were completed in 1996, and a ROD was signed in October 1997 addressing soil and groundwater contamination at Parcel B.

CERCLIS Assessment History:

Action Code: 001  
Action: DISCOVERY  
Date Started: / /  
Date Completed: 01/01/85  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: HAZARD RANKING SYSTEM PACKAGE  
Date Started: / /  
Date Completed: 05/01/88  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 06/25/87  
Date Completed: 03/31/89  
Priority Level: Cleaned up  
Operable Unit: PARCEL D-1  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: PROPOSAL TO NATIONAL PRIORITIES LIST  
Date Started: / /  
Date Completed: 07/14/89  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported

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Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: FINAL LISTING ON NATIONAL PRIORITIES LIST  
Date Started: / /  
Date Completed: 11/21/89  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: Notice Letters Issued  
Date Started: / /  
Date Completed: 03/02/90  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: EPA Fund-Financed  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: PRELIMINARY ASSESSMENT  
Date Started: / /  
Date Completed: 09/06/90  
Priority Level: Higher priority for further assessment  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: SITE INSPECTION  
Date Started: / /  
Date Completed: 09/06/90  
Priority Level: Higher priority for further assessment  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

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**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

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For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: INTERAGENCY AGREEMENT NEGOTIATIONS  
Date Started: 03/02/90  
Date Completed: 09/28/90  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Enforcement  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: FEDERAL INTERAGENCY AGREEMENT  
Date Started: 09/28/90  
Date Completed: 09/28/90  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Enforcement  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 03/14/88  
Date Completed: 12/03/90  
Priority Level: Stabilized  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 007  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 11/02/91  
Date Completed: 07/12/92  
Priority Level: Stabilized  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

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**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Action Code: 005  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 12/03/90  
Date Completed: 11/18/92  
Priority Level: Stabilized  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 09/13/90  
Date Completed: 10/22/93  
Priority Level: Partially Cleaned up  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 08/28/90  
Date Completed: 01/05/94  
Priority Level: Stabilized  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: ENVIRONMENTAL IMPACT STATEMENT  
Date Started: 12/03/94  
Date Completed: 12/04/94  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: RE-USE PLAN  
Date Started: 11/03/95

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**1000403627**

Date Completed: 11/04/95  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY  
Date Started: 09/28/90  
Date Completed: 11/28/95  
Priority Level: Not reported  
Operable Unit: PARCEL A  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: RECORD OF DECISION  
Date Started: / /  
Date Completed: 11/28/95  
Priority Level: Not reported  
Operable Unit: PARCEL A  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: ENVIRONMENTAL ASSESSMENT  
Date Started: 12/03/95  
Date Completed: 12/04/95  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 006  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 04/26/91  
Date Completed: 07/31/96  
Priority Level: Cleaned up  
Operable Unit: PARCEL D-1  
Primary Responsibility: Federal Facilities

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**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Planning Status: Primary  
Urgency Indicator: Non-Time Critical  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 011  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 07/24/96  
Date Completed: 09/05/97  
Priority Level: Stabilized  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Non-Time Critical  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002  
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY  
Date Started: 09/28/90  
Date Completed: 10/09/97  
Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002  
Action: RECORD OF DECISION  
Date Started: / /  
Date Completed: 10/09/97  
Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 013  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 09/06/96  
Date Completed: 12/19/97  
Priority Level: Not reported  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

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**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

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For detailed financial records, contact EDR for a Site Report.:

Action Code: 009  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 05/01/97  
Date Completed: 01/01/98  
Priority Level: Partially Cleaned up  
Operable Unit: PARCEL C  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Non-Time Critical  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 008  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 08/22/96  
Date Completed: 02/23/98  
Priority Level: Cleaned up  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Non-Time Critical  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: Explanation Of Significant Differences  
Date Started: / /  
Date Completed: 10/20/98  
Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: NOTICE OF INTENT TO PARTIALLY DELETE  
Date Started: / /  
Date Completed: 12/15/98  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: EPA Fund-Financed  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

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**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Action Code: 012  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 09/13/96  
Date Completed: 01/29/99  
Priority Level: Stabilized  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Non-Time Critical  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 010  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 10/18/96  
Date Completed: 02/16/99  
Priority Level: Stabilized  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Non-Time Critical  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: PARTIAL NATIONAL PRIORITIES LIST DELETION  
Date Started: 12/15/98  
Date Completed: 04/05/99  
Priority Level: Not reported  
Operable Unit: PARCEL A  
Primary Responsibility: EPA Fund-Financed  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: FEDERAL FACILITY REMEDIAL DESIGN  
Date Started: 07/31/98  
Date Completed: 08/31/99  
Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002  
Action: Explanation Of Significant Differences  
Date Started: / /  
Date Completed: 05/05/00

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

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**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 017  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 10/01/01  
Date Completed: 10/26/01  
Priority Level: Stabilized  
Operable Unit: PARCEL C  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Emergency  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 015  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 09/13/00  
Date Completed: 12/06/01  
Priority Level: Not reported  
Operable Unit: PARCEL D-1  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 016  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 09/13/01  
Date Completed: 07/12/02  
Priority Level: Not reported  
Operable Unit: PARCEL C  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 018  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 09/23/02  
Date Completed: 05/15/03  
Priority Level: Stabilized  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003  
Action: FEDERAL FACILITY FIVE YEAR REVIEW  
Date Started: 07/08/03  
Date Completed: 07/01/04  
Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 014  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 02/01/01  
Date Completed: 09/30/06  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 019  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 10/28/04  
Date Completed: 09/30/06  
Priority Level: Not reported  
Operable Unit: PARCEL D-1  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 020  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 04/11/05  
Date Completed: 10/31/07  
Priority Level: Not reported  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

For detailed financial records, contact EDR for a Site Report.:

Action Code: 022  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 04/08/05  
Date Completed: 11/30/07  
Priority Level: Not reported  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 023  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 04/08/05  
Date Completed: 11/30/07  
Priority Level: Not reported  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 021  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 04/25/05  
Date Completed: 12/07/07  
Priority Level: Not reported  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004  
Action: FEDERAL FACILITY FIVE YEAR REVIEW  
Date Started: / /  
Date Completed: 12/03/08  
Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Action Code: 001  
Action: TECHNICAL ASSISTANCE GRANT  
Date Started: 09/30/03  
Date Completed: 12/31/08  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: RECORD OF DECISION AMENDMENT  
Date Started: / /  
Date Completed: 01/28/09  
Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 026  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 03/01/08  
Date Completed: 01/31/09  
Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 008  
Action: RECORD OF DECISION  
Date Started: / /  
Date Completed: 02/18/09  
Priority Level: Not reported  
Operable Unit: PARCEL G  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 025  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 03/01/08  
Date Completed: 03/31/09

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004  
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY  
Date Started: 10/01/90  
Date Completed: 09/11/09  
Priority Level: Not reported  
Operable Unit: PARCEL D-1  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003  
Action: RECORD OF DECISION  
Date Started: / /  
Date Completed: 09/11/09  
Priority Level: Not reported  
Operable Unit: PARCEL D-1  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 009  
Action: RECORD OF DECISION  
Date Started: / /  
Date Completed: 12/17/09  
Priority Level: Not reported  
Operable Unit: UTILITY CORRIDORS  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 007  
Action: RECORD OF DECISION  
Date Started: / /  
Date Completed: 06/22/10  
Priority Level: Not reported  
Operable Unit: PARCEL D-2 (BLDGS 813+819)  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003  
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY  
Date Started: 09/28/90  
Date Completed: 09/20/10  
Priority Level: Partially Cleaned up  
Operable Unit: PARCEL C  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Non-Time Critical  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004  
Action: RECORD OF DECISION  
Date Started: / /  
Date Completed: 09/20/10  
Priority Level: Not reported  
Operable Unit: PARCEL C  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 007  
Action: FEDERAL FACILITY REMEDIAL DESIGN  
Date Started: 06/30/10  
Date Completed: 12/30/10  
Priority Level: Not reported  
Operable Unit: UTILITY CORRIDORS  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002  
Action: FEDERAL FACILITY REMEDIAL DESIGN  
Date Started: 12/01/10  
Date Completed: 02/11/11  
Priority Level: Not reported  
Operable Unit: PARCEL D-1  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Action Code: 027  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 05/21/12  
Date Completed: 09/10/12  
Priority Level: Not reported  
Operable Unit: PARCEL E-2 (LANDFILL)  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 007  
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY  
Date Started: 01/22/91  
Date Completed: 11/20/12  
Priority Level: Not reported  
Operable Unit: PARCEL E-2 (LANDFILL)  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 010  
Action: RECORD OF DECISION  
Date Started: / /  
Date Completed: 11/20/12  
Priority Level: Not reported  
Operable Unit: PARCEL E-2 (LANDFILL)  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 008  
Action: FEDERAL FACILITY REMEDIAL DESIGN  
Date Started: 09/01/12  
Date Completed: 11/29/12  
Priority Level: Not reported  
Operable Unit: PARCEL G  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 006  
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY  
Date Started: 09/28/90

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Date Completed: / /  
Priority Level: Not reported  
Operable Unit: PARCEL F  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 005  
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY  
Date Started: 01/22/91  
Date Completed: / /  
Priority Level: Not reported  
Operable Unit: PARCEL E  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: Restoration Advisory Board  
Date Started: 02/01/94  
Date Completed: / /  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: FEDERAL FACILITY REMEDIAL ACTION  
Date Started: 07/06/98  
Date Completed: / /  
Priority Level: Not reported  
Operable Unit: PARCEL B  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Long Term Action  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 024  
Action: FEDERAL FACILITY REMOVAL  
Date Started: 04/21/06  
Date Completed: / /  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002  
Action: TECHNICAL ASSISTANCE GRANT  
Date Started: 10/01/09  
Date Completed: / /  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 009  
Action: FEDERAL FACILITY REMEDIAL ACTION  
Date Started: 12/17/09  
Date Completed: / /  
Priority Level: Not reported  
Operable Unit: UTILITY CORRIDORS  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003  
Action: FEDERAL FACILITY REMEDIAL DESIGN  
Date Started: 10/30/10  
Date Completed: / /  
Priority Level: Not reported  
Operable Unit: PARCEL C  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003  
Action: FEDERAL FACILITY REMEDIAL ACTION  
Date Started: 06/01/11  
Date Completed: / /  
Priority Level: Not reported  
Operable Unit: PARCEL C  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Action Code: 002  
Action: FEDERAL FACILITY REMEDIAL ACTION  
Date Started: 07/31/11  
Date Completed: / /  
Priority Level: Not reported  
Operable Unit: PARCEL D-1  
Primary Responsibility: Federal Facilities  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 007  
Action: FEDERAL FACILITY REMEDIAL ACTION  
Date Started: 11/20/12  
Date Completed: / /  
Priority Level: Not reported  
Operable Unit: PARCEL E-2 (LANDFILL)  
Primary Responsibility: Federal Facilities  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Federal Register Details:

Fed Register Date: 11/21/89  
Fed Register Volume: 54  
Page Number: 48184

Fed Register Date: 07/14/89  
Fed Register Volume: 54  
Page Number: 29820

[Click this hyperlink](#) while viewing on your computer to access  
347 additional US CERCLIS Financial: record(s) in the EDR Site Report.

RCRA-SQG:

Date form received by agency: 09/01/1996  
Facility name: USNAVY HUNTERS POINT NAVAL SHIPYARD DD4  
Facility address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA ID: CA1170090087  
Mailing address: MARE ISLAND, STOP 032 CODE 461  
VALLEJO, CA 94592  
Contact: Not reported  
Contact address: Not reported  
Contact address: Not reported  
Contact country: Not reported  
Contact telephone: Not reported  
Contact email: Not reported  
EPA Region: 09  
Land type: Federal  
Classification: Small Small Quantity Generator

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: NOT REQUIRED  
Owner/operator address: NOT REQUIRED  
NOT REQUIRED, ME 99999  
Owner/operator country: Not reported  
Owner/operator telephone: (415) 555-1212  
Legal status: Federal  
Owner/Operator Type: Operator  
Owner/Op start date: Not reported  
Owner/Op end date: Not reported

Owner/operator name: US NAVY  
Owner/operator address: NOT REQUIRED  
NOT REQUIRED, ME 99999  
Owner/operator country: Not reported  
Owner/operator telephone: (415) 555-1212  
Legal status: Federal  
Owner/Operator Type: Owner  
Owner/Op start date: Not reported  
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No  
Mixed waste (haz. and radioactive): No  
Recycler of hazardous waste: No  
Transporter of hazardous waste: No  
Treater, storer or disposer of HW: No  
Underground injection activity: No  
On-site burner exemption: No  
Furnace exemption: No  
Used oil fuel burner: No  
Used oil processor: No  
User oil refiner: No  
Used oil fuel marketer to burner: No  
Used oil Specification marketer: No  
Used oil transfer facility: No  
Used oil transporter: No

Historical Generators:

Date form received by agency: 12/13/1985  
Facility name: USNAVY HUNTERS POINT NAVAL SHIPYARD DD4  
Classification: Large Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 03/31/1998  
Evaluation: NON-FINANCIAL RECORD REVIEW  
Area of violation: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Date achieved compliance: Not reported  
Evaluation lead agency: EPA

Evaluation date: 03/01/1995  
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE  
Area of violation: Not reported  
Date achieved compliance: Not reported  
Evaluation lead agency: State

**US ENG CONTROLS:**

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Actual Date: 09/30/10

Action ID: 001  
Action Name: Explanation Of Significant Differences  
Action Completion date: 10/20/98  
Operable Unit: 02  
Contaminated Media : Soil  
Engineering Control: Non-fundamental change (ESD)

Action ID: 002  
Action Name: Explanation Of Significant Differences  
Action Completion date: 05/05/00  
Operable Unit: 02  
Contaminated Media : Soil  
Engineering Control: Non-fundamental change (ESD)

Action ID: 001  
Action Name: RECORD OF DECISION  
Action Completion date: 11/28/95  
Operable Unit: 01  
Contaminated Media : Groundwater  
Engineering Control: No Action

Action ID: 001  
Action Name: RECORD OF DECISION  
Action Completion date: 11/28/95  
Operable Unit: 01  
Contaminated Media : Soil  
Engineering Control: No Action

Action ID: 002  
Action Name: RECORD OF DECISION  
Action Completion date: 10/09/97  
Operable Unit: 02  
Contaminated Media : Debris  
Engineering Control: Grouting

Action ID: 002  
Action Name: RECORD OF DECISION  
Action Completion date: 10/09/97

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Operable Unit: 02  
Contaminated Media : Debris  
Engineering Control: Liner

Action ID: 002  
Action Name: RECORD OF DECISION  
Action Completion date: 10/09/97  
Operable Unit: 02  
Contaminated Media : Groundwater  
Engineering Control: Monitoring

Action ID: 002  
Action Name: RECORD OF DECISION  
Action Completion date: 10/09/97  
Operable Unit: 02  
Contaminated Media : Soil  
Engineering Control: Disposal

Action ID: 002  
Action Name: RECORD OF DECISION  
Action Completion date: 10/09/97  
Operable Unit: 02  
Contaminated Media : Soil  
Engineering Control: Excavation

Action ID: 002  
Action Name: RECORD OF DECISION  
Action Completion date: 10/09/97  
Operable Unit: 02  
Contaminated Media : Soil  
Engineering Control: Surface Drainage Control

Action ID: 003  
Action Name: RECORD OF DECISION  
Action Completion date: 09/11/09  
Operable Unit: 04  
Contaminated Media : Buildings/Structures  
Engineering Control: Decontamination

Action ID: 003  
Action Name: RECORD OF DECISION  
Action Completion date: 09/11/09  
Operable Unit: 04  
Contaminated Media : Buildings/Structures  
Engineering Control: Disposal

Action ID: 003  
Action Name: RECORD OF DECISION  
Action Completion date: 09/11/09  
Operable Unit: 04  
Contaminated Media : Buildings/Structures  
Engineering Control: Excavation

Action ID: 003  
Action Name: RECORD OF DECISION  
Action Completion date: 09/11/09  
Operable Unit: 04

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Contaminated Media : Buildings/Structures  
Engineering Control: Sampling

Action ID: 003  
Action Name: RECORD OF DECISION  
Action Completion date: 09/11/09  
Operable Unit: 04  
Contaminated Media : Groundwater  
Engineering Control: Bioremediation (In-Situ)

Action ID: 003  
Action Name: RECORD OF DECISION  
Action Completion date: 09/11/09  
Operable Unit: 04  
Contaminated Media : Groundwater  
Engineering Control: Monitoring

Action ID: 003  
Action Name: RECORD OF DECISION  
Action Completion date: 09/11/09  
Operable Unit: 04  
Contaminated Media : Soil  
Engineering Control: Disposal

Action ID: 003  
Action Name: RECORD OF DECISION  
Action Completion date: 09/11/09  
Operable Unit: 04  
Contaminated Media : Soil  
Engineering Control: Excavation

Action ID: 003  
Action Name: RECORD OF DECISION  
Action Completion date: 09/11/09  
Operable Unit: 04  
Contaminated Media : Soil  
Engineering Control: Sampling

Action ID: 003  
Action Name: RECORD OF DECISION  
Action Completion date: 09/11/09  
Operable Unit: 04  
Contaminated Media : Soil  
Engineering Control: Soil Cover

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Buildings/Structures  
Engineering Control: Decontamination

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Buildings/Structures

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Engineering Control: Demolition

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Buildings/Structures  
Engineering Control: Disposal

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Buildings/Structures  
Engineering Control: Excavation

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Groundwater  
Engineering Control: Bioremediation (In-Situ)

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Groundwater  
Engineering Control: Chemical Reduction, (N.O.S.)

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Groundwater  
Engineering Control: Monitoring

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Groundwater  
Engineering Control: Natural Attenuation

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Soil  
Engineering Control: Cap

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Soil  
Engineering Control: Disposal

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Soil  
Engineering Control: Excavation

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Soil  
Engineering Control: Monitoring

Action ID: 004  
Action Name: RECORD OF DECISION  
Action Completion date: 09/20/10  
Operable Unit: 03  
Contaminated Media : Soil  
Engineering Control: Soil Vapor Extraction (in-situ)

Action ID: 007  
Action Name: RECORD OF DECISION  
Action Completion date: 06/22/10  
Operable Unit: 08  
Contaminated Media : Buildings/Structures  
Engineering Control: No Further Action

Action ID: 007  
Action Name: RECORD OF DECISION  
Action Completion date: 06/22/10  
Operable Unit: 08  
Contaminated Media : Groundwater  
Engineering Control: No Further Action

Action ID: 007  
Action Name: RECORD OF DECISION  
Action Completion date: 06/22/10  
Operable Unit: 08  
Contaminated Media : Soil  
Engineering Control: No Further Action

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Buildings/Structures  
Engineering Control: Decontamination

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Buildings/Structures  
Engineering Control: Demolition

Action ID: 008

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Buildings/Structures  
Engineering Control: Disposal

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Buildings/Structures  
Engineering Control: Excavation

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Buildings/Structures  
Engineering Control: Sampling

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Groundwater  
Engineering Control: Chemical Reduction, (N.O.S.)

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Groundwater  
Engineering Control: In-Situ Chemical Oxidation (ISCO)

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Soil  
Engineering Control: Cap

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Soil  
Engineering Control: Disposal

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Soil  
Engineering Control: Excavation

Action ID: 008  
Action Name: RECORD OF DECISION

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Soil  
Engineering Control: Sampling

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Soil Gas  
Engineering Control: Monitoring

Action ID: 008  
Action Name: RECORD OF DECISION  
Action Completion date: 02/18/09  
Operable Unit: 09  
Contaminated Media : Soil Gas  
Engineering Control: Sampling

Action ID: 009  
Action Name: RECORD OF DECISION  
Action Completion date: 12/17/09  
Operable Unit: 10  
Contaminated Media : Buildings/Structures  
Engineering Control: Decontamination

Action ID: 009  
Action Name: RECORD OF DECISION  
Action Completion date: 12/17/09  
Operable Unit: 10  
Contaminated Media : Buildings/Structures  
Engineering Control: Disposal

Action ID: 009  
Action Name: RECORD OF DECISION  
Action Completion date: 12/17/09  
Operable Unit: 10  
Contaminated Media : Buildings/Structures  
Engineering Control: Excavation

Action ID: 009  
Action Name: RECORD OF DECISION  
Action Completion date: 12/17/09  
Operable Unit: 10  
Contaminated Media : Groundwater  
Engineering Control: Monitoring

Action ID: 009  
Action Name: RECORD OF DECISION  
Action Completion date: 12/17/09  
Operable Unit: 10  
Contaminated Media : Groundwater  
Engineering Control: Natural Attenuation

Action ID: 009  
Action Name: RECORD OF DECISION  
Action Completion date: 12/17/09

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Operable Unit: 10  
Contaminated Media : Soil  
Engineering Control: Decontamination

Action ID: 009  
Action Name: RECORD OF DECISION  
Action Completion date: 12/17/09  
Operable Unit: 10  
Contaminated Media : Soil  
Engineering Control: Disposal

Action ID: 009  
Action Name: RECORD OF DECISION  
Action Completion date: 12/17/09  
Operable Unit: 10  
Contaminated Media : Soil  
Engineering Control: Excavation

Action ID: 009  
Action Name: RECORD OF DECISION  
Action Completion date: 12/17/09  
Operable Unit: 10  
Contaminated Media : Soil  
Engineering Control: Soil Cover

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Buildings/Structures  
Engineering Control: Decontamination

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Buildings/Structures  
Engineering Control: Demolition

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Buildings/Structures  
Engineering Control: Disposal

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Groundwater  
Engineering Control: Bioremediation (In-Situ)

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Contaminated Media : Groundwater  
Engineering Control: Monitoring

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Sediment  
Engineering Control: Shoreline Stabilization

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Sediment  
Engineering Control: Wetlands Replacement

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Soil  
Engineering Control: Air Monitoring

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Soil  
Engineering Control: Cap

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Soil  
Engineering Control: Disposal

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Soil  
Engineering Control: Excavation

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Soil  
Engineering Control: Soil Cover

Action ID: 001  
Action Name: ROD Amendment  
Action Completion date: 01/28/09  
Operable Unit: 02  
Contaminated Media : Soil

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Engineering Control: Soil Vapor Extraction (in-situ)

US INST CONTROL:

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Deed Restriction  
Actual Date: 12/31/1997  
Comple. Date: 10/9/1997  
Operable Unit: 02  
Contaminated Media : Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Deed Restriction  
Actual Date: 12/31/1997  
Comple. Date: 10/9/1997  
Operable Unit: 02  
Contaminated Media : Soil

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Access Restriction  
Actual Date: 9/30/2009  
Comple. Date: 9/11/2009  
Operable Unit: 04  
Contaminated Media : Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Event Code: Not reported  
Inst. Control: Covenant  
Actual Date: 9/30/2009  
Complet. Date: 9/11/2009  
Operable Unit: 04  
Contaminated Media : Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Access Restriction  
Actual Date: 9/30/2009  
Complet. Date: 9/11/2009  
Operable Unit: 04  
Contaminated Media : Soil

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Covenant  
Actual Date: 9/30/2009  
Complet. Date: 9/11/2009  
Operable Unit: 04  
Contaminated Media : Soil

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Land Use Restriction  
Actual Date: 9/30/2009  
Complet. Date: 9/11/2009  
Operable Unit: 04  
Contaminated Media : Soil

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

EPA Region: SAN FRANCISCO, CA 94124  
County: 09  
Event Code: SAN FRANCISCO  
Inst. Control: Not reported  
Actual Date: Covenant  
Complet. Date: 8/30/2010  
Operable Unit: 9/20/2010  
Contaminated Media : 03  
Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Covenant  
Actual Date: 8/30/2010  
Complet. Date: 9/20/2010  
Operable Unit: 03  
Contaminated Media : Soil

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Institutional Controls, (N.O.S.)  
Actual Date: 8/30/2010  
Complet. Date: 9/20/2010  
Operable Unit: 03  
Contaminated Media : Soil

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Institutional Controls, (N.O.S.)  
Actual Date: 9/30/2009  
Complet. Date: 2/18/2009  
Operable Unit: 09  
Contaminated Media : Buildings/Structures

EPA ID: CA1170090087  
Site ID: 0902722

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Covenant  
Actual Date: 9/30/2009  
Comple. Date: 2/18/2009  
Operable Unit: 09  
Contaminated Media : Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Deed Restriction  
Actual Date: 9/30/2009  
Comple. Date: 2/18/2009  
Operable Unit: 09  
Contaminated Media : Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Groundwater use/well drilling regulation  
Actual Date: 9/30/2009  
Comple. Date: 2/18/2009  
Operable Unit: 09  
Contaminated Media : Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Covenant  
Actual Date: 9/30/2009  
Comple. Date: 2/18/2009  
Operable Unit: 09  
Contaminated Media : Soil

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Deed Restriction  
Actual Date: 9/30/2009  
Compleat. Date: 2/18/2009  
Operable Unit: 09  
Contaminated Media : Soil

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Covenant  
Actual Date: 8/8/2010  
Compleat. Date: 12/17/2009  
Operable Unit: 10  
Contaminated Media : Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Institutional Controls, (N.O.S.)  
Actual Date: 8/8/2010  
Compleat. Date: 12/17/2009  
Operable Unit: 10  
Contaminated Media : Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124  
EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Covenant  
Actual Date: 8/8/2010  
Compleat. Date: 12/17/2009

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Operable Unit: 10  
Contaminated Media : Soil

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: RECORD OF DECISION  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Land Use Restriction  
Actual Date: 8/8/2010  
Comple. Date: 12/17/2009  
Operable Unit: 10  
Contaminated Media : Soil

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: ROD Amendment  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Covenant  
Actual Date: 11/30/2008  
Comple. Date: 1/28/2009  
Operable Unit: 02  
Contaminated Media : Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: ROD Amendment  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Groundwater use/well drilling regulation  
Actual Date: 11/30/2008  
Comple. Date: 1/28/2009  
Operable Unit: 02  
Contaminated Media : Groundwater

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: ROD Amendment  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**USNAVY HUNTERS POINT NAVAL SHIPYARD DD4 (Continued)**

**1000403627**

Inst. Control: Covenant  
Actual Date: 11/30/2008  
Compleat. Date: 1/28/2009  
Operable Unit: 02  
Contaminated Media : Sediment

EPA ID: CA1170090087  
Site ID: 0902722  
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX  
Action Name: ROD Amendment  
Address: HUNTERS POINT NAVAL SHIPYARD  
SAN FRANCISCO, CA 94124

EPA Region: 09  
County: SAN FRANCISCO  
Event Code: Not reported  
Inst. Control: Covenant  
Actual Date: 11/30/2008  
Compleat. Date: 1/28/2009  
Operable Unit: 02  
Contaminated Media : Soil

ROD:

Full-text of USEPA Record of Decision(s) is available from EDR.

PRP:

PRP name: U.S. NAVY

**A7**  
**SSE**  
**< 1/8**  
**0.005 mi.**  
**27 ft.**

**DONCO INDUSTRIES INC**  
**894 INNES AVE**  
**SAN FRANCISCO, CA 94124**

**CERCLIS 1015730663**  
**RCRA-SQG CAD983608571**  
**HAZNET**

**Site 7 of 12 in cluster A**

**Relative:**  
**Higher**

CERCLIS:  
Site ID: 0904154  
EPA ID: CAD983608571  
Facility County: SAN FRANCISCO  
Short Name: DONCO INDUSTRIES  
Congressional District: 06  
IFMS ID: Not reported  
SMSA Number: 7360  
USGC Hydro Unit: 18050004  
Federal Facility: Not a Federal Facility  
DMNSN Number: 0.00000  
Site Orphan Flag: N  
RCRA ID: E  
USGS Quadrangle: Not reported  
Site Init By Prog: Not reported  
NFRAP Flag: Not reported  
Parent ID: Not reported  
RST Code: Not reported  
EPA Region: 09  
Classification: Not reported  
Site Settings Code: Not reported  
NPL Status: Not on the NPL  
DMNSN Unit Code: Not reported  
RBRAC Code: Not reported

**Actual:**  
**29 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DONCO INDUSTRIES INC (Continued)**

**1015730663**

RResp Fed Agency Code: Not reported  
Non NPL Status: Referred to Removal - NFRAP  
Non NPL Status Date: 07/02/02  
Site Fips Code: 06075  
CC Concurrence Date: / /  
CC Concurrence FY: Not reported  
Alias EPA ID: Not reported  
Site FUDS Flag: Not reported

CERCLIS Site Contact Name(s):

Contact ID: 9271184.00000  
Contact Name: Karen Jurist  
Contact Tel: (415) 972-3219  
Contact Title: Site Assessment Manager (SAM)  
Contact Email: Not reported

Contact ID: 13003854.00000  
Contact Name: Leslie Ramirez  
Contact Tel: (415) 972-3978  
Contact Title: Site Assessment Manager (SAM)  
Contact Email: Not reported

Contact ID: 13003858.00000  
Contact Name: Sharon Murray  
Contact Tel: (415) 972-4250  
Contact Title: Site Assessment Manager (SAM)  
Contact Email: Not reported

Contact ID: 13004003.00000  
Contact Name: Carl Brickner  
Contact Tel: Not reported  
Contact Title: Site Assessment Manager (SAM)  
Contact Email: Not reported

Alias Comments: Not reported

Site Description: Site was in RCRA deferral universe as of 11/01. Switched to PA needed, pending initial review by Weston. 12/01: Site found to be a removal only site. Should not have been in SA universe. Same site as India Basin Boat Yard.

CERCLIS Assessment History:

Action Code: 001  
Action: DISCOVERY  
Date Started: / /  
Date Completed: 10/04/91  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: EPA Fund-Financed  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

Action Code: 001  
Action: PRELIMINARY ASSESSMENT  
Date Started: / /  
Date Completed: 02/19/92

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DONCO INDUSTRIES INC (Continued)**

**1015730663**

Priority Level: Referred to Removal, no further Rmdl Asmt  
Operable Unit: SITEWIDE  
Primary Responsibility: EPA Fund-Financed  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

**RCRA-SQG:**

Date form received by agency: 06/18/1992  
Facility name: DONCO INDUSTRIES INC  
Facility address: 894 INNES AVE  
SAN FRANCISCO, CA 94124  
EPA ID: CAD983608571  
Contact: GARY THATCHER  
Contact address: 2401 UNION ST  
OAKLAND, CA 94607  
Contact country: US  
Contact telephone: (510) 272-9922  
Contact email: Not reported  
EPA Region: 09  
Land type: Private  
Classification: Small Small Quantity Generator  
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

**Owner/Operator Summary:**

Owner/operator name: DON MANNING CHARLES JAMES  
Owner/operator address: 2401 UNION ST  
OAKLAND, CA 94124  
Owner/operator country: Not reported  
Owner/operator telephone: (510) 272-9922  
Legal status: Private  
Owner/Operator Type: Owner  
Owner/Op start date: Not reported  
Owner/Op end date: Not reported

**Handler Activities Summary:**

U.S. importer of hazardous waste: No  
Mixed waste (haz. and radioactive): No  
Recycler of hazardous waste: No  
Transporter of hazardous waste: No  
Treater, storer or disposer of HW: No  
Underground injection activity: No  
On-site burner exemption: No  
Furnace exemption: No  
Used oil fuel burner: No  
Used oil processor: No  
User oil refiner: No  
Used oil fuel marketer to burner: No  
Used oil Specification marketer: No  
Used oil transfer facility: No  
Used oil transporter: No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DONCO INDUSTRIES INC (Continued)**

**1015730663**

Corrective Action Summary:

Event date: 01/01/1990  
Event: CA029ST

Facility Has Received Notices of Violations:

Regulation violated: F - 262.50-60  
Area of violation: Generators - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER  
Enforcement action date: 09/25/1996  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA  
Proposed penalty amount: Not reported  
Final penalty amount: 43130  
Paid penalty amount: Not reported

Regulation violated: F - 262.10-12.A  
Area of violation: Generators - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER  
Enforcement action date: 09/25/1996  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA  
Proposed penalty amount: Not reported  
Final penalty amount: 43130  
Paid penalty amount: Not reported

Regulation violated: F - 262.30-34.C  
Area of violation: Generators - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER  
Enforcement action date: 09/25/1996  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA  
Proposed penalty amount: Not reported  
Final penalty amount: 43130  
Paid penalty amount: Not reported

Regulation violated: F - 268.7  
Area of violation: LDR - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: INITIAL 3008(A) COMPLIANCE  
Enforcement action date: 02/03/1992  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DONCO INDUSTRIES INC (Continued)**

**1015730663**

Enforcement lead agency: EPA  
Proposed penalty amount: 96500  
Final penalty amount: Not reported  
Paid penalty amount: Not reported

Regulation violated: F - 268.7  
Area of violation: LDR - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER  
Enforcement action date: 09/25/1996  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA  
Proposed penalty amount: Not reported  
Final penalty amount: 43130  
Paid penalty amount: Not reported

Regulation violated: F - 262.30-34.C  
Area of violation: Generators - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: INITIAL 3008(A) COMPLIANCE  
Enforcement action date: 02/03/1992  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA  
Proposed penalty amount: 96500  
Final penalty amount: Not reported  
Paid penalty amount: Not reported

Regulation violated: F - 262.40-43.D  
Area of violation: Generators - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER  
Enforcement action date: 09/25/1996  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA  
Proposed penalty amount: Not reported  
Final penalty amount: 43130  
Paid penalty amount: Not reported

Regulation violated: F - 262.20-23.B  
Area of violation: Generators - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER  
Enforcement action date: 09/25/1996  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DONCO INDUSTRIES INC (Continued)**

**1015730663**

Proposed penalty amount: Not reported  
Final penalty amount: 43130  
Paid penalty amount: Not reported

Regulation violated: F - 262.50-60  
Area of violation: Generators - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: INITIAL 3008(A) COMPLIANCE  
Enforcement action date: 02/03/1992  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA  
Proposed penalty amount: 96500  
Final penalty amount: Not reported  
Paid penalty amount: Not reported

Regulation violated: F - 262.40-43.D  
Area of violation: Generators - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: INITIAL 3008(A) COMPLIANCE  
Enforcement action date: 02/03/1992  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA  
Proposed penalty amount: 96500  
Final penalty amount: Not reported  
Paid penalty amount: Not reported

Regulation violated: F - 262.20-23.B  
Area of violation: Generators - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: INITIAL 3008(A) COMPLIANCE  
Enforcement action date: 02/03/1992  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA  
Proposed penalty amount: 96500  
Final penalty amount: Not reported  
Paid penalty amount: Not reported

Regulation violated: F - 262.10-12.A  
Area of violation: Generators - General  
Date violation determined: 10/25/1991  
Date achieved compliance: 09/25/1996  
Violation lead agency: EPA  
Enforcement action: INITIAL 3008(A) COMPLIANCE  
Enforcement action date: 02/03/1992  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: EPA  
Proposed penalty amount: 96500

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DONCO INDUSTRIES INC (Continued)**

**1015730663**

Final penalty amount: Not reported  
Paid penalty amount: Not reported

Evaluation Action Summary:

Evaluation date: 09/25/1996  
Evaluation: NOT A SIGNIFICANT NON-COMPLIER  
Area of violation: Not reported  
Date achieved compliance: Not reported  
Evaluation lead agency: EPA

Evaluation date: 10/25/1991  
Evaluation: SIGNIFICANT NON-COMPLIER  
Area of violation: Not reported  
Date achieved compliance: Not reported  
Evaluation lead agency: EPA

Evaluation date: 09/25/1991  
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE  
Area of violation: Generators - General  
Date achieved compliance: 09/25/1996  
Evaluation lead agency: EPA

Evaluation date: 09/25/1991  
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE  
Area of violation: LDR - General  
Date achieved compliance: 09/25/1996  
Evaluation lead agency: EPA

HAZNET:

Year: 1993  
Gepaid: CAD983608571  
Contact: DON MANNING CHARLES JAMES  
Telephone: 5102729922  
Mailing Name: Not reported  
Mailing Address: 2401 UNION ST  
Mailing City,St,Zip: OAKLAND, CA 946070000  
Gen County: Not reported  
TSD EPA ID: CAD043260702  
TSD County: Not reported  
Waste Category: Waste oil and mixed oil  
Disposal Method: Recycler  
Tons: 8.339999999999  
Facility County: San Francisco

Year: 1993  
Gepaid: CAD983608571  
Contact: DON MANNING CHARLES JAMES  
Telephone: 5102729922  
Mailing Name: Not reported  
Mailing Address: 2401 UNION ST  
Mailing City,St,Zip: OAKLAND, CA 946070000  
Gen County: Not reported  
TSD EPA ID: CAD043260702  
TSD County: Not reported  
Waste Category: Unspecified oil-containing waste  
Disposal Method: Recycler  
Tons: 20.8500000000

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site		Database(s)	EDR ID Number EPA ID Number
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**DONCO INDUSTRIES INC (Continued)**

**1015730663**

Facility County: San Francisco

**A8**  
**SSE**  
 < 1/8  
 0.005 mi.  
 27 ft.

**DONCO INDUSTRIES INC**  
**894 INNES AVE**  
**SAN FRANCISCO, CA 94124**

**FINDS** **1000483603**  
**CHMIRS** **N/A**  
**ENVIROSTOR**

**Site 8 of 12 in cluster A**

**Relative:**  
**Higher**

**FINDS:**

Registry ID: 110001182265

**Actual:**  
**29 ft.**

**Environmental Interest/Information System**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

**CHMIRS:**

OES Incident Number:	02-1594
OES notification:	03/23/2002
OES Date:	Not reported
OES Time:	Not reported
Incident Date:	Not reported
<b>Date Completed:</b>	<b>Not reported</b>
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s) EDR ID Number  
EPA ID Number

**DONCO INDUSTRIES INC (Continued)**

**1000483603**

Property Management: Not reported  
Special Studies 1: Not reported  
Special Studies 2: Not reported  
Special Studies 3: Not reported  
Special Studies 4: Not reported  
Special Studies 5: Not reported  
Special Studies 6: Not reported  
More Than Two Substances Involved?: Not reported  
Resp Agency Personel # Of Decontaminated: Not reported  
Responding Agency Personel # Of Injuries: Not reported  
Responding Agency Personel # Of Fatalities: Not reported  
Others Number Of Decontaminated: Not reported  
Others Number Of Injuries: Not reported  
Others Number Of Fatalities: Not reported  
Vehicle Make/year: Not reported  
Vehicle License Number: Not reported  
Vehicle State: Not reported  
Vehicle Id Number: Not reported  
CA/DOT/PUC/ICC Number: Not reported  
Company Name: Not reported  
Reporting Officer Name/ID: Not reported  
Report Date: Not reported  
Comments: Not reported  
Facility Telephone: Not reported  
Waterway Involved: Yes  
Waterway: India Basin/ San Francisco Bay  
Spill Site: Not reported  
Cleanup By: Unknown  
Containment: Not reported  
What Happened: Not reported  
Type: Not reported  
Measure: Not reported  
Other: Not reported  
Date/Time: Not reported  
Year: 2002  
Agency: NRC  
Incident Date: 3/23/200212:00:00 AM  
Admin Agency: San Francisco County Health Department  
Amount: Not reported  
Contained: Unknown  
Site Type: Ship/Harbor/Port  
E Date: Not reported  
Substance: Unknown Oil  
Quantity Released: Not reported  
BBLS: 0  
Cups: 0  
CUFT: 0  
Gallons: 0.000000  
Grams: 0  
Pounds: 0  
Liters: 0  
Ounces: 0  
Pints: 0  
Quarts: 0  
Sheen: 0  
Tons: 0  
Unknown: 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**DONCO INDUSTRIES INC (Continued)**

**1000483603**

Evacuations: 0  
Number of Injuries: 0  
Number of Fatalities: 0  
Description: Per The NRC: The Caller is reporting a diesel sheen. Caller stated the sheen covered the whole basin

**ENVIROSTOR:**

Site Type: Corrective Action  
Site Type Detailed: Corrective Action  
Acres: 0  
NPL: NO  
Regulatory Agencies: NONE SPECIFIED  
Lead Agency: NONE SPECIFIED  
Program Manager: Robert Boggs  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Facility ID: 80001502  
Site Code: Not reported  
Assembly: 17  
Senate: 11  
Special Program: Not reported  
Status: Inactive - Needs Evaluation  
Status Date: 06/29/2009  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: Not reported  
Latitude: 37.73208  
Longitude: -122.3758  
APN: NONE SPECIFIED  
Past Use: NONE SPECIFIED  
Potential COC: NONE SPECIFIED  
Confirmed COC: NONE SPECIFIED  
Potential Description: NONE SPECIFIED  
Alias Name: CAD983608571  
Alias Type: EPA Identification Number  
Alias Name: 80001502  
Alias Type: Envirostor ID Number

**Completed Info:**

Completed Area Name: Not reported  
Completed Sub Area Name: Not reported  
Completed Document Type: Not reported  
Completed Date: Not reported  
Comments: Not reported

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Site

Database(s)

EDR ID Number  
 EPA ID Number

**A9**            **INDIA BASIN BOATYARD**  
**SSE**           **894 INNES AVE**  
**< 1/8**         **SAN FRANCISCO, CA 94107**  
**0.005 mi.**  
**27 ft.**         **Site 9 of 12 in cluster A**

**CERCLIS**    **1000855624**  
**PRP**         **CA0000067603**

**Relative:**  
**Higher**

CERCLIS:

**Actual:**  
**29 ft.**

Site ID: 0904954  
 EPA ID: CA0000067603  
 Facility County: SAN FRANCISCO  
 Short Name: INDIA BASIN BOATYARD  
 Congressional District: 06  
 IFMS ID: 099G  
 SMSA Number: 7360  
 USGC Hydro Unit: 18050004  
 Federal Facility: Not a Federal Facility  
 DMNSN Number: 0.00000  
 Site Orphan Flag: N  
 RCRA ID: Not reported  
 USGS Quadrangle: Not reported  
 Site Init By Prog: Not reported  
 NFRAP Flag: Not reported  
 Parent ID: Not reported  
 RST Code: Not reported  
 EPA Region: 09  
 Classification: Not reported  
 Site Settings Code: Not reported  
 NPL Status: Not on the NPL  
 DMNSN Unit Code: Not reported  
 RBRAC Code: Not reported  
 RResp Fed Agency Code: Not reported  
 Non NPL Status: Removal Only Site (No Site Assessment Work Needed)  
 Non NPL Status Date: 12/12/01  
 Site Fips Code: 06075  
 CC Concurrence Date: / /  
 CC Concurrence FY: Not reported  
 Alias EPA ID: Not reported  
 Site FUDS Flag: Not reported

CERCLIS Site Contact Name(s):

Contact ID: 9270501.00000  
 Contact Name: Daniel M. Shane  
 Contact Tel: (415) 972-3037  
 Contact Title: On-Scene Coordinator (OSC)  
 Contact Email: Not reported

Contact ID: 9271184.00000  
 Contact Name: Karen Jurist  
 Contact Tel: (415) 972-3219  
 Contact Title: Site Assessment Manager (SAM)  
 Contact Email: Not reported

Contact ID: 13003854.00000  
 Contact Name: Leslie Ramirez  
 Contact Tel: (415) 972-3978  
 Contact Title: Site Assessment Manager (SAM)  
 Contact Email: Not reported

Contact ID: 13003858.00000

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**INDIA BASIN BOATYARD (Continued)**

**1000855624**

Contact Name: Sharon Murray  
Contact Tel: (415) 972-4250  
Contact Title: Site Assessment Manager (SAM)  
Contact Email: Not reported

Contact ID: 13004003.00000  
Contact Name: Carl Brickner  
Contact Tel: Not reported  
Contact Title: Site Assessment Manager (SAM)  
Contact Email: Not reported

CERCLIS Site Alias Name(s):

Alias ID: 101  
Alias Name: DONCO INDUSTRIES  
Alias Address: Not reported  
Not reported  
Alias Comments: Not reported

Site Description: The Site is located on and near Innes Avenue, in the Hunters Point Area of San Francisco. The Site is located adjacent to San Francisco Bay. The area around the Site is mixed residential, industrial and recreational use. It is also known as "The Donco Site" and "The Innes Avenue Site"

CERCLIS Assessment History:

Action Code: 001  
Action: ISSUE REQUEST LETTERS (104E)  
Date Started: / /  
Date Completed: 01/14/94  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Enforcement  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002  
Action: ISSUE REQUEST LETTERS (104E)  
Date Started: / /  
Date Completed: 02/11/94  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Enforcement  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003  
Action: ISSUE REQUEST LETTERS (104E)  
Date Started: / /  
Date Completed: 06/17/94  
Priority Level: Not reported  
Operable Unit: SITEWIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**INDIA BASIN BOATYARD (Continued)**

**1000855624**

Primary Responsibility: Federal Enforcement  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: REMOVAL  
Date Started: 04/15/98  
Date Completed: 05/01/98  
Priority Level: Stabilized  
Operable Unit: SITEWIDE  
Primary Responsibility: EPA Fund-Financed  
Planning Status: Primary  
Urgency Indicator: Time Critical  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004  
Action: ISSUE REQUEST LETTERS (104E)  
Date Started: / /  
Date Completed: 02/22/99  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Enforcement  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 005  
Action: ISSUE REQUEST LETTERS (104E)  
Date Started: / /  
Date Completed: 02/22/99  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Enforcement  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: NON-NATIONAL PRIORITIES LIST POTENTIALLY RESPONSIBLE PARTY SEARCH  
Date Started: 12/01/93  
Date Completed: 06/30/99  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Enforcement  
Planning Status: Primary  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**INDIA BASIN BOATYARD (Continued)**

**1000855624**

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001  
Action: CONSENT AGREEMENT (ADMINISTRATIVE)  
Date Started: / /  
Date Completed: 06/30/00  
Priority Level: Not reported  
Operable Unit: SITEWIDE  
Primary Responsibility: Federal Enforcement  
Planning Status: Not reported  
Urgency Indicator: Not reported  
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

[Click this hyperlink](#) while viewing on your computer to access  
48 additional US CERCLIS Financial: record(s) in the EDR Site Report.

PRP name: JAMES, CHARLES

**A10**  
**WNW**  
**< 1/8**  
**0.007 mi.**  
**37 ft.**

**RFJ MEISWINKEL CO.**  
**930 INNES AV**  
**SAN FRANCISCO, CA**  
**Site 10 of 12 in cluster A**

**LUST U003897750**  
**UST N/A**

**Relative:**  
**Higher**

**LUST:**  
Region: STATE  
Global Id: T0607536728  
Latitude: 37.732528  
Longitude: -122.376159  
Case Type: LUST Cleanup Site  
Status: Completed - Case Closed  
Status Date: 11/17/2006  
Lead Agency: SAN FRANCISCO COUNTY LOP  
Case Worker: MA  
Local Agency: SAN FRANCISCO COUNTY LOP  
RB Case Number: 38-2435  
LOC Case Number: 11774  
File Location: Local Library  
Potential Media Affect: Soil  
Potential Contaminants of Concern: Gasoline  
Site History: Not reported

**Actual:**  
**30 ft.**

Click here to access the California GeoTracker records for this facility:

**Contact:**  
Global Id: T0607536728  
Contact Type: Local Agency Caseworker  
Contact Name: MAMDOUH AWWAD  
Organization Name: SAN FRANCISCO COUNTY LOP  
Address: 1390 MARKET STREET, #210  
City: SAN FRANCISCO  
Email: mamdouh.awwad@sfdph.org  
Phone Number: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RFJ MEISWINKEL CO. (Continued)**

**U003897750**

Global Id: T0607536728  
Contact Type: Regional Board Caseworker  
Contact Name: NANCY KATYL  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY STREET  
City: OAKLAND  
Email: nkatyl@waterboards.ca.gov  
Phone Number: Not reported

Regulatory Activities:

Global Id: T0607536728  
Action Type: ENFORCEMENT  
Date: 10/02/2006  
Action: Notice of Responsibility

Global Id: T0607536728  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Discovery

Global Id: T0607536728  
Action Type: REMEDIATION  
Date: 01/01/1950  
Action: Excavation

Global Id: T0607536728  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Reported

UST:

Facility ID: 7016  
Latitude: 37.73227  
Longitude: -122.3762

SAN FRANCISCO CO. UST:

Facility ID: 7016  
Facility Status: Not reported  
Number Of Tanks: Not reported  
Owner/Operator Name: Not reported  
Owner/Operator Title: Not reported  
Owner Name: RFJ, Inc.  
Care Of Addr: Kurt Meiswinkel  
2nd Care Of Addr: Not reported  
Mailing Address: 930 Innes Street  
Mailing City,St,Zip: San Francisco, CA 94124  
Permit Number: Not reported  
Permit Approved By: Not reported  
Permit Expiration Date: Not reported  
Applications: Not reported  
Application Date: Not reported  
Application Name: Not reported  
Action Type: 3  
Yr Spill/Overfill Installed1: Not reported  
Yr Spill/Overfill Installed2: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RFJ MEISWINKEL CO. (Continued)**

**U003897750**

Yr Spill/Overfill Installed3: Not reported

Tank ID: 1001  
Tank Test: Not reported  
Local Tank Id: 7016001001  
Tank Manufacturer: Owens-Corning  
Compartmentalized Tank: No  
# Of Tank Compartments: Not reported  
Date Tank Installed: 1/1/1987  
Tank Capacity: 4000  
Additional Desc: Not reported  
Tank Use: 1  
Petroleum Type: Regular Unleaded  
Common Name: Not reported  
Case Number: Not reported  
Type Of Tank: Single wall  
Primary Tank Material: Fiberglass/plastic  
Secondary Tank Material: Not reported  
Tank Interior Lining: Unlined  
Date Interior Lining Install: Not reported  
Date Closed: Not reported  
UST Close ID: Not reported  
Type Of Spill Protection: spill containment  
Date Alarm Overfill Protection Installed: Not reported  
Date Ball Float Overfill Protection Installed: Not reported  
Date Fill Tube Shut Overfill Protection Installed: Not reported  
Overfill Protection Exempt: No  
Othr Tnk Corrosive Prtctn: Fiberglass Reinforced Plastic (FRP)  
Date Corrosive Prtctn Install: Not reported  
Tank Leak Detection (single walled): Not reported  
Tank Leak Detection (double wall): Not reported  
Estimated Date Last Used: Not reported  
Estimated Qty Of Substance Remaining: 0  
Tank Filled With Inert Material: 0  
Piping System Type ( Underground ): Suction  
Piping System Type ( Aboveground ): Not reported  
Piping Construction (Underground): Double Wall  
Piping Manufacturer (Underground): Not reported  
Piping Construction (Aboveground): Not reported  
Piping Manufacturer (Aboveground): Not reported  
Piping Material & Corrosion Protection (Underground): Plastic Compatible with Contents, Galvanized Steel  
Piping Material & Corrosion Protection (Aboveground): Not reported  
Piping Leak Detection (Undrgrnd - Single Wall): Not reported  
Piping Leak Detection (2nd Contained): Suction,Gravity ,Sump Sensor,Alarms  
Piping Leak Detection (Emrgncy Gnrtrs): Not reported  
Pipe Integrity Test, Underground: Not reported  
Piping Leak Detection (Aboveground - Single Wall): Not reported  
Piping Leak Detection (Underground - 2nd Contained): Not reported  
Piping Leak Detection Underground (Emrgncy Gnrtrs): Not reported  
Pipe Integrity Test, Aboveground: Not reported  
Date Dispenser Containment Installed: 8/2/2004  
Dispenser Containment Type: Continuous Dispenser Pan Sensor & Audible & Visual Alarms  
Date Certified (Tank Unit): Not reported  
Certified Date: Not reported  
Last Annual Monitoring Cert: 5/24/2004  
2nd Containment Test: 12/9/2002  
Spill Containment Present: Yes

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

RFJ MEISWINKEL CO. (Continued)

U003897750

Drop Tube Present:	Yes
Striker Plate Present:	No
Alarm Present:	No
Ball Float Present:	No
Fill Tube Present:	Yes
Other Tank Leak Detection Present:	No
Tank ID:	Not reported
Tank Test:	Not reported
Local Tank Id:	Not reported
Tank Manufacturer:	Not reported
Compartmentalized Tank:	Not reported
# Of Tank Compartments:	Not reported
Date Tank Installed:	Not reported
Tank Capacity:	Not reported
Additional Desc:	Not reported
Tank Use:	Not reported
Petroleum Type:	Not reported
Common Name:	Not reported
Case Number:	Not reported
Type Of Tank:	Not reported
Primary Tank Material:	Not reported
Secondary Tank Material:	Not reported
Tank Interior Lining:	Not reported
Date Interior Lining Install:	Not reported
Date Closed:	8/10/2006
UST Close ID:	4855
Type Of Spill Protection:	Not reported
Date Alarm Overfill Protection Installed:	Not reported
Date Ball Float Overfill Protection Installed:	Not reported
Date Fill Tube Shut Overfill Protection Installed:	Not reported
Overfill Protection Exempt:	Not reported
Othr Tnk Corrosive Prtctn:	Not reported
Date Corrosive Prtctn Install:	Not reported
Tank Leak Detection (single walled):	Not reported
Tank Leak Detection (double wall):	Not reported
Estimated Date Last Used:	Not reported
Estimated Qty Of Substance Remaining:	Not reported
Tank Filled With Inert Material:	Not reported
Piping System Type ( Underground ):	Not reported
Piping System Type ( Aboveground ):	Not reported
Piping Construction (Underground):	Not reported
Piping Manufacturer (Underground):	Not reported
Piping Construction (Aboveground):	Not reported
Piping Manufacturer (Aboveground):	Not reported
Piping Material & Corrosion Protection (Underground):	Not reported
Piping Material & Corrosion Protection (Aboveground):	Not reported
Piping Leak Detection (Undrgrnd - Single Wall):	Not reported
Piping Leak Detection (2nd Contained):	Not reported
Piping Leak Detection (Emrgncy Gnrtrs):	Not reported
Pipe Integrity Test, Underground:	Not reported
Piping Leak Detection (Aboveground - Single Wall):	Not reported
Piping Leak Detection (Underground - 2nd Contained):	Not reported
Piping Leak Detection Underground (Emrgncy Gnrtrs):	Not reported
Pipe Integrity Test, Aboveground:	Not reported
Date Dispenser Containment Installed:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RFJ MEISWINKEL CO. (Continued)**

**U003897750**

Dispenser Containment Type:	Not reported
Date Certified (Tank Unit):	Not reported
Certified Date:	Not reported
Last Annual Monitoring Cert:	Not reported
2nd Containment Test:	Not reported
Spill Containment Present:	Not reported
Drop Tube Present:	Not reported
Striker Plate Present:	Not reported
Alarm Present:	Not reported
Ball Float Present:	Not reported
Fill Tube Present:	Not reported
Other Tank Leak Detection Present:	Not reported

Tank ID:	Not reported
Tank Test:	Not reported
Local Tank Id:	Not reported
Tank Manufacturer:	Not reported
Compartmentalized Tank:	Not reported
# Of Tank Compartments:	Not reported
Date Tank Installed:	Not reported
Tank Capacity:	Not reported
Additional Desc:	Not reported
Tank Use:	Not reported
Petroleum Type:	Not reported
Common Name:	Not reported
Case Number:	Not reported
Type Of Tank:	Not reported
Primary Tank Material:	Not reported
Secondary Tank Material:	Not reported
Tank Interior Lining:	Not reported
Date Interior Lining Install:	Not reported
Date Closed:	Not reported
UST Close ID:	Not reported
Type Of Spill Protection:	Not reported
Date Alarm Overfill Protection Installed:	Not reported
Date Ball Float Overfill Protection Installed:	Not reported
Date Fill Tube Shut Overfill Protection Installed:	Not reported
Overfill Protection Exempt:	Not reported
Othr Tnk Corrosive Prtctn:	Not reported
Date Corrosive Prtctn Install:	Not reported
Tank Leak Detection (single walled):	Not reported
Tank Leak Detection (double wall):	Not reported
Estimated Date Last Used:	Not reported
Estimated Qty Of Substance Remaining:	Not reported
Tank Filled With Inert Material:	Not reported
Piping System Type ( Underground ):	Not reported
Piping System Type ( Aboveground ):	Not reported
Piping Construction (Underground):	Not reported
Piping Manufacturer (Underground):	Not reported
Piping Construction (Aboveground):	Not reported
Piping Manufacturer (Aboveground):	Not reported
Piping Material & Corrosion Protection (Underground):	Not reported
Piping Material & Corrosion Protection (Aboveground):	Not reported
Piping Leak Detection (Undrgrnd - Single Wall):	Not reported
Piping Leak Detection (2nd Contained):	Not reported
Piping Leak Detection (Emrgncy Gnrtrs):	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**RFJ MEISWINKEL CO. (Continued)**

**U003897750**

Pipe Integrity Test, Underground:	Not reported
Piping Leak Detection (Aboveground - Single Wall):	Not reported
Piping Leak Detection (Underground - 2nd Contained):	Not reported
Piping Leak Detection Underground (Emrgncy Gnrtrs):	Not reported
Pipe Integrity Test, Aboveground:	Not reported
Date Dispenser Containment Installed:	Not reported
Dispenser Containment Type:	Not reported
Date Certified (Tank Unit):	Not reported
Certified Date:	Not reported
Last Annual Monitoring Cert:	Not reported
2nd Containment Test:	Not reported
Spill Containment Present:	Not reported
Drop Tube Present:	Not reported
Striker Plate Present:	Not reported
Alarm Present:	Not reported
Ball Float Present:	Not reported
Fill Tube Present:	Not reported
Other Tank Leak Detection Present:	Not reported

**A11**      **MEE CORP.**  
**SSE**      **895 INNES AVE**  
**< 1/8**     **SAN FRANCISCO, CA 94124**  
**0.007 mi.**  
**37 ft.**

**HIST CORTESE**    **S104165333**  
**LUST**            **N/A**

**Site 11 of 12 in cluster A**

**Relative:**      **CORTESE:**  
**Higher**        Region:            **CORTESE**  
                  Facility County Code:    **38**  
**Actual:**        **Reg By:**            **LTNKA**  
**30 ft.**            **Reg Id:**            **38-0705**

**LUST:**  
Region:                    **STATE**  
Global Id:                **T0607500614**  
Latitude:                 **37.731685**  
Longitude:               **-122.375744**  
Case Type:               **LUST Cleanup Site**  
Status:                   **Completed - Case Closed**  
Status Date:             **01/12/1996**  
Lead Agency:            **SAN FRANCISCO COUNTY LOP**  
Case Worker:            **SC**  
Local Agency:           **SAN FRANCISCO COUNTY LOP**  
RB Case Number:        **38-0705**  
LOC Case Number:      **10569**  
File Location:           **Not reported**  
Potential Media Affect: **Other Groundwater (uses other than drinking water)**  
Potential Contaminants of Concern: **Gasoline**  
Site History:             **Not reported**

Click here to access the California GeoTracker records for this facility:

**Contact:**  
Global Id:                **T0607500614**  
Contact Type:            **Regional Board Caseworker**  
Contact Name:           **VIC PAL**  
Organization Name:     **SAN FRANCISCO BAY RWQCB (REGION 2)**  
Address:                 **1515 CLAY STREET, SUITE 1400**  
City:                      **OAKLAND**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MEE CORP. (Continued)**

**S104165333**

Email: vpal@waterboards.ca.gov  
Phone Number: Not reported  
  
Global Id: T0607500614  
Contact Type: Local Agency Caseworker  
Contact Name: STEPHANIE CUSHING  
Organization Name: SAN FRANCISCO COUNTY LOP  
Address: 1390 MARKET STREET #210  
City: SAN FRANCISCO  
Email: stephanie.cushing@sfdph.org  
Phone Number: Not reported

Regulatory Activities:

Global Id: T0607500614  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Discovery

Global Id: T0607500614  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Reported

LUST REG 2:

Region: 2  
Facility Id: 38-0705  
Facility Status: Case Closed  
Case Number: 10569  
How Discovered: Not reported  
Leak Cause: Not reported  
Leak Source: Not reported  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

SAN FRANCISCO CO. LUST:

Region: SAN FRANCISCO  
Facility ID: 38-0705  
Facility Status: Case Closed  
Case Number: 10569  
Case Type: Other ground water affected  
Release Date: 8/10/1995  
Discovered Date: 8/18/1995  
Substance: Gasoline  
Substance Qty: Not reported  
How Discovered: Tank Closure  
How Stopped: Remove Contents  
Report Date: 8/10/1995  
Case Closed: 1/12/1996  
Closed Date: 1/12/1996

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MEE CORP. (Continued)**

**S104165333**

Leak Source: Tank  
Leak Cause: Overfill  
Leak Confirmed: 12/21/1995  
Entered Date: 12/5/1995  
Number of Wells: Not reported  
Regional Board: San Francisco Bay Region  
Local Agency: 38000  
Lead Agency: Local Agency  
Program: LOP  
Responsible Party: Not reported  
RP Address: Not reported  
Operator: Not reported  
Staff Initial: VP  
Facility Staff: SC  
Cross Street: EVANS ST  
NOR Date: 12/5/1995  
MTBE Current: Not reported  
MTBE Current Date: Not reported  
MTBE: NT  
Maximum MTBE Soil: Not reported  
Maximum MTBE GW: Not reported  
MTBE DATE: Not reported  
Review Date: Not reported  
Workplan Submitted: Not reported  
Assessment Underway: Not reported  
Pollution Characterization: Not reported  
Corrective Action Plan: Not reported  
Remediation Underway: Not reported  
Monitoring Begun: Not reported  
Funding: Not reported  
Interim Remediation: Not reported  
Priority: Not reported  
Abatement: Not reported  
Enforcement Type: NOR  
Enforcement Due Date: Not reported  
Basin: Islais Basin  
Beneficial Use: No  
Lat/Long: Not reported  
CUFID: Not reported  
Suspended: No  
Stopped Date: Not reported  
Free Product: No  
Depth to Grnd Wtr: Not reported  
Gradient: Not reported  
Benzene: Not reported  
Primary Substance: Gasoline  
Enforcement Type: Not reported  
Amount of Free Produce: Not reported  
Benzene Test: Not reported  
Maximum Soil GW: Not reported  
Max Soil Concentration: Not reported  
TPH Tested: Not reported  
Max TPH GW: Not reported  
Max TPH Soil: Not reported  
TPH Date: Not reported  
Block: Not reported  
Lot: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MEE CORP. (Continued)**

**S104165333**

Notify: False  
TPH Current: Not reported  
TPH Current Date: Not reported  
Grnd Wtr Qualifier: Not reported  
Soil Qualifier: Not reported  
Comments: Not reported  
Summary: Not reported

**A12**  
**SSE**  
**< 1/8**  
**0.007 mi.**  
**37 ft.**

**MEE CORPORATION**  
**895 INNES AV**  
**SAN FRANCISCO, CA**

**UST U004003792**  
**N/A**

**Site 12 of 12 in cluster A**

**Relative:**  
**Higher**

**SAN FRANCISCO CO. UST:**

**Actual:**  
**30 ft.**

Facility ID: 24670  
Facility Status: Not reported  
Number Of Tanks: 1  
Owner/Operator Name: Not reported  
Owner/Operator Title: Not reported  
Owner Name: Not reported  
Care Of Addr: Not reported  
2nd Care Of Addr: Not reported  
Mailing Address: 255 Shipley Street  
Mailing City,St,Zip: Not reported  
Permit Number: Not reported  
Permit Approved By: Not reported  
Permit Expiration Date: Not reported  
Applications: Golden Gate Tank  
Application Date: 7/19/1995  
Application Name: Jim Tracy  
Action Type: Not reported  
Yr Spill/Overfill Installed1: Not reported  
Yr Spill/Overfill Installed2: Not reported  
Yr Spill/Overfill Installed3: Not reported

Tank ID: Not reported  
Tank Test: Not reported  
Local Tank Id: Not reported  
Tank Manufacturer: Not reported  
Compartmentalized Tank: Not reported  
# Of Tank Compartments: Not reported  
Date Tank Installed: Not reported  
Tank Capacity: Not reported  
Additional Desc: Not reported  
Tank Use: Not reported  
Petroleum Type: Not reported  
Common Name: Not reported  
Case Number: Not reported  
Type Of Tank: Not reported  
Primary Tank Material: Not reported  
Secondary Tank Material: Not reported  
Tank Interior Lining: Not reported  
Date Interior Lining Install: Not reported  
Date Closed: 8/10/1995  
UST Close ID: 2122  
Type Of Spill Protection: Not reported  
Date Alarm Overfill Protection Installed: Not reported

Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MEE CORPORATION (Continued)**

**U004003792**

Date Ball Float Overfill Protection Installed:	Not reported
Date Fill Tube Shut Overfill Protection Installed:	Not reported
Overfill Protection Exempt:	Not reported
Othr Tnk Corrosive Prtctn:	Not reported
Date Corrosive Prtctn Install:	Not reported
Tank Leak Detection (single walled):	Not reported
Tank Leak Detection (double wall):	Not reported
Estimated Date Last Used:	Not reported
Estimated Qty Of Substance Remaining:	Not reported
Tank Filled With Inert Material:	Not reported
Piping System Type ( Underground ):	Not reported
Piping System Type ( Aboveground ):	Not reported
Piping Construction (Underground):	Not reported
Piping Manufacturer (Underground):	Not reported
Piping Construction (Aboveground):	Not reported
Piping Manufacturer (Aboveground):	Not reported
Piping Material & Corrosion Protection (Underground):	Not reported
Piping Material & Corrosion Protection (Aboveground):	Not reported
Piping Leak Detection (Undrgrnd - Single Wall):	Not reported
Piping Leak Detection (2nd Contained):	Not reported
Piping Leak Detection (Emrgncy Gnrtrs):	Not reported
Pipe Integrity Test, Underground:	Not reported
Piping Leak Detection (Aboveground - Single Wall):	Not reported
Piping Leak Detection (Underground - 2nd Contained):	Not reported
Piping Leak Detection Underground (Emrgncy Gnrtrs):	Not reported
Pipe Integrity Test, Aboveground:	Not reported
Date Dispenser Containment Installed:	Not reported
Dispenser Containment Type:	Not reported
Date Certified (Tank Unit):	Not reported
Certified Date:	11/10/1995
Last Annual Monitoring Cert:	Not reported
2nd Containment Test:	Not reported
Spill Containment Present:	Not reported
Drop Tube Present:	Not reported
Striker Plate Present:	Not reported
Alarm Present:	Not reported
Ball Float Present:	Not reported
Fill Tube Present:	Not reported
Other Tank Leak Detection Present:	Not reported

**B13**  
**WNW**  
 < 1/8  
 0.030 mi.  
 157 ft.

**GEORGE PAIZI TRUSTEE**  
**966 INNES**  
**SAN FRANCISCO, CA 94116**  
 Site 1 of 4 in cluster B

**HIST CORTESE** **S102430722**  
 N/A

**Relative:**  
**Higher**

CORTESE:  
 Region: CORTESE  
 Facility County Code: 38  
 Reg By: LTNKA  
 Reg Id: 38-0264

**Actual:**  
 33 ft.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**B14  
NW  
< 1/8  
0.032 mi.  
168 ft.**

**MIL SPEC HOUSE THE  
HUNTERS POINT NAVAL SHIPYRD  
SAN FRANCISCO, CA 94124**

**RCRA NonGen / NLR 1000132154  
FINDS CAD981462278**

**Site 2 of 4 in cluster B**

**Relative:  
Higher**

RCRA NonGen / NLR:

Date form received by agency: 04/14/1986

Facility name: MIL SPEC HOUSE THE

Facility address: HUNTERS POINT NAVAL SHIPYRD

SAN FRANCISCO, CA 94124

EPA ID: CAD981462278

Mailing address: P O BOX 883902

SAN FRANCISCO, CA 94188

Contact: ENVIRONMENTAL MANAGER

Contact address: HUNTERS POINT NAVAL SHIPYRD

SAN FRANCISCO, CA 94124

Contact country: US

Contact telephone: (415) 822-2760

Contact email: Not reported

EPA Region: 09

Classification: Non-Generator

Description: Handler: Non-Generators do not presently generate hazardous waste

**Actual:  
28 ft.**

Owner/Operator Summary:

Owner/operator name: ROSEMARY MORGAN

Owner/operator address: NOT REQUIRED

NOT REQUIRED, ME 99999

Owner/operator country: Not reported

Owner/operator telephone: (415) 555-1212

Legal status: Private

Owner/Operator Type: Owner

Owner/Op start date: Not reported

Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED

Owner/operator address: NOT REQUIRED

NOT REQUIRED, ME 99999

Owner/operator country: Not reported

Owner/operator telephone: (415) 555-1212

Legal status: Private

Owner/Operator Type: Operator

Owner/Op start date: Not reported

Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No

Mixed waste (haz. and radioactive): No

Recycler of hazardous waste: No

Transporter of hazardous waste: Yes

Treater, storer or disposer of HW: No

Underground injection activity: No

On-site burner exemption: No

Furnace exemption: No

Used oil fuel burner: No

Used oil processor: No

User oil refiner: No

Used oil fuel marketer to burner: No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MIL SPEC HOUSE THE (Continued)**

**1000132154**

Used oil Specification marketer: No  
Used oil transfer facility: No  
Used oil transporter: No

Violation Status: No violations found

**FINDS:**

Registry ID: 110008269710

**Environmental Interest/Information System**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

**B15**  
**WNW**  
**< 1/8**  
**0.037 mi.**  
**196 ft.**

**NAVAL SHIPYARD**  
**1 HUNTERS POINT BLVD**  
**SAN FRANCISCO, CA 94124**

**CA FID UST** **S101592563**  
**SWEEPS UST** **N/A**

**Site 3 of 4 in cluster B**

**Relative:**  
**Higher**

CA FID UST:  
Facility ID: 38005428  
Regulated By: UTNKA  
Regulated ID: Not reported  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4150000000  
Mail To: Not reported  
Mailing Address: 1 HUNTERS POINT BLVD  
Mailing Address 2: Not reported  
Mailing City,St,Zip: SAN FRANCISCO 94124  
Contact: Not reported  
Contact Phone: Not reported  
DUNs Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Active

**Actual:**  
**32 ft.**

**SWEEPS UST:**

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000001  
Actv Date: 09-30-92  
Capacity: 6880  
Tank Use: UNKNOWN

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

NAVAL SHIPYARD (Continued)

S101592563

Stg: P  
Content: DIESEL  
Number Of Tanks: 25

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000002  
Actv Date: 09-30-92  
Capacity: 10000  
Tank Use: UNKNOWN  
Stg: P  
Content: DIESEL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000003  
Actv Date: 09-30-92  
Capacity: 210000  
Tank Use: UNKNOWN  
Stg: P  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000004  
Actv Date: 09-30-92  
Capacity: 3000  
Tank Use: UNKNOWN  
Stg: P  
Content: DIESEL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**NAVAL SHIPYARD (Continued)**

**S101592563**

Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000005  
Actv Date: 09-30-92  
Capacity: 4500  
Tank Use: UNKNOWN  
Stg: P  
Content: DIESEL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000006  
Actv Date: 09-30-92  
Capacity: 35000  
Tank Use: UNKNOWN  
Stg: P  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000007  
Actv Date: 09-30-92  
Capacity: 22000  
Tank Use: UNKNOWN  
Stg: P  
Content: DIESEL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**NAVAL SHIPYARD (Continued)**

**S101592563**

Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000008  
Actv Date: 09-30-92  
Capacity: 6880  
Tank Use: UNKNOWN  
Stg: P  
Content: LEADED GASOL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000009  
Actv Date: 09-30-92  
Capacity: Not reported  
Tank Use: UNKNOWN  
Stg: P  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000010  
Actv Date: 09-30-92  
Capacity: Not reported  
Tank Use: UNKNOWN  
Stg: P  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000011  
Actv Date: 09-30-92  
Capacity: Not reported  
Tank Use: UNKNOWN  
Stg: P

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

NAVAL SHIPYARD (Continued)

S101592563

Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000012  
Actv Date: 09-30-92  
Capacity: Not reported  
Tank Use: UNKNOWN  
Stg: P  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000013  
Actv Date: 09-30-92  
Capacity: 6880  
Tank Use: UNKNOWN  
Stg: P  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000014  
Actv Date: 09-30-92  
Capacity: 10800  
Tank Use: UNKNOWN  
Stg: P  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**NAVAL SHIPYARD (Continued)**

**S101592563**

Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000015  
Actv Date: 09-30-92  
Capacity: 5000  
Tank Use: UNKNOWN  
Stg: P  
Content: LEADED GASOL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000016  
Actv Date: 09-30-92  
Capacity: 5000  
Tank Use: UNKNOWN  
Stg: P  
Content: LEADED GASOL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000017  
Actv Date: 09-30-92  
Capacity: 5000  
Tank Use: UNKNOWN  
Stg: P  
Content: DIESEL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**NAVAL SHIPYARD (Continued)**

**S101592563**

Swrcb Tank Id: 38-000-007180-000018  
Actv Date: 09-30-92  
Capacity: 5000  
Tank Use: UNKNOWN  
Stg: P  
Content: DIESEL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A

Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000019  
Actv Date: 09-30-92  
Capacity: Not reported  
Tank Use: UNKNOWN  
Stg: P  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A

Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000020  
Actv Date: 09-30-92  
Capacity: 3000  
Tank Use: M.V. FUEL  
Stg: P  
Content: REG UNLEADED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A

Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000021  
Actv Date: 09-30-92  
Capacity: 3000  
Tank Use: M.V. FUEL  
Stg: P  
Content: REG UNLEADED

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**NAVAL SHIPYARD (Continued)**

**S101592563**

Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000022  
Actv Date: 09-30-92  
Capacity: 3000  
Tank Use: UNKNOWN  
Stg: P  
Content: DIESEL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000023  
Actv Date: 09-30-92  
Capacity: 3000  
Tank Use: UNKNOWN  
Stg: P  
Content: LEADED GASOL  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000024  
Actv Date: 09-30-92  
Capacity: 25320  
Tank Use: UNKNOWN  
Stg: P  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 7180  
Number: 9  
Board Of Equalization: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**NAVAL SHIPYARD (Continued)**

**S101592563**

Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-007180-000025  
Actv Date: 09-30-92  
Capacity: 1000  
Tank Use: M.V. FUEL  
Stg: P  
Content: REG UNLEADED  
Number Of Tanks: Not reported

**B16  
WNW  
< 1/8  
0.038 mi.  
199 ft.**

**ODACO INC  
BLDG 134 HUNTERS POINT  
SAN FRANCISCO, CA 94124**

**RCRA-SQG 1000176862  
FINDS CAD982507584  
HAZNET**

**Site 4 of 4 in cluster B**

**Relative:  
Higher**

**RCRA-SQG:**

Date form received by agency: 06/28/1989  
Facility name: ODACO INC  
Facility address: BLDG 134 HUNTERS POINT  
SAN FRANCISCO, CA 94124  
EPA ID: CAD982507584  
Mailing address: P O BOX 881628  
SAN FRANCISCO, CA 94188  
Contact: ENVIRONMENTAL MANAGER  
Contact address: BLDG FIRST HUNDRED THIRTY FOUR  
SAN FRANCISCO, CA 94124  
Contact country: US  
Contact telephone: (415) 822-7170  
Contact email: Not reported  
EPA Region: 09  
Classification: Small Small Quantity Generator  
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

**Actual:  
34 ft.**

**Owner/Operator Summary:**

Owner/operator name: NOT REQUIRED  
Owner/operator address: NOT REQUIRED  
NOT REQUIRED, ME 99999  
Owner/operator country: Not reported  
Owner/operator telephone: (415) 555-1212  
Legal status: County  
Owner/Operator Type: Operator  
Owner/Op start date: Not reported  
Owner/Op end date: Not reported  
  
Owner/operator name: ODACO INC  
Owner/operator address: NOT REQUIRED  
NOT REQUIRED, ME 99999  
Owner/operator country: Not reported  
Owner/operator telephone: (415) 555-1212

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ODACO INC (Continued)**

**1000176862**

Legal status: County  
Owner/Operator Type: Owner  
Owner/Op start date: Not reported  
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No  
Mixed waste (haz. and radioactive): No  
Recycler of hazardous waste: No  
Transporter of hazardous waste: No  
Treater, storer or disposer of HW: No  
Underground injection activity: No  
On-site burner exemption: No  
Furnace exemption: No  
Used oil fuel burner: No  
Used oil processor: No  
User oil refiner: No  
Used oil fuel marketer to burner: No  
Used oil Specification marketer: No  
Used oil transfer facility: No  
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110008280109

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Year: 1998  
Gepaid: CAD982507584  
Contact: JOHN M ODA HUNTERS PT SHIPYARD  
Telephone: 0000000000  
Mailing Name: Not reported  
Mailing Address: BLDG 134 HUNTERS POINT  
Mailing City,St,Zip: SAN FRANCISCO, CA 941240000  
Gen County: Not reported  
TSD EPA ID: CAT000646117  
TSD County: Not reported  
Waste Category: Other empty containers 30 gallons or more  
Disposal Method: Disposal, Land Fill  
Tons: .5000  
Facility County: San Francisco

Year: 1998  
Gepaid: CAD982507584  
Contact: JOHN M ODA HUNTERS PT SHIPYARD  
Telephone: 0000000000

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ODACO INC (Continued)**

**1000176862**

Mailing Name: Not reported  
Mailing Address: BLDG 134 HUNTERS POINT  
Mailing City,St,Zip: SAN FRANCISCO, CA 941240000  
Gen County: Not reported  
TSD EPA ID: CAD097030993  
TSD County: Not reported  
Waste Category: Alkaline solution (pH >= 12.5) with metals  
Disposal Method: Recycler  
Tons: .9174  
Facility County: San Francisco

Year: 1998  
Gepaid: CAD982507584  
Contact: JOHN M ODA HUNTERS PT SHIPYARD  
Telephone: 0000000000  
Mailing Name: Not reported  
Mailing Address: BLDG 134 HUNTERS POINT  
Mailing City,St,Zip: SAN FRANCISCO, CA 941240000  
Gen County: Not reported  
TSD EPA ID: CAD097030993  
TSD County: Not reported  
Waste Category: Alkaline solution without metals pH >= 12.5  
Disposal Method: Recycler  
Tons: .2293  
Facility County: San Francisco

Year: 1995  
Gepaid: CAD982507584  
Contact: JOHN M ODA HUNTERS PT SHIPYARD  
Telephone: 0000000000  
Mailing Name: Not reported  
Mailing Address: BLDG 134 HUNTERS POINT  
Mailing City,St,Zip: SAN FRANCISCO, CA 941240000  
Gen County: Not reported  
TSD EPA ID: CAT080031628  
TSD County: Not reported  
Waste Category: Waste oil and mixed oil  
Disposal Method: Recycler  
Tons: 1.5220  
Facility County: San Francisco

**C17  
WNW  
< 1/8  
0.077 mi.  
409 ft.**

**VACANT  
996 INNES AVE  
SAN FRANCISCO, CA 94124  
Site 1 of 4 in cluster C**

**LUST S101592205  
CA FID UST N/A**

**Relative:  
Higher**

LUST:

Region: STATE  
Global Id: T0607500229  
Latitude: 37.73275  
Longitude: -122.37585  
Case Type: LUST Cleanup Site  
Status: Completed - Case Closed  
Status Date: 01/26/1996  
Lead Agency: SAN FRANCISCO COUNTY LOP  
Case Worker: SC  
Local Agency: SAN FRANCISCO COUNTY LOP

**Actual:  
43 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**VACANT (Continued)**

**S101592205**

RB Case Number: 38-0264  
LOC Case Number: 10588  
File Location: Not reported  
Potential Media Affect: Soil  
Potential Contaminants of Concern: Gasoline  
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

**Contact:**

Global Id: T0607500229  
Contact Type: Regional Board Caseworker  
Contact Name: VIC PAL  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY STREET, SUITE 1400  
City: OAKLAND  
Email: vpal@waterboards.ca.gov  
Phone Number: Not reported

Global Id: T0607500229  
Contact Type: Local Agency Caseworker  
Contact Name: STEPHANIE CUSHING  
Organization Name: SAN FRANCISCO COUNTY LOP  
Address: 1390 MARKET STREET #210  
City: SAN FRANCISCO  
Email: stephanie.cushing@sfdph.org  
Phone Number: Not reported

**Regulatory Activities:**

Global Id: T0607500229  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Discovery

Global Id: T0607500229  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Reported

**LUST REG 2:**

Region: 2  
Facility Id: 38-0264  
Facility Status: Case Closed  
Case Number: 10588  
How Discovered: Not reported  
Leak Cause: Not reported  
Leak Source: Not reported  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**VACANT (Continued)**

**S101592205**

SAN FRANCISCO CO. LUST:

Region: SAN FRANCISCO  
Facility ID: 38-0264  
Facility Status: Case Closed  
Case Number: 10588  
Case Type: Soil only  
Release Date: 11/17/1989  
Discovered Date: 11/17/1989  
Substance: Gasoline  
Substance Qty: Not reported  
How Discovered: Tank Closure  
How Stopped: Close Tank  
Report Date: 11/17/1989  
Case Closed: 1/26/1996  
Closed Date: 1/26/1996  
Leak Source: Tank  
Leak Cause: Structure Failure  
Leak Confirmed: Not reported  
Entered Date: 1/19/1996  
Number of Wells: Not reported  
Regional Board: San Francisco Bay Region  
Local Agency: 38000  
Lead Agency: Local Agency  
Program: LOP  
Responsible Party: Not reported  
RP Address: Not reported  
Operator: Not reported  
Staff Initial: VP  
Facility Staff: SC  
Cross Street: HUNTERS PT BLVD  
NOR Date: 1/19/1996  
MTBE Current: Not reported  
MTBE Current Date: Not reported  
MTBE: NT  
Maximum MTBE Soil: Not reported  
Maximum MTBE GW: Not reported  
MTBE DATE: Not reported  
Review Date: Not reported  
Workplan Submitted: Not reported  
Assessment Underway: Not reported  
Pollution Characterization: Not reported  
Corrective Action Plan: Not reported  
Remediation Underway: Not reported  
Monitoring Begun: Not reported  
Funding: Federal  
Interim Remediation: No  
Priority: Not reported  
Abatement: No Action Taken - no action has as yet been taken at the site  
Enforcement Type: NOR  
Enforcement Due Date: Not reported  
Basin: Islais Basin  
Beneficial Use: No  
Lat/Long: Not reported  
CUFID: Not reported  
Suspended: No  
Stopped Date: 11/14/1989  
Free Product: No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**VACANT (Continued)**

**S101592205**

Depth to Grnd Wtr: Not reported  
Gradient: Not reported  
Benzene: Not reported  
Primary Substance: Gasoline  
Enforcement Type: Not reported  
Amount of Free Produce: Not reported  
Benzene Test: Not reported  
Maximum Soil GW: Not reported  
Max Soil Concentration: Not reported  
TPH Tested: Not reported  
Max TPH GW: Not reported  
Max TPH Soil: Not reported  
TPH Date: Not reported  
Block: Not reported  
Lot: Not reported  
Notify: False  
TPH Current: Not reported  
TPH Current Date: Not reported  
Grnd Wtr Qualifier: Not reported  
Soil Qualifier: Not reported  
Comments: Not reported  
Summary: Not reported

**CA FID UST:**

Facility ID: 38001492  
Regulated By: UTNKA  
Regulated ID: Not reported  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4150000000  
Mail To: Not reported  
Mailing Address: 996 INNES AVE  
Mailing Address 2: Not reported  
Mailing City,St,Zip: SAN FRANCISCO 94124  
Contact: Not reported  
Contact Phone: Not reported  
DUNs Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Active

**C18  
WNW  
< 1/8  
0.077 mi.  
409 ft.**

**VACANT  
996 INNES AV  
SAN FRANCISCO, CA  
Site 2 of 4 in cluster C**

**UST U004004425  
N/A**

**Relative:  
Higher**

**SAN FRANCISCO CO. UST:**

Facility ID: 24671  
Facility Status: Not reported  
Number Of Tanks: 1  
Owner/Operator Name: Not reported  
Owner/Operator Title: Not reported  
Owner Name: Not reported  
Care Of Addr: Not reported  
2nd Care Of Addr: Not reported

**Actual:  
43 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

VACANT (Continued)

U004004425

Mailing Address:	Not reported	
Mailing City,St,Zip:	Not reported	
Permit Number:	Not reported	
Permit Approved By:	Not reported	
Permit Expiration Date:	Not reported	
Applications:	Not reported	
Application Date:	10/23/1989	
Application Name:	Not reported	
Action Type:	Not reported	
Yr Spill/Overfill Installed1:	Not reported	
Yr Spill/Overfill Installed2:	Not reported	
Yr Spill/Overfill Installed3:	Not reported	
Tank ID:	Not reported	
Tank Test:	Not reported	
Local Tank Id:	Not reported	
Tank Manufacturer:	Not reported	
Compartmentalized Tank:	Not reported	
# Of Tank Compartments:	Not reported	
Date Tank Installed:	Not reported	
Tank Capacity:	Not reported	
Additional Desc:	Not reported	
Tank Use:	Not reported	
Petroleum Type:	Not reported	
Common Name:	Not reported	
Case Number:	Not reported	
Type Of Tank:	Not reported	
Primary Tank Material:	Not reported	
Secondary Tank Material:	Not reported	
Tank Interior Lining:	Not reported	
Date Interior Lining Install:	Not reported	
Date Closed:	11/21/1989	
UST Close ID:	271	
Type Of Spill Protection:	Not reported	
Date Alarm Overfill Protection Installed:	Not reported	Not reported
Date Ball Float Overfill Protection Installed:	Not reported	Not reported
Date Fill Tube Shut Overfill Protection Installed:	Not reported	Not reported
Overfill Protection Exempt:	Not reported	Not reported
Othr Tnk Corrosive Prtctn:	Not reported	Not reported
Date Corrosive Prtctn Install:	Not reported	Not reported
Tank Leak Detection (single walled):	Not reported	Not reported
Tank Leak Detection (double wall):	Not reported	Not reported
Estimated Date Last Used:	Not reported	Not reported
Estimated Qty Of Substance Remaining:	Not reported	Not reported
Tank Filled With Inert Material:	Not reported	Not reported
Piping System Type ( Underground ):	Not reported	Not reported
Piping System Type ( Aboveground ):	Not reported	Not reported
Piping Construction (Underground):	Not reported	Not reported
Piping Manufacturer (Underground):	Not reported	Not reported
Piping Construction (Aboveground):	Not reported	Not reported
Piping Manufacturer (Aboveground):	Not reported	Not reported
Piping Material & Corrosion Protection (Underground):	Not reported	Not reported
Piping Material & Corrosion Protection (Aboveground):	Not reported	Not reported
Piping Leak Detection (Undrgrnd - Single Wall):	Not reported	Not reported
Piping Leak Detection (2nd Contained):	Not reported	Not reported
Piping Leak Detection (Emrgncy Gnrtrs):	Not reported	Not reported
Pipe Integrity Test, Underground:	Not reported	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**VACANT (Continued)**

**U004004425**

Piping Leak Detection (Aboveground - Single Wall): Not reported  
Piping Leak Detection (Underground - 2nd Contained): Not reported  
Piping Leak Detection Underground (Emrgncy Gnrtrs): Not reported  
Pipe Integrity Test, Aboveground: Not reported  
Date Dispenser Containment Installed: Not reported  
Dispenser Containment Type: Not reported  
Date Certified (Tank Unit): Not reported  
Certified Date: Not reported  
Last Annual Monitoring Cert: Not reported  
2nd Containment Test: Not reported  
Spill Containment Present: Not reported  
Drop Tube Present: Not reported  
Striker Plate Present: Not reported  
Alarm Present: Not reported  
Ball Float Present: Not reported  
Fill Tube Present: Not reported  
Other Tank Leak Detection Present: Not reported

**C19  
WNW  
< 1/8  
0.077 mi.  
409 ft.**

**VACANT  
996 INNES AVE V  
SAN FRANCISCO, CA 94124**

**SWEEPS UST S106933975  
N/A**

**Site 3 of 4 in cluster C**

**Relative:  
Higher**

**SWEEPS UST:**

**Actual:  
43 ft.**

Status: Not reported  
Comp Number: 1666  
Number: Not reported  
Board Of Equalization: Not reported  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Tank Status: Not reported  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-001666-000001  
Actv Date: Not reported  
Capacity: 1000  
Tank Use: UNKNOWN  
Stg: PRODUCT  
Content: UNSPECIFIED  
Number Of Tanks: 3

Status: Not reported  
Comp Number: 1666  
Number: Not reported  
Board Of Equalization: Not reported  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Tank Status: Not reported  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-001666-000002  
Actv Date: Not reported  
Capacity: 1000  
Tank Use: UNKNOWN  
Stg: PRODUCT  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**VACANT (Continued)**

**S106933975**

Status: Not reported  
 Comp Number: 1666  
 Number: Not reported  
 Board Of Equalization: Not reported  
 Referral Date: Not reported  
 Action Date: Not reported  
 Created Date: Not reported  
 Tank Status: Not reported  
 Owner Tank Id: Not reported  
 Swrcb Tank Id: 38-000-001666-000003  
 Actv Date: Not reported  
 Capacity: 1000  
 Tank Use: UNKNOWN  
 Stg: PRODUCT  
 Content: UNSPECIFIED  
 Number Of Tanks: Not reported

Status: Active  
 Comp Number: 1666  
 Number: 9  
 Board Of Equalization: Not reported  
 Referral Date: 09-30-92  
 Action Date: 12-10-91  
 Created Date: 01-01-01  
 Tank Status: Not reported  
 Owner Tank Id: Not reported  
 Swrcb Tank Id: Not reported  
 Actv Date: Not reported  
 Capacity: Not reported  
 Tank Use: Not reported  
 Stg: Not reported  
 Content: Not reported  
 Number Of Tanks: Not reported

**C20**  
**WNW**  
**< 1/8**  
**0.080 mi.**  
**423 ft.**

**SEASIDE SERVICE**  
**998 INNES AVE**  
**SAN FRANCISCO, CA**  
**Site 4 of 4 in cluster C**

**EDR US Hist Auto Stat 1009000759**  
**N/A**

**Relative:**  
**Higher**  
  
**Actual:**  
**44 ft.**

EDR Historical Auto Stations:

Name: HUNTER S POINT SERVICE STATION  
 Year: 1953  
 Type: GASOLINE STATIONS

Name: LEACH & HARRIS SEASIDE SERVICE STATION  
 Year: 1958  
 Type: GASOLINE STATIONS

Name: LEACH & HARRIS SEASIDE SERVICE STATION  
 Year: 1958  
 Type: GASOLINE STATIONS

Name: GREEN S SEASIDE SERVICE STATION  
 Year: 1962  
 Type: GASOLINE STATIONS

Name: SEASIDE SERVICE

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**SEASIDE SERVICE (Continued)**

**1009000759**

Year: 1966  
 Type: GASOLINE STATIONS  
  
 Name: SEASIDE SERVICE  
 Year: 1966  
 Type: GASOLINE STATIONS

**21**  
**WNW**  
**1/8-1/4**  
**0.157 mi.**  
**831 ft.**

**AVIS**  
**230 HARBOR WAY**  
**SAN FRANCISCO, CA 94124**

**UST U003971541**  
**N/A**

**Relative:**  
**Higher**

UST:  
 Facility ID: FAtest9  
 Latitude: 37.73306  
 Longitude: -122.37896

**Actual:**  
**112 ft.**

**22**  
**SE**  
**1/8-1/4**  
**0.173 mi.**  
**915 ft.**

**NICK S CLEANERS**  
**714 INNES AV**  
**SAN FRANCISCO, CA**

**EDR US Hist Cleaners 1009131303**  
**N/A**

**Relative:**  
**Higher**

EDR Historical Cleaners:  
 Name: NICHOLSON R W  
 Year: 1949  
 Type: CLEANERS AND DYERS  
  
 Name: NICK S CLEANERS  
 Year: 1953  
 Type: CLEANERS AND DYERS  
  
 Name: NICK S CLEANERS  
 Year: 1958  
 Type: CLOTHES PRESSERS AND CLEANERS  
  
 Name: NICK S CLEANERS  
 Year: 1958  
 Type: CLOTHES PRESSERS AND CLEANERS

**Actual:**  
**44 ft.**

**23**  
**North**  
**1/8-1/4**  
**0.186 mi.**  
**984 ft.**

**PG & E HUNTERS POINT**  
**1000 EVANS AVE HUNTERS POINT POWER PLANT**  
**SAN FRANCISCO, CA 94124**

**VCP S100351554**  
**ENVIROSTOR N/A**

**Relative:**  
**Lower**

VCP:  
 Facility ID: 38490002  
 Site Type: Voluntary Cleanup  
 Site Type Detail: Voluntary Cleanup  
 Site Mgmt. Req.: NONE SPECIFIED  
 Acres: 30.3  
 National Priorities List: NO  
 Cleanup Oversight Agencies: SMBRP

**Actual:**  
**15 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Lead Agency: SMBRP  
Lead Agency Description: DTSC - Site Cleanup Program  
Project Manager: Janet Naito  
Supervisor: Barbara Cook  
Division Branch: Cleanup Berkeley  
Site Code: 201869  
Assembly: 17  
Senate: 11  
Special Programs Code: Designation of Single Agency  
Status: Active  
Status Date: 03/27/2007  
Restricted Use: NO  
Funding: Not reported  
Lat/Long: 37.73771 / -122.3782  
APN: 4570-024, 4570024, 4571-001, 4571001, 4580-002, 4580002, 4603A-005, 4603A005, 4623A-002, 4623A002, 4647A-010, 4647A010  
  
Past Use: ELECTRIC GENERATION/SUBSTATION, LDF  
Potential COC: 30001, 30013, 30018, 30019, 30024, 3002502  
Confirmed COC: 30001,30013,30019,30024,3002502,30018  
Potential Description: OTH, SOIL  
Alias Name: PACIFIC GAS & ELECTRIC CO  
Alias Type: Alternate Name  
Alias Name: PG&E  
Alias Type: Alternate Name  
Alias Name: PG&E Hunters Point Power Plant  
Alias Type: Alternate Name  
Alias Name: 4570-024  
Alias Type: APN  
Alias Name: 4570024  
Alias Type: APN  
Alias Name: 4571-001  
Alias Type: APN  
Alias Name: 4571001  
Alias Type: APN  
Alias Name: 4580-002  
Alias Type: APN  
Alias Name: 4580002  
Alias Type: APN  
Alias Name: 4603A-005  
Alias Type: APN  
Alias Name: 4603A005  
Alias Type: APN  
Alias Name: 4623A-002  
Alias Type: APN  
Alias Name: 4623A002  
Alias Type: APN  
Alias Name: 4647A-010  
Alias Type: APN  
Alias Name: 4647A010  
Alias Type: APN  
Alias Name: 110033611456  
Alias Type: EPA (FRS #)  
Alias Name: 201724  
Alias Type: Project Code (Site Code)  
Alias Name: 201869  
Alias Type: Project Code (Site Code)  
Alias Name: 38490002

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Alias Type:	Envirostor ID Number
Completed Info:	
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	06/20/2012
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	07/18/2012
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	07/18/2012
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Report
Completed Date:	06/07/2012
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Report
Completed Date:	06/07/2012
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	*Correspondence - Received
Completed Date:	12/05/2011
Comments:	DTSC verbally approved the installation of five groundwater monitoring wells to replace the 13 wells abandoned in Areas A, B, C, D, and I. DTSC will review the sampling results and groundwater flow directions. Based upon the results, additional monitoring wells may be required. Wells are to be reinstalled and sampled by the end of January 2012.
Completed Area Name:	Area J
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Workplan
Completed Date:	04/06/2012
Comments:	Work Plan submitted to DTSC for its files. No review requested.
Completed Area Name:	Area I
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedial Action Plan w/ESD
Completed Date:	08/20/2012
Comments:	DTSC approved the Area I RAP Amendment for public comment.
Completed Area Name:	Area I
Completed Sub Area Name:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Document Type: Fact Sheets  
Completed Date: 07/10/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Work Notice  
Completed Date: 06/20/2012  
Comments: Work Notice announcing the potential for the contractor to work on Saturdays is being sent to potentially impacted individuals, businesses and key community contacts.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Installation Workplan  
Completed Date: 07/12/2012  
Comments: DTSC approved installation of three additional groundwater monitoring wells on the adjacent White Cap property to better delineate the extent of the petroleum hydrocarbon groundwater plume.

Completed Area Name: Area I  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Notice  
Completed Date: 07/10/2012  
Comments: Public Notice to run in the San Francisco Chronicle and Sun Reporter on 7/13/2012.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 08/21/2012  
Comments: During the reporting period, there was two TEM test reports (July 10th, and July 24th 2012) for airborne asbestos that exceeded 0.016 s/cc., the trigger level established for this project. Corrective actions were taken and asbestos levels returned to below the trigger level in each instance. All other air samples during this time frame were below the monitoring goals.

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 09/05/2012  
Comments: Not reported

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 09/05/2012  
Comments: Not reported

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 09/05/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 09/06/2012  
Comments: Not reported

Completed Area Name: Area E  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 11/29/2012  
Comments: Not reported

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 11/09/2012  
Comments: DTSC approves the implementation of the soil vapor sampling plan with modifications specified in the letter that were agreed upon between DTSC and PG&E.

Completed Area Name: Area I  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 10/12/2012  
Comments: Approved installation of four replacement monitoring wells in Area I.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 11/01/2012  
Comments: Approved workplan for groundwater sampling during the second semiannual 2012 monitoring event with one modification.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 12/18/2012  
Comments: Letter Report documents PG&E's observations and the response actions implemented to address an apparent petroleum hydrocarbon release observed on December 5, 2012 in the utility tunnel beneath Evans Avenue adjacent to the PG&E Hunters Point Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/30/2013  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/01/2012  
Comments: During the August 2012 reporting period, there were two TEM test reports for airborne asbestos that were reported as overloaded by Asbestos TEM Laboratories, INC. Testing protocols require that any sample with >20% loading is considered overloaded. On Tuesday August 7th, 2012, AMS-7D had a particulate loading of >20% with non-mineral fibers which is consistent with the hydroseal application

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

which took place at that time. A heavy layer of hydroseal soil tacking material was applied to control dust during the sampling time frame. The airborne respirable dust (mg/m3) analyzed by Dustrak photometer during the work day had a maximum reading of 0.052 mg/m3 which is below the project goal. On Thursday August 16th, 2012 AMS 7D had a particulate loading of 40% consisting of gypsum, clay and fine grain quartz particulate. Clean import fill was being stock piled in the vicinity of AMS 7D during the sample time frame. The airborne respirable dust analyzed by Dustrak photometer had a maximum reading of 0.135 mg/m3 which is below the project goal. In order to minimize particulate loading in the future, all clean import fill will be stockpiled at least 75 feet from the AMS and additional misting and dust spray will be employed during stockpiling. All other air samples during this time frame were below the monitoring goals.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Workplan  
Completed Date: 07/18/2007  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Notice  
Completed Date: 08/29/2007  
Comments: Postcard language approved and sent to PG&E for distribution to site mailing list. Postcard mailed out to the community on 9/4/07.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/15/2007  
Comments: Document approved with comments. Significant increase in TPH as diesel and Bunker C levels in the extraction well. No releases noted into the intake lagoon from July 16, 2007 to end of reporting period.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/13/2004  
Comments: Report submitted as part of MOA Application.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Assessment Report  
Completed Date: 04/30/1997  
Comments: Phase I Environmental Site Assessment prepared by Camp, Dresser & McKee dated April 1997.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Report  
Completed Date: 08/31/1999  
Comments: Phase II Environmental Site Assessment submitted as part of MOA application.

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 01/25/2008  
Comments: Quarterly O&M Report (September through December 2007) documents operating history of extraction well EW-2 and monitoring conducted to evaluate the concentrations of petroleum hydrocarbons present in the area of EW-2. Intermittent small-volume releases, identified by the presence of sheen on the intake water lagoon, occurred from September 2007 until October 25, 2007. Since that time, no releases have been noted. All releases are fully contained by the four-part boom and absorbent system deployed in the intake water lagoon.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 09/10/2009  
Comments: RI Report approved with caveats. There are data gaps in the site characterization for Areas I and J that could be filled as part of pre-design sampling. There are comments that should be addressed as part of the subsequent predictive ecological risk assessment. Further action is needed to address chemicals of concern in soil, soil gas and groundwater.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Plan  
Completed Date: 06/10/2010  
Comments: Final Remedial Action Plan approved. Remedy calls for removal of vadose zone soil containing chemicals of concern above residential screening values, treatment of free-phase petroleum hydrocarbons, and paving of historic fill material to address concerns about potential for future exposure to naturally-occurring asbestos in the fill material.

Completed Area Name: Area H  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 05/30/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 04/11/2008  
Comments: The GWES began full operation on February 6, 2007. Since start up, the system has processed 84,251 gallons, for an average extraction rate of 0.17 gpm. No free product was detected in any of the wells monitored during this reporting period. No releases to the intake water lagoon have been observed since October 25, 2007. Scale build-up in the pump reduced the pumping rate this quarter. The scale was removed March 13, 2008. Pump will now be checked weekly and cleaned, as needed, to ensure its efficiency.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 09/18/2007

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Comments: Report summarizes the data collected from startup through May 1, 2007 for the groundwater extraction system installed to address the release of petroleum hydrocarbons to the intake lagoon. DTSC approved this report with modifications.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Tank Removal Report  
Completed Date: 07/17/2007  
Comments: At DTSC's request, the October 2004 draft report prepared for the Water Board was finalized and signed.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 12/10/2007  
Comments: Air Monitoring Data Reports indicated that total dust, respirable dust, particulates, and metals in air are below screening values.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 12/10/2007  
Comments: Air Monitoring Data for October 2007 continues to show all constituents measured below screening levels.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 03/21/2008  
Comments: This summary report includes air monitoring data from February 1, 2008 through February 29, 2008. None of the respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded the footnoted air monitoring goals during the referenced monitoring period. Twenty (20) days of air monitoring is included in this reporting period. No site work or air monitoring was performed on February 18, 2008 during observation of the Presidents Day holiday. Total dust air samples collected on February 19, 2008 were lost following receipt at the analytical laboratory. PCM, chromium, lead, nickel and total dust air samples collected on February 22, 2008 were lost during shipment to the analytical laboratory.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/03/2008  
Comments: First Quarter GMR is accepted. Historical data tables will be included in subsequent groundwater monitoring reports.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 07/24/2008  
Comments: DTSC approved the Public Participation Plan for the Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Document Type: Other Report  
Completed Date: 04/21/2008  
Comments: Report provides air monitoring data from March 3, 2008 through March 31, 2008. None of the average respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded the air monitoring goals during the referenced monitoring period. There was a momentary spike that exceeded the respirable dust goal on one (1) of the twenty-one (21) days of monitoring at Station 2. The spike was short in duration (~1 minute). The spike was attributed to a fire protection vendor working onsite on March 27, 2008. Dry powdered fire suppressant was discharged from a pressure relief valve during servicing of equipment near AMS 2.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/14/2008  
Comments: Report provides air monitoring data from November 1, 2007 through November 30, 2007. None of the respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded air monitoring goals during the referenced monitoring period. Air samples collected at AMS 3 and 4 on November 30th were voided due to a sampling error that damaged the filter media cassette. Twenty (20) days of air monitoring is included in this reporting period. No site work or air monitoring was performed on November 22 and 23, 2007 during observation of the Thanksgiving holiday.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 06/15/2012  
Comments: DTSC concurred with Remedial Designs.

Completed Area Name: Areas C & D  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 10/28/2011  
Comments: Not reported

Completed Area Name: Area A  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 11/16/2011  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 02/01/2008  
Comments: Report provides air monitoring data from December 3, 2007 through December 28, 2007. None of the respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded air monitoring goals during the referenced monitoring period. Eighteen (18) days of air monitoring is included in this reporting period. No site work or air monitoring was performed on December 24, 25 or 31, 2007 during the Christmas and New Year holidays.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 02/22/2008  
Comments: Report provides air monitoring data for 22 days from January 2, 2008 through January 31, 2008. None of the respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded air monitoring goals during the referenced monitoring period. No site work or air monitoring was performed on January 1, 2008 during observation of the New Year holiday. PCM, chromium, lead, nickel and total dust air samples were voided on January 4th due to water damage from a strong weather event. Active abatement and demolition were suspended during the late morning hours of January 4th due to safety concerns.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/29/2008  
Comments: Summarizes air data from April 1 to April 30, 2008. A hard disk failure resulted in loss of weather monitoring data at Stations 1, 2, and 3 from April 4th through April 22nd and real-time dust monitoring data (respirable dust) generated at AMS 1 - 4 from April 7th through April 23rd. Additional backup procedures and systems have been put in place to prevent this from happening again. None of the average respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded the air monitoring goals during this twenty-two day monitoring period.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 06/23/2008  
Comments: This summary report includes air monitoring data from May 1, 2008 through May 30, 2008. None of the average respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded the air monitoring goals during the twenty-one (21) day monitoring period.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 12/16/2008  
Comments: Fact sheet summarizing the results of the Remedial Investigation and Feasibility Study and announcing a community briefing on January 13, 2009. The fact sheet was translated into Chinese, Spanish, Samoan. This is the date the fact sheet was approved by DTSC's public participation specialist and sent to PG&E for reproduction and mailing. Copies should be mailed out on 12/26/2008.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/18/2008  
Comments: This summary report includes air monitoring data from June 2, 2008 through June 30, 2008. None of the average respirable dust, total dust, chromium, lead, or nickel results exceeded the footnoted air

MAP FINDINGS

**PG & E HUNTERS POINT (Continued)**

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monitoring goals during the twenty-three (23) day monitoring period. The airborne fibers by PCM results at AMS 4 was slightly above the air monitoring goal on June 18th, but was significantly less than the California Department of Occupational Safety and Health's (DOSH's) permissible exposure limit (PEL). There was also a momentary spike that exceeded the respirable dust goal at AMS 4. The spike was short in duration lasting approximately four (4) minutes. The spikes were attributed to the felling of Boiler 3 on this day. Additional pre-wetting to minimize dust emissions will be incorporated into preparation work prior to the felling of the remaining boilers at the site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 08/25/2008  
Comments: This summary report includes air monitoring data from July 1, 2008 through July 31, 2008. None of the airborne fibers by PCM, average respirable dust, total dust, chromium, lead, or nickel results exceeded the footnoted air monitoring goals during the twenty-five (25) day monitoring period. There were momentary spikes noted on July 18th that exceeded the respirable dust goal at AMS 3 & 4. The spikes were short in duration lasting approximately thirty (30) minutes. The spikes were attributed to an off-site fire west of property on this day. Visible smoke from the fire was noted crossing the site during the afternoon hours.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 09/26/2008  
Comments: This summary report includes air monitoring data from August 1, 2008 through August 30, 2008. None of the airborne fibers by PCM, average respirable dust, total dust, chromium, lead, or nickel results exceeded the footnoted air monitoring goals during the twenty-three (23) day monitoring period. There were momentary spikes noted on August 1st, 7th, 15th, and 21st that exceeded the respirable dust goal at AMS 4 (Southeast monitoring station). Most of the spikes were short in duration lasting five (5) or fewer minutes. Multiple spikes were measured during a period of approximately one (1) hour on August 21st. Spikes on the 1st and 7th were likely associated with vehicular traffic near the air monitoring station. The spikes on the 15th and 21st are associated with the demolition of the oily water separator located near the air monitoring station. Air samples collected at AMS 4 on August 15th, 19th, and 21st were over-loaded with particulate and not suitable for chemical analysis. Particulate from demolition of the oily-water separator and associated concrete pedestals was the likely contributor to the sample overloading.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 01/28/2010  
Comments: Fact sheet approved by the Public Participation Specialist. Comment period will run from 2/5/2010 - 3/8/2010, public meeting to be held on 2/23/2010.

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**PG & E HUNTERS POINT (Continued)**

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Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 10/28/2008  
Comments: Provides perimeter air monitoring data from September 2, 2008 through September 30, 2008. None of the airborne fibers by PCM, average respirable dust, total dust, chromium, lead, or nickel results exceeded the air monitoring goals during the twenty-four (24) day monitoring period. Brief spikes were noted on September 2nd at AMS 3 and on September 25th at AMS 3 and 4 that exceeded the respirable dust goal for a minute or less.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/20/2009  
Comments: Although issues were raised, they should be addressed in the next semiannual monitoring report. Problems with sampling should be corrected in the next sampling event.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Pilot Study/Treatability Workplan  
Completed Date: 12/22/2009  
Comments: Pilot Test workplan involves bench scale and pilot testing of chemical oxidation treatment of petroleum hydrocarbons within the "smear" zone.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 04/09/2009  
Comments: Agree to address comments in subsequent report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 03/26/2009  
Comments: DTSC approved a workplan to conduct additional investigation of the petroleum groundwater plume on Areas B and I and on the adjacent White Cap Construction property.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/26/2008  
Comments: Report provides air monitoring data from October 1, 2008 through October 31, 2008. None of the airborne fibers by PCM, average respirable dust, total dust, chromium, lead, or nickel results exceeded the air monitoring goals during the twenty-three (23) day monitoring period. There were momentary spikes noted on October 7th, 22nd, and 23rd at AMS 4 and on October 22nd at AMS 2 that exceeded the respirable dust goal. All of the spikes were of short duration lasting for three (3) or fewer minutes. Respirable dust data for October 3rd is not available for AMS 4 due to a memory error with the field instrumentation. The data logger used at AMS 4 on October 3rd was inspected and verified functional before returning to the field

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the following day.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/02/2009  
Comments: This summary report includes air monitoring data from November 3, 2008 through November 26, 2008. None of the airborne fibers by PCM, average respirable dust, total dust, chromium, lead, or nickel results exceeded the footnoted air monitoring goals during the twenty-two (22) day monitoring period.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/27/2009  
Comments: The report summarizes air monitoring data from December 1, 2008 through December 31, 2008. None of the airborne fibers by PCM, total dust, chromium, lead, or nickel results exceeded the air monitoring goals during this period. There were two momentary occurrences, lasting for one minute, noted on December 1st and 5th at AMS 4 that exceeded the respirable dust goal. Handling of crushed concrete contributed to the event on December 1st. Site cleaning with a street sweeper contributed to the December 5, 2008 event. The respirable dust concentrations as measured at AMS 4 on December 1st and 5th were more than 300 times below the California Department of Occupational Safety and Health (DOSH) Permissible Exposure Limit (PEL).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 02/26/2009  
Comments: This summary report includes air monitoring data from January 5, 2009 through January 30, 2009. None of the airborne fibers by PCM, total dust, chromium, lead, or nickel results exceeded air monitoring goals during the twenty (20) day monitoring period. There was one occurrence noted on January 23rd at AMS 1 that exceeded the Site's respirable dust goal lasting one minute. However, this concentration was more than 150 times below the Cal-OSHA Permissible Exposure Limit (PEL). This occurrence was likely due to vehicle traffic.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 04/30/2009  
Comments: This summary report includes air monitoring data from March 2, 2009 through March 31, 2009. The total dust, average respirable dust, chromium, lead, and nickel results were below air monitoring goals during the twenty-two (22) day monitoring period. All of the lead air samples were reported below the laboratory detection limit. However, due to shortened air monitoring durations on March 2nd and 7th, the laboratory detection limit for lead was above the lead air monitoring goal for those two days. Respirable dust data is not available for March 27th at AMS 2 due to a corrupted memory header in the electronic instrument that was fixed by the next day. The respirable dust concentration at AMS 2 on March 11, 2009 exceeded the monitoring goal for a one minute duration during the morning likely due to

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**PG & E HUNTERS POINT (Continued)**

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adjacent excavation work to access a gas line. The airborne fibers result was reported above the site's air monitoring goal on March 30th at AMS 1. There was not any site work within several hundred feet of their monitoring station. The result although above the air monitoring goal, was several orders of magnitude less than the Cal/OSHA's permissible exposure level.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 06/01/2009  
Comments: This report summarizes air monitoring data from April 1, 2009 through April 30, 2009. The total dust, average respirable dust, chromium, lead, and nickel results were below the footnoted air monitoring goals during the twenty-two (22) day monitoring period. All of the lead air samples were reported below the laboratory detection limit. However, the laboratory detection limit was at or above the lead air monitoring goal for the samples collected at AMS 7 on April 28th, 29th, and 30th due to shortened air monitoring durations on each day. The respirable dust concentration at AMS 4 on April 2, 2009 exceeded the monitoring goal for a one minute duration during the afternoon. The elevated dust concentration was attributed to higher than average wind and the movement of tarps for soil stockpiles near the end of site operations for the day. The airborne fibers as determined by phase contrast microscopy (PCM) sample collected at AMS 2 on April 21st was reported as overloaded with particulate. Excavation within a few feet of AMS 2 was performed on April 21st and increased the loading in this air sample.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 12/30/2009  
Comments: DTSC approved the Feasibility Study Report that recommends (1) removal of soil to remove contaminants from operations at the Site; (2) in-situ chemical oxidation to address a petroleum product plume in groundwater; and (3) capping of the site until the Site is redeveloped to address issues associated with naturally-occurring asbestos and metals associated with the serpentinite materials used as fill material when the Site filled in.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Report  
Completed Date: 02/03/2010  
Comments: Report supplements information developed in the Remedial Investigation. Soil gas, optical screening, chemical, geotechnical and petro-physical testing of soils and analysis of groundwater to better define the extent of the free product plume.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Time Critical Removal Action Workplan  
Completed Date: 11/30/2009  
Comments: TCRA Work Plan approved for implementation. Work will begin in late-December 2009, concurrent with public comment period on the administrative record for this action.

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Completed Area Name: Area A  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 09/29/2011  
Comments: Not reported

Completed Area Name: Area A  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 07/11/2012  
Comments: Not reported

Completed Area Name: Areas C & D  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 07/11/2012  
Comments: Not reported

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 07/18/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/02/2012  
Comments: Not reported

Completed Area Name: Area J  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 07/11/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Pilot/Treatability Study Report  
Completed Date: 07/24/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 09/01/2009  
Comments: Report covers the period from July 1 to July 31, 2009. The total dust, respirable dust, peak respirable dust, airborne fibers by PCM, chromium, lead, and nickel results were below the footnoted air monitoring goals during the twenty-two (22) day monitoring period. Air testing for airborne asbestos fibers by TEM was implemented on July 17, 2009. Air testing for airborne fibers by PCM was suspended on July 21, 2009. Airborne fiber analysis by TEM is more sensitive than PCM and is capable of identifying and confirming the presence of asbestos fibers by its mineralogy. The transition to airborne fiber analysis by TEM was implemented based upon the requirements of the Bay Area Air Quality Management District (BAAQMD) to performed work

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on the site that will disturb naturally occurring asbestos (NOA) starting on July 22, 2009. The airborne fiber concentrations by TEM reported at AMS 3 and 4 on July 31st was most likely attributed to heavier than average truck traffic accessing the site through the Evans Street entry gate and traveling near the southern perimeter of the property. More frequent access road and stockpile wetting was implemented to reduce airborne asbestos fiber concentrations.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 09/02/2009  
Comments: Report presents air monitoring data for the period from June 1, 2009 through June 30, 2009. The total dust, average respirable dust, peak respirable dust, airborne fibers, chromium, lead, and nickel results were below the footnoted air monitoring goals during the twenty-two (22) day monitoring period.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 10/22/2009  
Comments: This summary report includes air monitoring data from September 1 - 30, 2009. The total dust, respirable dust, peak respirable dust, chromium, lead and nickel results were below air monitoring goals during the 21 work days monitored.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/30/2009  
Comments: Report presents air monitoring results for air samples collected during the 20 working days between October 1 and October 30, 2009. Supplemental air monitoring was conducted during the 11 days when work was conducted in Area A. The total dust, average respirable dust, chromium, lead, and nickel results were below project air monitoring goals. Respirable dust data is not available for October 12th at Station AMS 1 due to a field error during downloading of the instrument. Abbreviated data is available for October 22nd at Station AMS 4 and October 28th and 30th at Station AMS 3. Data logging stopped or was intermittent during the sampling sessions due to failing circuit boards in both instruments. The faulty instruments at AMS 3 and 4 were temporarily replaced with other functioning instruments. The manufacturer has replaced the failed circuit boards in both of the faulty instruments.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 12/22/2009  
Comments: Air Monitoring Report for November 2009 continues to show particulates below screening levels

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 02/01/2010

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**PG & E HUNTERS POINT (Continued)**

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Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Notice  
Completed Date: 01/28/2010  
Comments: Public Participation Specialist approved the public notice for publication on 2/5/2010.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 02/03/2010  
Comments: PG&E collected samples around 6 power poles and 1 support pole in Area A to determine the extent of potential chemicals of concern that may be present in the vicinity of the poles.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 04/13/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/09/2010  
Comments: Report approved with minor changes to the sounding, sampling and reporting requirements.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 06/28/2010  
Comments: Letter approving report with modifications and caveats.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 06/21/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 04/19/2010  
Comments: February 2010 air monitoring report OK. Total dust, respirable dust, chromium, lead, and nickel results were below air monitoring goals for the 19 day monitoring period. Air monitoring was administered in 4 fixed locations (AMS 1-4) and 3 supplemental locations (AMS 6-8). Air monitoring stations 6-8 were operational during field work activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/28/2010

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**PG & E HUNTERS POINT (Continued)**

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Comments: Approved

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/28/2010  
Comments: April 2010 air monitoring report approved. There was one maximum detection of respirable dust above the 0.5 mg/m3 screening level, but the average for the air monitoring station for that day was below 0.01 mg/m3.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/15/2011  
Comments: RP's response to comments addresses DTSC's comments. DTSC accepts the 2010 Semiannual Groundwater Monitoring Report into its records.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Pilot/Treatability Study Report  
Completed Date: 10/28/2010  
Comments: DTSC approved the report and required submittal of the full scale design plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 08/03/2010  
Comments: Report OK. Call with CSiu of SCA Environmental to address comment dated 7.7.10. No significant excavation activities and no short term air monitoring data were collected for the month of May.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/30/2010  
Comments: Perimeter Zone Monitoring Report OK. Asbestos, total chromium, lead, nickel, dust (total), dust (respirable), SVOC, and VOC data all below Project Monitoring Levels. MH 7.30.10

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 08/06/2010  
Comments: Workplan approved. MH 8.6.2010

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 08/30/2010

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**PG & E HUNTERS POINT (Continued)**

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Comments: Not reported

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Other Report

Completed Date: 09/29/2010

Comments: Reports OK. Airborne asbestos, total dust, respirable dust, chromium, nickel, and lead all below project monitoring goals. MH 9.29.10

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Other Report

Completed Date: 11/01/2010

Comments: Not reported

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Site Characterization Workplan

Completed Date: 01/24/2011

Comments: DTSC reviewed/approved changes in response to our comments on the draft document on 12/27/2010. Additional change to AVS/SEM method agreed to on 1/24/2011.

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Ecological Risk Assessment Report

Completed Date: 03/02/2012

Comments: Predictive Ecological Risk Assessment (PERA) for Area G (Intertidal Zone Surface Water and Sediments) approved. PERA found no significant risk for ecological receptors that utilize the mud flats of both the Site-specific background area and Area G. 2/28/2012 Report resubmitted 7/2/2012 to correct an error on Page 1, section 1, Paragraph 1, last sentence. Area G includes any land below the maximum high tide mark.

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Design/Implementation Workplan

Completed Date: 04/21/2011

Comments: DTSC approved the insitu chemical oxidation pilot study work plan for implementation with additional requirements.

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Other Report

Completed Date: 11/29/2010

Comments: PZM Report for October 2010 OK. Air monitoring was conducted from the period of October 1-30, 2010 for airborne asbestos, dust, metals, and semi-volatiles and volatiles at four (4) air monitoring stations. One spike for respirable dust that exceeded the project monitoring goal was measured on October 26, 2010. However, the average respirable dust for the rest of the day was well below the project monitoring goal and similar to the average respirable dust for other days indicating that this is an isolated event.

Completed Area Name: PROJECT WIDE

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**PG & E HUNTERS POINT (Continued)**

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Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 12/10/2010  
Comments: All biweekly TEM Reports and PZM Report submitted for this month.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/26/2011  
Comments: All TEM data and PZM data for the month of December OK.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/15/2011  
Comments: RP submitted a signed signature page to the DTSC that fulfilled DTSC's comment. DTSC accepts the 2010 Semiannual Groundwater Monitoring Report into its records.

Completed Area Name: Area I  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 09/09/2011  
Comments: DTSC approves Work Plan with modifications/conditions.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 03/30/2011  
Comments: Reviewed biweekly airborne asbestos monitoring report dated January 19, 2011 monitoring from January 4 through January 14, 2011. Data was collected from six (6) air monitoring stations on Site. There were a total of five (5) trigger-level exceedences for airborne asbestos during this period. The trigger-level is set for 0.016 s/cc. On January 4, 2011, AMS6U had a reading of 0.016. On January 10, 2011, AMS1 had a reading of 0.0312, and AMS2 had a reading of 0.0205. On January 14, 2011, AMS2 had a reading of 0.0287 and AMS6U had a reading of 0.0169. PG&E held a public meeting on January 20, 2011 to discuss these series of exceedences and the action being taken to reduce these instances. Additional water misters were placed in Area A around the truck path. Physical sheeting is being placed in some areas Areas A and J. Additional soil tack is also being placed on top of the physical sheeting. When all of these exceedences were encountered, we were either contacted by email or by phone. Report OK. If additional monitoring reports show high levels of asbestos in air, work activities may need to be decreased in these areas. MH 1.25.11

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 04/29/2011  
Comments: Sample collection completed.

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan

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**PG & E HUNTERS POINT (Continued)**

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Completed Date: 03/07/2011  
Comments: PG&E submitted it's plans to conduct additional soil sampling in Area B to better define the extent of soil containing dioxins above the site cleanup goal.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 03/30/2011  
Comments: All bi-weekly reports and PZM report OK. MH 3.30.11

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/02/2011  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/24/2011  
Comments: Reviewed Perimeter Zone Monitoring Report dated May 19, 2011. Air monitoring was conducted at six (6) monitoring stations located around the perimeter of the site. Air was monitored for airborne asbestos, metals, dust, SVOCs, and VOCs. On April 14, 2011, asbestos was detected at 0.0391 s/cc at air monitoring station AMS 6U which is above the air monitoring goal of 0.016 s/cc. Additional soil tackifier and water was applied to the area when the exceedance occurred. No other exceedances were detected. DTSC accepts the results and analysis of the Report. MH 5.24.11

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 06/30/2011  
Comments: Reports accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/28/2011  
Comments: Bi-weekly air monitoring reports for June 2011 and Partial June 2011 Monthly Air Monitoring Report accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/28/2011  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Work Notice  
Completed Date: 12/22/2009  
Comments: Work Notice for the time critical removal action work mailed out today.

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**PG & E HUNTERS POINT (Continued)**

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Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/01/2009  
Comments: Report accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 08/25/2011  
Comments: July 2011 Bi-weekly TEM Reports and Monthly Report accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 09/30/2011  
Comments: Two bi-weekly TEM Reports and monthly summary report accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/14/2011  
Comments: Report accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/30/2011  
Comments: Report covers air monitoring conducted between October 1 through October 31, 2011 for asbestos (TEM), dust, metals, semi-volatile organic compounds and volatile organic compounds at four perimeter monitoring stations around the site and four additional mobile air monitoring stations.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/04/2012  
Comments: Reports document air monitoring conducted between November 1 and November 30, 2011 from four fixed and two mobile air monitoring stations at the Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 08/15/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 04/14/2011  
Comments: PG&E letter notifying DTSC that David Harnish is replacing Loren Loo as PG&E's project manager for the Hunters Point Power Plant site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

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**PG & E HUNTERS POINT (Continued)**

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Completed Document Type: Ecological Risk Assessment Report

Completed Date: 10/06/2011

Comments: Not reported

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Other Report

Completed Date: 01/27/2012

Comments: The report presents the results of the air sampling conducted in December 2011. One (1) result on December 9 of 0.0469 s/cc at 6U exceeded the screening level of 0.016 s/cc for airborne asbestos possibly due to upwind and offsite excavation activities unrelated to this project. On 12/29/2011, the average daily photometer reading (0.845 mg/m3) exceeded the Project Monitoring Goal of 0.5 mg/m3. There were no other exceedances of screening criteria. On 12/17 and 12/21, the downwind monitor in Area A (AMS6D) was shut down before the upwind monitor (AMS6U) because the battery ran low or the replacement batteries would not power up the stations and SCA had to get another replacement battery from the Annex (URS office).

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Other Report

Completed Date: 02/28/2012

Comments: Provides results for air monitoring conducted in January 2012. No air monitoring was conducted on 1/2/2012 because the entire site was shut down for the New Year holiday. All soil disturbance activities were completed on 1/19/2012, so air monitoring was discontinued. Airborne asbestos exceeded the site screening level of 0.016 s/cc on two days (air monitoring station #2 (0.0177 s/cc on 1/17/2012 and 0.0218 s/cc on 1/14/2012). Based upon the east/southeast prevailing wind direction, this is believed to be related to offsite upwind non-projected related activities. However, additional dust control measures, including suspending work, applying more water and soil tackifier, etc. were implemented for pertinent onsite-related activities.

Completed Area Name: Area B

Completed Sub Area Name: Not reported

Completed Document Type: Site Characterization Report

Completed Date: 04/25/2012

Comments: Additional soil sampling and analysis conducted in support of the remedial design. Email message sent to PG&E concurring with the responses and clarifying that in the RTC to 2a, the trench logs for SB-31 and SB-37 don't mention encountering the tank ring. Therefore, there isn't documentation in the report to support the text on page 4 which notes no apparent staining and concrete in good condition. However, the tank ring will likely be exposed during the Area B-South soil excavation, so this isn't a significant issue.

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Voluntary Cleanup Agreement

Completed Date: 03/27/2007

Comments: Entered into Voluntary Cleanup Agreement Docket No. HSA-VCA 06/07-144 with Pacific Gas & Electric Company for the investigation and cleanup of the Hunters Point Power Plant Site.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \* Discovery  
Completed Date: 08/14/1981  
Comments: FACILITY IDENTIFIED FROM RWQCB FILES

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Amendment - Order/Agreement  
Completed Date: 07/08/2008  
Comments: VCA amended to add two additional areas (I & J) and to update cost estimate.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: AB 2061 - Designation  
Completed Date: 08/29/2008  
Comments: Site Designation Committee approved PG&E's application requesting that Assessor Parcel Number 4570-024 be added to the previous designation specified in Resolution Number 07-05 (designated on June 28, 2007 and including APN(s) 4571-001, 4580-002, 4603A-005, 4623A-002 and 4647A-010) and that the Administering Agency continue to be DTSC.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Initial Study/ Neg. Declaration  
Completed Date: 06/10/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Notice of Exemption  
Completed Date: 11/30/2009  
Comments: Notice of Exemption for the Time-Critical Removal Action to install product skimming trenches at the PG&E HPPP Site to remove floating product from the water table.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Amendment - Order/Agreement  
Completed Date: 08/17/2012  
Comments: VCA Amended to clarify property included in the VCA and to add portion of PG&E substation property formerly used by Habitat for Humanity as a laydown area.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 11/09/2011  
Comments: 2011/2012 DTSC Oversight Cost Estimate sent to PG&E

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/30/2012  
Comments: Cost estimate for project codes 201724 and 201869

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Future Area Name: Area B  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2013  
Future Area Name: Area E  
Future Sub Area Name: Not reported  
Future Document Type: Site Characterization Report  
Future Due Date: 2013  
Future Area Name: Area J  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2013  
Future Area Name: Area B  
Future Sub Area Name: Not reported  
Future Document Type: Operations and Maintenance Plan  
Future Due Date: 2013  
Future Area Name: Area A  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2013  
Future Area Name: Area A  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2013  
Future Area Name: Area J  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2013  
Future Area Name: Area J  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2014  
Future Area Name: Area I  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2013  
Future Area Name: Areas C & D  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2013  
Future Area Name: Area B  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2013  
Future Area Name: Area H  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2013  
Future Area Name: Area B  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2014  
Future Area Name: Areas C & D  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2013  
Schedule Area Name: Area I

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Schedule Sub Area Name: Not reported  
Schedule Document Type: Remedial Action Completion Report  
Schedule Due Date: 06/30/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: Area J  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Design/Implementation Workplan  
Schedule Due Date: 04/30/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: Area H  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Land Use Restriction  
Schedule Due Date: 02/20/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: Area I  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Land Use Restriction  
Schedule Due Date: 04/20/2013  
Schedule Revised Date: Not reported

**ENVIROSTOR:**

Site Type: Voluntary Cleanup  
Site Type Detailed: Voluntary Cleanup  
Acres: 30.3  
NPL: NO  
Regulatory Agencies: SMBRP  
Lead Agency: SMBRP  
Program Manager: Janet Naito  
Supervisor: Barbara Cook  
Division Branch: Cleanup Berkeley  
Facility ID: 38490002  
Site Code: 201869  
Assembly: 17  
Senate: 11  
Special Program: Designation of Single Agency  
Status: Active  
Status Date: 03/27/2007  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: Not reported  
Latitude: 37.73771  
Longitude: -122.3782  
APN: 4570-024, 4570024, 4571-001, 4571001, 4580-002, 4580002, 4603A-005, 4603A005, 4623A-002, 4623A002, 4647A-010, 4647A010  
Past Use: ELECTRIC GENERATION/SUBSTATION, LDF  
Potential COC: 30001, 30013, 30018, 30019, 30024, 3002502  
Confirmed COC: 30001,30013,30019,30024,3002502,30018  
Potential Description: OTH, SOIL  
Alias Name: PACIFIC GAS & ELECTRIC CO  
Alias Type: Alternate Name  
Alias Name: PG&E  
Alias Type: Alternate Name  
Alias Name: PG&E Hunters Point Power Plant  
Alias Type: Alternate Name  
Alias Name: 4570-024  
Alias Type: APN  
Alias Name: 4570024

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Alias Type: APN  
Alias Name: 4571-001  
Alias Type: APN  
Alias Name: 4571001  
Alias Type: APN  
Alias Name: 4580-002  
Alias Type: APN  
Alias Name: 4580002  
Alias Type: APN  
Alias Name: 4603A-005  
Alias Type: APN  
Alias Name: 4603A005  
Alias Type: APN  
Alias Name: 4623A-002  
Alias Type: APN  
Alias Name: 4623A002  
Alias Type: APN  
Alias Name: 4647A-010  
Alias Type: APN  
Alias Name: 4647A010  
Alias Type: APN  
Alias Name: 110033611456  
Alias Type: EPA (FRS #)  
Alias Name: 201724  
Alias Type: Project Code (Site Code)  
Alias Name: 201869  
Alias Type: Project Code (Site Code)  
Alias Name: 38490002  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 06/20/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/18/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 06/07/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Date: 06/07/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 12/05/2011  
Comments: DTSC verbally approved the installation of five groundwater monitoring wells to replace the 13 wells abandoned in Areas A, B, C, D, and I. DTSC will review the sampling results and groundwater flow directions. Based upon the results, additional monitoring wells may be required. Wells are to be reinstalled and sampled by the end of January 2012.

Completed Area Name: Area J  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 04/06/2012  
Comments: Work Plan submitted to DTSC for its files. No review requested.

Completed Area Name: Area I  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Plan w/ESD  
Completed Date: 08/20/2012  
Comments: DTSC approved the Area I RAP Amendment for public comment.

Completed Area Name: Area I  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 07/10/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Work Notice  
Completed Date: 06/20/2012  
Comments: Work Notice announcing the potential for the contractor to work on Saturdays is being sent to potentially impacted individuals, businesses and key community contacts.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Installation Workplan  
Completed Date: 07/12/2012  
Comments: DTSC approved installation of three additional groundwater monitoring wells on the adjacent White Cap property to better delineate the extent of the petroleum hydrocarbon groundwater plume.

Completed Area Name: Area I  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Notice  
Completed Date: 07/10/2012  
Comments: Public Notice to run in the San Francisco Chronicle and Sun Reporter on 7/13/2012.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

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**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Document Type: Other Report  
Completed Date: 08/21/2012  
Comments: During the reporting period, there was two TEM test reports (July 10th, and July 24th 2012) for airborne asbestos that exceeded 0.016 s/cc., the trigger level established for this project. Corrective actions were taken and asbestos levels returned to below the trigger level in each instance. All other air samples during this time frame were below the monitoring goals.

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 09/05/2012  
Comments: Not reported

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 09/05/2012  
Comments: Not reported

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 09/05/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 09/06/2012  
Comments: Not reported

Completed Area Name: Area E  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 11/29/2012  
Comments: Not reported

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 11/09/2012  
Comments: DTSC approves the implementation of the soil vapor sampling plan with modifications specified in the letter that were agreed upon between DTSC and PG&E.

Completed Area Name: Area I  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 10/12/2012  
Comments: Approved installation of four replacement monitoring wells in Area I.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 11/01/2012

Map ID  
Direction  
Distance  
Elevation

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Database(s)

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EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Comments: Approved workplan for groundwater sampling during the second semiannual 2012 monitoring event with one modification.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 12/18/2012  
Comments: Letter Report documents PG&E's observations and the response actions implemented to address an apparent petroleum hydrocarbon release observed on December 5, 2012 in the utility tunnel beneath Evans Avenue adjacent to the PG&E Hunters Point Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/30/2013  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/01/2012  
Comments: During the August 2012 reporting period, there were two TEM test reports for airborne asbestos that were reported as overloaded by Asbestos TEM Laboratories, INC. Testing protocols require that any sample with >20% loading is considered overloaded. On Tuesday August 7th, 2012, AMS-7D had a particulate loading of >20% with non-mineral fibers which is consistent with the hydroseal application which took place at that time. A heavy layer of hydroseal soil tacking material was applied to control dust during the sampling time frame. The airborne respirable dust (mg/m3) analyzed by Dustrak photometer during the work day had a maximum reading of 0.052 mg/m3 which is below the project goal. On Thursday August 16th, 2012 AMS 7D had a particulate loading of 40% consisting of gypsum, clay and fine grain quartz particulate. Clean import fill was being stock piled in the vicinity of AMS 7D during the sample time frame. The airborne respirable dust analyzed by Dustrak photometer had a maximum reading of 0.135 mg/m3 which is below the project goal. In order to minimize particulate loading in the future, all clean import fill will be stockpiled at least 75 feet from the AMS and additional misting and dust spray will be employed during stockpiling. All other air samples during this time frame were below the monitoring goals.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Workplan  
Completed Date: 07/18/2007  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Notice  
Completed Date: 08/29/2007  
Comments: Postcard language approved and sent to PG&E for distribution to site mailing list. Postcard mailed out to the community on 9/4/07.

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

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EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/15/2007  
Comments: Document approved with comments. Significant increase in TPH as diesel and Bunker C levels in the extraction well. No releases noted into the intake lagoon from July 16, 2007 to end of reporting period.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/13/2004  
Comments: Report submitted as part of MOA Application.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Assessment Report  
Completed Date: 04/30/1997  
Comments: Phase I Environmental Site Assessment prepared by Camp, Dresser & McKee dated April 1997.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Report  
Completed Date: 08/31/1999  
Comments: Phase II Environmental Site Assessment submitted as part of MOA application.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 01/25/2008  
Comments: Quarterly O&M Report (September through December 2007) documents operating history of extraction well EW-2 and monitoring conducted to evaluate the concentrations of petroleum hydrocarbons present in the area of EW-2. Intermittent small-volume releases, identified by the presence of sheen on the intake water lagoon, occurred from September 2007 until October 25, 2007. Since that time, no releases have been noted. All releases are fully contained by the four-part boom and absorbent system deployed in the intake water lagoon.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 09/10/2009  
Comments: RI Report approved with caveats. There are data gaps in the site characterization for Areas I and J that could be filled as part of pre-design sampling. There are comments that should be addressed as part of the subsequent predictive ecological risk assessment. Further action is needed to address chemicals of concern in soil, soil gas and groundwater.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Plan  
Completed Date: 06/10/2010  
Comments: Final Remedial Action Plan approved. Remedy calls for removal of vadose zone soil containing chemicals of concern above residential

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

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**PG & E HUNTERS POINT (Continued)**

**S100351554**

screening values, treatment of free-phase petroleum hydrocarbons, and paving of historic fill material to address concerns about potential for future exposure to naturally-occurring asbestos in the fill material.

Completed Area Name: Area H  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 05/30/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 04/11/2008  
Comments: The GWES began full operation on February 6, 2007. Since start up, the system has processed 84,251 gallons, for an average extraction rate of 0.17 gpm. No free product was detected in any of the wells monitored during this reporting period. No releases to the intake water lagoon have been observed since October 25, 2007. Scale build-up in the pump reduced the pumping rate this quarter. The scale was removed March 13, 2008. Pump will now be checked weekly and cleaned, as needed, to ensure its efficiency.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 09/18/2007  
Comments: Report summarizes the data collected from startup through May 1, 2007 for the groundwater extraction system installed to address the release of petroleum hydrocarbons to the intake lagoon. DTSC approved this report with modifications.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Tank Removal Report  
Completed Date: 07/17/2007  
Comments: At DTSC's request, the October 2004 draft report prepared for the Water Board was finalized and signed.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 12/10/2007  
Comments: Air Monitoring Data Reports indicated that total dust, respirable dust, particulates, and metals in air are below screening values.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 12/10/2007  
Comments: Air Monitoring Data for October 2007 continues to show all constituents measured below screening levels.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Date: 03/21/2008  
Comments: This summary report includes air monitoring data from February 1, 2008 through February 29, 2008. None of the respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded the footnoted air monitoring goals during the referenced monitoring period. Twenty (20) days of air monitoring is included in this reporting period. No site work or air monitoring was performed on February 18, 2008 during observation of the Presidents Day holiday. Total dust air samples collected on February 19, 2008 were lost following receipt at the analytical laboratory. PCM, chromium, lead, nickel and total dust air samples collected on February 22, 2008 were lost during shipment to the analytical laboratory.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/03/2008  
Comments: First Quarter GMR is accepted. Historical data tables will be included in subsequent groundwater monitoring reports.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 07/24/2008  
Comments: DTSC approved the Public Participation Plan for the Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 04/21/2008  
Comments: Report provides air monitoring data from March 3, 2008 through March 31, 2008. None of the average respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded the air monitoring goals during the referenced monitoring period. There was a momentary spike that exceeded the respirable dust goal on one (1) of the twenty-one (21) days of monitoring at Station 2. The spike was short in duration (~1 minute). The spike was attributed to a fire protection vendor working onsite on March 27, 2008. Dry powdered fire suppressant was discharged from a pressure relief valve during servicing of equipment near AMS 2.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/14/2008  
Comments: Report provides air monitoring data from November 1, 2007 through November 30, 2007. None of the respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded air monitoring goals during the referenced monitoring period. Air samples collected at AMS 3 and 4 on November 30th were voided due to a sampling error that damaged the filter media cassette. Twenty (20) days of air monitoring is included in this reporting period. No site work or air monitoring was performed on November 22 and 23, 2007 during observation of the Thanksgiving holiday.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 06/15/2012  
Comments: DTSC concurred with Remedial Designs.

Completed Area Name: Areas C & D  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 10/28/2011  
Comments: Not reported

Completed Area Name: Area A  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 11/16/2011  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 02/01/2008  
Comments: Report provides air monitoring data from December 3, 2007 through December 28, 2007. None of the respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded air monitoring goals during the referenced monitoring period. Eighteen (18) days of air monitoring is included in this reporting period. No site work or air monitoring was performed on December 24, 25 or 31, 2007 during the Christmas and New Year holidays.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 02/22/2008  
Comments: Report provides air monitoring data for 22 days from January 2, 2008 through January 31, 2008. None of the respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded air monitoring goals during the referenced monitoring period. No site work or air monitoring was performed on January 1, 2008 during observation of the New Year holiday. PCM, chromium, lead, nickel and total dust air samples were voided on January 4th due to water damage from a strong weather event. Active abatement and demolition were suspended during the late morning hours of January 4th due to safety concerns.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/29/2008  
Comments: Summarizes air data from April 1 to April 30, 2008. A hard disk failure resulted in loss of weather monitoring data at Stations 1, 2, and 3 from April 4th through April 22nd and real-time dust monitoring data (respirable dust) generated at AMS 1 - 4 from April 7th through April 23rd. Additional backup procedures and systems have been put in place to prevent this from happening again. None of the average respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded the air monitoring goals during this twenty-two day monitoring period.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 06/23/2008

Comments: This summary report includes air monitoring data from May 1, 2008 through May 30, 2008. None of the average respirable dust, total dust, airborne fibers by PCM, chromium, lead, or nickel results exceeded the air monitoring goals during the twenty-one (21) day monitoring period.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 12/16/2008

Comments: Fact sheet summarizing the results of the Remedial Investigation and Feasibility Study and announcing a community briefing on January 13, 2009. The fact sheet was translated into Chinese, Spanish, Samoan. This is the date the fact sheet was approved by DTSC's public participation specialist and sent to PG&E for reproduction and mailing. Copies should be mailed out on 12/26/2008.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/18/2008

Comments: This summary report includes air monitoring data from June 2, 2008 through June 30, 2008. None of the average respirable dust, total dust, chromium, lead, or nickel results exceeded the footnoted air monitoring goals during the twenty-three (23) day monitoring period. The airborne fibers by PCM results at AMS 4 was slightly above the air monitoring goal on June 18th, but was significantly less than the California Department of Occupational Safety and Health's (DOSH's) permissible exposure limit (PEL). There was also a momentary spike that exceeded the respirable dust goal at AMS 4. The spike was short in duration lasting approximately four (4) minutes. The spikes were attributed to the felling of Boiler 3 on this day. Additional pre-wetting to minimize dust emissions will be incorporated into preparation work prior to the felling of the remaining boilers at the site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 08/25/2008

Comments: This summary report includes air monitoring data from July 1, 2008 through July 31, 2008. None of the airborne fibers by PCM, average respirable dust, total dust, chromium, lead, or nickel results exceeded the footnoted air monitoring goals during the twenty-five (25) day monitoring period. There were momentary spikes noted on July 18th that exceeded the respirable dust goal at AMS 3 & 4. The spikes were short in duration lasting approximately thirty (30) minutes. The spikes were attributed to an off-site fire west of property on this day. Visible smoke from the fire was noted crossing the site during the afternoon hours.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Document Type: Other Report  
Completed Date: 09/26/2008  
Comments: This summary report includes air monitoring data from August 1, 2008 through August 30, 2008. None of the airborne fibers by PCM, average respirable dust, total dust, chromium, lead, or nickel results exceeded the footnoted air monitoring goals during the twenty-three (23) day monitoring period. There were momentary spikes noted on August 1st, 7th, 15th, and 21st that exceeded the respirable dust goal at AMS 4 (Southeast monitoring station). Most of the spikes were short in duration lasting five (5) or fewer minutes. Multiple spikes were measured during a period of approximately one (1) hour on August 21st. Spikes on the 1st and 7th were likely associated with vehicular traffic near the air monitoring station. The spikes on the 15th and 21st are associated with the demolition of the oily water separator located near the air monitoring station. Air samples collected at AMS 4 on August 15th, 19th, and 21st were over-loaded with particulate and not suitable for chemical analysis. Particulate from demolition of the oily-water separator and associated concrete pedestals was the likely contributor to the sample overloading.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 01/28/2010  
Comments: Fact sheet approved by the Public Participation Specialist. Comment period will run from 2/5/2010 - 3/8/2010, public meeting to be held on 2/23/2010.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 10/28/2008  
Comments: Provides perimeter air monitoring data from September 2, 2008 through September 30, 2008. None of the airborne fibers by PCM, average respirable dust, total dust, chromium, lead, or nickel results exceeded the air monitoring goals during the twenty-four (24) day monitoring period. Brief spikes were noted on September 2nd at AMS 3 and on September 25th at AMS 3 and 4 that exceeded the respirable dust goal for a minute or less.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/20/2009  
Comments: Although issues were raised, they should be addressed in the next semiannual monitoring report. Problems with sampling should be corrected in the next sampling event.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Pilot Study/Treatability Workplan  
Completed Date: 12/22/2009  
Comments: Pilot Test workplan involves bench scale and pilot testing of chemical oxidation treatment of petroleum hydrocarbons within the "smear" zone.

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 04/09/2009  
Comments: Agree to address comments in subsequent report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 03/26/2009  
Comments: DTSC approved a workplan to conduct additional investigation of the petroleum groundwater plume on Areas B and I and on the adjacent White Cap Construction property.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/26/2008  
Comments: Report provides air monitoring data from October 1, 2008 through October 31, 2008. None of the airborne fibers by PCM, average respirable dust, total dust, chromium, lead, or nickel results exceeded the air monitoring goals during the twenty-three (23) day monitoring period. There were momentary spikes noted on October 7th, 22nd, and 23rd at AMS 4 and on October 22nd at AMS 2 that exceeded the respirable dust goal. All of the spikes were of short duration lasting for three (3) or fewer minutes. Respirable dust data for October 3rd is not available for AMS 4 due to a memory error with the field instrumentation. The data logger used at AMS 4 on October 3rd was inspected and verified functional before returning to the field the following day.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/02/2009  
Comments: This summary report includes air monitoring data from November 3, 2008 through November 26, 2008. None of the airborne fibers by PCM, average respirable dust, total dust, chromium, lead, or nickel results exceeded the footnoted air monitoring goals during the twenty-two (22) day monitoring period.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/27/2009  
Comments: The report summarizes air monitoring data from December 1, 2008 through December 31, 2008. None of the airborne fibers by PCM, total dust, chromium, lead, or nickel results exceeded the air monitoring goals during this period. There were two momentary occurrences, lasting for one minute, noted on December 1st and 5th at AMS 4 that exceeded the respirable dust goal. Handling of crushed concrete contributed to the event on December 1st. Site cleaning with a street sweeper contributed to the December 5, 2008 event. The respirable dust concentrations as measured at AMS 4 on December 1st and 5th were more than 300 times below the California Department of Occupational Safety and Health (DOSH) Permissible Exposure Limit (PEL).

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 02/26/2009  
Comments: This summary report includes air monitoring data from January 5, 2009 through January 30, 2009. None of the airborne fibers by PCM, total dust, chromium, lead, or nickel results exceeded air monitoring goals during the twenty (20) day monitoring period. There was one occurrence noted on January 23rd at AMS 1 that exceeded the Site's respirable dust goal lasting one minute. However, this concentration was more than 150 times below the Cal-OSHA Permissible Exposure Limit (PEL). This occurrence was likely due to vehicle traffic.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 04/30/2009  
Comments: This summary report includes air monitoring data from March 2, 2009 through March 31, 2009. The total dust, average respirable dust, chromium, lead, and nickel results were below air monitoring goals during the twenty-two (22) day monitoring period. All of the lead air samples were reported below the laboratory detection limit. However, due to shortened air monitoring durations on March 2nd and 7th, the laboratory detection limit for lead was above the lead air monitoring goal for those two days. Respirable dust data is not available for March 27th at AMS 2 due to a corrupted memory header in the electronic instrument that was fixed by the next day. The respirable dust concentration at AMS 2 on March 11, 2009 exceeded the monitoring goal for a one minute duration during the morning likely due to adjacent excavation work to access a gas line. The airborne fibers result was reported above the site's air monitoring goal on March 30th at AMS 1. There was not any site work within several hundred feet of their monitoring station. The result although above the air monitoring goal, was several orders of magnitude less than the Cal/OSHA's permissible exposure level.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 06/01/2009  
Comments: This report summarizes air monitoring data from April 1, 2009 through April 30, 2009. The total dust, average respirable dust, chromium, lead, and nickel results were below the footnoted air monitoring goals during the twenty-two (22) day monitoring period. All of the lead air samples were reported below the laboratory detection limit. However, the laboratory detection limit was at or above the lead air monitoring goal for the samples collected at AMS 7 on April 28th, 29th, and 30th due to shortened air monitoring durations on each day. The respirable dust concentration at AMS 4 on April 2, 2009 exceeded the monitoring goal for a one minute duration during the afternoon. The elevated dust concentration was attributed to higher than average wind and the movement of tarps for soil stockpiles near the end of site operations for the day. The airborne fibers as determined by phase contrast microscopy (PCM) sample collected at AMS 2 on April 21st was reported as overloaded with particulate. Excavation within a few feet of AMS 2 was performed on April 21st and increased the loading in this air sample.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

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**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 12/30/2009  
Comments: DTSC approved the Feasibility Study Report that recommends (1) removal of soil to remove contaminants from operations at the Site; (2) in-situ chemical oxidation to address a petroleum product plume in groundwater; and (3) capping of the site until the Site is redeveloped to address issues associated with naturally-occurring asbestos and metals associated with the serpentinite materials used as fill material when the Site filled in.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Report  
Completed Date: 02/03/2010  
Comments: Report supplements information developed in the Remedial Investigation. Soil gas, optical screening, chemical, geotechnical and petro-physical testing of soils and analysis of groundwater to better define the extent of the free product plume.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Time Critical Removal Action Workplan  
Completed Date: 11/30/2009  
Comments: TCRA Work Plan approved for implementation. Work will begin in late-December 2009, concurrent with public comment period on the administrative record for this action.

Completed Area Name: Area A  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 09/29/2011  
Comments: Not reported

Completed Area Name: Area A  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 07/11/2012  
Comments: Not reported

Completed Area Name: Areas C & D  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 07/11/2012  
Comments: Not reported

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 07/18/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/02/2012

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

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EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Comments: Not reported

Completed Area Name: Area J  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 07/11/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Pilot/Treatability Study Report  
Completed Date: 07/24/2012  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 09/01/2009  
Comments: Report covers the period from July 1 to July 31, 2009. The total dust, respirable dust, peak respirable dust, airborne fibers by PCM, chromium, lead, and nickel results were below the footnoted air monitoring goals during the twenty-two (22) day monitoring period. Air testing for airborne asbestos fibers by TEM was implemented on July 17, 2009. Air testing for airborne fibers by PCM was suspended on July 21, 2009. Airborne fiber analysis by TEM is more sensitive than PCM and is capable of identifying and confirming the presence of asbestos fibers by its mineralogy. The transition to airborne fiber analysis by TEM was implemented based upon the requirements of the Bay Area Air Quality Management District (BAAQMD) to performed work on the site that will disturb naturally occurring asbestos (NOA) starting on July 22, 2009. The airborne fiber concentrations by TEM reported at AMS 3 and 4 on July 31st was most likely attributed to heavier than average truck traffic accessing the site through the Evans Street entry gate and traveling near the southern perimeter of the property. More frequent access road and stockpile wetting was implemented to reduce airborne asbestos fiber concentrations.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 09/02/2009  
Comments: Report presents air monitoring data for the period from June 1, 2009 through June 30, 2009. The total dust, average respirable dust, peak respirable dust, airborne fibers, chromium, lead, and nickel results were below the footnoted air monitoring goals during the twenty-two (22) day monitoring period.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 10/22/2009  
Comments: This summary report includes air monitoring data from September 1 - 30, 2009. The total dust, respirable dust, peak respirable dust, chromium, lead and nickel results were below air monitoring goals during the 21 work days monitored.

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

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**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/30/2009  
Comments: Report presents air monitoring results for air samples collected during the 20 working days between October 1 and October 30, 2009. Supplemental air monitoring was conducted during the 11 days when work was conducted in Area A. The total dust, average respirable dust, chromium, lead, and nickel results were below project air monitoring goals. Respirable dust data is not available for October 12th at Station AMS 1 due to a field error during downloading of the instrument. Abbreviated data is available for October 22nd at Station AMS 4 and October 28th and 30th at Station AMS 3. Data logging stopped or was intermittent during the sampling sessions due to failing circuit boards in both instruments. The faulty instruments at AMS 3 and 4 were temporarily replaced with other functioning instruments. The manufacturer has replaced the failed circuit boards in both of the faulty instruments.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 12/22/2009  
Comments: Air Monitoring Report for November 2009 continues to show particulates below screening levels

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 02/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Notice  
Completed Date: 01/28/2010  
Comments: Public Participation Specialist approved the public notice for publication on 2/5/2010.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 02/03/2010  
Comments: PG&E collected samples around 6 power poles and 1 support pole in Area A to determine the extent of potential chemicals of concern that may be present in the vicinity of the poles.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 04/13/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/09/2010  
Comments: Report approved with minor changes to the sounding, sampling and

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MAP FINDINGS

Site

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**PG & E HUNTERS POINT (Continued)**

**S100351554**

reporting requirements.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 06/28/2010  
Comments: Letter approving report with modifications and caveats.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 06/21/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 04/19/2010  
Comments: February 2010 air monitoring report OK. Total dust, respirable dust, chromium, lead, and nickel results were below air monitoring goals for the 19 day monitoring period. Air monitoring was administered in 4 fixed locations (AMS 1-4) and 3 supplemental locations (AMS 6-8). Air monitoring stations 6-8 were operational during field work activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/28/2010  
Comments: Approved

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/28/2010  
Comments: April 2010 air monitoring report approved. There was one maximum detection of respirable dust above the 0.5 mg/m3 screening level, but the average for the air monitoring station for that day was below 0.01 mg/m3.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/15/2011  
Comments: RP's response to comments addresses DTSC's comments. DTSC accepts the 2010 Semiannual Groundwater Monitoring Report into its records.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Pilot/Treatability Study Report  
Completed Date: 10/28/2010

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

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**PG & E HUNTERS POINT (Continued)**

**S100351554**

Comments: DTSC approved the report and required submittal of the full scale design plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 08/03/2010  
Comments: Report OK. Call with CSiu of SCA Environmental to address comment dated 7.7.10. No significant excavation activities and no short term air monitoring data were collected for the month of May.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/30/2010  
Comments: Perimeter Zone Monitoring Report OK. Asbestos, total chromium, lead, nickel, dust (total), dust (respirable), SVOC, and VOC data all below Project Monitoring Levels. MH 7.30.10

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 08/06/2010  
Comments: Workplan approved. MH 8.6.2010

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 08/30/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 09/29/2010  
Comments: Reports OK. Airborne asbestos, total dust, respirable dust, chromium, nickel, and lead all below project monitoring goals. MH 9.29.10

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 01/24/2011  
Comments: DTSC reviewed/approved changes in response to our comments on the draft document on 12/27/2010. Additional change to AVS/SEM method agreed to on 1/24/2011.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Ecological Risk Assessment Report  
Completed Date: 03/02/2012

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

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Database(s)

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**PG & E HUNTERS POINT (Continued)**

**S100351554**

Comments: Predictive Ecological Risk Assessment (PERA) for Area G (Intertidal Zone Surface Water and Sediments) approved. PERA found no significant risk for ecological receptors that utilize the mud flats of both the Site-specific background area and Area G. 2/28/2012 Report resubmitted 7/2/2012 to correct an error on Page 1, section 1, Paragraph 1, last sentence. Area G includes any land below the maximum high tide mark.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 04/21/2011  
Comments: DTSC approved the insitu chemical oxidation pilot study work plan for implementation with additional requirements.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/29/2010  
Comments: PZM Report for October 2010 OK. Air monitoring was conducted from the period of October 1-30, 2010 for airborne asbestos, dust, metals, and semi-volatiles and volatiles at four (4) air monitoring stations. One spike for respirable dust that exceeded the project monitoring goal was measured on October 26, 2010. However, the average respirable dust for the rest of the day was well below the project monitoring goal and similar to the average respirable dust for other days indicating that this is an isolated event.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 12/10/2010  
Comments: All biweekly TEM Reports and PZM Report submitted for this month.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 01/26/2011  
Comments: All TEM data and PZM data for the month of December OK.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/15/2011  
Comments: RP submitted a signed signature page to the DTSC that fulfilled DTSC's comment. DTSC accepts the 2010 Semiannual Groundwater Monitoring Report into its records.

Completed Area Name: Area I  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 09/09/2011  
Comments: DTSC approves Work Plan with modifications/conditions.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Date: 03/30/2011  
Comments: Reviewed biweekly airborne asbestos monitoring report dated January 19, 2011 monitoring from January 4 through January 14, 2011. Data was collected from six (6) air monitoring stations on Site. There were a total of five (5) trigger-level exceedences for airborne asbestos during this period. The trigger-level is set for 0.016 s/cc. On January 4, 2011, AMS6U had a reading of 0.016. On January 10, 2011, AMS1 had a reading of 0.0312, and AMS2 had a reading of 0.0205. On January 14, 2011, AMS2 had a reading of 0.0287 and AMS6U had a reading of 0.0169. PG&E held a public meeting on January 20, 2011 to discuss these series of exceedences and the action being taken to reduce these instances. Additional water misters were placed in Area A around the truck path. Physical sheeting is being placed in some areas Areas A and J. Additional soil tack is also being placed on top of the physical sheeting. When all of these exceedences were encountered, we were either contacted by email or by phone. Report OK. If additional monitoring reports show high levels of asbestos in air, work activities may need to be decreased in these areas. MH 1.25.11

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 04/29/2011  
Comments: Sample collection completed.

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 03/07/2011  
Comments: PG&E submitted it's plans to conduct additional soil sampling in Area B to better define the extent of soil containing dioxins above the site cleanup goal.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 03/30/2011  
Comments: All bi-weekly reports and PZM report OK. MH 3.30.11

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/02/2011  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/24/2011  
Comments: Reviewed Perimeter Zone Monitoring Report dated May 19, 2011. Air monitoring was conducted at six (6) monitoring stations located around the perimeter of the site. Air was monitored for airborne asbestos, metals, dust, SVOCs, and VOCs. On April 14, 2011, asbestos was detected at 0.0391 s/cc at air monitoring station AMS 6U which is above the air monitoring goal of 0.016 s/cc. Additional soil tackifier and water was applied to the area when the exceedance

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

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**PG & E HUNTERS POINT (Continued)**

**S100351554**

occurred. No other exceedances were detected. DTSC accepts the results and analysis of the Report. MH 5.24.11

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 06/30/2011  
Comments: Reports accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/28/2011  
Comments: Bi-weekly air monitoring reports for June 2011 and Partial June 2011 Monthly Air Monitoring Report accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/28/2011  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Work Notice  
Completed Date: 12/22/2009  
Comments: Work Notice for the time critical removal action work mailed out today.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/01/2009  
Comments: Report accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 08/25/2011  
Comments: July 2011 Bi-weekly TEM Reports and Monthly Report accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 09/30/2011  
Comments: Two bi-weekly TEM Reports and monthly summary report accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/14/2011  
Comments: Report accepted.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/30/2011

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Comments: Report covers air monitoring conducted between October 1 through October 31, 2011 for asbestos (TEM), dust, metals, semi-volatile organic compounds and volatile organic compounds at four perimeter monitoring stations around the site and four additional mobile air monitoring stations.

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Other Report

Completed Date: 01/04/2012

Comments: Reports document air monitoring conducted between November 1 and November 30, 2011 from four fixed and two mobile air monitoring stations at the Site.

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Other Report

Completed Date: 08/15/2012

Comments: Not reported

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: \*Correspondence - Received

Completed Date: 04/14/2011

Comments: PG&E letter notifying DTSC that David Harnish is replacing Loren Loo as PG&E's project manager for the Hunters Point Power Plant site.

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Ecological Risk Assessment Report

Completed Date: 10/06/2011

Comments: Not reported

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Other Report

Completed Date: 01/27/2012

Comments: The report presents the results of the air sampling conducted in December 2011. One (1) result on December 9 of 0.0469 s/cc at 6U exceeded the screening level of 0.016 s/cc for airborne asbestos possibly due to upwind and offsite excavation activities unrelated to this project. On 12/29/2011, the average daily photometer reading (0.845 mg/m<sup>3</sup>) exceeded the Project Monitoring Goal of 0.5 mg/m<sup>3</sup>. There were no other exceedances of screening criteria. On 12/17 and 12/21, the downwind monitor in Area A (AMS6D) was shut down before the upwind monitor (AMS6U) because the battery ran low or the replacement batteries would not power up the stations and SCA had to get another replacement battery from the Annex (URS office).

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Other Report

Completed Date: 02/28/2012

Comments: Provides results for air monitoring conducted in January 2012. No air monitoring was conducted on 1/2/2012 because the entire site was shut down for the New Year holiday. All soil disturbance activities were completed on 1/19/2012, so air monitoring was discontinued.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Airborne asbestos exceeded the site screening level of 0.016 s/cc on two days (air monitoring station #2 (0.0177 s/cc on 1/17/2012 and 0.0218 s/cc on 1/14/2012). Based upon the east/southeast prevailing wind direction, this is believed to be related to offsite upwind non-projected related activities. However, additional dust control measures, including suspending work, applying more water and soil tackifier, etc. were implemented for pertinent onsite-related activities.

Completed Area Name: Area B  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Report  
Completed Date: 04/25/2012  
Comments: Additional soil sampling and analysis conducted in support of the remedial design. Email message sent to PG&E concurring with the responses and clarifying that in the RTC to 2a, the trench logs for SB-31 and SB-37 don't mention encountering the tank ring. Therefore, there isn't documentation in the report to support the text on page 4 which notes no apparent staining and concrete in good condition. However, the tank ring will likely be exposed during the Area B-South soil excavation, so this isn't a significant issue.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Voluntary Cleanup Agreement  
Completed Date: 03/27/2007  
Comments: Entered into Voluntary Cleanup Agreement Docket No. HSA-VCA 06/07-144 with Pacific Gas & Electric Company for the investigation and cleanup of the Hunters Point Power Plant Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \* Discovery  
Completed Date: 08/14/1981  
Comments: FACILITY IDENTIFIED FROM RWQCB FILES

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Amendment - Order/Agreement  
Completed Date: 07/08/2008  
Comments: VCA amended to add two additional areas (I & J) and to update cost estimate.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: AB 2061 - Designation  
Completed Date: 08/29/2008  
Comments: Site Designation Committee approved PG&E's application requesting that Assessor Parcel Number 4570-024 be added to the previous designation specified in Resolution Number 07-05 (designated on June 28, 2007 and including APN(s) 4571-001, 4580-002, 4603A-005, 4623A-002 and 4647A-010) and that the Administering Agency continue to be DTSC.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Initial Study/ Neg. Declaration

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Completed Date: 06/10/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Notice of Exemption  
Completed Date: 11/30/2009  
Comments: Notice of Exemption for the Time-Critical Removal Action to install product skimming trenches at the PG&E HPPP Site to remove floating product from the water table.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Amendment - Order/Agreement  
Completed Date: 08/17/2012  
Comments: VCA Amended to clarify property included in the VCA and to add portion of PG&E substation property formerly used by Habitat for Humanity as a laydown area.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 11/09/2011  
Comments: 2011/2012 DTSC Oversight Cost Estimate sent to PG&E

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Annual Oversight Cost Estimate  
Completed Date: 10/30/2012  
Comments: Cost estimate for project codes 201724 and 201869

Future Area Name: Area B  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2013  
Future Area Name: Area E  
Future Sub Area Name: Not reported  
Future Document Type: Site Characterization Report  
Future Due Date: 2013  
Future Area Name: Area J  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2013  
Future Area Name: Area B  
Future Sub Area Name: Not reported  
Future Document Type: Operations and Maintenance Plan  
Future Due Date: 2013  
Future Area Name: Area A  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2013  
Future Area Name: Area A  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2013  
Future Area Name: Area J  
Future Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PG & E HUNTERS POINT (Continued)**

**S100351554**

Future Document Type: Land Use Restriction  
Future Due Date: 2013  
Future Area Name: Area J  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2014  
Future Area Name: Area I  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2013  
Future Area Name: Areas C & D  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2013  
Future Area Name: Area B  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2013  
Future Area Name: Area H  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2013  
Future Area Name: Area B  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2014  
Future Area Name: Areas C & D  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2013  
Schedule Area Name: Area I  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Remedial Action Completion Report  
Schedule Due Date: 06/30/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: Area J  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Design/Implementation Workplan  
Schedule Due Date: 04/30/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: Area H  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Land Use Restriction  
Schedule Due Date: 02/20/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: Area I  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Land Use Restriction  
Schedule Due Date: 04/20/2013  
Schedule Revised Date: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

24  
SSW  
1/8-1/4  
0.190 mi.  
1002 ft.

**STEVEN MITCHELL TRUCKING**  
**50 REARDON RD STE 110**  
**SAN FRANCISCO, CA 94124**

**RCRA NonGen / NLR** 1004676810  
**FINDS** CAR000089722

**Relative:**  
**Higher**

RCRA NonGen / NLR:

**Actual:**  
**180 ft.**

Date form received by agency: 01/03/2001  
Facility name: STEVEN MITCHELL TRUCKING  
Facility address: 50 REARDON RD STE 110  
SAN FRANCISCO, CA 94124  
EPA ID: CAR000089722  
Mailing address: 101 RAINTREE CT  
VALLEJO, CA 94589  
Contact: STEVEN MITCHELL  
Contact address: 101 RAINTREE CT  
VALLEJO, CA 94589  
Contact country: US  
Contact telephone: (707) 554-9808  
Contact email: Not reported  
EPA Region: 09  
Classification: Non-Generator  
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: STEVEN M MITCHELL  
Owner/operator address: 101 RAINTREE CT  
VALLEJO, CA 94589  
Owner/operator country: Not reported  
Owner/operator telephone: (707) 554-9808  
Legal status: Private  
Owner/Operator Type: Owner  
Owner/Op start date: Not reported  
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No  
Mixed waste (haz. and radioactive): No  
Recycler of hazardous waste: No  
Transporter of hazardous waste: Yes  
Treater, storer or disposer of HW: No  
Underground injection activity: No  
On-site burner exemption: No  
Furnace exemption: No  
Used oil fuel burner: No  
Used oil processor: No  
User oil refiner: No  
Used oil fuel marketer to burner: No  
Used oil Specification marketer: No  
Used oil transfer facility: No  
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110012226563

Environmental Interest/Information System

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**STEVEN MITCHELL TRUCKING (Continued)**

**1004676810**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

**D25**  
**ESE**  
**1/8-1/4**  
**0.233 mi.**  
**1228 ft.**

**COMMERCIAL PROPERTY**  
**690 HUDSON AVE**  
**SAN FRANCISCO, CA 94124**

**LUST** **S108209214**  
**N/A**

**Site 1 of 2 in cluster D**

**Relative:**  
**Lower**

LUST:

**Actual:**  
**26 ft.**

Region: STATE  
Global Id: T10000001201  
Latitude: 37.7368139  
Longitude: -122.3836901  
Case Type: LUST Cleanup Site  
Status: Completed - Case Closed  
Status Date: 01/22/2010  
Lead Agency: SAN FRANCISCO COUNTY LOP  
Case Worker: SC  
Local Agency: SAN FRANCISCO COUNTY LOP  
RB Case Number: Not reported  
LOC Case Number: 11870  
File Location: Not reported  
Potential Media Affect: Not reported  
Potential Contaminants of Concern: Diesel  
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id: T10000001201  
Contact Type: Local Agency Caseworker  
Contact Name: STEPHANIE CUSHING  
Organization Name: SAN FRANCISCO COUNTY LOP  
Address: 1390 MARKET STREET #210  
City: SAN FRANCISCO  
Email: stephanie.cushing@sfdph.org  
Phone Number: Not reported

Regulatory Activities:

Global Id: T10000001201  
Action Type: ENFORCEMENT  
Date: 01/22/2010  
Action: File Review - Closure

Global Id: T10000001201  
Action Type: ENFORCEMENT  
Date: 01/22/2010  
Action: File review

Global Id: T10000001201  
Action Type: ENFORCEMENT  
Date: 06/08/2009

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

COMMERCIAL PROPERTY (Continued)

S108209214

Action: Meeting

Global Id: T10000001201  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Reported

Global Id: T10000001201  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Stopped

Global Id: T10000001201  
Action Type: ENFORCEMENT  
Date: 01/21/2010  
Action: Meeting

Global Id: T10000001201  
Action Type: ENFORCEMENT  
Date: 01/22/2010  
Action: Closure/No Further Action Letter

Global Id: T10000001201  
Action Type: ENFORCEMENT  
Date: 01/22/2010  
Action: Closure/No Further Action Letter

Global Id: T10000001201  
Action Type: ENFORCEMENT  
Date: 06/08/2009  
Action: Clean Up Fund - Letter to RP - #11870

Global Id: T10000001201  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Discovery

D26  
ESE  
1/8-1/4  
0.233 mi.  
1228 ft.

HUNTERS POINT REDEVELOPMENT PROJECT  
690 HUDSON AVE  
SAN FRANCISCO, CA 94124

RCRA-LQG 1008402369  
CAR000164376

Site 2 of 2 in cluster D

Relative:  
Lower

RCRA-LQG:  
Date form received by agency: 08/12/2005  
Facility name: HUNTERS POINT REDEVELOPMENT PROJECT  
Facility address: 690 HUDSON AVE  
SAN FRANCISCO, CA 94124  
EPA ID: CAR000164376  
Mailing address: 49 STEVENSON ST  
STE 600  
SAN FRANCISCO, CA 94105  
Contact: PHILIP A BURKE  
Contact address: 49 STEVENSON ST STE 600  
SAN FRANCISCO, CA 94105  
Contact country: US  
Contact telephone: 916-947-7338

Actual:  
26 ft.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT REDEVELOPMENT PROJECT (Continued)**

**1008402369**

Contact email: PBURKE@CH2M.COM  
EPA Region: 09  
Classification: Large Quantity Generator  
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name: LENNAR HOMES OF CALIFORNIA  
Owner/operator address: Not reported  
Not reported  
Owner/operator country: US  
Owner/operator telephone: Not reported  
Legal status: Private  
Owner/Operator Type: Operator  
Owner/Op start date: 04/05/2005  
Owner/Op end date: Not reported

Owner/operator name: LENNAR BVHP LLC  
Owner/operator address: 49 STEVENSON ST STE 600  
SAN FRANCISCO, CA 94105  
Owner/operator country: US  
Owner/operator telephone: Not reported  
Legal status: Private  
Owner/Operator Type: Owner  
Owner/Op start date: 04/05/2005  
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: Yes  
Mixed waste (haz. and radioactive): Yes  
Recycler of hazardous waste: No  
Transporter of hazardous waste: No  
Treater, storer or disposer of HW: No  
Underground injection activity: No  
On-site burner exemption: No  
Furnace exemption: No  
Used oil fuel burner: No  
Used oil processor: No  
Used oil refiner: No  
Used oil fuel marketer to burner: No  
Used oil Specification marketer: No  
Used oil transfer facility: No  
Used oil transporter: No

Hazardous Waste Summary:

Waste code: D008

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT REDEVELOPMENT PROJECT (Continued)**

**1008402369**

Waste name: LEAD  
Violation Status: No violations found

**E27  
NNW  
1/4-1/2  
0.289 mi.  
1528 ft.**

**HUNTERS POINT POWER PL  
1000 EVANS AVE  
SAN FRANCISCO, CA 94124**

**Site 1 of 2 in cluster E**

**NPDES  
HIST CORTESE  
LUST  
CHMIRS  
ENF  
WDS**

**S100942332  
N/A**

**Relative:  
Higher**

**Actual:  
34 ft.**

**NPDES:**

Npdes Number: CAS000002  
Facility Status: Active  
Agency Id: 0  
Region: 2  
Regulatory Measure Id: 359752  
Order No: 2009-0009-DWQ  
Regulatory Measure Type: Enrollee  
Place Id: Not reported  
WDID: 2 38C354414  
Program Type: Construction  
Adoption Date Of Regulatory Measure: Not reported  
Effective Date Of Regulatory Measure: 01/20/2009  
Expiration Date Of Regulatory Measure: Not reported  
Termination Date Of Regulatory Measure: Not reported  
Discharge Name: Pacific Gas and Electric Company  
Discharge Address: 3401 Crow Canyon Road  
Discharge City: San Ramon  
Discharge State: California  
Discharge Zip: 94583

**CORTESE:**

Region: CORTESE  
Facility County Code: 38  
Reg By: LTNKA  
Reg Id: 38-1320

**LUST:**

Region: STATE  
Global Id: T0607501205  
Latitude: 37.738173  
Longitude: -122.376917  
Case Type: LUST Cleanup Site  
Status: Completed - Case Closed  
Status Date: 07/02/1999  
Lead Agency: SAN FRANCISCO COUNTY LOP  
Case Worker: MA  
Local Agency: SAN FRANCISCO COUNTY LOP  
RB Case Number: 38-1320  
LOC Case Number: 11196  
File Location: Not reported  
Potential Media Affect: Other Groundwater (uses other than drinking water)  
Potential Contaminants of Concern: Diesel  
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PL (Continued)**

**S100942332**

Contact:

Global Id: T0607501205  
Contact Type: Local Agency Caseworker  
Contact Name: MAMDOUH AWWAD  
Organization Name: SAN FRANCISCO COUNTY LOP  
Address: 1390 MARKET STREET, #210  
City: SAN FRANCISCO  
Email: mamdouh.awwad@sfdph.org  
Phone Number: Not reported

Global Id: T0607501205  
Contact Type: Regional Board Caseworker  
Contact Name: VIC PAL  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY STREET, SUITE 1400  
City: OAKLAND  
Email: vpal@waterboards.ca.gov  
Phone Number: Not reported

Regulatory Activities:

Global Id: T0607501205  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Discovery

Global Id: T0607501205  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Reported

LUST REG 2:

Region: 2  
Facility Id: 38-1320  
Facility Status: Case Closed  
Case Number: 11196  
How Discovered: Not reported  
Leak Cause: Not reported  
Leak Source: Not reported  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

CHMIRS:

OES Incident Number: '10-7169  
OES notification: 11/30/2010  
OES Date: Not reported  
OES Time: Not reported  
Incident Date: Not reported  
**Date Completed: Not reported**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PL (Continued)**

**S100942332**

Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Road
Cleanup By:	Responsible Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Gal(s)
Other:	Not reported
Date/Time:	945
Year:	2010
Agency:	NRC
Incident Date:	11/30/2010
Admin Agency:	San Francisco County Health Department
Amount:	Not reported
Contained:	Unknown
Site Type:	Not reported
E Date:	Not reported
Substance:	Diesel
Quantity Released:	200
BBLs:	Not reported
Cups:	Not reported
CUFT:	Not reported
Gallons:	Not reported
Grams:	Not reported
Pounds:	Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**HUNTERS POINT POWER PL (Continued)**

**S100942332**

Liters:	Not reported
Ounces:	Not reported
Pints:	Not reported
Quarts:	Not reported
Sheen:	Not reported
Tons:	Not reported
Unknown:	Not reported
Evacuations:	Not reported
Number of Injuries:	2
Number of Fatalities:	Not reported
Description:	CALLER IS REPORTING A DISCHARGE OF DIESEL FUEL AND HYDRAULIC OIL FROM A LARGE DUMP TRUCK THAT FELL DOWN AN EMBANKMENT AS THE RESULT OF A SINGLE VEHICLE ACCIDENT. CALLER STATES THERE IS ALSO A POTENTIAL FOR THE BATTERY IN THE TRUCK TO LEAK AND A MOTOR OIL SPILL BUT THAT HAS NOT OCCURRED OR BEEN DETERMINED AT THIS TIME. CALLER STATES THEY STABILIZED THE VEHICLE AND CLEANUP IS UNDERWAY.

ENF:

Region:	2
Facility Id:	230899
Agency Name:	Pacific Gas & Electric Company San Francisco
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Industrial
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	37.7372280
Place Longitude:	-122.37833
SIC Code 1:	4961
SIC Desc 1:	Steam and Air-Conditioning Supply
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	413.111499
Threat To Water Quality:	2
Complexity:	B
Pretreatment:	N - POTW does not have EPA approved pretreatment prog.
Facility Waste Type:	Cooling water: Contact
Facility Waste Type 2:	Stormwater runoff
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NPDES
# Of Programs:	1
WDID:	2 386003001
Reg Measure Id:	143305
Reg Measure Type:	NPDES Permits
Region:	2
Order #:	R2-1994-0057

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PL (Continued)**

**S100942332**

Npdes# CA#: CA0005649  
Major-Minor: Minor  
Npdes Type: OTH  
Reclamation: N - No  
Dredge Fill Fee: Not reported  
301H: N  
Application Fee Amt Received: Not reported  
Status: Historical  
Status Date: 05/02/2012  
Effective Date: 05/18/1994  
Expiration/Review Date: 05/18/1999  
Termination Date: 06/30/2006  
WDR Review - Amend: Not reported  
WDR Review - Revise/Renew: Not reported  
WDR Review - Rescind: Not reported  
WDR Review - No Action Required: 1999-05-18 00:00:00  
WDR Review - Pending: Not reported  
WDR Review - Planned: Not reported  
Status Enrollee: N  
Individual/General: I  
Fee Code: 66 - NPDES Based on Flow  
Direction/Voice: Passive  
Enforcement Id(EID): 254507  
Region: 2  
Order / Resolution Number: R2-2004-0083  
Enforcement Action Type: Admin Civil Liability  
Effective Date: 11/17/2004  
Adoption/Issuance Date: Not reported  
Achieve Date: Not reported  
Termination Date: Not reported  
ACL Issuance Date: Not reported  
EPL Issuance Date: Not reported  
Status: Historical  
Title: Enforcement - 2 386003001  
Description: PG&E is being assessed an MMP in the total amount of \$3000. They will remit the full penalty payment to the State Water Pollution Cleanup and Abatement Account.  
  
Program: NPDES  
Latest Milestone Completion Date: 11/19/2004  
# Of Programs1: 1  
Total Assessment Amount: 3000  
Initial Assessed Amount: 0  
Liability \$ Amount: 3000  
Project \$ Amount: 0  
Liability \$ Paid: 3000  
Project \$ Completed: 0  
Total \$ Paid/Completed Amount: 3000

**CA WDS:**

Facility ID: San Francisco Bay 386003001  
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.  
Facility Status: Active - Any facility with a continuous or seasonal discharge that is

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**HUNTERS POINT POWER PL (Continued)**

**S100942332**

under Waste Discharge Requirements.

NPDES Number: CA0005649 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board

Subregion: 2

Facility Telephone: 4156952205

Facility Contact: Michael L. Jones

Agency Name: PACIFIC GAS & ELECTRIC CO

Agency Address: PO BOX 7640 MAIL LOC B24A

Agency City,St,Zip: SAN FRANCISCO 94120

Agency Contact: YVONNE J. MEEKS

Agency Telephone: Not reported

Agency Type: Private

SIC Code: 4961

SIC Code 2: Not reported

Primary Waste: Cooling Water: Contact

Primary Waste Type: Designated/Influent or Solid Wastes that pose a significant threat to water quality because of their high concentrations (E.G., BOD, Hardness, TRF, Chloride). 'Manageable' hazardous wastes (E.G., inorganic salts and heavy metals) are included in this category.

Secondary Waste: Stormwater Runoff

Secondary Waste Type: Designated/Influent or Solid Wastes that pose a significant threat to water quality because of their high concentrations (E.G., BOD, Hardness, TRF, Chloride). 'Manageable' hazardous wastes (E.G., inorganic salts and heavy metals) are included in this category.

Design Flow: 413

Baseline Flow: 299

Reclamation: No reclamation requirements associated with this facility.

POTW: The POTW Does not have an approved pretreatment program. Some POTWs may have local pretreatment programs that have not been approved by the regional board and/or EPA.

Treat To Water: Moderate Threat to Water Quality. A violation could have a major adverse impact on receiving biota, can cause aesthetic impairment to a significant human population, or render unusable a potential domestic or municipal water supply. Awsthetic impairment would include nuisance from a waste treatment facility.

Complexity: Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.

**E28  
 NNW  
 1/4-1/2  
 0.289 mi.  
 1528 ft.**

**HUNTERS POINT POWER PLANT  
 1000 EVANS AVE  
 SAN FRANCISCO, CA 94124  
 Site 2 of 2 in cluster E**

**LUST U001595669  
 HIST UST N/A  
 CHMIRS**

**Relative:  
 Higher**

SAN FRANCISCO CO. LUST:  
 Region: SAN FRANCISCO  
 Facility ID: 38-1320  
 Facility Status: Case Closed  
 Case Number: 11196  
 Case Type: Other ground water affected  
 Release Date: 5/22/1998  
 Discovered Date: 5/22/1998  
 Substance: Diesel  
 Substance Qty: Not reported  
 How Discovered: Tank Closure

**Actual:  
 34 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

How Stopped: Repair Tank  
Report Date: 10/15/1991  
Case Closed: 7/2/1999  
Closed Date: 7/2/1999  
Leak Source: Unknown  
Leak Cause: Unknown  
Leak Confirmed: Not reported  
Entered Date: 3/24/1999  
Number of Wells: Not reported  
Regional Board: San Francisco Bay Region  
Local Agency: 38000  
Lead Agency: Local Agency  
Program: LOP  
Responsible Party: PG&E/Hunters point  
RP Address: Not reported  
Operator: Not reported  
Staff Initial: VP  
Facility Staff: MA  
Cross Street: Not reported  
NOR Date: 3/24/1999  
MTBE Current: Not reported  
MTBE Current Date: Not reported  
MTBE: ND  
Maximum MTBE Soil: Not reported  
Maximum MTBE GW: Not reported  
MTBE DATE: Not reported  
Review Date: Not reported  
Workplan Submitted: Not reported  
Assessment Underway: Not reported  
Pollution Characterization: Not reported  
Corrective Action Plan: Not reported  
Remediation Underway: Not reported  
Monitoring Begun: Not reported  
Funding: Federal  
Interim Remediation: No  
Priority: Not reported  
Abatement: No Action Taken - no action has as yet been taken at the site  
Enforcement Type: NOR  
Enforcement Due Date: Not reported  
Basin: Islais Basin  
Beneficial Use: No  
Lat/Long: Not reported  
CUFID: Not reported  
Suspended: No  
Stopped Date: 5/22/1998  
Free Product: No  
Depth to Grnd Wtr: Not reported  
Gradient: NA  
Benzene: Not reported  
Primary Substance: Diesel fuel oil  
Enforcement Type: Not reported  
Amount of Free Produce: Not reported  
Benzene Test: ND  
Maximum Soil GW: ND  
Max Soil Concentration: Not reported  
TPH Tested: Not reported  
Max TPH GW: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

Max TPH Soil: Not reported  
TPH Date: Not reported  
Block: Not reported  
Lot: Not reported  
Notify: False  
TPH Current: Not reported  
TPH Current Date: Not reported  
Grnd Wtr Qualifier: Not reported  
Soil Qualifier: Not reported  
Comments: Not reported  
Summary: Diesel tank, TPH-D

**HIST UST:**

Region: STATE  
Facility ID: 00000035375  
Facility Type: Other  
Other Type: UTILITY  
Total Tanks: 0039  
Contact Name: D.L. GOUVEIA - PLANT MANAGER  
Telephone: 4157814211  
Owner Name: PACIFIC GAS AND ELECTRIC COMPA  
Owner Address: 1000 EVANS AVENUE  
Owner City,St,Zip: SAN FRANCISCO, CA 94124

Tank Num: 001  
Container Num: 111  
Year Installed: 1947  
Tank Capacity: 00000202  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 12 inches  
Leak Detection: None

Tank Num: 002  
Container Num: 101  
Year Installed: 1975  
Tank Capacity: 00000583  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 6 inches  
Leak Detection: None

Tank Num: 003  
Container Num: 112  
Year Installed: 1947  
Tank Capacity: 00000236  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 12 inches  
Leak Detection: None

Tank Num: 004  
Container Num: 113  
Year Installed: Not reported  
Tank Capacity: 00000076  
Tank Used for: WASTE  
Type of Fuel: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

Tank Construction: 6 inches  
Leak Detection: None

Tank Num: 005  
Container Num: 114  
Year Installed: Not reported  
Tank Capacity: 00000135  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: Not reported  
Leak Detection: None

Tank Num: 006  
Container Num: 121  
Year Installed: 1947  
Tank Capacity: 00000202  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 18 inches  
Leak Detection: None

Tank Num: 007  
Container Num: 122  
Year Installed: 1947  
Tank Capacity: 00000236  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 18 inches  
Leak Detection: None

Tank Num: 008  
Container Num: 123  
Year Installed: Not reported  
Tank Capacity: 00000076  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 6 inches  
Leak Detection: None

Tank Num: 009  
Container Num: 124  
Year Installed: Not reported  
Tank Capacity: 00000135  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: Not reported  
Leak Detection: None

Tank Num: 010  
Container Num: 201  
Year Installed: 1957  
Tank Capacity: 00000337  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 10 inches  
Leak Detection: None

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

Tank Num: 011  
Container Num: 202  
Year Installed: 1979  
Tank Capacity: 00001870  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 12 inches  
Leak Detection: None

Tank Num: 012  
Container Num: 251  
Year Installed: 1957  
Tank Capacity: 00001962  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 10 inches  
Leak Detection: None

Tank Num: 013  
Container Num: 261  
Year Installed: 1957  
Tank Capacity: 00001962  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 10 inches  
Leak Detection: None

Tank Num: 014  
Container Num: 271  
Year Installed: 1957  
Tank Capacity: 00001962  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 10 inches  
Leak Detection: None

Tank Num: 015  
Container Num: 301  
Year Installed: 1974  
Tank Capacity: 00005934  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 12 inches  
Leak Detection: None

Tank Num: 016  
Container Num: 331  
Year Installed: 1947  
Tank Capacity: 00000202  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 18 inches  
Leak Detection: None

Tank Num: 017  
Container Num: 332  
Year Installed: 1947

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

Tank Capacity: 00000236  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 18 inches  
Leak Detection: None

Tank Num: 018  
Container Num: 333  
Year Installed: Not reported  
Tank Capacity: 00000076  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 6 inches  
Leak Detection: None

Tank Num: 019  
Container Num: 334  
Year Installed: Not reported  
Tank Capacity: 00000135  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: Not reported  
Leak Detection: None

Tank Num: 020  
Container Num: 341  
Year Installed: 1947  
Tank Capacity: 00000202  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 18 gauge  
Leak Detection: None

Tank Num: 021  
Container Num: 342  
Year Installed: 1947  
Tank Capacity: 00000236  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 18 inches  
Leak Detection: None

Tank Num: 022  
Container Num: 343  
Year Installed: Not reported  
Tank Capacity: 00000076  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 6 inches  
Leak Detection: None

Tank Num: 023  
Container Num: 344  
Year Installed: Not reported  
Tank Capacity: 00000135  
Tank Used for: WASTE  
Type of Fuel: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

Tank Construction: Not reported  
Leak Detection: None

Tank Num: 024  
Container Num: 381  
Year Installed: Not reported  
Tank Capacity: 00000090  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: Not reported  
Leak Detection: None

Tank Num: 025  
Container Num: 511  
Year Installed: 1975  
Tank Capacity: 00000110  
Tank Used for: WASTE  
Type of Fuel: WASTE OIL  
Tank Construction: Not reported  
Leak Detection: None

Tank Num: 026  
Container Num: 512  
Year Installed: 1975  
Tank Capacity: 00001010  
Tank Used for: WASTE  
Type of Fuel: WASTE OIL  
Tank Construction: 8 inches  
Leak Detection: Not reported

Tank Num: 027  
Container Num: 513  
Year Installed: 1975  
Tank Capacity: 00002097  
Tank Used for: PRODUCT  
Type of Fuel: Not reported  
Tank Construction: 8 inches  
Leak Detection: None

Tank Num: 028  
Container Num: 521  
Year Installed: 1948  
Tank Capacity: 00001018  
Tank Used for: WASTE  
Type of Fuel: WASTE OIL  
Tank Construction: 6 inches  
Leak Detection: None

Tank Num: 029  
Container Num: 522  
Year Installed: 1947  
Tank Capacity: 00000180  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 10 inches  
Leak Detection: None

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

Tank Num: 030  
Container Num: 523  
Year Installed: 1948  
Tank Capacity: 00005341  
Tank Used for: PRODUCT  
Type of Fuel: Not reported  
Tank Construction: 3/4 inches  
Leak Detection: None

Tank Num: 031  
Container Num: 524  
Year Installed: 1947  
Tank Capacity: 00064347  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: Not reported  
Leak Detection: None

Tank Num: 032  
Container Num: 541  
Year Installed: 1956  
Tank Capacity: 02100000  
Tank Used for: WASTE  
Type of Fuel: WASTE OIL  
Tank Construction: 48 inches  
Leak Detection: None

Tank Num: 033  
Container Num: 542  
Year Installed: 1956  
Tank Capacity: 00002221  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 10 inches  
Leak Detection: None

Tank Num: 034  
Container Num: 601  
Year Installed: 1977  
Tank Capacity: 00000838  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 12 inches  
Leak Detection: None

Tank Num: 035  
Container Num: 602  
Year Installed: 1977  
Tank Capacity: 00005000  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 12 inches  
Leak Detection: None

Tank Num: 036  
Container Num: 603  
Year Installed: 1956

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

Tank Capacity: 00028000  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 3 inches  
Leak Detection: None

Tank Num: 037  
Container Num: 701  
Year Installed: 1956  
Tank Capacity: 00005890  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 6 inches  
Leak Detection: None

Tank Num: 038  
Container Num: 702  
Year Installed: 1978  
Tank Capacity: 00003591  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 12 inches  
Leak Detection: None

Tank Num: 039  
Container Num: 703  
Year Installed: 1978  
Tank Capacity: 00012000  
Tank Used for: WASTE  
Type of Fuel: Not reported  
Tank Construction: 12 inches  
Leak Detection: None

**CHMIRS:**

OES Incident Number: 012590  
OES notification: Not reported  
OES Date: 3/2/1996  
OES Time: 04:15:47 PM  
Incident Date: Not reported  
**Date Completed: Not reported**  
Property Use: Not reported  
Agency Id Number: Not reported  
Agency Incident Number: Not reported  
Time Notified: Not reported  
Time Completed: Not reported  
Surrounding Area: Not reported  
Estimated Temperature: Not reported  
Property Management: Not reported  
Special Studies 1: Not reported  
Special Studies 2: Not reported  
Special Studies 3: Not reported  
Special Studies 4: Not reported  
Special Studies 5: Not reported  
Special Studies 6: Not reported  
More Than Two Substances Involved?: Not reported  
Resp Agency Personel # Of Decontaminated: Not reported  
Responding Agency Personel # Of Injuries: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

Responding Agency Personel # Of Fatalities: Not reported  
Others Number Of Decontaminated: Not reported  
Others Number Of Injuries: Not reported  
Others Number Of Fatalities: Not reported  
Vehicle Make/year: Not reported  
Vehicle License Number: Not reported  
Vehicle State: Not reported  
Vehicle Id Number: Not reported  
CA/DOT/PUC/ICC Number: Not reported  
Company Name: Not reported  
Reporting Officer Name/ID: Not reported  
Report Date: Not reported  
Comments: Not reported  
Facility Telephone: Not reported  
Waterway Involved: YES  
Waterway: Not reported  
Spill Site: Not reported  
Cleanup By: Not reported  
Containment: Not reported  
What Happened: Not reported  
Type: Not reported  
Measure: Not reported  
Other: Not reported  
Date/Time: Not reported  
Year: 1996  
Agency: pge  
Incident Date: 0818/3-2-96  
Admin Agency: Not reported  
Amount: 2 lbs  
Contained: NO  
Site Type: OTHER  
E Date: Not reported  
Substance: asbestos  
Quantity Released: Not reported  
BBLS: Not reported  
Cups: Not reported  
CUFT: Not reported  
Gallons: Not reported  
Grams: Not reported  
Pounds: Not reported  
Liters: Not reported  
Ounces: Not reported  
Pints: Not reported  
Quarts: Not reported  
Sheen: Not reported  
Tons: Not reported  
Unknown: Not reported  
Evacuations: NO  
Number of Injuries: NO  
Number of Fatalities: NO  
Description: guage glass blew off and took insulation with it.  
  
OES Incident Number: 03-0816  
OES notification: 02/12/2003  
OES Date: Not reported  
OES Time: Not reported  
Incident Date: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

<b>Date Completed:</b>	<b>Not reported</b>
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
Special Studies 1:	Not reported
Special Studies 2:	Not reported
Special Studies 3:	Not reported
Special Studies 4:	Not reported
Special Studies 5:	Not reported
Special Studies 6:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agency Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA/DOT/PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Comments:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	Yes
Waterway:	SF Bay
Spill Site:	Not reported
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2003
Agency:	Hunters Point Power Plant
Incident Date:	2/12/2003 12:00:00 AM
Admin Agency:	San Francisco County Health Department
Amount:	Not reported
Contained:	Yes
Site Type:	Utilities/Substation
E Date:	Not reported
Substance:	Diesel Fuel
Quantity Released:	Not reported
BBLs:	0
Cups:	0
CUFT:	0
Gallons:	0.000000
Grams:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT POWER PLANT (Continued)

U001595669

Pounds: 0  
Liters: 0  
Ounces: 0  
Pints: 1  
Quarts: 0  
Sheen: 0  
Tons: 0  
Unknown: 0  
Evacuations: 0  
Number of Injuries: 0  
Number of Fatalities: 0  
Description: Substance was released when heavy equipment was being moved. During movement substance was released and was washed into the crack into retaining berm and then into the outfall which is connected to San Francisco Bay. Booms and absorbents have been applied and substance was recovered .

OES Incident Number: 99-2913  
OES notification: 07/12/1999  
OES Date: Not reported  
OES Time: Not reported  
Incident Date: Not reported  
**Date Completed: Not reported**  
Property Use: Not reported  
Agency Id Number: Not reported  
Agency Incident Number: Not reported  
Time Notified: Not reported  
Time Completed: Not reported  
Surrounding Area: Not reported  
Estimated Temperature: Not reported  
Property Management: Not reported  
Special Studies 1: Not reported  
Special Studies 2: Not reported  
Special Studies 3: Not reported  
Special Studies 4: Not reported  
Special Studies 5: Not reported  
Special Studies 6: Not reported  
More Than Two Substances Involved?: Not reported  
Resp Agncy Personel # Of Decontaminated: Not reported  
Responding Agency Personel # Of Injuries: Not reported  
Responding Agency Personel # Of Fatalities: Not reported  
Others Number Of Decontaminated: Not reported  
Others Number Of Injuries: Not reported  
Others Number Of Fatalities: Not reported  
Vehicle Make/year: Not reported  
Vehicle License Number: Not reported  
Vehicle State: Not reported  
Vehicle Id Number: Not reported  
CA/DOT/PUC/ICC Number: Not reported  
Company Name: Not reported  
Reporting Officer Name/ID: Not reported  
Report Date: Not reported  
Comments: Not reported  
Facility Telephone: Not reported  
Waterway Involved: No  
Waterway: Not reported  
Spill Site: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT POWER PLANT (Continued)**

**U001595669**

Cleanup By: Reporting Party  
Containment: Not reported  
What Happened: Not reported  
Type: Not reported  
Measure: Not reported  
Other: Not reported  
Date/Time: Not reported  
Year: 1999  
Agency: San Francisco Power  
Incident Date: 7/12/1999 12:00:00 AM  
Admin Agency: Not reported  
Amount: Not reported  
Contained: Yes  
Site Type: Utilities/Substation  
E Date: Not reported  
Substance: insulation  
Quantity Released: Not reported  
BBLs: 0  
Cups: 0  
CUFT: 0  
Gallons: 0  
Grams: 0  
Pounds: 0  
Liters: 0  
Ounces: 0  
Pints: 0  
Quarts: 0  
Sheen: 0  
Tons: 0  
Unknown: 0  
Evacuations: 0  
Number of Injuries: 0  
Number of Fatalities: 0  
Description: Tube failure early this morning resulting in insulation loss

29  
SSE  
1/4-1/2  
0.298 mi.  
1575 ft.

**HUNTERS POINT SHIPYARD ANNEX**  
**SAN FRANCISCO, CA**

**FUDS 1007211930**  
**N/A**

**Relative:**  
**Higher**

FUDS:  
Federal Facility ID: CA9799F5929  
FUDS #: J09CA1033  
INST ID: 57898  
Facility Name: HUNTERS POINT SHIPYARD ANNEX  
City: SAN FRANCISCO  
State: CA  
EPA Region: 09  
County: SAN FRANCISCO  
Congressional District: 08  
US Army District: Sacramento District (SPK)  
Fiscal Year: 2011  
Telephone: 916-557-7461  
NPL Status: Not Listed  
RAB: Not reported  
CTC: 1112.8  
Current Owner: FEDERAL; STATE; LOCAL GOVT; PRIVATE

**Actual:**  
**141 ft.**

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**HUNTERS POINT SHIPYARD ANNEX (Continued)**

**1007211930**

Current Prog: Not reported  
 Future Prog: Not reported  
 Description: Hunters Point Annex is located on Treasure Island in the San Francisco Bay area, California. The site totaled 966.75 acres. Of the 966.75 acres, 30.38 acres have been occupied by different agencies since Department of Defense (DoD) use. One building on site is currently occupied by File Safe, a microfiche document storage company. Other structures located on site are currently occupied by the University of California San Francisco (UCSF) and are used for animal research and kennels. The remainder of the acreage is under the jurisdiction of the San Francisco Housing Authority and consists of vacant land, public housing projects, and the Hunters Point Boys Club. The Navy currently owns 936.37 acres of the former Hunters Point Annex.  
 The U.S. acquired fee title to 964.91 acres by declaration of taking, transfer, and purchase between 1940 and 1966. The U.S. also acquired approximately 1.84 easement acres between 1959 and 1988. An additional 17.07 acres were acquired and disposed of for an off-base site known as Islais Creek. The Navy operated Hunters Point as a ship repair facility from 1940 until 1975 and in May 1976, leased approximately 773 acres to Triple A Machine Shop for 11 years. Between 1976 and 1990, 30.38 acres were transferred from the Navy to the General Services Administration (GSA). The 936.37 acres is currently part of the inactive Hunters Point Annex. A fuel storage tank site is proposed as a containerized/hazardous, toxic, radioactive waste (CON/HTRW) project at this site under the FUDS program.

**30**  
**North**  
**1/4-1/2**  
**0.301 mi.**  
**1587 ft.**

**P G & E HUNTER'S POINT POWER PLANT**  
**SAN FRANCISCO, CA**

**SLIC S106610988**  
**N/A**

**Relative:**  
**Lower**

SLIC REG 2:  
 Region: 2  
 Facility ID: SL376221199  
 Facility Status: Not reported  
 Date Closed: Not reported  
 Local Case #: Not reported  
 How Discovered: Not reported  
 Leak Cause: Not reported  
 Leak Source: Not reported  
 Date Confirmed: Not reported  
 Date Prelim Site Assmnt Workplan Submitted: Not reported  
 Date Preliminary Site Assessment Began: Not reported  
 Date Pollution Characterization Began: Not reported  
 Date Remediation Plan Submitted: Not reported  
 Date Remedial Action Underway: Not reported  
 Date Post Remedial Action Monitoring Began: Not reported

**Actual:**  
**11 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)  
EDR ID Number  
EPA ID Number

**F31**            **COMMERCIAL PROPERTY**  
**SSE**            **50 CRISP ROAD**  
**1/4-1/2**        **SAN FRANCISCO, CA 94124**  
**0.394 mi.**  
**2080 ft.**        **Site 1 of 3 in cluster F**

**LUST**    **S103964323**  
              **N/A**

**Relative:**  
**Lower**

LUST:

**Actual:**  
**25 ft.**

Region:                    STATE  
Global Id:                T0607591197  
Latitude:                 37.727803  
Longitude:               -122.3817223  
Case Type:               LUST Cleanup Site  
Status:                   Completed - Case Closed  
Status Date:             09/18/2000  
Lead Agency:            SAN FRANCISCO COUNTY LOP  
Case Worker:            SC  
Local Agency:           SAN FRANCISCO COUNTY LOP  
RB Case Number:        38-2046  
LOC Case Number:       11431  
File Location:           Not reported  
Potential Media Affect: Soil  
Potential Contaminants of Concern: Diesel  
Site History:            Not reported

[Click here to access the California GeoTracker records for this facility:](#)

Contact:

Global Id:                T0607591197  
Contact Type:            Local Agency Caseworker  
Contact Name:           STEPHANIE CUSHING  
Organization Name:     SAN FRANCISCO COUNTY LOP  
Address:                 1390 MARKET STREET #210  
City:                     SAN FRANCISCO  
Email:                    stephanie.cushing@sfdph.org  
Phone Number:          Not reported

Global Id:                T0607591197  
Contact Type:            Regional Board Caseworker  
Contact Name:           VIC PAL  
Organization Name:     SAN FRANCISCO BAY RWQCB (REGION 2)  
Address:                 1515 CLAY STREET, SUITE 1400  
City:                     OAKLAND  
Email:                    vpal@waterboards.ca.gov  
Phone Number:          Not reported

Regulatory Activities:

Global Id:                T0607591197  
Action Type:             ENFORCEMENT  
Date:                     02/06/2001  
Action:                   Notice of Responsibility

Global Id:                T0607591197  
Action Type:             Other  
Date:                     01/01/1950  
Action:                   Leak Discovery

Global Id:                T0607591197  
Action Type:             Other  
Date:                     01/01/1950

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**COMMERCIAL PROPERTY (Continued)**

**S103964323**

Action: Leak Reported

**F32**  
**SSE**  
**1/4-1/2**  
**0.394 mi.**  
**2080 ft.**

**COMMERCIAL PROPERTY**  
**50 CRISP ROAD**  
**SAN FRANCISCO, CA 94124**

**LUST S105194750**  
**N/A**

**Site 2 of 3 in cluster F**

**Relative:**  
**Lower**

LUST REG 2:

Region: 2  
Facility Id: 38-2046  
Facility Status: Case Closed  
Case Number: 11431  
How Discovered: Not reported  
Leak Cause: Not reported  
Leak Source: Not reported  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**F33**  
**SSE**  
**1/4-1/2**  
**0.394 mi.**  
**2080 ft.**

**COMMERCIAL**  
**50 CRISP ROAD**  
**SAN FRANCISCO, CA 94124**

**LUST S105627936**  
**N/A**

**Site 3 of 3 in cluster F**

**Relative:**  
**Lower**

SAN FRANCISCO CO. LUST:

Region: SAN FRANCISCO  
Facility ID: 02-101-009  
Facility Status: Case Closed  
Case Number: 11431  
Case Type: Soil only  
Release Date: Not reported  
Discovered Date: 8/24/2000  
Substance: Diesel  
Substance Qty: Not reported  
How Discovered: Tank Closure  
How Stopped: Close Tank  
Report Date: 9/18/2000  
Case Closed: 2/13/2001  
Closed Date: Not reported  
Leak Source: Tank  
Leak Cause: Unknown  
Leak Confirmed: 8/24/2000  
Entered Date: 2/6/2001  
Number of Wells: Not reported  
Regional Board: San Francisco Bay Region  
Local Agency: 38000  
Lead Agency: Local Agency  
Program: LOP

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**COMMERCIAL (Continued)**

**S105627936**

Responsible Party: Not reported  
RP Address: Not reported  
Operator: Ted Lowpensky  
Staff Initial: VP  
Facility Staff: SC  
Cross Street: Griffith  
NOR Date: Not reported  
MTBE Current: Not reported  
MTBE Current Date: 8/2/400  
MTBE: YES  
Maximum MTBE Soil: 0.05  
Maximum MTBE GW: Not reported  
MTBE DATE: 8/2/400  
Review Date: 2/13/2001  
Workplan Submitted: Not reported  
Assessment Underway: Not reported  
Pollution Characterization: Not reported  
Corrective Action Plan: Not reported  
Remediation Underway: Not reported  
Monitoring Begun: Not reported  
Funding: Federal  
Interim Remediation: No  
Priority: Low Priority Site  
Abatement: Excavate and Dispose - remove contaminated soil and dispose in approved site  
  
Enforcement Type: NOR  
Enforcement Due Date: 2/6/2001  
Basin: ISLAIS  
Beneficial Use: No  
Lat/Long: Not reported  
CUFID: Not reported  
Suspended: No  
Stopped Date: 8/24/2000  
Free Product: Not reported  
Depth to Grnd Wtr: Not reported  
Gradient: Not reported  
Benzene: Not reported  
Primary Substance: Not reported  
Enforcement Type: Not reported  
Amount of Free Produce: Not reported  
Benzene Test: YES  
Maximum Soil GW: Not reported  
Max Soil Concentration: Not reported  
TPH Tested: YES  
Max TPH GW: Not reported  
Max TPH Soil: 4.2  
TPH Date: 8/24/2000  
Block: Not reported  
Lot: Not reported  
Notify: False  
TPH Current: Not reported  
TPH Current Date: Not reported  
Grnd Wtr Qualifier: Not reported  
Soil Qualifier: Not reported  
Comments: Not reported  
Summary: Not reported

MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Site

Database(s)

EDR ID Number  
EPA ID Number

**G34**  
**NNW**  
**1/4-1/2**  
**0.402 mi.**  
**2123 ft.**

**MARELICH MECHANICAL (FORMER)**  
**200 JENNINGS STREET**  
**SAN FRANCISCO, CA 94124**

**HIST CORTESE**  
**LUST**  
**SWEEPS UST**

**S100851648**  
**N/A**

**Site 1 of 2 in cluster G**

**Relative:**  
**Lower**

**CORTESE:**  
Region: CORTESE  
Facility County Code: 38  
Reg By: LTNKA  
Reg Id: 38-0207

**Actual:**  
**17 ft.**

**LUST:**

Region: STATE  
Global Id: T0607500176  
Latitude: 37.739022  
Longitude: -122.378682  
Case Type: LUST Cleanup Site  
Status: Completed - Case Closed  
Status Date: 03/23/1995  
Lead Agency: SAN FRANCISCO COUNTY LOP  
Case Worker: SC  
Local Agency: SAN FRANCISCO COUNTY LOP  
RB Case Number: 38-0207  
LOC Case Number: 10208  
File Location: Not reported  
Potential Media Affect: Other Groundwater (uses other than drinking water)  
Potential Contaminants of Concern: Diesel  
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

**Contact:**

Global Id: T0607500176  
Contact Type: Regional Board Caseworker  
Contact Name: VIC PAL  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY STREET, SUITE 1400  
City: OAKLAND  
Email: vpal@waterboards.ca.gov  
Phone Number: Not reported

Global Id: T0607500176  
Contact Type: Local Agency Caseworker  
Contact Name: STEPHANIE CUSHING  
Organization Name: SAN FRANCISCO COUNTY LOP  
Address: 1390 MARKET STREET #210  
City: SAN FRANCISCO  
Email: stephanie.cushing@sfdph.org  
Phone Number: Not reported

**Regulatory Activities:**

Global Id: T0607500176  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Discovery

Global Id: T0607500176  
Action Type: Other

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MARELICH MECHANICAL (FORMER) (Continued)**

**S100851648**

Date: 01/01/1950  
Action: Leak Reported

**SWEEPS UST:**

Status: Not reported  
Comp Number: 9472  
Number: Not reported  
Board Of Equalization: Not reported  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Tank Status: Not reported  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-009472-000001  
Actv Date: Not reported  
Capacity: 4000  
Tank Use: UNKNOWN  
Stg: PRODUCT  
Content: UNSPECIFIED  
Number Of Tanks: 2

Status: Not reported  
Comp Number: 9472  
Number: Not reported  
Board Of Equalization: Not reported  
Referral Date: Not reported  
Action Date: Not reported  
Created Date: Not reported  
Tank Status: Not reported  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-009472-000002  
Actv Date: Not reported  
Capacity: 2000  
Tank Use: UNKNOWN  
Stg: PRODUCT  
Content: UNSPECIFIED  
Number Of Tanks: Not reported

Status: Active  
Comp Number: 9472  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: Not reported  
Owner Tank Id: Not reported  
Swrcb Tank Id: Not reported  
Actv Date: Not reported  
Capacity: Not reported  
Tank Use: Not reported  
Stg: Not reported  
Content: Not reported  
Number Of Tanks: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

G35  
NNW  
1/4-1/2  
0.402 mi.  
2123 ft.

**MARELICH MECHANICAL (FORMER)  
200 JENNINGS STREET  
SAN FRANCISCO, CA 94124**

**LUST S104396865  
N/A**

**Site 2 of 2 in cluster G**

**Relative:  
Lower**

LUST REG 2:

Region: 2  
Facility Id: 38-0207  
Facility Status: Case Closed  
Case Number: 10208  
How Discovered: Not reported  
Leak Cause: Not reported  
Leak Source: Not reported  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Wokplan Submitted: Not reported  
Preliminary Site Assessment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**Actual:  
17 ft.**

SAN FRANCISCO CO. LUST:

Region: SAN FRANCISCO  
Facility ID: 38-0207  
Facility Status: Case Closed  
Case Number: 10208  
Case Type: Other ground water affected  
Release Date: 3/29/1981  
Discovered Date: 7/23/1992  
Substance: Diesel  
Substance Qty: Not reported  
How Discovered: Tank Closure  
How Stopped: Close Tank  
Report Date: 3/29/1981  
Case Closed: 3/23/1995  
Closed Date: 3/23/1995  
Leak Source: Tank  
Leak Cause: Structure Failure  
Leak Confirmed: Not reported  
Entered Date: 1/14/1994  
Number of Wells: Not reported  
Regional Board: San Francisco Bay Region  
Local Agency: 38000  
Lead Agency: Local Agency  
Program: LOP  
Responsible Party: Not reported  
RP Address: Not reported  
Operator: Not reported  
Staff Initial: VP  
Facility Staff: SC  
Cross Street: DONNER ST  
NOR Date: 1/14/1994  
MTBE Current: Not reported  
MTBE Current Date: Not reported  
MTBE: NT  
Maximum MTBE Soil: Not reported  
Maximum MTBE GW: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MARELICH MECHANICAL (FORMER) (Continued)**

**S104396865**

MTBE DATE: Not reported  
 Review Date: Not reported  
 Workplan Submitted: 8/13/1992  
 Assessment Underway: Not reported  
 Pollution Characterization: Not reported  
 Corrective Action Plan: Not reported  
 Remediation Underway: Not reported  
 Monitoring Begun: Not reported  
 Funding: Federal  
 Interim Remediation: No  
 Priority: Not reported  
 Abatement: No Action Taken - no action has as yet been taken at the site  
 Enforcement Type: 2A  
 Enforcement Due Date: Not reported  
 Basin: Islais Basin  
 Beneficial Use: No  
 Lat/Long: Not reported  
 CUFID: Not reported  
 Suspended: No  
 Stopped Date: 1/7/1992  
 Free Product: No  
 Depth to Grnd Wtr: Not reported  
 Gradient: Not reported  
 Benzene: Not reported  
 Primary Substance: Diesel fuel oil  
 Enforcement Type: 2A  
 Amount of Free Produce: Not reported  
 Benzene Test: Not reported  
 Maximum Soil GW: Not reported  
 Max Soil Concentration: Not reported  
 TPH Tested: Not reported  
 Max TPH GW: Not reported  
 Max TPH Soil: Not reported  
 TPH Date: Not reported  
 Block: Not reported  
 Lot: Not reported  
 Notify: False  
 TPH Current: Not reported  
 TPH Current Date: Not reported  
 Grnd Wtr Qualifier: Not reported  
 Soil Qualifier: Not reported  
 Comments: Not reported  
 Summary: Not reported

**H36** **PACIFIC FAN & BLOWER CO., INC.**  
**SW** **1132 QUESADA AVE**  
**1/4-1/2** **SAN FRANCISCO, CA 94124**  
**0.430 mi.**  
**2271 ft.** **Site 1 of 2 in cluster H**

**LUST** **S101592335**  
**CA FID UST** **N/A**  
**SWEEPS UST**

**Relative:** **LUST:**  
**Lower** Region: STATE  
 Global Id: T0607569070  
**Actual:** Latitude: 37.727562  
**19 ft.** Longitude: -122.380729  
 Case Type: LUST Cleanup Site  
 Status: Completed - Case Closed  
 Status Date: 06/08/2004

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PACIFIC FAN & BLOWER CO., INC. (Continued)**

**S101592335**

Lead Agency: SAN FRANCISCO COUNTY LOP  
Case Worker: SC  
Local Agency: SAN FRANCISCO COUNTY LOP  
RB Case Number: 38-2282  
LOC Case Number: 11621  
File Location: Local Agency  
Potential Media Affect: Soil  
Potential Contaminants of Concern: Gasoline  
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

**Contact:**

Global Id: T0607569070  
Contact Type: Local Agency Caseworker  
Contact Name: STEPHANIE CUSHING  
Organization Name: SAN FRANCISCO COUNTY LOP  
Address: 1390 MARKET STREET #210  
City: SAN FRANCISCO  
Email: stephanie.cushing@sfdph.org  
Phone Number: Not reported

Global Id: T0607569070  
Contact Type: Regional Board Caseworker  
Contact Name: NANCY KATYL  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY STREET  
City: OAKLAND  
Email: nkatyl@waterboards.ca.gov  
Phone Number: Not reported

**Regulatory Activities:**

Global Id: T0607569070  
Action Type: ENFORCEMENT  
Date: 06/08/2004  
Action: Closure/No Further Action Letter

Global Id: T0607569070  
Action Type: ENFORCEMENT  
Date: 06/03/2004  
Action: File review

Global Id: T0607569070  
Action Type: ENFORCEMENT  
Date: 06/04/2004  
Action: Notice of Reimbursement

Global Id: T0607569070  
Action Type: ENFORCEMENT  
Date: 06/10/2004  
Action: \* No Action

Global Id: T0607569070  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Discovery

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PACIFIC FAN & BLOWER CO., INC. (Continued)**

**S101592335**

Global Id: T0607569070  
Action Type: REMEDIATION  
Date: 01/01/1950  
Action: Excavation

Global Id: T0607569070  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Reported

**CA FID UST:**

Facility ID: 38003206  
Regulated By: UTNKA  
Regulated ID: Not reported  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4150000000  
Mail To: Not reported  
Mailing Address: 1132 QUESADA AVE  
Mailing Address 2: Not reported  
Mailing City,St,Zip: SAN FRANCISCO 94124  
Contact: Not reported  
Contact Phone: Not reported  
DUNs Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Active

**SWEEPS UST:**

Status: Active  
Comp Number: 5682  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A  
Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-005682-000001  
Actv Date: 09-30-92  
Capacity: 550  
Tank Use: M.V. FUEL  
Stg: P  
Content: REG UNLEADED  
Number Of Tanks: 2

Status: Active  
Comp Number: 5682  
Number: 9  
Board Of Equalization: Not reported  
Referral Date: 09-30-92  
Action Date: 12-10-91  
Created Date: 01-01-01  
Tank Status: A

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**PACIFIC FAN & BLOWER CO., INC. (Continued)**

**S101592335**

Owner Tank Id: Not reported  
Swrcb Tank Id: 38-000-005682-000002  
Actv Date: 09-30-92  
Capacity: 550  
Tank Use: UNKNOWN  
Stg: P  
Content: LEADED GASOL  
Number Of Tanks: Not reported

**H37  
SW  
1/4-1/2  
0.430 mi.  
2271 ft.**

**PACIFIC FAN & BLOWER  
1132 QUESADA AVENUE  
SAN FRANCISCO, CA 94124  
Site 2 of 2 in cluster H**

**LUST S106448227  
N/A**

**Relative:  
Lower**

LUST REG 2:

Region: 2  
Facility Id: 38-2282  
Facility Status: Case Closed  
Case Number: 11621  
How Discovered: Tank Closure  
Leak Cause: Corrosion  
Leak Source: Tank  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assesment Wokplan Submitted: Not reported  
Preliminary Site Assesment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**Actual:  
19 ft.**

**I38  
North  
1/4-1/2  
0.457 mi.  
2415 ft.**

**BLAKEWAY METAL WORKS  
101 CARGO WAY  
SAN FRANCISCO, CA 94124  
Site 1 of 3 in cluster I**

**HIST CORTESE S102446062  
LUST N/A**

**Relative:  
Lower**

CORTESE:

Region: CORTESE  
Facility County Code: 38  
Reg By: LTNKA  
Reg Id: 38-0847

**Actual:  
14 ft.**

LUST:

Region: STATE  
Global Id: T0607500742  
Latitude: 37.740178  
Longitude: -122.377645  
Case Type: LUST Cleanup Site  
Status: Completed - Case Closed  
Status Date: 12/13/1996  
Lead Agency: SAN FRANCISCO COUNTY LOP  
Case Worker: MA  
Local Agency: SAN FRANCISCO COUNTY LOP  
RB Case Number: 38-0847

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BLAKEWAY METAL WORKS (Continued)**

**S102446062**

LOC Case Number: 10738  
File Location: Not reported  
Potential Media Affect: Soil  
Potential Contaminants of Concern: Gasoline  
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

Contact:

Global Id: T0607500742  
Contact Type: Regional Board Caseworker  
Contact Name: VIC PAL  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY STREET, SUITE 1400  
City: OAKLAND  
Email: vpal@waterboards.ca.gov  
Phone Number: Not reported

Global Id: T0607500742  
Contact Type: Local Agency Caseworker  
Contact Name: MAMDOUH AWWAD  
Organization Name: SAN FRANCISCO COUNTY LOP  
Address: 1390 MARKET STREET, #210  
City: SAN FRANCISCO  
Email: mamdouh.awwad@sfdph.org  
Phone Number: Not reported

Regulatory Activities:

Global Id: T0607500742  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Discovery

Global Id: T0607500742  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Reported

I39  
North  
1/4-1/2  
0.457 mi.  
2415 ft.

**BLAKEWAY METAL**  
**101 CARGO WAY**  
**SAN FRANCISCO, CA 94124**

**LUST S104165374**  
**N/A**

**Site 2 of 3 in cluster I**

Relative:  
Lower

SAN FRANCISCO CO. LUST:  
Region: SAN FRANCISCO  
Facility ID: 38-0847  
Facility Status: Case Closed  
Case Number: 10738  
Case Type: Soil only  
Release Date: 8/22/1996  
Discovered Date: 9/6/1996  
Substance: Gasoline  
Substance Qty: Not reported  
How Discovered: Tank Closure  
How Stopped: Close Tank  
Report Date: 8/22/1996

Actual:  
14 ft.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BLAKEWAY METAL (Continued)**

**S104165374**

Case Closed: 12/13/1996  
Closed Date: 12/13/1996  
Leak Source: Unknown  
Leak Cause: Unknown  
Leak Confirmed: Not reported  
Entered Date: 12/4/1996  
Number of Wells: Not reported  
Regional Board: San Francisco Bay Region  
Local Agency: 38000  
Lead Agency: Local Agency  
Program: LOP  
Responsible Party: Not reported  
RP Address: Not reported  
Operator: Not reported  
Staff Initial: VP  
Facility Staff: MA  
Cross Street: JENNINGS ST  
NOR Date: 12/4/1996  
MTBE Current: Not reported  
MTBE Current Date: Not reported  
MTBE: NT  
Maximum MTBE Soil: Not reported  
Maximum MTBE GW: Not reported  
MTBE DATE: Not reported  
Review Date: Not reported  
Workplan Submitted: Not reported  
Assessment Underway: Not reported  
Pollution Characterization: Not reported  
Corrective Action Plan: Not reported  
Remediation Underway: Not reported  
Monitoring Begun: Not reported  
Funding: Federal  
Interim Remediation: Yes  
Priority: Not reported  
Abatement: Excavate and Dispose - remove contaminated soil and dispose in approved site  
  
Enforcement Type: NOR  
Enforcement Due Date: Not reported  
Basin: Islais Basin  
Beneficial Use: No  
Lat/Long: Not reported  
CUFID: Not reported  
Suspended: No  
Stopped Date: Not reported  
Free Product: No  
Depth to Grnd Wtr: Not reported  
Gradient: Not reported  
Benzene: Not reported  
Primary Substance: Gasoline  
Enforcement Type: Not reported  
Amount of Free Produce: Not reported  
Benzene Test: Not reported  
Maximum Soil GW: Not reported  
Max Soil Concentration: Not reported  
TPH Tested: Not reported  
Max TPH GW: Not reported  
Max TPH Soil: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BLAKEWAY METAL (Continued)**

**S104165374**

TPH Date: Not reported  
Block: Not reported  
Lot: Not reported  
Notify: False  
TPH Current: Not reported  
TPH Current Date: Not reported  
Grnd Wtr Qualifier: Not reported  
Soil Qualifier: Not reported  
Comments: Not reported  
Summary: Not reported

**I40**  
North  
1/4-1/2  
0.457 mi.  
2415 ft.

**BONELLI ENTERPRISES**  
**101 CARGO WAY**  
**SAN FRANCISCO, CA 94124**

**LUST** **S101623316**  
**CA FID UST** **N/A**  
**SWEEPS UST**

**Site 3 of 3 in cluster I**

**Relative:**  
**Lower**

LUST REG 2:  
Region: 2  
Facility Id: 38-0847  
Facility Status: Case Closed  
Case Number: 10738  
How Discovered: Not reported  
Leak Cause: Not reported  
Leak Source: Not reported  
Date Leak Confirmed: Not reported  
Oversight Program: LUST  
Prelim. Site Assessment Workplan Submitted: Not reported  
Preliminary Site Assessment Began: Not reported  
Pollution Characterization Began: Not reported  
Pollution Remediation Plan Submitted: Not reported  
Date Remediation Action Underway: Not reported  
Date Post Remedial Action Monitoring Began: Not reported

**Actual:**  
**14 ft.**

CA FID UST:  
Facility ID: 38005237  
Regulated By: UTKA  
Regulated ID: Not reported  
Cortese Code: Not reported  
SIC Code: Not reported  
Facility Phone: 4158227222  
Mail To: Not reported  
Mailing Address: 101 CARGO WAY  
Mailing Address 2: Not reported  
Mailing City,St,Zip: SAN FRANCISCO 94124  
Contact: Not reported  
Contact Phone: Not reported  
DUNs Number: Not reported  
NPDES Number: Not reported  
EPA ID: Not reported  
Comments: Not reported  
Status: Active

SWEEPS UST:

Status: Active  
Comp Number: 447  
Number: 1

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BONELLI ENTERPRISES (Continued)**

**S101623316**

Board Of Equalization: Not reported  
 Referral Date: 09-30-92  
 Action Date: 12-10-91  
 Created Date: 01-01-01  
 Tank Status: A  
 Owner Tank Id: Not reported  
 Swrcb Tank Id: 38-000-000447-000001  
 Actv Date: 09-30-92  
 Capacity: 1000  
 Tank Use: M.V. FUEL  
 Stg: P  
 Content: REG UNLEADED  
 Number Of Tanks: 1

**41**  
**South**  
**1/4-1/2**  
**0.499 mi.**  
**2635 ft.**

**HUNTERS POINT**  
**HUNTER'S POINT NAVAL SHIPYARD**  
**SAN FRANCISCO, CA**

**SWF/LF S104654474**  
**N/A**

**Relative:**  
**Lower**

SWF/LF (SWIS):  
 Region: STATE  
 Facility ID: 38-CR-0018  
 Lat/Long: 37.7246000 / -122.37560  
 Owner Name: Department of the Navy, SW Division  
 Owner Telephone: 6195320930  
 Owner Address: Naval Facilities Engineering Command  
 Owner Address2: 1220 Pacific Highway  
 Owner City,St,Zip: San Diego, CA 92132-5190  
 Operational Status: Closed  
 Operator: Not reported  
 Operator Phone: Not reported  
 Operator Address: Not reported  
 Operator Address2: Not reported  
 Operator City,St,Zip: Not reported  
 Permit Date: Not reported  
 Permit Status: Not reported  
 Permitted Acreage: 0  
 Activity: Solid Waste Disposal Site  
 Regulation Status: Pre-regulations  
 Landuse Name: Not reported  
 GIS Source: Place  
 Category: Disposal  
 Unit Number: 01  
 Inspection Frequency: None  
 Accepted Waste: Not reported  
 Closure Date: Not reported  
 Closure Type: Not reported  
 Disposal Acreage: 0  
 SWIS Num: 38-CR-0018  
 Waste Discharge Requirement Num: Not reported  
 Program Type: Not reported  
 Permitted Throughput with Units: Not reported  
 Actual Throughput with Units: Not reported  
 Permitted Capacity with Units: Not reported  
 Remaining Capacity: Not reported  
 Remaining Capacity with Units: Not reported

**Actual:**  
**16 ft.**

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**42**  
**SW**  
**1/2-1**  
**0.600 mi.**  
**3168 ft.**

**BAY AREA DRUM**  
**1212 THOMAS AVENUE**  
**SAN FRANCISCO, CA**

**HIST Cal-Sites** **S100833360**  
**CA BOND EXP. PLAN** **N/A**  
**HIST CORTESE**  
**LUST**  
**SLIC**  
**LIENS**  
**RESPONSE**  
**ENVIROSTOR**

**Relative:**  
**Lower**

**Actual:**  
**21 ft.**

Calsite:  
 Facility ID: 38280112  
 Region: 2  
 Region Name: BERKELEY  
 Branch: NC  
 Branch Name: NORTH COAST  
 File Name: Not reported  
 State Senate District: 06302003  
 Status: CERTIFIED AS HAVING BEEN REMEDIED SATISFACTORILY UNDER DTSC OVERSIGHT  
 Status Name: CERTIFIED  
 Lead Agency: DTSC  
 Lead Agency: DEPT OF TOXIC SUBSTANCES CONTROL  
 Facility Type: RP  
 Type Name: RESPONSIBLE PARTY  
 NPL: Not Listed  
 SIC Code: 28  
 SIC Name: MANU - CHEMICALS & ALLIED PRODUCTS  
 Access: Controlled  
 Cortese: Not reported  
 Hazardous Ranking Score: Not reported  
 Date Site Hazard Ranked: Not reported  
 Groundwater Contamination: Confirmed  
 Staff Member Responsible for Site: BBROWN  
 Supervisor Responsible for Site: Not reported  
 Region Water Control Board: SF  
 Region Water Control Board Name: SAN FRANCISCO BAY  
 Lat/Long Direction: Not reported  
 Lat/Long (dms): 0 0 0 / 0 0 0  
 Lat/long Method: Not reported  
 Lat/Long Description: Not reported  
 State Assembly District Code: 13  
 State Senate District Code: 03  
 Facility ID: 38280112  
 Activity: DISC  
 Activity Name: DISCOVERY  
 AWP Code: Not reported  
 Proposed Budget: 0  
 AWP Completion Date: Not reported  
 Revised Due Date: Not reported  
 Comments Date: 09151981  
 Est Person-Yrs to complete: 0  
 Estimated Size: Not reported  
 Request to Delete Activity: Not reported  
 Activity Status: CERT  
 Definition of Status: CERTIFIED  
 Liquids Removed (Gals): 0  
 Liquids Treated (Gals): 0  
 Action Included Capping: Not reported  
 Well Decommissioned: Not reported  
 Action Included Fencing: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: ORDER  
Activity Name: I/SE, IORSE, FFA, FFSRA, VCA, EA  
AWP Code: Not reported  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 06301986  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: FDNC  
Activity Name: FINAL DETERMINATION OF NON-COMPLIANCE  
AWP Code: Not reported  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 08301986  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: SS  
Activity Name: SITE SCREENING

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

AWP Code: Not reported  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 03101987  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: ORDER  
Activity Name: I/SE, IORSE, FFA, FFSRA, VCA, EA  
AWP Code: IS&E  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 06301987  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: ERA  
Activity Name: EXPEDITED RESPONSE ACTION  
AWP Code: SOIL  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 02281988  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	DRUMS
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	08291990
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	REMOVAL OF DRUMMED SOILS AND LIQUIDS. 214 DRUMS AND 2,960 GALLONS OF WASTE REMOVED.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	COST
Activity Name:	COST RECOVERY
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	09301990
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	FRIFS
Activity Name:	FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
AWP Code:	BLDG
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	01281992
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	PPP
Activity Name:	PUBLIC PARTICIPATION PLAN
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	01311992
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	FRIFS
Activity Name:	FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
AWP Code:	VACAN
Proposed Budget:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	05081992
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	PRP
Activity Name:	POTENTIAL RESPONSIBLE PARTY SEARCH
AWP Code:	ENHAN
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	08271992
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	DRUMS
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	10211993
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	SEVEN 55-GALLON DRUMS OF CONTAMINATED GROUNDWATER REMOVED.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	COST
Activity Name:	COST RECOVERY
AWP Code:	BANKR
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	11101993
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	ORDER
Activity Name:	I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code:	CONSE
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	03141996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Unknown Type:	0
Facility ID:	38280112
Activity:	ORDER
Activity Name:	I/SE, IORSE, FFA, FFSRA, VCA, EA
AWP Code:	ENFOR
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	04041996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	RIFS
Activity Name:	REMEDIATION INVESTIGATION / FEASIBILITY STUDY
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	03222000
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	RAP
Activity Name:	REMEDIATION ACTION PLAN / RECORD OF DECISION
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	08142000

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: DES  
Activity Name: DESIGN  
AWP Code: Not reported  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 07022001  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: RMDL  
Activity Name: REMEDIAL ACTION (RAP REQUIRED)  
AWP Code: SITE  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 06042002  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 5500  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: X

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	REMEDATION INCLUDE SOIL EXCAVATION TO CLEANUP GOALS, REMOVAL OF 3 UST AND 2100 GALLONS OF WATER. INSITU GROUNDWATER TREATED WAS ALSO PERFORMED. GROUNDWATER MONITORING WILL CONTINUE.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	CERT
Activity Name:	CERTIFICATION
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	06302003
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	2
Unknown Type:	0
Facility ID:	38280112
Activity:	COST
Activity Name:	COST RECOVERY
AWP Code:	SETTL
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	12031997
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Facility ID: 38280112  
Activity: RAW  
Activity Name: REMOVAL ACTION WORKPLAN  
AWP Code: BYARD  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 12221998  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: CEQA  
Activity Name: CEQA INCLUDING NEGATIVE DECS  
AWP Code: NOE  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 12221998  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: COST  
Activity Name: COST RECOVERY  
AWP Code: SETTL  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 03191999  
Est Person-Yrs to complete: 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	CEQA
Activity Name:	CEQA INCLUDING NEGATIVE DECS
AWP Code:	NEG'D
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	08142000
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	COST
Activity Name:	COST RECOVERY
AWP Code:	LIEN
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	08092000
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: ORDER  
Activity Name: I/SE, IORSE, FFA, FFSRA, VCA, EA  
AWP Code: ISE  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 01172001  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: BKYD  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 06042002  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 1000  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38280112  
Activity: COST  
Activity Name: COST RECOVERY

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

AWP Code:	SETTL
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	07112001
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	OM
Activity Name:	OPERATION & MAINTENANCE
AWP Code:	PLAN
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	02142002
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38280112
Activity:	COST
Activity Name:	COST RECOVERY
AWP Code:	SETTL
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	10142003
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Alternate Address: 1212 THOMAS AVENUE  
Alternate City,St,Zip: SAN FRANCISCO, CA 94124  
Background Info: Drum reconditioning operations were conducted at this site from approximately 1948 to 1987. The drum reconditioning process typically involve significant spillage of cleaning rinsate and drum residues onto floors and in areas of drum storage.  
Comments Date: 02142002  
Comments: Approved O&M Plan.  
Comments Date: 02281988  
Comments: Completed ERA. The expedited response action involved the  
Comments Date: 02281988  
Comments: removal of soil from some adjacent backyards and vacant lot.  
Comments Date: 03101987  
Comments: Completed Site Screening. Elevated levels of lead, copper,  
Comments Date: 01172001  
Comments: Issued I&SE Determination and RAO ordering the removal of  
Comments Date: 01172001  
Comments: above-ground material, equipment and/or debris and structures on  
Comments Date: 01172001  
Comments: the property.  
Comments Date: 01281992  
Comments: Completed Focused RIFS. In 1988 and 1989, DTSC's contractor  
Comments Date: 01281992  
Comments: conducted a Phase II remedial investigation of contamination  
Comments Date: 01281992  
Comments: remaining in site soil and groundwater, including the  
Comments Date: 01281992  
Comments: installation of 10 additional groundwater monitoring wells. In  
Comments Date: 01281992  
Comments: 1990, DTSC arranged for off-site treatment of over 2,000 gallons  
Comments Date: 01281992  
Comments: of contaminated groundwater generated during site well  
Comments Date: 01281992  
Comments: development and sampling activities.  
Comments Date: 01311992  
Comments: Completed Public Participation Plan.  
Comments Date: 03101987  
Comments: cadmium, PCBs, and volatile organic compounds (VOCs) were found  
Comments Date: 03101987  
Comments: in soil and groundwater. In addition to finding contamination  
Comments Date: 03101987  
Comments: in on-site soils and groundwater, contamination was found in the  
Comments Date: 03101987  
Comments: soils of some adjacent residential backyards, and in the soils  
Comments Date: 03101987

Map ID  
Direction  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Comments: and groundwater of an adjacent vacant lot.  
Comments Date: 03141996  
Comments: Issued Consent Order to perform remedial investigation  
Comments Date: 03141996  
Comments: activities, prepare a remedial investigation report, risk  
Comments Date: 03141996  
Comments: assessment, feasibility study and a draft Remedial Action Plan.  
Comments Date: 03222000  
Comments: Completed RIFS. In August 1995, DTSC oversaw flux-chamber air  
Comments Date: 03222000  
Comments: sampling and groundwater monitoring performed by a group of  
Comments Date: 03222000  
Comments: potential responsible parties (PRP Group). In May 1997, DTSC  
Comments Date: 03222000  
Comments: approved a Baseline Risk Assessment (RA). The RA found that  
Comments Date: 03222000  
Comments: risk to human health would be above levels considered safe under  
Comments Date: 03222000  
Comments: a potential future residential use scenario. Therefore,  
Comments Date: 03222000  
Comments: remedial action would be necessary to allow unrestricted use of  
Comments Date: 03222000  
Comments: the site. Sampling was conducted in the eight residential  
Comments Date: 03222000  
Comments: backyards adjacent to the Site in December 1997 and April 1998.  
Comments Date: 03222000  
Comments: Elevated levels of lead, PCBs and thallium were found.  
Comments Date: 03222000  
Comments: Additional investigation activities were performed in 1999.  
Comments Date: 04041996  
Comments: Issued I&SE Determination and Order.  
Comments Date: 05081992  
Comments: Completed Focused RIFS. Soil sampled on-site showed elevated  
Comments Date: 05081992  
Comments: levels of metals, DDD, chlordane, toxaphene, oil and grease,  
Comments Date: 05081992  
Comments: volatile organics including tetrachloroethylene (PCE) and  
Comments Date: 05081992  
Comments: trichloroethylene (TCE), and PCBs. Groundwater sampled on-site  
Comments Date: 05081992  
Comments: primarily showed elevated levels of volatile organics including  
Comments Date: 05081992  
Comments: 1,2-dichloroethane, cis-1,2-dichloroethylene, PCE,  
Comments Date: 05081992  
Comments: trans-1,2-dichloroethylene, vinyl chloride and petroleum  
Comments Date: 05081992  
Comments: hydrocarbons.  
Comments Date: 06042002  
Comments: Completed Removal Action. Completed Remedial Action.  
Comments Date: 06042002  
Comments: Approximately 6,500 cubic yards of soil were removed from the  
Comments Date: 06042002  
Comments: site, including the eight adjacent residential properties and  
Comments Date: 06042002  
Comments: vacant lot. Groundwater degradation enhancement was performed  
Comments Date: 06042002  
Comments: in March 2002.

Map ID  
Direction  
Distance  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
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**BAY AREA DRUM (Continued)**

**S100833360**

Comments Date: 06301986  
Comments: Issued RAO ordering remedial investigation and remedial action.  
Comments Date: 06301986  
Comments: Soil and liquid samples taken at the site showed elevated levels  
Comments Date: 06301986  
Comments: of metals, polychlorinated biphenyls (PCBs) and solvents.  
Comments Date: 06301987  
Comments: Issued I&SE Order. High levels of contaminants were found at  
Comments Date: 06301987  
Comments: the site, including PCBs, lead and pesticides (chlordane and  
Comments Date: 06301987  
Comments: toxaphene).  
Comments Date: 06302003  
Comments: Certified Site. DTSC approved closure of the monitoring wells  
Comments Date: 06302003  
Comments: in May 2003, since contamination levels in the wells were below  
Comments Date: 06302003  
Comments: site specific cleanup levels identified in the RAP.  
Comments Date: 07022001  
Comments: Approved Remedial Design and Implementation Plan for soil and  
Comments Date: 07022001  
Comments: groundwater.  
Comments Date: 08271992  
Comments: Completed Potential Responsible Party Search.  
Comments Date: 08291990  
Comments: Completed RA. Drums were removed from the facility. A cap was  
Comments Date: 08291990  
Comments: placed over the former drum yard, and a fence was placed around  
Comments Date: 08291990  
Comments: the former drum yard.  
Comments Date: 08301986  
Comments: Issued FDNC. The responsible parties were in non-compliance  
Comments Date: 08301986  
Comments: with the RAO.  
Comments Date: 09151981  
Comments: Site Discovery.  
Comments Date: 10142003  
Comments: COST - SETTL - Settlement Agreement signed with Bay Area Drum  
Comments Date: 10142003  
Comments: Company and David Canon.  
Comments Date: 10211993  
Comments: Completed RA. 76 drums of contaminated soil were disposed  
Comments Date: 10211993  
Comments: off-site.  
Comments Date: 12211998  
Comments: RAW - DTSC approved the RAW which proposed excavation and  
Comments Date: 12211998  
Comments: off-site disposal of soils containing various substances  
Comments Date: 12211998  
Comments: including lead, thallium and polychlorinated biphenyls (PCBs),  
Comments Date: 12211998  
Comments: from the eight residential backyards adjacent to the Bay Area  
Comments Date: 12211998  
Comments: Drum Site. The proposal included the removal of a minimum of  
Comments Date: 12211998  
Comments: the top two feet of soil from each backyard, with removal of  
Comments Date: 12211998

Map ID  
Direction  
Distance  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
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**BAY AREA DRUM (Continued)**

**S100833360**

Comments: soil below two feet in several locations, to achieve  
Comments Date: 12211998  
Comments: health-based residential cleanup levels. It is estimated that  
Comments Date: 12211998  
Comments: approximately 1,200 cubic yards of soil would be excavated, and  
Comments Date: 12211998  
Comments: a similar quantity of clean fill would be used to refill the  
Comments Date: 12211998  
Comments: excavations. Landscaping, patios, fences, etc. would also be  
Comments Date: 12211998  
Comments: replaced. Groundwater contamination will be addressed in the  
Comments Date: 12211998  
Comments: final remedy for the Bay Area Drum Site.  
ID Name: EPA IDENTIFICATION NUMBER  
ID Value: CAD982015109  
ID Name: EPA IDENTIFICATION NUMBER  
ID Value: CAC002118344  
ID Name: EPA IDENTIFICATION NUMBER  
ID Value: CAT080010242  
ID Name: CALSTARS CODE  
ID Value: 200011  
ID Name: BEP DATABASE PCODE  
ID Value: P21006  
ID Name: CALSTARS CODE  
ID Value: 201399  
ID Name: CALSTARS CODE  
ID Value: 201400  
Alternate Name: BAY AREA DRUM COMPANYBAY AREA STEEL DRUMBAY AREA DRUM COMPANYBEDINI DRUMWAYMIF  
DRUMS  
Special Programs Code: Not reported  
Special Programs Name: Not reported

**CA BOND EXP. PLAN:**

Reponsible Party: DETAILED SITE EXPENDITURE PLAN  
Project Revenue Source Company: Not reported  
Project Revenue Source Addr: Not reported  
Project Revenue Source City,St,Zip: Not reported  
Project Revenue Source Desc: Identified Responsible parties are small businesses with limited resources. The operator of Bay Area Drum has filed Chapter 11 bankruptcy. It has been necessary to utilize Bond funds to remedy this site. The Department will undertake cost recovery actions. This site has not been identified as an NPL site, nor does it appear to be a likely NPL candidate in the future. Therefore, it appears unlikely that federal funds are a viable source of revenue for this site.  
Site Description: This site a former drum reconditioning operation. Drum reconditioning processes involve significant spillage of cleaning rinsate and drum residues onto floors and in areas of drum storage.  
Hazardous Waste Desc: Soils and ground water sampled onsite and offsite show elevated levels of lead, pesticides, oil and grease, volatile organics and polychlorinated biphenyls (PCBs). The extent of ground water contamination is still being determined.  
Threat To Public Health & Env: The site adjoins a residential neighborhood and several residential yards have shown the presence of hazardous contaminants. San Francisco Bay is approximately 1,000 feet away, and may be impacted by contaminants migrating through the ground water.  
Site Activity Status: Extensive soil sampling has been completed by DHS. A remedial action order (RAO) and a remedial investigation workplan were issued to the responsible parties on June 19, 1986. Final notices of noncompliance with the RAO were

Map ID  
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MAP FINDINGS

Site

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EDR ID Number  
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**BAY AREA DRUM (Continued)**

**S100833360**

issued by the Department on August 22, 1986. A task order to implement the workplan was issued to a State contractor on August 28, 1986. Drummyard and adjacent soils have been sampled. Onsite and offsite ground water wells were installed. The risk assessment for offsite contaminated soils was completed July 31, 1987. IRM activities including soil removal, capping, and refencing were completed by February, 1988. Removal of drums containing residual liquids was completed by October, 1988. Additional ground water investigations are continuing.

**CORTESE:**

Region: CORTESE  
Facility County Code: 38  
Reg By: CALSI  
Reg Id: 38280112

**LUST:**

Region: STATE  
Global Id: T0607581979  
Latitude: 37.726665  
Longitude: -122.384144  
Case Type: LUST Cleanup Site  
Status: Completed - Case Closed  
Status Date: 09/16/2003  
Lead Agency: SAN FRANCISCO COUNTY LOP  
Case Worker: SC  
Local Agency: SAN FRANCISCO COUNTY LOP  
RB Case Number: 38-2211  
LOC Case Number: 11550  
File Location: Local Agency  
Potential Media Affect: Soil  
Potential Contaminants of Concern: Diesel  
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

**Contact:**

Global Id: T0607581979  
Contact Type: Local Agency Caseworker  
Contact Name: STEPHANIE CUSHING  
Organization Name: SAN FRANCISCO COUNTY LOP  
Address: 1390 MARKET STREET #210  
City: SAN FRANCISCO  
Email: stephanie.cushing@sfdph.org  
Phone Number: Not reported

Global Id: T0607581979  
Contact Type: Regional Board Caseworker  
Contact Name: VIC PAL  
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)  
Address: 1515 CLAY STREET, SUITE 1400  
City: OAKLAND  
Email: vpal@waterboards.ca.gov  
Phone Number: Not reported

**Regulatory Activities:**

Global Id: T0607581979

Map ID  
Direction  
Distance  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Action Type: ENFORCEMENT  
Date: 04/08/2003  
Action: Notice of Responsibility

Global Id: T0607581979  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Stopped

Global Id: T0607581979  
Action Type: ENFORCEMENT  
Date: 09/09/2003  
Action: File review

Global Id: T0607581979  
Action Type: ENFORCEMENT  
Date: 09/15/2003  
Action: Closure/No Further Action Letter

Global Id: T0607581979  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Discovery

Global Id: T0607581979  
Action Type: REMEDIATION  
Date: 01/01/1950  
Action: Excavation

Global Id: T0607581979  
Action Type: Other  
Date: 01/01/1950  
Action: Leak Reported

**SLIC:**

Region: STATE  
**Facility Status: Completed - Case Closed**  
Status Date: 09/01/1996  
Global Id: SL18336756  
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)  
Lead Agency Case Number: Not reported  
Latitude: 37.72619  
Longitude: -122.38276  
Case Type: Cleanup Program Site  
Case Worker: MEJ  
Local Agency: Not reported  
RB Case Number: SL18336756  
File Location: DTSC  
Potential Media Affected: Not reported  
Potential Contaminants of Concern: Not reported  
Site History: Not reported

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**LIENS:**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Envirostor Id: 38280112  
Latitude: 37.726664  
Longitude: -122.38414  
Project Mgr: Not reported  
Project Code: 200011, 201399, 201400  
If Satisfied: YES  
Date Satisfied: 07/27/2007  
Site Status: Certified  
Site Type: CSITES  
Completed: 08/09/2000  
Description: Drum reconditioning operations were conducted at this site from approximately 1948 to 1987. The drum reconditioning process typically involved significant spillage of cleaning rinsate and drum residues onto floors and in areas of drum storage. Eight adjacent residential backyards and an adjacent vacant lot (comprised of two parcels) were also remediated as part of the final remedial action. The former Bay Area Drum property is APN: 4792-029; the remaining APNs belong to the residential and vacant lot properties.

**RESPONSE:**

Facility ID: 38280112  
Site Type: State Response  
Site Type Detail: State Response or NPL  
Acres: 2  
National Priorities List: NO  
Cleanup Oversight Agencies: SMBRP  
Lead Agency: SMBRP  
Lead Agency Description: DTSC - Site Cleanup Program  
Project Manager: Not reported  
Supervisor: Karen Toth  
Division Branch: Cleanup Berkeley  
Site Code: 201400  
Site Mgmt. Req.: NONE SPECIFIED  
Assembly: 17  
Senate: 11  
Special Program Status: Not reported  
Status: Certified  
Status Date: 06/30/2003  
Restricted Use: NO  
Funding: Responsible Party  
Latitude: 37.72666  
Longitude: -122.3841  
APN: 4792-001B, 4792-022, 4792-023, 4792-024, 4792-025, 4792-025A, 4792-025B, 4792-026, 4792-027, 4792-028, 4792-029, 4792001B, 4792022, 4792023, 4792024, 4792025, 4792025A, 4792025B, 4792026, 4792027, 4792028, 4792029  
Past Use: RECYCLING - DRUM  
Potential COC: 30003, 30004, 30006, 30013, 30018, 30019, 30022, 30023, 30027, 30028, 30032, 30058, 30108, 30116, 30127, 30136, 30192, 30272, 30357, 30407, 30536, 30542, 30593, 30594  
Confirmed COC: 30536, 30542, 30018, 30019, 30022, 30023, 30027, 30028, 30032, 30058, 30108, 30116, 30127, 30136, 30192, 30272, 30357, 30407, 30003, 30004, 30006, 30013, 30593, 30594  
Potential Description: OTH, SOIL  
Alias Name: BAY AREA STEEL DRUM  
Alias Type: Alternate Name  
Alias Name: BEDINI DRUM

Map ID  
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Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Alias Type:	Alternate Name
Alias Name:	WAYMIRE DRUMS
Alias Type:	Alternate Name
Alias Name:	4792-001B
Alias Type:	APN
Alias Name:	4792-022
Alias Type:	APN
Alias Name:	4792-023
Alias Type:	APN
Alias Name:	4792-024
Alias Type:	APN
Alias Name:	4792-025
Alias Type:	APN
Alias Name:	4792-025A
Alias Type:	APN
Alias Name:	4792-025B
Alias Type:	APN
Alias Name:	4792-026
Alias Type:	APN
Alias Name:	4792-027
Alias Type:	APN
Alias Name:	4792-028
Alias Type:	APN
Alias Name:	4792-029
Alias Type:	APN
Alias Name:	4792001B
Alias Type:	APN
Alias Name:	4792022
Alias Type:	APN
Alias Name:	4792023
Alias Type:	APN
Alias Name:	4792024
Alias Type:	APN
Alias Name:	4792025
Alias Type:	APN
Alias Name:	4792025A
Alias Type:	APN
Alias Name:	4792025B
Alias Type:	APN
Alias Name:	4792026
Alias Type:	APN
Alias Name:	4792027
Alias Type:	APN
Alias Name:	4792028
Alias Type:	APN
Alias Name:	4792029
Alias Type:	APN
Alias Name:	CAC002118344
Alias Type:	EPA Identification Number
Alias Name:	CAD982015109
Alias Type:	EPA Identification Number
Alias Name:	CAT080010242
Alias Type:	EPA Identification Number
Alias Name:	110002945029
Alias Type:	EPA (FRS #)
Alias Name:	P21006
Alias Type:	PCode

Map ID  
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MAP FINDINGS

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Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Alias Name: 200011  
Alias Type: Project Code (Site Code)  
Alias Name: 201399  
Alias Type: Project Code (Site Code)  
Alias Name: 201400  
Alias Type: Project Code (Site Code)  
Alias Name: 38280112  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 10/21/1993  
Comments: Completed Removal Action. Five drums of contaminated groundwater and two drums of decontamination rinse water were disposed off-site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 08/29/1990  
Comments: Completed RA. Drums containing soil and liquids from Phase II soil borings were removed from the facility.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation / Feasibility Study  
Completed Date: 05/08/1992  
Comments: Completed Focused RIFS. Soil sampled on-site showed elevated levels of metals, DDD, chlordane, toxaphene, oil and grease, volatile organics including tetrachloroethylene (PCE) and trichloroethylene (TCE), and PCBs. Groundwater sampled on-site primarily showed elevated levels of volatile organics including 1,2-dichloroethane, cis-1,2-dichloroethylene, PCE, trans-1,2-dichloroethylene, vinyl chloride and petroleum hydrocarbons.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation / Feasibility Study  
Completed Date: 01/28/1992  
Comments: Completed Focused RIFS. In 1988 and 1989, DTSC's contractor conducted a Phase II remedial investigation of contamination remaining in site soil and groundwater, including the installation of 10 additional groundwater monitoring wells. In 1990, DTSC arranged for off-site treatment of over 2,000 gallons of contaminated groundwater generated during site well development and sampling activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 02/28/1988  
Comments: Completed ERA. The expedited response action involved the removal of soil from some adjacent backyards and vacant lot, characterization and removal of drums, placement of temporary cap over drum yard, and fencing of property.

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Sub Area Name: Not reported  
Completed Document Type: Site Screening  
Completed Date: 03/10/1987  
Comments: Completed Site Screening. Elevated levels of lead, copper, cadmium, PCBs, and volatile organic compounds (VOCs) were found in soil and groundwater. In addition to finding contamination in on-site soils and groundwater, contamination was found in the soils of some adjacent residential backyards, and in the soils and groundwater of an adjacent vacant lot.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Decommissioning Report  
Completed Date: 06/27/2003  
Comments: Twelve groundwater monitoring wells destroyed in compliance with San Francisco Department of Public Health requirements.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 01/01/2000  
Comments: Fact Sheet #7

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Human Health Risk Assessment Report  
Completed Date: 12/10/1999  
Comments: Supplemental risk assessment determined that the site posed an unacceptable risk for residential uses.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 07/01/1997  
Comments: Fact sheet updates the community on the ongoing site investigations.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 09/01/1986  
Comments: Fact Sheet describes site, and cleanup process and public involvement.  
Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 04/01/1987  
Comments: Report describes soils samples collected at the site and nearby off-site locations between January 28 and 30, 1987.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 12/12/1986  
Comments: Report describes soil sampling conducted between September 23 and October 1, 1986

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 02/01/1992  
Comments: Public Participation Plan approved

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 03/22/2000  
Comments: English and Spanish Fact Sheet announcing the Availability of the Draft Feasibility Study/Remedial Action Plan and announcing a public meeting.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 04/30/2001  
Comments: Approved Demolition plan for aboveground structures. Approval letter includes modifications and additional requirements for plan implementation.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 11/01/1991  
Comments: Fact Sheet

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 09/09/1998  
Comments: English & Spanish Fact Sheets announcing the availability of the Draft Removal Action Workplan for the backyards adjacent to the Bay Area Drum Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 06/01/1988  
Comments: Fact Sheet - Update on recent and future activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 10/06/1988  
Comments: Fact sheet describe ongoing field work activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Work Notice  
Completed Date: 07/01/1995  
Comments: work notice

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Date: 01/01/1996  
Comments: Community Involvement Plan

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 09/30/1990  
Comments: Stipulation for Resolution of Objection to Claim of State of California Department of Health Services (DHS) between Kaiser Steel Resources, Inc. and DHS.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 11/10/1993  
Comments: Regarding the bankruptcy of Trans World Airlines, Inc.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 12/03/1997  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 03/19/1999  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Lien  
Completed Date: 08/09/2000  
Comments: Lien recorded in the amount of \$3,989,775.84 for DTSC costs.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 07/11/2001  
Comments: Settlement Filed - with members of the Bay Area Drum Site Ad Hoc PRP Group.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 10/14/2003  
Comments: Settlement Agreement and Consent Decree

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 09/04/2007  
Comments: Settlemnt with Freud Farley & Karl Kluck. Payments due \$100,000 by July 16, 2007 and \$150,000 By April 16, 2010

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Document Type: Lien Satisfaction  
Completed Date: 07/27/2007  
Comments: Recorded lien satisfaction acknowledgement for August 9, 2000 lien

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operations and Maintenance Plan  
Completed Date: 02/14/2002  
Comments: Approved O&M Plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Workplan  
Completed Date: 12/22/1998  
Comments: RAW - DTSC approved the RAW which proposed excavation and off-site disposal of soils containing various substances including lead, thallium and polychlorinated biphenyls (PCBs), from the eight residential backyards adjacent to the Bay Area Drum Site. The proposal included the removal of a minimum of the top two feet of soil from each backyard, with removal of soil below two feet in several locations, to achieve health-based residential cleanup levels. It is estimated that approximately 1,200 cubic yards of soil would be excavated, and a similar quantity of clean fill would be used to refill the excavations. Landscaping, patios, fences, etc. would also be replaced. Groundwater contamination will be addressed in the final remedy for the Bay Area Drum Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 06/04/2002  
Comments: Completed Remedial Actions. Approximately 6,500 cubic yards of soil were removed from the site, including the eight adjacent residential properties and vacant lot. Groundwater degradation enhancement was performed in March 2002.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 07/02/2001  
Comments: Approved Remedial Design and Implementation Plan for soil and groundwater.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Plan  
Completed Date: 08/14/2000  
Comments: Remedial Action Plan required removal of all contaminated soils above residential standards and treatment of groundwater using Oxygen Releasing Compound. Groundwater monitoring required until groundwater concentrations reach site specific groundwater goals based on aquatic impacts and distance from the San Francisco Bay.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 11/21/1986

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Comments: Report describes installation of 4 monitoring wells and groundwater samples.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 05/22/1987  
Comments: Report describes installation of monitoring wells and piezometers between February and March 1987

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 05/01/1987  
Comments: Fact Sheet describing health evaluation and a proposed expediated response action.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Human Health Risk Assessment Report  
Completed Date: 07/15/1987  
Comments: report assess threats associated to contamination found in backyards and on the site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 11/05/1987  
Comments: Report describes soil borings and sampling conducted to define underlying geology.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation / Feasibility Study  
Completed Date: 03/22/2000  
Comments: Completed RIFS. In August 1995, DTSC oversaw flux-chamber air sampling and groundwater monitoring performed by a group of potential responsible parties (PRP Group). In May 1997, DTSC approved a Baseline Risk Assessment (RA). The RA found that risk to human health would be above levels considered safe under a potential future residential use scenario. Therefore, remedial action would be necessary to allow unrestricted use of the site. Sampling was conducted in the eight residential backyards adjacent to the Site in December 1997 and April 1998. Elevated levels of lead, PCBs and thallium were found. Additional investigation activities were performed in 1999.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 09/16/1987  
Comments: Fact Sheet updates community on the expediated response underway.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 06/18/1987

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Comments: Fact Sheet describes the recent risk assessment prepared and the upcoming expediated response work.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Workplan  
Completed Date: 07/01/1987  
Comments: Reports detailed expediated response activities to be undertaken.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 12/22/1987  
Comments: Report summarizes activities and findings to date.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 04/20/1990  
Comments: Report prepared to summarizes activities and results todote.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 01/29/1996  
Comments: Results of Groundwater Monitoring conducted between August 23 and August 25, 1995.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Human Health Risk Assessment Report  
Completed Date: 05/16/1997  
Comments: Approval of Baseline Risk Assessment

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 07/31/1996  
Comments: Public Participation Plan update

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 01/12/1996  
Comments: Results of Flux Chamber sampling Conducted in 1995 on residential properties and on the Bay Area Drum Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Amendment - Order/Agreement  
Completed Date: 09/19/1997  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)  
Completed Date: 01/17/2001

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Comments: Issued I&SE Determination and RAO ordering the removal of above-ground material, equipment and/or debris and structures on the property.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Initial Study/ Neg. Declaration  
Completed Date: 08/14/2000  
Comments: Negative Declaration for main site RAP.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Notice of Exemption  
Completed Date: 12/22/1998  
Comments: NOE for Backyards RAW

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Certification  
Completed Date: 06/30/2003  
Comments: Certified Site. DTSC approved closure of the monitoring wells in May 2003, since contamination levels in the wells were below site specific cleanup levels identified in the RAP.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)  
Completed Date: 04/04/1996  
Comments: Issued I&SE Determination and Order to perform remedial investigation activities, prepare a remedial investigation report, risk assessment, feasibility study and a draft Remedial Action Plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Order  
Completed Date: 03/14/1996  
Comments: Issued Consent Order to perform remedial investigation activities, prepare a remedial investigation report, risk assessment, feasibility study and a draft Remedial Action Plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Imminent and/or Subst. Endangerment Determination  
Completed Date: 06/30/1987  
Comments: Issued I&SE Determination. High levels of contaminants were found at the site, including PCBs, lead and pesticides (chlordane and toxaphene).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Final Determination of Non-Compliance  
Completed Date: 08/30/1986  
Comments: Issued FDNC. The responsible parties were in non-compliance with the RAO.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)  
Completed Date: 06/30/1986  
Comments: Issued RAO ordering remedial investigation and remedial action. Soil and liquid samples taken at the site showed elevated levels of metals, polychlorinated biphenyls (PCBs) and solvents.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \* Discovery  
Completed Date: 09/15/1981  
Comments: Site Discovery.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 06/03/1982  
Comments: Complaint received regarding discharge to sewer

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Final Determination of Non-Compliance  
Completed Date: 12/27/1996  
Comments: Final DNC

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Inspections/Visit (Non LUR)  
Completed Date: 07/07/1984  
Comments: Site inspection report including data from samples collected in Fall 1983

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Inspections/Visit (Non LUR)  
Completed Date: 07/27/1982  
Comments: Site inspection report

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

**ENVIROSTOR:**

Site Type: State Response  
Site Type Detailed: State Response or NPL  
Acres: 2  
NPL: NO  
Regulatory Agencies: SMBRP  
Lead Agency: SMBRP  
Program Manager: Not reported  
Supervisor: Karen Toth  
Division Branch: Cleanup Berkeley

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Facility ID: 38280112  
Site Code: 201400  
Assembly: 17  
Senate: 11  
Special Program: Not reported  
Status: Certified  
Status Date: 06/30/2003  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: Responsible Party  
Latitude: 37.72666  
Longitude: -122.3841  
APN: 4792-001B, 4792-022, 4792-023, 4792-024, 4792-025, 4792-025A, 4792-025B, 4792-026, 4792-027, 4792-028, 4792-029, 4792001B, 4792022, 4792023, 4792024, 4792025, 4792025A, 4792025B, 4792026, 4792027, 4792028, 4792029  
Past Use: RECYCLING - DRUM  
Potential COC: 30003, 30004, 30006, 30013, 30018, 30019, 30022, 30023, 30027, 30028, 30032, 30058, 30108, 30116, 30127, 30136, 30192, 30272, 30357, 30407, 30536, 30542, 30593, 30594  
Confirmed COC: 30536,30542,30018,30019,30022,30023,30027,30028,30032,30058,30108, 30116,30127,30136,30192,30272,30357,30407,30003,30004,30006,30013, 30593,30594  
Potential Description: OTH, SOIL  
Alias Name: BAY AREA STEEL DRUM  
Alias Type: Alternate Name  
Alias Name: BEDINI DRUM  
Alias Type: Alternate Name  
Alias Name: WAYMIRE DRUMS  
Alias Type: Alternate Name  
Alias Name: 4792-001B  
Alias Type: APN  
Alias Name: 4792-022  
Alias Type: APN  
Alias Name: 4792-023  
Alias Type: APN  
Alias Name: 4792-024  
Alias Type: APN  
Alias Name: 4792-025  
Alias Type: APN  
Alias Name: 4792-025A  
Alias Type: APN  
Alias Name: 4792-025B  
Alias Type: APN  
Alias Name: 4792-026  
Alias Type: APN  
Alias Name: 4792-027  
Alias Type: APN  
Alias Name: 4792-028  
Alias Type: APN  
Alias Name: 4792-029  
Alias Type: APN  
Alias Name: 4792001B  
Alias Type: APN  
Alias Name: 4792022  
Alias Type: APN  
Alias Name: 4792023

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Alias Type: APN  
Alias Name: 4792024  
Alias Type: APN  
Alias Name: 4792025  
Alias Type: APN  
Alias Name: 4792025A  
Alias Type: APN  
Alias Name: 4792025B  
Alias Type: APN  
Alias Name: 4792026  
Alias Type: APN  
Alias Name: 4792027  
Alias Type: APN  
Alias Name: 4792028  
Alias Type: APN  
Alias Name: 4792029  
Alias Type: APN  
Alias Name: CAC002118344  
Alias Type: EPA Identification Number  
Alias Name: CAD982015109  
Alias Type: EPA Identification Number  
Alias Name: CAT080010242  
Alias Type: EPA Identification Number  
Alias Name: 110002945029  
Alias Type: EPA (FRS #)  
Alias Name: P21006  
Alias Type: PCode  
Alias Name: 200011  
Alias Type: Project Code (Site Code)  
Alias Name: 201399  
Alias Type: Project Code (Site Code)  
Alias Name: 201400  
Alias Type: Project Code (Site Code)  
Alias Name: 38280112  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 10/21/1993  
Comments: Completed Removal Action. Five drums of contaminated groundwater and two drums of decontamination rinse water were disposed off-site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 08/29/1990  
Comments: Completed RA. Drums containing soil and liquids from Phase II soil borings were removed from the facility.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation / Feasibility Study  
Completed Date: 05/08/1992  
Comments: Completed Focused RIFS. Soil sampled on-site showed elevated levels of metals, DDD, chlordan, toxaphene, oil and grease, volatile organics including tetrachloroethylene (PCE) and trichloroethylene

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

(TCE), and PCBs. Groundwater sampled on-site primarily showed elevated levels of volatile organics including 1,2-dichloroethane, cis-1,2-dichloroethylene, PCE, trans-1,2-dichloroethylene, vinyl chloride and petroleum hydrocarbons.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation / Feasibility Study  
Completed Date: 01/28/1992  
Comments: Completed Focused RIFS. In 1988 and 1989, DTSC's contractor conducted a Phase II remedial investigation of contamination remaining in site soil and groundwater, including the installation of 10 additional groundwater monitoring wells. In 1990, DTSC arranged for off-site treatment of over 2,000 gallons of contaminated groundwater generated during site well development and sampling activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 02/28/1988  
Comments: Completed ERA. The expedited response action involved the removal of soil from some adjacent backyards and vacant lot, characterization and removal of drums. placement of temporary cap over drum yard, and fencing of property.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Screening  
Completed Date: 03/10/1987  
Comments: Completed Site Screening. Elevated levels of lead, copper, cadmium, PCBs, and volatile organic compounds (VOCs) were found in soil and groundwater. In addition to finding contamination in on-site soils and groundwater, contamination was found in the soils of some adjacent residential backyards, and in the soils and groundwater of an adjacent vacant lot.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Well Decommissioning Report  
Completed Date: 06/27/2003  
Comments: Twelve groundwater monitoring wells destroyed in compliance with San Francisco Department of Public Health requirements.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 01/01/2000  
Comments: Fact Sheet #7

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Human Health Risk Assessment Report  
Completed Date: 12/10/1999  
Comments: Supplemental risk assessment determined that the site posed an unacceptable risk for residential uses.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 07/01/1997  
Comments: Fact sheet updates the community on the ongoing site investigations.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 09/01/1986  
Comments: Fact Sheet describes site, and cleanup process and public involvement.  
Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 04/01/1987  
Comments: Report describes soils samples collected at the site and nearby off-site locations between January 28 and 30, 1987.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 12/12/1986  
Comments: Report describes soil sampling conducted between September 23 and October 1, 1986

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 02/01/1992  
Comments: Public Participation Plan approved

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 03/22/2000  
Comments: English and Spanish Fact Sheet announcing the Availability of the Draft Feasibility Study/Remedial Action Plan and announcing a public meeting.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 04/30/2001  
Comments: Approved Demolition plan for aboveground structures. Approval letter includes modifications and additional requirements for plan implementation.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 11/01/1991  
Comments: Fact Sheet

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Document Type: Fact Sheets  
Completed Date: 09/09/1998  
Comments: English & Spanish Fact Sheets announcing the availability of the Draft Removal Action Workplan for the backyards adjacent to the Bay Area Drum Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 06/01/1988  
Comments: Fact Sheet - Update on recent and future activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 10/06/1988  
Comments: Fact sheet describe ongoing field work activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Work Notice  
Completed Date: 07/01/1995  
Comments: work notice

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 01/01/1996  
Comments: Community Involvement Plan

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 09/30/1990  
Comments: Stipulation for Resolution of Objection to Claim of State of California Department of Health Services (DHS) between Kaiser Steel Resources, Inc. and DHS.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 11/10/1993  
Comments: Regarding the bankruptcy of Trans World Airlines, Inc.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 12/03/1997  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 03/19/1999  
Comments: Not reported

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Sub Area Name: Not reported  
Completed Document Type: Lien  
Completed Date: 08/09/2000  
Comments: Lien recorded in the amount of \$3,989,775.84 for DTSC costs.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 07/11/2001  
Comments: Settlement Filed - with members of the Bay Area Drum Site Ad Hoc PRP Group.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 10/14/2003  
Comments: Settlement Agreement and Consent Decree

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Decree  
Completed Date: 09/04/2007  
Comments: Settlemnt with Freud Farley & Karl Kluck. Payments due \$100,000 by July 16, 2007 and \$150,000 By April 16, 2010

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Lien Satisfaction  
Completed Date: 07/27/2007  
Comments: Recorded lien satisfaction acknowledgement for August 9, 2000 lien

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Operations and Maintenance Plan  
Completed Date: 02/14/2002  
Comments: Approved O&M Plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Workplan  
Completed Date: 12/22/1998  
Comments: RAW - DTSC approved the RAW which proposed excavation and off-site disposal of soils containing various substances including lead, thallium and polychlorinated biphenyls (PCBs), from the eight residential backyards adjacent to the Bay Area Drum Site. The proposal included the removal of a minimum of the top two feet of soil from each backyard, with removal of soil below two feet in several locations, to achieve health-based residential cleanup levels. It is estimated that approximately 1,200 cubic yards of soil would be excavated, and a similar quantity of clean fill would be used to refill the excavations. Landscaping, patios, fences, etc. would also be replaced. Groundwater contamination will be addressed in the final remedy for the Bay Area Drum Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Date: 06/04/2002  
Comments: Completed Remedial Actions. Approximately 6,500 cubic yards of soil were removed from the site, including the eight adjacent residential properties and vacant lot. Groundwater degradation enhancement was performed in March 2002.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 07/02/2001  
Comments: Approved Remedial Design and Implementation Plan for soil and groundwater.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Plan  
Completed Date: 08/14/2000  
Comments: Remedial Action Plan required removal of all contaminated soils above residential standards and treatment of groundwater using Oxygen Releasing Compound. Groundwater monitoring required until groundwater concentrations reach site specific groundwater goals based on aquatic impacts and distance from the San Francisco Bay.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 11/21/1986  
Comments: Report describes installation of 4 monitoring wells and groundwater samples.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 05/22/1987  
Comments: Report describes installation of monitoring wells and piezometers between February and March 1987

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 05/01/1987  
Comments: Fact Sheet describing health evaluation and a proposed expediated response action.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Human Health Risk Assessment Report  
Completed Date: 07/15/1987  
Comments: report assess threats associated to contamination found in backyards and on the site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 11/05/1987  
Comments: Report describes soil borings and sampling conducted to define underlying geology.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation / Feasibility Study  
Completed Date: 03/22/2000  
Comments: Completed RIFS. In August 1995, DTSC oversaw flux-chamber air sampling and groundwater monitoring performed by a group of potential responsible parties (PRP Group). In May 1997, DTSC approved a Baseline Risk Assessment (RA). The RA found that risk to human health would be above levels considered safe under a potential future residential use scenario. Therefore, remedial action would be necessary to allow unrestricted use of the site. Sampling was conducted in the eight residential backyards adjacent to the Site in December 1997 and April 1998. Elevated levels of lead, PCBs and thallium were found. Additional investigation activities were performed in 1999.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 09/16/1987  
Comments: Fact Sheet updates community on the expediated response underway.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 06/18/1987  
Comments: Fact Sheet describes the recent risk assessment prepared and the upcoming expediated response work.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Workplan  
Completed Date: 07/01/1987  
Comments: Reports detailed expediated response activities to be undertaken.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 12/22/1987  
Comments: Report summarizes activities and findings to date.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 04/20/1990  
Comments: Report prepared to summarizes activities and results todate.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 01/29/1996  
Comments: Results of Groundwater Monitoring conducted between August 23 and August 25, 1995.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Human Health Risk Assessment Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Date: 05/16/1997  
Comments: Approval of Baseline Risk Assessment

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 07/31/1996  
Comments: Public Participation Plan update

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 01/12/1996  
Comments: Results of Flux Chamber sampling Conducted in 1995 on residential properties and on the Bay Area Drum Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Amendment - Order/Agreement  
Completed Date: 09/19/1997  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)  
Completed Date: 01/17/2001  
Comments: Issued I&SE Determination and RAO ordering the removal of above-ground material, equipment and/or debris and structures on the property.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Initial Study/ Neg. Declaration  
Completed Date: 08/14/2000  
Comments: Negative Declaration for main site RAP.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: CEQA - Notice of Exemption  
Completed Date: 12/22/1998  
Comments: NOE for Backyards RAW

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Certification  
Completed Date: 06/30/2003  
Comments: Certified Site. DTSC approved closure of the monitoring wells in May 2003, since contamination levels in the wells were below site specific cleanup levels identified in the RAP.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)  
Completed Date: 04/04/1996  
Comments: Issued I&SE Determination and Order to perform remedial investigation activities, prepare a remedial investigation report, risk assessment, feasibility study and a draft Remedial Action Plan.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Consent Order  
Completed Date: 03/14/1996  
Comments: Issued Consent Order to perform remedial investigation activities, prepare a remedial investigation report, risk assessment, feasibility study and a draft Remedial Action Plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Imminent and/or Subst. Endangerment Determination  
Completed Date: 06/30/1987  
Comments: Issued I&SE Determination. High levels of contaminants were found at the site, including PCBs, lead and pesticides (chlordane and toxaphene).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Final Determination of Non-Compliance  
Completed Date: 08/30/1986  
Comments: Issued FDNC. The responsible parties were in non-compliance with the RAO.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Unilateral Order (I/SE, RAO, CAO, EPA AO)  
Completed Date: 06/30/1986  
Comments: Issued RAO ordering remedial investigation and remedial action. Soil and liquid samples taken at the site showed elevated levels of metals, polychlorinated biphenyls (PCBs) and solvents.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \* Discovery  
Completed Date: 09/15/1981  
Comments: Site Discovery.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 06/03/1982  
Comments: Complaint received regarding discharge to sewer

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Final Determination of Non-Compliance  
Completed Date: 12/27/1996  
Comments: Final DNC

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Inspections/Visit (Non LUR)  
Completed Date: 07/07/1984  
Comments: Site inspection report including data from samples collected in Fall 1983

Completed Area Name: PROJECT WIDE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**BAY AREA DRUM (Continued)**

**S100833360**

Completed Sub Area Name: Not reported  
Completed Document Type: Site Inspections/Visit (Non LUR)  
Completed Date: 07/27/1982  
Comments: Site inspection report

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

43  
SW  
1/2-1  
0.666 mi.  
3519 ft.

**1228 UNDERWOOD AVENUE SITE**  
**1228 UNDERWOOD AVE.**  
**SAN FRANCISCO, CA 94124**

VCP S109548306  
ENVIROSTOR N/A

Relative:  
Lower

VCP:  
Facility ID: 60001063  
Site Type: Voluntary Cleanup  
Site Type Detail: Voluntary Cleanup  
Site Mgmt. Req.: NONE SPECIFIED  
Acres: 0.23  
National Priorities List: NO  
Cleanup Oversight Agencies: SMBRP  
Lead Agency: SMBRP  
Lead Agency Description: DTSC - Site Cleanup Program  
Project Manager: Remedios Sunga  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Site Code: 201839  
Assembly: 17  
Senate: 11  
Special Programs Code: Voluntary Cleanup Program  
Status: No Further Action  
Status Date: 03/20/2009  
Restricted Use: NO  
Funding: Responsible Party  
Lat/Long: 37.72639 / -122.3853  
APN: 4807018  
Past Use: JUNKYARD  
Potential COC: 30001, 30407  
Confirmed COC: 30001-NO,30407-NO  
Potential Description: SOIL  
Alias Name: 4807018  
Alias Type: APN  
Alias Name: 201839  
Alias Type: Project Code (Site Code)  
Alias Name: 60001063  
Alias Type: Envirostor ID Number

Actual:  
21 ft.

Completed Info:  
Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**1228 UNDERWOOD AVENUE SITE (Continued)**

**S109548306**

Completed Document Type: Preliminary Endangerment Assessment Report  
Completed Date: 03/17/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Voluntary Cleanup Agreement  
Completed Date: 02/26/2009  
Comments: The property is located at 1228 Underwood Avenue, San Francisco, California, in San Francisco County, California 94124 (Site), identified by San Francisco Assessor's Parcel Number 4807-018. Based on the information available to DTSC and Proponent, the Site is or may be contaminated with hazardous substances, including arsenic and nickel. DTSC will review the information to identify areas and media of concern, and to determine the additional work, if any, required to complete the investigation/remediation of the Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Cost Recovery Closeout Memo  
Completed Date: 05/10/2011  
Comments: Not reported

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

**ENVIROSTOR:**

Site Type: Voluntary Cleanup  
Site Type Detailed: Voluntary Cleanup  
Acres: 0.23  
NPL: NO  
Regulatory Agencies: SMBRP  
Lead Agency: SMBRP  
Program Manager: Remedios Sunga  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Facility ID: 60001063  
Site Code: 201839  
Assembly: 17  
Senate: 11  
Special Program: Voluntary Cleanup Program  
Status: No Further Action  
Status Date: 03/20/2009  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: Responsible Party  
Latitude: 37.72639  
Longitude: -122.3853  
APN: 4807018  
Past Use: JUNKYARD

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**1228 UNDERWOOD AVENUE SITE (Continued)**

**S109548306**

Potential COC: 30001, 30407  
Confirmed COC: 30001-NO,30407-NO  
Potential Description: SOIL  
Alias Name: 4807018  
Alias Type: APN  
Alias Name: 201839  
Alias Type: Project Code (Site Code)  
Alias Name: 60001063  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Report  
Completed Date: 03/17/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Voluntary Cleanup Agreement  
Completed Date: 02/26/2009  
Comments: The property is located at 1228 Underwood Avenue, San Francisco, California, in San Francisco County, California 94124 (Site), identified by San Francisco Assessor's Parcel Number 4807-018. Based on the information available to DTSC and Proponent, the Site is or may be contaminated with hazardous substances, including arsenic and nickel. DTSC will review the information to identify areas and media of concern, and to determine the additional work, if any, required to complete the investigation/remediation of the Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Cost Recovery Closeout Memo  
Completed Date: 05/10/2011  
Comments: Not reported

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

J44  
SW  
1/2-1  
0.818 mi.  
4317 ft.

**MOBILE DEBRIS BOX SERVICE  
1301V YOSEMITE AVENUE  
SAN FRANCISCO, CA 94124**

**ENVIROSTOR S103953942  
N/A**

**Site 1 of 3 in cluster J**

**Relative:  
Lower**

ENVIROSTOR:  
Site Type: Evaluation  
Site Type Detailed: Evaluation  
Acres: 0.5  
NPL: NO  
Regulatory Agencies: SMBRP

**Actual:  
8 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MOBILE DEBRIS BOX SERVICE (Continued)**

**S103953942**

Lead Agency: SMBRP  
Program Manager: Not reported  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Facility ID: 38990012  
Site Code: Not reported  
Assembly: 17  
Senate: 11  
Special Program: EPA - PASI  
Status: Inactive - Needs Evaluation  
Status Date: 07/16/2009  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: Not reported  
Latitude: 37.72357  
Longitude: -122.3866  
APN: 4846001  
Past Use: LDF  
Potential COC: 30013, 3002502, 30153  
Confirmed COC: 3002502,30013  
Potential Description: SED, SOIL  
Alias Name: BUCKEYE PROPERTIES  
Alias Type: Alternate Name  
Alias Name: MOBILE DEBRIS BOX SERVICE  
Alias Type: Alternate Name  
Alias Name: 4846001  
Alias Type: APN  
Alias Name: 38990012  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: PA/SI Discovery  
Completed Date: 04/30/2009  
Comments: DTSC is to follow up on the site for further investigation.

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

45  
WNW  
1/2-1  
0.823 mi.  
4343 ft.

1633 NEWCOMB STREET  
1633 NEWCOMB STREET  
SAN FRANCISCO, CA 94124

ENVIROSTOR S101482040  
N/A

Relative:  
Higher

ENVIROSTOR:  
Site Type: Evaluation  
Site Type Detailed: Evaluation  
Acres: 0.1  
NPL: NO

Actual:  
56 ft.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

1633 NEWCOMB STREET (Continued)

S101482040

Regulatory Agencies: SMBRP, SAN FRANCISCO COUNTY  
Lead Agency: SAN FRANCISCO COUNTY  
Program Manager: Xavier Bryant  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Facility ID: 38990004  
Site Code: 200568  
Assembly: 17  
Senate: 11  
Special Program: EPA - PASI  
Status: No Further Action  
Status Date: 02/27/2003  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: EPA Grant  
Latitude: 37.73562  
Longitude: -122.3910  
APN: 5311025  
Past Use: ILLEGAL DUMPING  
Potential COC: 3002502  
Confirmed COC: 3002502  
Potential Description: SOIL  
Alias Name: 5311025  
Alias Type: APN  
Alias Name: 200568  
Alias Type: Project Code (Site Code)  
Alias Name: 38990004  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Endangerment Assessment Report  
Completed Date: 02/27/2003  
Comments: Completed Preliminary Endangerment Assessment. Site Investigation was conducted under the oversight of the City and County of San Francisco. After the emergency removal in 1993, the property owner removed all the debris from the Site in 1994. In March 2001, the property owner applied for a Building Permit, the permit was denied pending the outcome of the Site Characterization required by the City and County of San Francisco. In July 2001, the property owner conducted a soil and groundwater characterization. The results concluded that the existing soil contamination posed little threat to human health and the environment. The City and County of San Francisco issued a No Further Action (NFA) Warrent and a Building Permit was issued.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Screening  
Completed Date: 11/03/1994  
Comments: Completed Site Screening.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Supplemental Site Investigation Report  
Completed Date: 08/05/2001  
Comments: Report was not submitted to DTSC. Site Investigation was completed

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**1633 NEWCOMB STREET (Continued)**

**S101482040**

under the oversight of the City and County of San Francisco.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: PA/SI Site Screening  
Completed Date: 09/30/1999  
Comments: The Site Screening included a recommendation of further action to determine if a spill of flammable liquid had impacted the site.

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

**J46**  
**SW**  
**1/2-1**  
**0.860 mi.**  
**4540 ft.**

**BUCKEYE PROPERTIES**  
**1296 ARMSTRONG AVENUE**  
**SAN FRANCISCO, CA 94126**

**ENVIROSTOR** **S108217877**  
**N/A**

**Site 2 of 3 in cluster J**

**Relative:**  
**Lower**

**ENVIROSTOR:**

**Actual:**  
**10 ft.**

Site Type: Historical  
Site Type Detailed: \* Historical  
Acres: Not reported  
NPL: NO  
Regulatory Agencies: NONE SPECIFIED  
Lead Agency: NONE SPECIFIED  
Program Manager: Not reported  
Supervisor: Referred - Not Assigned  
Division Branch: Cleanup Berkeley  
Facility ID: 38650002  
Site Code: Not reported  
Assembly: 17  
Senate: 11  
Special Program: Not reported  
Status: Refer: RWQCB  
Status Date: 03/09/1993  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: Not reported  
Latitude: 37.72308  
Longitude: -122.3859  
APN: 4845003  
Past Use: NONE SPECIFIED  
Potential COC: NONE SPECIFIED  
Confirmed COC: NONE SPECIFIED  
Potential Description: NONE SPECIFIED  
Alias Name: VUCKEYE PROPERTIES  
Alias Type: Alternate Name  
Alias Name: 4845003  
Alias Type: APN  
Alias Name: 38650002  
Alias Type: Envirostor ID Number

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**BUCKEYE PROPERTIES (Continued)**

**S108217877**

Completed Info:

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Site Screening  
 Completed Date: 03/09/1993

Comments: This 7-acre partially paved and built-up site, located in a partially industrial waterfront area of San Francisco is a landfill created by filling tidal flats with random refuse during and after World War II between 1942 and 1965 and was acquired by the present owners in 1955. { A number of business operate at this site. Excavation during sewer inspections by city of San Francisco's Dept of Public Works (DPW) in 1986 revealed groundwater was contaminated with PCB (3.7 ppm), DCE (200 ppm) and benzene (0.3 ppm). The site does not have an adequate engineered cover. Other routes of exposure to contamination are surface run-off and groundwater area within a radius of 1 mile was a population of over 20,000. It is also within close proximity of sensitive environment and habitat of a few endangered species. Currently no regulatory agency is involved in the control or abatement process of the site. Consideration for emergency response rapid containment migration is unlikely at the site. Contamination at the site was discovered in 1986 City sewer installation. Soil and groundwater detected first in 1986. No files on facility for RWQCB or DTSC. US EPA involvement limited to 1990 CERCLA preliminary Assessment (used to prepare this screening). Locals have file on site. EPA Federal Inspection Team program made a reassessment on the site in July 1991. Potential appears to be high for containment migration through surface water, groundwater, contact and through food chain.

Future Area Name: Not reported  
 Future Sub Area Name: Not reported  
 Future Document Type: Not reported  
 Future Due Date: Not reported  
 Schedule Area Name: Not reported  
 Schedule Sub Area Name: Not reported  
 Schedule Document Type: Not reported  
 Schedule Due Date: Not reported  
 Schedule Revised Date: Not reported

J47  
 SW  
 1/2-1  
 0.862 mi.  
 4549 ft.

**YOSEMITE AND FITCH SEWER CONSTRUCTION  
 HAWES AND ARMSTRONG STREETS  
 SAN FRANCISCO, CA 94124**

**HIST CORTESE S100182237  
 ENVIROSTOR N/A**

**Site 3 of 3 in cluster J**

Relative:  
 Lower

CORTESE:  
 Region: CORTESE  
 Facility County Code: 38  
 Reg By: CALSI  
 Reg Id: 38160001

Actual:  
 10 ft.

ENVIROSTOR:  
 Site Type: Historical  
 Site Type Detailed: \* Historical  
 Acres: Not reported  
 NPL: NO  
 Regulatory Agencies: NONE SPECIFIED

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**YOSEMITE AND FITCH SEWER CONSTRUCTION (Continued)**

**S100182237**

Lead Agency: NONE SPECIFIED  
Program Manager: Not reported  
Supervisor: Not reported  
Division Branch: Cleanup Berkeley  
Facility ID: 38160001  
Site Code: Not reported  
Assembly: 17  
Senate: 11  
Special Program: Not reported  
Status: No Further Action  
Status Date: 02/15/1990  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: Not reported  
Latitude: 37.72277  
Longitude: -122.3866  
APN: NONE SPECIFIED  
Past Use: NONE SPECIFIED  
Potential COC: 10002, 10009, 10199  
Confirmed COC: NONE SPECIFIED  
Potential Description: NONE SPECIFIED  
Alias Name: 38160001  
Alias Type: Envirostor ID Number

**Completed Info:**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Screening  
Completed Date: 02/05/1990  
Comments: ON CORTESE LIST SITE SCREENING DONE INVESTIGATION RESULTS INDICATE THAT WASTE CREOSOTE & DIESEL FUEL WERE FOUND NEAR THE INTERSECTION OF HAWES & ARM- STRONG, AND ALONG THE YOSEMITE CANAL. LESS THAN 10 MG/KG OF TPH WERE MET ON ALL SOIL EXCEPT 126 YARDS OF OIL SATUR- ATED SOIL. THIS CONTAMINATED SOIL WAS MANIFESTED & SENT TO TREATMENT FACILITY. A FACILITY WAS CONSTRUCTED TO RECEIVE PUMPED H2O AND SEPARATE CREOSOTE AND FUEL FROM H2O. WASTE THAT WERE SKIMMED FROM THE TOPS OF TANKS WERE PLACED IN 55 GAL.DRUMS & SHIPPED TO LISCENCED FACIL- ITY. RECOMMEND PEA (LOW PRIORITY).

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

48  
NW  
1/2-1  
0.890 mi.  
4701 ft.

3950 3RD STREET  
3950 3RD STREET  
SAN FRANCISCO, CA 94124

ENVIROSTOR S108407612  
N/A

Relative:  
Lower

ENVIROSTOR:  
Site Type: Evaluation  
Site Type Detailed: Evaluation  
Acres: Not reported  
NPL: NO  
Regulatory Agencies: SAN FRANCISCO COUNTY  
Lead Agency: SAN FRANCISCO COUNTY  
Program Manager: Not reported  
Supervisor: Referred - Not Assigned  
Division Branch: Cleanup Berkeley  
Facility ID: 60000532  
Site Code: Not reported  
Assembly: 17  
Senate: 11  
Special Program: Not reported  
Status: Refer: 1248 Local Agency  
Status Date: 09/17/1997  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: Responsible Party  
Latitude: 37.74153  
Longitude: -122.3887  
APN: 5242042  
Past Use: NONE SPECIFIED  
Potential COC: NONE SPECIFIED  
Confirmed COC: NONE SPECIFIED  
Potential Description: NONE SPECIFIED  
Alias Name: 5242042  
Alias Type: APN  
Alias Name: 60000532  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: Not reported  
Completed Sub Area Name: Not reported  
Completed Document Type: Not reported  
Completed Date: Not reported  
Comments: Not reported  
  
Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

49  
 SSE  
 1/2-1  
 0.969 mi.  
 5115 ft.

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F**  
**965 ACRES; SE PORTION OF SF, CA**  
**SAN FRANCISCO, CA 94124**

**HIST Cal-Sites S101272855**  
**Cortese N/A**  
**ENVIROSTOR**

**Relative:**  
**Lower**

Calsite:

**Actual:**  
**8 ft.**

Facility ID: 38440001  
 Region: 2  
 Region Name: BERKELEY  
 Branch: NO  
 Branch Name: OMF-NORTHERN CALIF  
 File Name: Not reported  
 State Senate District: 05011986  
 Status: CERTIFIED AS HAVING BEEN REMEDIED SATISFACTORILY UNDER DTSC OVERSIGHT  
 Status Name: CERTIFIED  
 Lead Agency: DTSC  
 Lead Agency: DEPT OF TOXIC SUBSTANCES CONTROL  
 Facility Type: CLOSE  
 Type Name: CLOSED MILITARY BASE  
 NPL: Not Listed  
 SIC Code: 44  
 SIC Name: WATER TRANSPORTATION  
 Access: Not reported  
 Cortese: Not reported  
 Hazardous Ranking Score: Not reported  
 Date Site Hazard Ranked: Not reported  
 Groundwater Contamination: Confirmed  
 Staff Member Responsible for Site: TLANPHAR  
 Supervisor Responsible for Site: Not reported  
 Region Water Control Board: SF  
 Region Water Control Board Name: SAN FRANCISCO BAY  
 Lat/Long Direction: Not reported  
 Lat/Long (dms): 0 0 0 / 0 0 0  
 Lat/long Method: Not reported  
 Lat/Long Description: Not reported  
 State Assembly District Code: 13  
 State Senate District Code: 03  
 Facility ID: 38440001  
 Activity: RAP  
 Activity Name: REMEDIAL ACTION PLAN / RECORD OF DECISION  
 AWP Code: PAR-A  
 Proposed Budget: 0  
 AWP Completion Date: 11301995  
 Revised Due Date: Not reported  
 Comments Date: 11301995  
 Est Person-Yrs to complete: 0  
 Estimated Size: X  
 Request to Delete Activity: Not reported  
 Activity Status: CERT  
 Definition of Status: CERTIFIED  
 Liquids Removed (Gals): 0  
 Liquids Treated (Gals): 0  
 Action Included Capping: Not reported  
 Well Decommissioned: Not reported  
 Action Included Fencing: Not reported  
 Removal Action Certification: Not reported  
 Activity Comments: Not reported  
 For Commercial Reuse: 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440001  
Activity: RIFS  
Activity Name: REMEDIAL INVESTIGATION / FEASIBILITY STUDY  
AWP Code: PAR-A  
Proposed Budget: 0  
AWP Completion Date: 09301995  
Revised Due Date: Not reported  
Comments Date: 09301995  
Est Person-Yrs to complete: 0  
Estimated Size: X  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440001  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: PAR-A  
Proposed Budget: 0  
AWP Completion Date: 12151993  
Revised Due Date: Not reported  
Comments Date: 12151993  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 140  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: 140 CU YDS DISPOSED TO A LANDFILL.  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440001  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: PAR-A  
Proposed Budget: 0  
AWP Completion Date: 12151993

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

Revised Due Date: Not reported  
Comments Date: 12151993  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 375  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: 375 CU YDS OF CONTAMINATED SOIL DISPOSED TO OFF-SITE LANDFILL.  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440001  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: PAR-A  
Proposed Budget: 0  
AWP Completion Date: 12151993  
Revised Due Date: Not reported  
Comments Date: 12151993  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 235  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: TOTAL VOLUME OF SOIL REMOVED WAS APPROXIMATELY 85 CU YDS WHICH WAS DISPOSED OFF-SITE IN A CLASS I LANDFILL. BULK OF WORK DONE 2/93 WITH SOME RESIDUAL WORK DONE 12/93. 150 CY OF SANDBLAST GRIT REMOVED.  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440001  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: UGTS  
Proposed Budget: 0  
AWP Completion Date: 12171992  
Revised Due Date: Not reported  
Comments Date: 12171992  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440001
Activity:	SS
Activity Name:	SITE SCREENING
AWP Code:	Not reported
Proposed Budget:	0
AWP Completion Date:	04241987
Revised Due Date:	Not reported
Comments Date:	04241987
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440001
Activity:	CERT
Activity Name:	CERTIFICATION
AWP Code:	PAR-A
Proposed Budget:	0
AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	06211998
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	CERT
Definition of Status:	CERTIFIED
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440001  
Activity: ORDER  
Activity Name: I/SE, IORSE, FFA, FFSRA, VCA, EA  
AWP Code: FFA  
Proposed Budget: 0  
AWP Completion Date: Not reported  
Revised Due Date: Not reported  
Comments Date: 09191990  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: CERT  
Definition of Status: CERTIFIED  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0

Alternate Address: 965 ACRES; SE PORTION OF SF, CA  
Alternate City,St,Zip: SAN FRANCISCO, CA 94124  
Alternate Address: END OF INNES AVE, SE CNR SF, HUNTER'S PT  
Alternate City,St,Zip: SAN FRANCISCO, CA 94101  
Alternate Address: HUNTERS PT NAVAL SHIPYARD  
Alternate City,St,Zip: SAN FRANCISCO, CA 94124

Background Info: The site is located on a promontory in southeast San Francisco. The promontory is bounded on the north and east by the San Francisco Bay and on the south and west by the Bayview-Hunters Point district of the City of San Francisco. The entire site covers 936 acres, 493 of which are on land and 443 of which are under water. It was used as a naval shipyard by the Navy from 1941, until it was decommissioned in 1974. In 1976, the Navy leased the site to Triple A Machine Shop. Triple A Machine Shop was indicted and convicted for illegal disposal of hazardous substances at Hunters Point. In 1986, Triple A Machine Shop's 10-year lease expired and was not renewed. Currently, the Site is occupied by Navy personnel and approximately 200 small businesses which employ about 1,000 workers. To facilitate environmental investigation and remediation, as well as the ultimate transfer of the property to the City, this facility has been divided into six parcels, Parcel A through F. An initial assessment of Hunters Point completed by the Navy in 1984, identified numerous contaminated areas including: the oil reclamation ponds, industrial landfill, bay fill area, battery and electroplating shop, tank farm, pickling and plate yard, scrap yard and an old transformer storage yard, submarine base area, and bay sediment area. Recent investigation identified additional areas such as disposal trenches and salvage yard, oily liquid waste disposal area, oily waste ponds, incineration tank, and drum storage and disposal area. These areas, if confirmed through PA/SI process, may be grouped into four additional OUs (Group

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

6 to Group 9) with Group 5 remaining as the base-wide OU. The Navy also documented and reported alleged illegal dumping by Triple A Machine Shop leading to the identification of additional contaminated areas. Remedial field work for Group 1 started in October, 1990. Soil and groundwater at Group 1 are contaminated with oil, asbestos, trichloroethylene (TCE); perchloroethylene (PCE); chromium (Cr); copper (Cu); lead (Pb); and acids. Contaminants could be transported via wind dispersion and/or groundwater. The Group 1 industrial landfill was used from 1958 to 1974, for disposal of industrial and solid wastes. Wastes included domestic refuse; dredge spoils; sandblast waste; chemical and solvent wastes, radium dials, and asbestos. The Bay Fill area operated from 1945 to 1978, and was used for disposal of sandblast waste. The Bay Fill area also includes Tank S-505, a 630,000 gallon steel fuel tank. Tank S-505 was used by Triple A Machine Shop as a holding tank for used and waste oil. Sampling has confirmed that the oil and sludge in the tank is contaminated with PCBs. From 1944 to 1974, Hunters Point used two unlined ponds located within the Bay Fill area for oil storage. Oil waste from the industrial shops and ships, and TCE, PCBs, and chromates were disposed of at these waste ponds. The ponds were emptied and filled with soil in 1974. Hunters Point was placed on the National Priorities List (NPL) in November, 1989. A Federal Facilities Agreement (FFA) was signed by the Navy, EPA, and DHS in September, 1990. The San Francisco RWQCB requested to be a signatory to the FFA during the 45-day public comment period. Final FFA with RWQCB as an additional signatory party was signed

Comments Date: 09301995  
Comments: taminated with DDT. Both sandblast grit and DDT contaminated soil  
Comments Date: 09301995  
Comments: ls were removed. Finally, the motor oil found in the groundwater  
Comments Date: 02101982  
Comments: Sample results show elevated levels of Cu, Pb, and Zn.  
Comments Date: 02281993  
Comments: RA - PAR-A -- Two removal actions were completed at  
Comments Date: 02281993  
Comments: Parcel "A". Parcel "A" is to be transferred to the City  
Comments Date: 02281993  
Comments: and County of San Francisco. The removal actions included:  
Comments Date: 02281993  
Comments: 1) Approximately 150 cubic yards of sandblast grit were  
Comments Date: 02281993  
Comments: removed; approximate cost = \$5,000; funding = DSMOA.  
Comments Date: 02281993  
Comments: And, 2) Another area of concern was the gardening shed  
Comments Date: 02281993  
Comments: in the upland portion of Parcel "A". Approximately  
Comments Date: 02281993  
Comments: 85 cubic yards of soil was excavated and disposed of off-  
Comments Date: 02281993  
Comments: site to a Class I Landfill in Nevada. Approximate  
Comments Date: 02281993  
Comments: cost = \$25,000; Funding = DSMOA.  
Comments Date: 04241987  
Comments: Site Screening Done: Mitre Model required.  
Comments Date: 06211998  
Comments: CERT - PAR-A -- The ROD for Parcel A has been implemented. No CE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments Date: 06211998  
Comments: RCLA hazardous substances exist at the 88-acre Parcel A above hea  
Comments Date: 06211998  
Comments: lth-based levels, so the BCT approved a No Further Action ROD. On  
Comments Date: 06211998  
Comments: the other hand, some of the parcel's groundwater is contaminated  
Comments Date: 06211998  
Comments: with low levels of petroleum products, so the RWQCB will enforce  
Comments Date: 06211998  
Comments: deed notifications.  
Comments Date: 07251991  
Comments: Naval shipyard from 1941 until it was decommissioned in  
Comments Date: 07251991  
Comments: 1974. In 1976, the Navy leased the facility to Triple A  
Comments Date: 07251991  
Comments: Machine Shop. Contamination from previous shipyard  
Comments Date: 07251991  
Comments: activities and alleged illegal disposal of hazardous waste.  
Comments Date: 07251991  
Comments: Soil and groundwater contaminants include TPH, PCBs, Cu, Pb,  
Comments Date: 07251991  
Comments: As, Cd, Cr, BTX&E, acids, asbestos, TCE, TCA, PCE, and  
Comments Date: 07251991  
Comments: pesticides.  
Comments Date: 07301993  
Comments: RA - PA-A -- Removal Action completed at Parcel "A". PA-43  
Comments Date: 07301993  
Comments: consists of the area surrounding Building 906 and the  
Comments Date: 07301993  
Comments: gardening tool house. Approximately 375 cubic yards of  
Comments Date: 07301993  
Comments: PCB and Pesticide contaminated soils were excavated and  
Comments Date: 07301993  
Comments: disposed of off-site to a landfill in Utah. Approximate  
Comments Date: 07301993  
Comments: cost = \$90,000; Funding = DSMOA.  
Comments Date: 07311993  
Comments: RA - PA-A -- Removal Action completed at Parcel "A". PA-19  
Comments Date: 07311993  
Comments: consists of two parking medians near Building 901 and the  
Comments Date: 07311993  
Comments: Officers' Club. Approximately 140 cubic yards of metals,  
Comments Date: 07311993  
Comments: PCB, and pesticide contaminated soil was excavated and  
Comments Date: 07311993  
Comments: disposed of off-site to a landfill in Utah. Approximate  
Comments Date: 07311993  
Comments: cost = \$36,000; funding = DSMOA.  
Comments Date: 09151981  
Comments: Facility Drive-By: Noted two transformers. Photos taken.  
Comments Date: 09301995  
Comments: RIFS completion Size of activity: X-Large Parcel A is comprised o  
Comments Date: 09301995  
Comments: f about 88 acres of both residential and commercial areas. Early  
Comments Date: 09301995  
Comments: investigation coupled with soil removals led to two areas that r  
Comments Date: 09301995

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments: equired further work. Discovery of sandblast grit led to soil con  
Comments Date: 09301995  
Comments: led the RWQCB to ask for deed notification to alert future land  
Comments Date: 09301995  
Comments: owner(s) of the presence of low levels of motor oil in the ground  
Comments Date: 09301995  
Comments: water at Parcel A. The risk assessment indicated no or diminimus  
Comments Date: 09301995  
Comments: risk at Parcel A. The Navy proposed no action in the feasibilit  
Comments Date: 09301995  
Comments: y study. Volume trenched, stabilized or disposed: Approximately 6  
Comments Date: 09301995  
Comments: 00 cubic yards Approximate cost: \$700,000  
Comments Date: 10011981  
Comments: Site used by "Triple A Machine Shop".  
Comments Date: 10151981  
Comments: Records Search: RWQCB - transformer storage.  
Comments Date: 10261981  
Comments: State Inspection: Samples taken of soil, sludge, oily  
Comments Date: 10261981  
Comments: material. Transformers moved off-site by Defense Logistics  
Comments Date: 10261981  
Comments: Contract.  
Comments Date: 11301995  
Comments: RAP 11-30-1995 Parcel A is comprised of about 88 acres of both re  
Comments Date: 11301995  
Comments: sidential and commercial areas. Early investigation coupled with  
Comments Date: 11301995  
Comments: soil removals lead to two areas that required further work. Disc  
Comments Date: 11301995  
Comments: overy of sandblast grit lead to the discovery of soil contaminate  
Comments Date: 11301995  
Comments: d with DDT. Both sandblast grit and DDT contaminated soils were  
Comments Date: 11301995  
Comments: removed. Finally, the motor oil found in the groundwater lead th  
Comments Date: 11301995  
Comments: e Regional Water Quality Control Board to require a deed notifica  
Comments Date: 11301995  
Comments: tion to alert the future owner(s) of the presence of low levels o  
Comments Date: 11301995  
Comments: f motor oil in the groundwater at parcel A. The risk assessment  
Comments Date: 11301995  
Comments: indicated no or minimun risk at Parcel A. The Navy proposed a No  
Comments Date: 11301995  
Comments: Action ROD that was accepted by all the parties. Volume Trench  
Comments Date: 11301995  
Comments: ed, Stabilized or disposed: Approximately 600 cubic yards. Approx  
Comments Date: 11301995  
Comments: imate Cost and Funding Source: about \$100,000  
Comments Date: 12171992  
Comments: Removal of 23 underground storage tanks ranging in size from 500  
Comments Date: 12171992  
Comments: - 210,000 gallons. Tanks contained either gasoline, diesel, solv  
Comments Date: 12171992  
Comments: ents, waste oils, water or a mixture of solvent and water. 1,378  
Comments Date: 12171992  
Comments: cubic yards of solvent-contaminated soil was excavated and dispo

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments Date: 12171992  
Comments: sed offsite.  
ID Name: EPA IDENTIFICATION NUMBER  
ID Value: CA1170090087  
ID Name: BEP DATABASE PCODE  
ID Value: P22129  
Alternate Name: HUNTERS POINT NAVAL SHIPYARD, PARCEL B  
TREASURE ISLAND NAVAL STATION HNTRS  
PTTRIPLE A MACHINE SHOP  
HUNTERS POINT ANNEXTREASURE ISLAND NAVAL STATION  
HUNTERS POINT NAVAL SHIPYARD, GROUP 1  
HUNTERS POINT NAVAL SHIPYARD, PARCEL A  
Special Programs Code: BRAC2  
Special Programs Name: BASE REALIGNMENT & CLOSURE, 2ND ROUND  
Special Programs Code: DSMOA  
Special Programs Name: DEFENSE MEMORANDUM OF AGREEMENT  
Facility ID: 38440002  
Region: 2  
Region Name: BERKELEY  
Branch: NO  
Branch Name: OMF-NORTHERN CALIF  
File Name: Not reported  
State Senate District: 05011986  
Status: ANNUAL WORKPLAN (AWP) - ACTIVE SITE  
Status Name: ANNUAL WORKPLAN - ACTIVE SITE  
Lead Agency: DTSC  
Lead Agency: DEPT OF TOXIC SUBSTANCES CONTROL  
Facility Type: CLOSE  
Type Name: CLOSED MILITARY BASE  
NPL: Listed  
SIC Code: 44  
SIC Name: WATER TRANSPORTATION  
Access: Not reported  
Cortese: Not reported  
Hazardous Ranking Score: Not reported  
Date Site Hazard Ranked: Not reported  
Groundwater Contamination: Confirmed  
Staff Member Responsible for Site: TLANPHAR  
Supervisor Responsible for Site: Not reported  
Region Water Control Board: SF  
Region Water Control Board Name: SAN FRANCISCO BAY  
Lat/Long Direction: Not reported  
Lat/Long (dms): 0 0 0 / 0 0 0  
Lat/long Method: Not reported  
Lat/Long Description: FROM THE CENTER OF PARCEL  
State Assembly District Code: 13  
State Senate District Code: 03  
Facility ID: 38440002  
Activity: DES  
Activity Name: DESIGN  
AWP Code: PAR-B  
Proposed Budget: 0  
AWP Completion Date: 09071999  
Revised Due Date: Not reported  
Comments Date: 09071999  
Est Person-Yrs to complete: 0  
Estimated Size: X  
Request to Delete Activity: Not reported  
Activity Status: AWP

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440002
Activity:	RAP
Activity Name:	REMEDIAL ACTION PLAN / RECORD OF DECISION
AWP Code:	PAR-B
Proposed Budget:	0
AWP Completion Date:	10091997
Revised Due Date:	Not reported
Comments Date:	10091997
Est Person-Yrs to complete:	0
Estimated Size:	X
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440002
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	PAR-B
Proposed Budget:	0
AWP Completion Date:	11261996
Revised Due Date:	Not reported
Comments Date:	11261996
Est Person-Yrs to complete:	0
Estimated Size:	X
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440002  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: IR-06  
Proposed Budget: 0  
AWP Completion Date: 12221994  
Revised Due Date: Not reported  
Comments Date: 12221994  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 20  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: TWO UNDERGROUND STORAGE TANKS REMOVED. CONTAMINATED SOIL WAS EXCAVATED AND DISPOSED OFF-SITE, APPROXIMATELY 20 TONS.

For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440002  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: PAR-B  
Proposed Budget: 0  
AWP Completion Date: 12151993  
Revised Due Date: Not reported  
Comments Date: 12151993  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 140  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: REMOVAL OF ASBESTOS-CONTAINING MATERIAL, TANKS AND TANK PIPING, PETROLEUM FUEL AND SOLVENTS, FOUNDATIONS FOR THE 17 TANKS, DEMOLITION OF THE 2 PUMP HOUSES AND BLDGS 111 & 112, & REMOVAL OF CONTAMINATED SOIL.

For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440002  
Activity: RA  
Activity Name: REMOVAL ACTION

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

AWP Code: SOIL  
Proposed Budget: 0  
AWP Completion Date: 12311986  
Revised Due Date: Not reported  
Comments Date: 12311986  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440002  
Activity: CERT  
Activity Name: CERTIFICATION  
AWP Code: PAR-B  
Proposed Budget: 0  
AWP Completion Date: 05312008  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Alternate Address: 965 ACRES; SE PORTION OF SF, CA  
Alternate City,St,Zip: SAN FRANCISCO, CA 94101  
Alternate Address: HUNTERS POINT  
Alternate City,St,Zip: SAN FRANCISCO, CA 94101

Background Info: The site is located on a promontory in southeast San Francisco. The promontory is bounded on the north and east by the San Francisco Bay and on the south and west by the Bayview-Hunters Point district of the City of San Francisco. The entire site covers 936 acres, 493 of which are on land and 443 of which are under water. It was used as a naval shipyard by the Navy from 1941, until it was decommissioned in 1974. In 1976, the Navy leased the site to Triple A Machine Shop. Triple A Machine Shop was indicted and c

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

convicted for illegal disposal of hazardous substances at Hunters Point. In 1986, Triple A Machine Shop's 10-year lease expired and was not renewed. Currently, the Site is occupied by Navy personnel and a number of small business tenants. To facilitate environmental investigation and remediation, as well as the ultimate transfer of the property to the City, this facility has been divided into six parcels, Parcel A through F. An initial assessment of Hunters Point completed by the Navy in 1984, identified numerous contaminated areas including: the oil reclamation ponds, industrial landfill, bay fill area, battery and electroplating shop, tank farm, pickling and plate yard, scrap yard and an old transformer storage yard, submarine base area and bay sediment area. Subsequent investigation identified additional areas such as disposal trenches and salvage yard, oily liquid waste disposal area, oily waste ponds, incineration tank, and drum storage and disposal area. The Navy also documented and reported alleged illegal dumping by Triple A Machine Shop leading to the identification of additional contaminated areas. Remedial field work for Parcel B began in September, 1989. Soil and groundwater at Parcel B are contaminated with oil, poly-chlorinated biphenyls (PCB), trichloroethylene (TCE), perchloro-ethylene (PCE), chromium (Cr), copper (Cu), lead (Pb), nickel (Ni), acids and zinc chromate. Contaminants could be transported via wind dispersion and/or groundwater. From 1944 to 1974, Hunters Point operated Building 123 as the submarine battery overhaul shop, storage shop and electroplating shop. During shop operations waste acids contaminated with lead and copper spilled onto the shop floor. Chromium, tin, lead, and copper were also discharged into the storm sewer by the electroplating operations. The Parcel B Tank Farm was used from 1942 until 1985 for diesel fuel storage. Content sampling has indicated possible PCB contamination. At least one major spill occurred in 1944. Hunters Point was placed on the National Priorities List (NPL) in November, 1989. A Federal Facilities Agreement (FFA) was signed by the Navy, EPA, and DHS in September, 1990. The San Francisco RWQCB requested to be a signatory to the FFA during the 45-day public comment period; they were added to the finalized agreement.

Comments Date: 07061994  
Comments: Parcel B - Historically, this OU was referenced as Group 2.  
Comments Date: 09071999  
Comments: DES - PAR-B -- Review, comment, and approval of engineering design and construction specifications for soil remediation and groundwater monitoring wells.  
Comments Date: 11261996  
Comments: RIFS - PARCEL B Investigated 66 acres. Identified areas of concern and provided several alternatives in mitigating the risk areas.  
Comments Date: 11261996  
Comments: soil alternatives range from no action to off-site disposal and on-site treatment. The concern from the groundwater contamination is the possible threat to the Bay. Since groundwater contamination is far from the Bay, groundwater monitoring seems to be sufficient.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments Date: 11261996  
Comments: ficient. And in case of exceedences, there will be a contingency  
Comments Date: 11261996  
Comments: plan to mitigate the threat. Due to high salinity and low yield,  
Comments Date: 11261996  
Comments: the ground- water is not suited for drinking. In addition, access  
Comments Date: 11261996  
Comments: to the groundwater will be controlled by placing restrictions in  
Comments Date: 11261996  
Comments: the deed. The Navy has decided to cleanup the parcel to resident  
Comments Date: 11261996  
Comments: ical scenario. The Reuse Plan calls for mixed use at Parcel B.  
Comments Date: 11301993  
Comments: RA - PAR-B -- Removal Action Completed at Parcel "B". This  
Comments Date: 11301993  
Comments: RA consisted of various activities at the Tank Farm.  
Comments Date: 11301993  
Comments: Removal of: asbestos-containing material from piping, pumps,  
Comments Date: 11301993  
Comments: and tanks; petroleum fuel and solvents; nine foundations;  
Comments Date: 11301993  
Comments: demolition of two pump houses and Buildings 111 and 112;  
Comments Date: 11301993  
Comments: approximately 140 cubic yards of soil were excavated and  
Comments Date: 11301993  
Comments: disposed of off-site. Approximate cost = \$385,000;  
Comments Date: 11301993  
Comments: funding = DSMOA.  
Comments Date: 12221994  
Comments: RA - IR-06 -- A Removal Action was completed at Parcel B. Two un  
Comments Date: 12221994  
Comments: derground storage tanks and associated pipes were removed. In ad  
Comments Date: 12221994  
Comments: dition, 20 tons of contaminated soils were excavated. Both the s  
Comments Date: 12221994  
Comments: oils and pipes were transported and disposed offsite. Approximat  
Comments Date: 12221994  
Comments: e cost = \$50,000; funding = BRAC.  
ID Name: BEP DATABASE PCODE  
ID Value: P23055  
Alternate Name: HUNTERS PT NAVAL SHIPYD- TREASURE ISLANDHUNTERS POINT NAVAL SHIPYARD, PARCEL  
BTRIPLE A MACHINE SHOPHUNTERS PT NAVAL SHIPYD- TREASURE ISLANDHUNTERS POINT  
NAVAL SHIPYARD, GROUP 2HUNTERS POINT NAVAL SHIPYARD, PARCEL B \*

Special Programs Code: BRAC2  
Special Programs Name: BASE REALIGNMENT & CLOSURE, 2ND ROUND  
Special Programs Code: DSMOA  
Special Programs Name: DEFENSE MEMORANDUM OF AGREEMENT

Facility ID: 38440003  
Region: 2  
Region Name: BERKELEY  
Branch: NO  
Branch Name: OMF-NORTHERN CALIF  
File Name: Not reported  
State Senate District: 05011986  
Status: ANNUAL WORKPLAN (AWP) - ACTIVE SITE  
Status Name: ANNUAL WORKPLAN - ACTIVE SITE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Lead Agency: DTSC  
Lead Agency: DEPT OF TOXIC SUBSTANCES CONTROL  
Facility Type: CLOSE  
Type Name: CLOSED MILITARY BASE  
NPL: Listed  
SIC Code: 44  
SIC Name: WATER TRANSPORTATION  
Access: Not reported  
Cortese: Not reported  
Hazardous Ranking Score: Not reported  
Date Site Hazard Ranked: Not reported  
Groundwater Contamination: Suspected  
Staff Member Responsible for Site: TLANPHAR  
Supervisor Responsible for Site: Not reported  
Region Water Control Board: SF  
Region Water Control Board Name: SAN FRANCISCO BAY  
Lat/Long Direction: Not reported  
Lat/Long (dms): 0 0 0 / 0 0 0  
Lat/long Method: Not reported  
Lat/Long Description: FROM THE CENTER OF PARCEL  
State Assembly District Code: 13  
State Senate District Code: 03  
Facility ID: 38440003  
Activity: RMDL  
Activity Name: REMEDIAL ACTION (RAP REQUIRED)  
AWP Code: PAR-C  
Proposed Budget: 0  
AWP Completion Date: 09302008  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440003  
Activity: DES  
Activity Name: DESIGN  
AWP Code: PAR-C  
Proposed Budget: 0  
AWP Completion Date: 09302007  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: X  
Request to Delete Activity: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440003  
Activity: RIFS  
Activity Name: REMEDIAL INVESTIGATION / FEASIBILITY STUDY  
AWP Code: PAR-C  
Proposed Budget: 0  
AWP Completion Date: 10312006  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: X  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440003  
Activity: CERT  
Activity Name: CERTIFICATION  
AWP Code: PAR-C  
Proposed Budget: 0  
AWP Completion Date: 09302009  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0

Alternate Address: 965 ACRES; SE PORTION OF SF, CA  
Alternate City,St,Zip: SAN FRANCISCO, CA 94101  
Alternate Address: HUNTERS POINT  
Alternate City,St,Zip: SAN FRANCISCO, CA 94101

Background Info: ce of PCBs and some metals in the soil. Hunters Point was placed on the National Priorities List (NPL) in November, 1989. A Federal Facilities Agreement (FFA) was signed by the Navy, EPA and DHS in September, 1990. The San Francisco RWQCB requested to be a signatory to the FFA during the 45-day public comment period; they were added to the finalized agreement.

The site is located on a promontory in southeast San Francisco. The promontory is bounded on the north and east by the San Francisco Bay and on the south and west by the Bayview-Hunters Point district of the City of San Francisco. The entire site covers 936 acres, 493 of which are on land and 443 of which are under water. It was used as a naval shipyard by the Navy from 1941, until it was decommissioned in 1974. In 1976, the Navy leased the site to Triple A Machine Shop. Triple A Machine Shop was indicted and convicted for illegal disposal of hazardous substances at Hunters Point. In 1986, Triple A Machine Shop's 10-year lease expired and was not renewed. Currently, the Site is occupied by Navy personnel and approximately 200 small businesses which employ about 1,000 workers. To facilitate environmental investigation and remediation, as well as the ultimate transfer of the property to the City, this facility has been divided into six parcels, Parcel A through F. An initial assessment of Hunters Point completed by the Navy in 1984, identified numerous contaminated areas including: the oil reclamation ponds, industrial landfill, bay fill area, battery and electroplating shop, tank farm, pickling and plate yard, scrap yard and an old transformer storage yard, submarine base area and bay sediment area. Recent investigation identified additional areas such as disposal trenches and salvage yard, oily liquid waste disposal area, oily waste ponds, incineration tank and drum storage and disposal area. The Navy also documented and reported alleged illegal dumping by Triple A Machine Shop leading to the identification of additional contaminated areas. Remedial field work for Parcel C began in late 1990. Soil at Parcel C sites are contaminated with polychlorinated biphenyls (PCB), copper, lead and arsenic. Other suspected contaminants include acids, asbestos, liquid wastes and oils. Groundwater contamination was encountered in investigations at Parcel C sites. From 1954 to 1974, used submarine battery lead and copper, as well as electrical transformers and capacitors containing PCBs, were stored at the scrap yard. The transformer storage yard was used from 1946 until 1974. The site is unpaved and electrical transformers containing PCBs were stored at the yard. Parcel C contains an alleged Triple A Machine Shop storage area. Initial soil boring sampling has taken place at the Parcel C sites. The sampling confirmed the presence

Comments Date: 07061994  
Comments: Parcel C - Historically, this OU was referenced as Group 3.  
Comments Date: 07251991  
Comments: Naval shipyard from 1941 until it was decommissioned in  
Comments Date: 07251991

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments: 1974. In 1976, the Navy leased the facility to Triple A  
Comments Date: 07251991  
Comments: Machine Shop. Contamination resulted from previous shipyard  
Comments Date: 07251991  
Comments: activities and alleged illegal disposal of hazardous waste.  
Comments Date: 07251991  
Comments: Soil and groundwater contaminants include TPH, PCBs, Cu, Pb,  
Comments Date: 07251991  
Comments: As, Cd, Cr, BTX&E, acids, asbestos, TCE, TCA, PCE, and  
Comments Date: 07251991  
Comments: pesticides.  
ID Name: BEP DATABASE PCODE  
ID Value: P23056  
Alternate Name: HUNTERS POINT NAVAL SHIPYARD, PARCEL CTRIPLE A MACHINE SHOP  
HUNTERS PT NAVAL SHIPYD- TREASURE ISLAND  
HUNTERS POINT NAVAL SHIPYARD, GROUP 3  
HUNTERS POINT NAVAL SHIPYARD, PARCEL C \*  
Special Programs Code: BRAC2  
Special Programs Name: BASE REALIGNMENT & CLOSURE, 2ND ROUND  
Special Programs Code: DSMOA  
Special Programs Name: DEFENSE MEMORANDUM OF AGREEMENT  
Facility ID: 38440004  
Region: 2  
Region Name: BERKELEY  
Branch: NO  
Branch Name: OMF-NORTHERN CALIF  
File Name: Not reported  
State Senate District: 05011986  
Status: ANNUAL WORKPLAN (AWP) - ACTIVE SITE  
Status Name: ANNUAL WORKPLAN - ACTIVE SITE  
Lead Agency: DTSC  
Lead Agency: DEPT OF TOXIC SUBSTANCES CONTROL  
Facility Type: CLOSE  
Type Name: CLOSED MILITARY BASE  
NPL: Not Listed  
SIC Code: 44  
SIC Name: WATER TRANSPORTATION  
Access: Not reported  
Cortese: Not reported  
Hazardous Ranking Score: Not reported  
Date Site Hazard Ranked: Not reported  
Groundwater Contamination: Suspected  
Staff Member Responsible for Site: TLANPHAR  
Supervisor Responsible for Site: Not reported  
Region Water Control Board: SF  
Region Water Control Board Name: SAN FRANCISCO BAY  
Lat/Long Direction: Not reported  
Lat/Long (dms): 0 0 0 / 0 0 0  
Lat/long Method: Not reported  
Lat/Long Description: MEASURED FROM THE CENTER OF PARCEL.  
State Assembly District Code: 13  
State Senate District Code: 03  
Facility ID: 38440004  
Activity: RIFS  
Activity Name: REMEDIAL INVESTIGATION / FEASIBILITY STUDY  
AWP Code: PAR-D  
Proposed Budget: 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

AWP Completion Date: 04302005  
Revised Due Date: 10312005  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440004  
Activity: RMDL  
Activity Name: REMEDIAL ACTION (RAP REQUIRED)  
AWP Code: PAR-D  
Proposed Budget: 0  
AWP Completion Date: 12312006  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440004  
Activity: DES  
Activity Name: DESIGN  
AWP Code: PAR-D  
Proposed Budget: 0  
AWP Completion Date: 05312006  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: X  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440004
Activity:	RIFS
Activity Name:	REMEDIATION INVESTIGATION / FEASIBILITY STUDY
AWP Code:	PAR-D
Proposed Budget:	0
AWP Completion Date:	03171997
Revised Due Date:	Not reported
Comments Date:	03171997
Est Person-Yrs to complete:	0
Estimated Size:	X
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440004
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	IR-9
Proposed Budget:	0
AWP Completion Date:	03301996
Revised Due Date:	Not reported
Comments Date:	03301996
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	20
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	ZINC CHROMATE RESIDUE WITHIN A TEMPORARY STRUCTURE WERE REMOVED AND DISPOSED OF OFFSITE ALONG WITH THE PICKLING TANK AND ITS CONTENTS, CONTAINMENT VAULT CONTENTS, AND THE PLATE DRYING AND STORAGE RACKS.
For Commercial Reuse:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440004  
Activity: CERT  
Activity Name: CERTIFICATION  
AWP Code: PAR-D  
Proposed Budget: 0  
AWP Completion Date: 12312007  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0

Alternate Address: 965 ACRES; SE PORTION OF SF, CA

Alternate City,St,Zip: SAN FRANCISCO, CA 94101

Alternate Address: HUNTERS POINT

Alternate City,St,Zip: SAN FRANCISCO, CA 94101

Background Info: The site is located on a promontory in southeast San Francisco. The promontory is bounded on the north and east by the San Francisco Bay and on the south and west by the Bayview-Hunters Point district of the City of San Francisco. The entire site covers 936 acres, 493 of which are on land and 443 of which are under water. It was used as a naval shipyard by the Navy from 1941, until it was decommissioned in 1974. In 1976, the Navy leased the site to Triple A Machine Shop. Triple A Machine Shop was indicted and convicted for illegal disposal of hazardous substances at Hunters Point. In 1986, Triple A Machine Shop's 10-year lease expired and was not renewed. Currently, the Site is occupied by Navy personnel and approximately 200 small businesses which employ about 1,000 workers. To facilitate environmental investigation and remediation, as well as the ultimate transfer of the property to the City, this facility has been divided into six parcels, Parcel A through F. An initial assessment of Hunters Point completed by the Navy in 1984, identified numerous contaminated areas including: the oil reclamation ponds, industrial landfill, bay fill area, battery and electroplating shop, tank farm, pickling and plate yard, scrap yard and an old transformer storage yard, submarine base area and bay sediment area. Recent investigation identified additional areas such as disposal trenches and salvage yard, oily liquid waste disposal area, oily waste ponds, incineration tank, and drum storage and disposal area. The Navy also documented and reported alleged illegal dumping by Triple A Machine Shop leading to the identification of additional contaminated areas. Remedial field

MAP FINDINGS

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

work for Parcel D began in late 1990. Soils at the Parcel D site areas are contaminated with sandblast grit, copper, lead, zinc and nickel. Other suspected contaminants include: asbestos, liquid wastes, oils and polychlorinated biphenyls (PCBs). The Submarine Base Area includes a painting area and sandblast fill area. The painting area was used for painting submarine superstructures. The paints were primarily zinc-chromate based. The sandblast fill area was used for disposal of sandblast wastes generated from the painting area. The sandblast grit contains heavy metals and paint chips. Parcel D also contains an alleged Triple A Machine Shop dumping area where oil and liquid wastes were dumped onto the ground. An initial soil boring sampling at the Parcel D sites confirmed the presence of metals and oil in the soil. Hunters Point was placed on the National Priorities List (NPL) in November, 1989. The Federal Facilities Agreement (FFA) was signed by the Navy, EPA, and DHS in September, 1990. The San Francisco RWQCB requested to be a signatory to the FFA during the 45-day public comment period; they were added to the finalized agreement.

- Comments Date: 07251991
- Comments: Soil and groundwater contaminants include TPH, PCBs, Cu, Pb,
- Comments Date: 07251991
- Comments: As, Cd, Cr, BTX&E, acids, asbestos, TCE, TCA, PCE, and
- Comments Date: 07251991
- Comments: pesticides.
- Comments Date: 03301996
- Comments: Pickling and Plate Yard Removal was completed on March 30, 1996.
- Comments Date: 03301996
- Comments: Contamination at the Pickling and Plate Yard was located at the s
- Comments Date: 03301996
- Comments: urface and high in concentration. The site was an uncovered and e
- Comments Date: 03301996
- Comments: xposed portion of the shipyard and was routinely exposed to winte
- Comments Date: 03301996
- Comments: r storms and strong winds in the summer. The site is surrounded b
- Comments Date: 03301996
- Comments: y buildings leased to commercial tenants. At the IR-9 Pickling an
- Comments Date: 03301996
- Comments: d Plate Yard, zinc chromate residue within a temporary structure
- Comments Date: 03301996
- Comments: were removed and disposed of offsite along with the pickling tank
- Comments Date: 03301996
- Comments: and its content, containment vault contents, and the plate dryin
- Comments Date: 03301996
- Comments: g and storage racks. Contaminated groundwater and soil in the are
- Comments Date: 03301996
- Comments: a will be addressed in the Parcel D RIFS process. Volume trench
- Comments Date: 03301996
- Comments: ed, stabilized or disposed: Approximately 47,000 gallons of liqui
- Comments Date: 03301996
- Comments: d and sludge and approximately 20 tons of debris and plating stor
- Comments Date: 03301996
- Comments: age racks. Approximate cost and funding source: \$3,000,000; DSM
- Comments Date: 03301996
- Comments: OA/BRAC
- Comments Date: 07061994
- Comments: Parcel D - Historically, this OU was referenced as Group 4.
- Comments Date: 07251991

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments: Naval shipyard from 1941 until it was decommissioned in  
Comments Date: 07251991  
Comments: 1974. In 1976, the Navy leased the facility to Triple A  
Comments Date: 07251991  
Comments: Machine Shop. Contamination resulted from previous shipyard  
Comments Date: 07251991  
Comments: activities and alleged illegal disposal of hazardous waste.  
ID Name: BEP DATABASE PCODE  
ID Value: P23057  
Alternate Name: TRIPLE A MACHINE SHOPHUNTERS PT NAVAL SHIPYD- TREASURE ISLANDHUNTERS POINT  
NAVAL SHIPYARD, GROUP 4HUNTERS POINT NAVAL SHIPYARD, PARCEL D  
Special Programs Code: BRAC2  
Special Programs Name: BASE REALIGNMENT & CLOSURE, 2ND ROUND  
Special Programs Code: DSMOA  
Special Programs Name: DEFENSE MEMORANDUM OF AGREEMENT  
Facility ID: 38440005  
Region: 2  
Region Name: BERKELEY  
Branch: NO  
Branch Name: OMF-NORTHERN CALIF  
File Name: Not reported  
State Senate District: 05011986  
Status: ANNUAL WORKPLAN (AWP) - ACTIVE SITE  
Status Name: ANNUAL WORKPLAN - ACTIVE SITE  
Lead Agency: DTSC  
Lead Agency: DEPT OF TOXIC SUBSTANCES CONTROL  
Facility Type: CLOSE  
Type Name: CLOSED MILITARY BASE  
NPL: Listed  
SIC Code: 44  
SIC Name: WATER TRANSPORTATION  
Access: Not reported  
Cortese: Not reported  
Hazardous Ranking Score: Not reported  
Date Site Hazard Ranked: Not reported  
Groundwater Contamination: Suspected  
Staff Member Responsible for Site: TLANPHAR  
Supervisor Responsible for Site: Not reported  
Region Water Control Board: SF  
Region Water Control Board Name: SAN FRANCISCO BAY  
Lat/Long Direction: Not reported  
Lat/Long (dms): 0 0 0 / 0 0 0  
Lat/long Method: Not reported  
Lat/Long Description: MEASURED FROM THE CENTER OF PARCEL  
State Assembly District Code: 13  
State Senate District Code: 03  
Facility ID: 38440005  
Activity: BWEBS  
Activity Name: BASEWIDE ENVIRONMENTAL BASELINE SURVEY  
AWP Code: HPA  
Proposed Budget: 0  
AWP Completion Date: 05131996  
Revised Due Date: Not reported  
Comments Date: 05131996  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: GRP3B  
Proposed Budget: 0  
AWP Completion Date: 11121996  
Revised Due Date: Not reported  
Comments Date: 11121996  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 2  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: GRP2B  
Proposed Budget: 0  
AWP Completion Date: 05171996  
Revised Due Date: Not reported  
Comments Date: 05171996  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	17
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440005
Activity:	RMDL
Activity Name:	REMEDIAL ACTION (RAP REQUIRED)
AWP Code:	PAR-E
Proposed Budget:	0
AWP Completion Date:	07232009
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440005
Activity:	DES
Activity Name:	DESIGN
AWP Code:	PAR-E
Proposed Budget:	0
AWP Completion Date:	07012008
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	X
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440005
Activity:	RIFS
Activity Name:	REMEDIAL INVESTIGATION / FEASIBILITY STUDY
AWP Code:	PAR-E

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Proposed Budget: 0  
AWP Completion Date: 12072006  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: X  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: GRP1B  
Proposed Budget: 0  
AWP Completion Date: 12131995  
Revised Due Date: Not reported  
Comments Date: 12131995  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 5  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: B-808  
Proposed Budget: 0  
AWP Completion Date: 10021995  
Revised Due Date: Not reported  
Comments Date: 10021995  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440005
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	B-414
Proposed Budget:	0
AWP Completion Date:	10021995
Revised Due Date:	Not reported
Comments Date:	10021995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440005
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	B-258
Proposed Budget:	0
AWP Completion Date:	10021995
Revised Due Date:	Not reported
Comments Date:	10021995
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: IR-2  
Proposed Budget: 0  
AWP Completion Date: 09301995  
Revised Due Date: Not reported  
Comments Date: 09301995  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 3000  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: SANDBLAST GRIT WAS SENT TO AN ASPHALT MANUFACTURING PLANT FOR RECYCLING. SANDBLAST GRIT CONTAINED ELEVATED METALS.

For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: B-368  
Proposed Budget: 0  
AWP Completion Date: 08081995  
Revised Due Date: Not reported  
Comments Date: 08081995  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported

For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: POST  
Proposed Budget: 0  
AWP Completion Date: 12311994

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Revised Due Date: Not reported  
Comments Date: 12311994  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: 5 WARNING SIGNS WERE INSTALLED.  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: DOCK4  
Proposed Budget: 0  
AWP Completion Date: 09011994  
Revised Due Date: Not reported  
Comments Date: 09011994  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: B-606  
Proposed Budget: 0  
AWP Completion Date: 07011994  
Revised Due Date: Not reported  
Comments Date: 07011994  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440005
Activity:	FOSL
Activity Name:	FINDING OF SUITABILITY TO LEASE
AWP Code:	B-281
Proposed Budget:	0
AWP Completion Date:	07011994
Revised Due Date:	Not reported
Comments Date:	07011994
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440005
Activity:	RA
Activity Name:	REMOVAL ACTION
AWP Code:	PAR-E
Proposed Budget:	0
AWP Completion Date:	12151993
Revised Due Date:	Not reported
Comments Date:	12151993
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	N
Activity Comments:	TANK S-505 WAS STEAM CLEANED, DECONTAMINATED AND DISPOSED OF. 20,000GALLONS OF LIQUID PCB WERE REMOVED FOR INCINERATION.
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

Unknown Type: 0  
Facility ID: 38440005  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: TANK2  
Proposed Budget: 0  
AWP Completion Date: 09241991  
Revised Due Date: Not reported  
Comments Date: 09241991  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: FIVE TANKS REMOVED: S-251 AND S-001 TO S-004. SOIL AROUND TANKS EXCAVATED, AMOUNT UNKNOWN.  
  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: TANK1  
Proposed Budget: 0  
AWP Completion Date: 09241991  
Revised Due Date: Not reported  
Comments Date: 09241991  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: 3 TANKS REMOVED: S-435 (1), S-435 (2), AND S-812. SOIL AROUND TANKS EXCAVATED, AMOUNTS UNKNOWN.  
  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: TANK3  
Proposed Budget: 0  
AWP Completion Date: 09241991

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Revised Due Date: Not reported  
Comments Date: 09241991  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: THREE TANKS REMOVED AND THE SOIL AROUND THEM EXCAVATED. AMOUNT OF SOIL UNKNOWN. TANKS: S-203, S-304 AND S-305.

For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: TANK4  
Proposed Budget: 0  
AWP Completion Date: 09241991  
Revised Due Date: Not reported  
Comments Date: 09241991  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: 6 TANKS REMOVED. TANKS: S-508, AND S-711 TO S-715.

For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: TANK  
Proposed Budget: 0  
AWP Completion Date: 01171991  
Revised Due Date: Not reported  
Comments Date: 01171991  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: CONTENTS OF 23 USTS WERE REMOVED DURING JULY AND AUGUST 1990.  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: RA  
Activity Name: REMOVAL ACTION  
AWP Code: ASBES  
Proposed Budget: 0  
AWP Completion Date: 01171991  
Revised Due Date: Not reported  
Comments Date: 01171991  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 244  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: N  
Activity Comments: REMOVAL OF ACM AT 22 SITES THROUGHOUT THE HUNTERS POINT ANNEX.  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: CERT  
Activity Name: CERTIFICATION  
AWP Code: PARE2  
Proposed Budget: 0  
AWP Completion Date: 12312007  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Unknown Type: 0  
Facility ID: 38440005  
Activity: CERT  
Activity Name: CERTIFICATION  
AWP Code: PAR-E  
Proposed Budget: 0  
AWP Completion Date: 12312009  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: B-813  
Proposed Budget: 0  
AWP Completion Date: 09111997  
Revised Due Date: Not reported  
Comments Date: 09111997  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: B-915  
Proposed Budget: 0  
AWP Completion Date: 09111997  
Revised Due Date: Not reported  
Comments Date: 09111997

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 0  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: GRP5B  
Proposed Budget: 0  
AWP Completion Date: 11121996  
Revised Due Date: Not reported  
Comments Date: 11121996  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported  
Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 3  
For Residential Reuse: 0  
Unknown Type: 0  
Facility ID: 38440005  
Activity: FOSSL  
Activity Name: FINDING OF SUITABILITY TO LEASE  
AWP Code: GRP4B  
Proposed Budget: 0  
AWP Completion Date: 11121996  
Revised Due Date: Not reported  
Comments Date: 11121996  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0  
Action Included Capping: Not reported  
Well Decommissioned: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Action Included Fencing: Not reported  
Removal Action Certification: Not reported  
Activity Comments: Not reported  
For Commercial Reuse: 0  
For Industrial Reuse: 1  
For Residential Reuse: 0  
Unknown Type: 0

Alternate Address: 965 ACRES; SE PORTION OF SF, CA

Alternate City,St,Zip: SAN FRANCISCO, CA 94101

Alternate Address: HUNTERS POINT

Alternate City,St,Zip: SAN FRANCISCO, CA 94101

Background Info: The site is located on a promontory in southeast San Francisco. The promontory is bounded on the north and east by the San Francisco Bay and on the south and west by the Bayview-Hunters Point district of the City of San Francisco. The entire site covers 936 acres, 493 of which are on land and 443 of which are under water. It was used as a naval shipyard by the Navy from 1941, until it was decommissioned in 1974. In 1976, the Navy leased the site to Triple A Machine Shop. Triple A Machine Shop was indicted and convicted for illegal disposal of hazardous substances at Hunters Point. In 1986, Triple A Machine Shop's 10-year lease expired and was not renewed. Currently, the Site is occupied by Navy personnel and approximately 200 small businesses which employ about 1,000 workers. To facilitate environmental investigation and remediation, as well as the ultimate transfer of the property to the City, this facility has been divided into six parcels, Parcel A through F. An initial assessment of Hunters Point completed by the Navy in 1984, identified numerous contaminated areas including: the oil reclamation ponds, industrial landfill, bay fill area, battery and electroplating shop, tank farm, pickling and plate yard, scrap yard and an old transformer storage yard, submarine base area and bay sediment area. Recent investigation identified additional areas such as disposal trenches and salvage yard, oily liquid waste disposal area, oily waste ponds, incineration tank, and drum storage and disposal area. The Navy also documented and reported alleged illegal dumping by Triple A Machine Shop leading to the identification of additional contaminated areas. Remedial field work for Parcel E will begin in early 1991. Soils at the Parcel E sites are contaminated with copper, lead, cadmium, nickel and other heavy metals. Other contaminants include asbestos, liquid wastes, oil, gasoline and PCBs. The power plant in Building 521 operated from 1950 to 1969. After the site was closed, the area was used for disposal of waste asbestos, battery acids and chemical containers. The Navy removed asbestos from the power plant in October of 1990, and initial field sampling (soil borings and monitor wells) took place in March 1989. The alleged Triple A sites included in Parcel E are composed of storage and alleged disposal areas. Asbestos lagging, chlorinated solvents, corrosives, lead, battery acids and lead based paints were stored or dumped at the various sites. Investigations at the alleged Triple A sites have included soil borings in 1987, and test pit excavations in 1988. The sampling confirmed the presence of metals in the soil. The USTs at Hunters Point include gasoline, diesel, solvents and waste disposal tanks. The Navy has conducted an inventory check and product characterization. All known tanks containing product (solvent, gasoline, diesel, water) were pumped out in October, 1990. From 1942 until 1974, Hunters Point had a combined sanitary

MAP FINDINGS

HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

y and storm sewer system. Industrial wastes, acids, electroplating liquid wastes, solvents, lead and chromium were discharged directly into the San Francisco Bay. Sandblast wastes, paint chips and metal were also discharged into the Bay via the dry docks. Hunters Point was placed on the National Priorities List (NPL) in November, 1989. The Federal Facilities Agreement (FFA) was signed by the Navy, EPA and DHS in September, 1990. The San Francisco RWQCB requested to be a signatory to the FFA during the 45-day public comment period; they were added to the finalized agreement.

Comments Date: 08231991  
Comments: Tanks S-812 was a 10,000-gallon steel fuel oil tank, coated  
Comments Date: 08231991  
Comments: with asphalt, located near the east side of Building 813.  
Comments Date: 08231991  
Comments: Asphalt covered the surface above the tank. The tank was  
Comments Date: 08231991  
Comments: rinsed with high pressure steam to remove any residual  
Comments Date: 08231991  
Comments: product, and the rinsate was collected by vacuum truck  
Comments Date: 08231991  
Comments: and transferred to an on-site temporary storage tank for  
Comments Date: 08231991  
Comments: analysis, to determine proper disposal. On August 23,  
Comments Date: 08231991  
Comments: the soil from around the tank was excavated and the tanks  
Comments Date: 08291991  
Comments: RA: Tank2 completed. Tank S-251 was a 1,000-gallon steel  
Comments Date: 08291991  
Comments: solvent tank located adjacent to the north side of building  
Comments Date: 08291991  
Comments: 251. The surface above the tank was covered with asphalt.  
Comments Date: 08291991  
Comments: The depth to the bottom of the tanks was 6'2". Prior to the  
Comments Date: 08291991  
Comments: removal, soil-gas samples collected in the backfill area  
Comments Date: 08291991  
Comments: near the tank contained xylene. TCA, DCE, DCA, and TCE were  
Comments Date: 08291991  
Comments: found near the tank, but the source of contamination is  
Comments Date: 08291991  
Comments: unknown. On July 30, the tank was removed and soil around  
Comments Date: 08291991  
Comments: the tank excavated. The hole was lined with a 10-mil  
Comments Date: 08291991  
Comments: synthetic material (to delineate the area) before clean  
Comments Date: 08291991  
Comments: backfill material was placed into the hole. Excavated  
Comments Date: 08291991  
Comments: soil was placed into roll-off bins for analysis to  
Comments Date: 08291991  
Comments: determine proper disposal.  
Comments Date: 08291991  
Comments: Not reported  
Comments Date: 08291991  
Comments: Tanks @-001, S-002, S-004 were 3,000-gallon steel gasoline  
Comments Date: 08291991  
Comments: and diesel tanks located at the northeast corner of Building

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments Date: 08291991  
Comments: 253. They were 6 feet in diameter, 16 feet long, and  
Comments Date: 08291991  
Comments: buried 18 inches below the asphalt covered surface. The  
Comments Date: 08291991  
Comments: tanks were installed in 1976 and supplied gasoline and  
Comments Date: 08291991  
Comments: and diesel to four fuel pumps located at a service station  
Comments Date: 08291991  
Comments: island approximately 20 feet west of the tanks. Prior to  
Comments Date: 08291991  
Comments: the removal soil-gas samples collected near the tanks  
Comments Date: 08291991  
Comments: contained benzene, toluene, and xylene. TCA, DCE, DCA,  
Comments Date: 08291991  
Comments: and TCE were also found near the tanks, but the source of  
Comments Date: 08291991  
Comments: contamination is unknown. Liquid in tanks S-001 and S-003  
Comments Date: 08291991  
Comments: was removed with the rinsate when all tanks were cleaned.  
Comments Date: 08291991  
Comments: The rinsate was collected by vacume truck and transferred  
Comments Date: 08291991  
Comments: to an on-site temporary storage tank for analysis to  
Comments Date: 08291991  
Comments: determine proper disposal.  
Comments Date: 08291991  
Comments: Not reported  
Comments Date: 08291991  
Comments: On August 29, soil from around the tanks was excavated with  
Comments Date: 08291991  
Comments: a backhoe, and soil from on top of the tanks was removed  
Comments Date: 08291991  
Comments: with shovels and a broom. The tanks were then lifted out of  
Comments Date: 08291991  
Comments: the ground with a crane and transported for disposal.  
Comments Date: 08291991  
Comments: Product pipelines were also removed the same day. The hole  
Comments Date: 08291991  
Comments: was lined with 10-mil synthetic material (to delineate the  
Comments Date: 08291991  
Comments: area) before clean backfill material was placed in the hole.  
Comments Date: 08311993  
Comments: RA - PAR-E -- Removal Action completed at Parcel "E".  
Comments Date: 08311993  
Comments: Tank S-505 was an above-ground 270,000 gallon storage tank.  
Comments Date: 08311993  
Comments: Approximately 20,000 gallons of liquid PCB was transported  
Comments Date: 08311993  
Comments: to Nevada for incineration; after decon and sampling, the  
Comments Date: 08311993  
Comments: tank was cut into pieces and disposed of as scrap.  
Comments Date: 08311993  
Comments: Approximate cost = \$1,000,000; Funding = DSMOA.  
Comments Date: 09011994  
Comments: Drydock 4 Final FOSL signed and lease executed 10/12/94.  
Comments Date: 09041990

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments: Removal Action #1: Asbestos removal at 22 spots throughout  
Comments Date: 09041990  
Comments: the site. Approximately 244 cubic yards of material,  
Comments Date: 09041990  
Comments: weighing 35 tons and including four tanks from the power  
Comments Date: 09041990  
Comments: plant, were removed.  
Comments Date: 09041990  
Comments: Removal Action #2: Contents of 23 underground storage tanks  
Comments Date: 09041990  
Comments: located throughout the site were removed. A total of 226,900  
Comments Date: 09041990  
Comments: gallons of liquids were removed.  
Comments Date: 09301995  
Comments: The Parcel E/Basewide sandblast grit removal action was completed  
Comments Date: 09301995  
Comments: 09/30/95. Three thousand tons of sandblast grit was sent to an  
Comments Date: 09301995  
Comments: asphalt manufacturing plant for recycling. The sandblast grit con  
Comments Date: 09301995  
Comments: tained elevated metals. The Department assisted the Navy in devel  
Comments Date: 09301995  
Comments: oping the recycling plan. It is hoped that the Navy will be able  
Comments Date: 09301995  
Comments: to recycle all the sandblast grit materials at Hunters Point. Ap  
Comments Date: 09301995  
Comments: proximate Cost and Funding Source: \$600,000 DSMOA Size of Activit  
Comments Date: 09301995  
Comments: y: Large  
Comments Date: 12311994  
Comments: RA - POST - As part of the Parcel E remedial investigation, it be  
Comments Date: 12311994  
Comments: came apparent that warning signs needed to be posted along side o  
Comments Date: 12311994  
Comments: f the Bay. These signs warn fisherman, who fish illegally on the  
Comments Date: 12311994  
Comments: Navy's property, of possible contaminated fish. The submerged a  
Comments Date: 12311994  
Comments: rea owned by the Navy is contaminated with inorganics and pestici  
Comments Date: 12311994  
Comments: des. Five signs were installed. Approximate cost = \$20,000; fund  
Comments Date: 12311994  
Comments: ing = BRAC.  
Comments Date: 08231991  
Comments: Not reported  
Comments Date: 07061994  
Comments: Basewide - Historically, this OU was referenced as Group 5. (Base  
Comments Date: 07061994  
Comments: wide OU is also referred to as Parcel E.)  
Comments Date: 07251991  
Comments: Naval shipyard from 1941 until it was decommissioned in  
Comments Date: 07251991  
Comments: 1974. In 1976, the Navy leased the facility to Triple A  
Comments Date: 07251991  
Comments: MAchine Shop. Contamination resulted from previous shipyard  
Comments Date: 07251991  
Comments: activities and alleged illegal disposal of hazardous waste.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments Date: 07251991  
Comments: Soil and groundwater contaminants include TPH, PCBs, Cu, Pb,  
Comments Date: 07251991  
Comments: As, Cd, Cr, BTX&E, acids, asbestos, TCE, TCA, PCE, and  
Comments Date: 07251991  
Comments: pesticides.  
Comments Date: 08081995  
Comments: SSEBS completed for building 368, 369, & berth 14 to be leased fo  
Comments Date: 08081995  
Comments: r materials storage and berthing. Approx 50,000 sf.  
Comments Date: 08121991  
Comments: RA: Tank4 completed. Tanks S-508 was a 750-gallon steel  
Comments Date: 08121991  
Comments: fuel oil tank located at the southeast side of Building 500  
Comments Date: 08121991  
Comments: and was used to store fuel oil for a boiler in the building.  
Comments Date: 08121991  
Comments: The tank measured approximately four feet in diameter and  
Comments Date: 08121991  
Comments: eight feet long. The surface cover above the tank was  
Comments Date: 08121991  
Comments: asphalt. Prior to the removal, a soil sample taken  
Comments Date: 08121991  
Comments: contained 90ppm of hydrocarbon contamination. The tank was  
Comments Date: 08121991  
Comments: removed on July 25, 1991 for disposal. The tank had  
Comments Date: 08121991  
Comments: numerous holes in it. The excavated area was lined with a  
Comments Date: 08121991  
Comments: 10-mil synthetic material (to delineate the area) and the  
Comments Date: 08121991  
Comments: excavated soil was placed back in.  
Comments Date: 08121991  
Comments: Not reported  
Comments Date: 08121991  
Comments: Tanks S-711, S-712, S-713, and S-715 were 5,000-gallon steel  
Comments Date: 08121991  
Comments: gasoline and diesel tanks, and tank S-715 was a 500-gallon  
Comments Date: 08121991  
Comments: steel waste oil tank. All five tanks were located at  
Comments Date: 08121991  
Comments: Building 709, an abandoned service station. Concrete and  
Comments Date: 08121991  
Comments: asphalt covered the surface above the tanks. Soil samples  
Comments Date: 08121991  
Comments: collected prior to the removal showed benzene, toluene, and  
Comments Date: 08121991  
Comments: xylene near tanks S-711 through S-714 and xylene and toluene  
Comments Date: 08121991  
Comments: near tank S0715. TCA, DCE, DCA, and TCE was also found near  
Comments Date: 08121991  
Comments: tank S-715. Tanks containing flammable vapors in excess of  
Comments Date: 08121991  
Comments: 10% of the lower explosive limit were purged with dry ice.  
Comments Date: 08121991  
Comments: All the tanks were rinsed with high pressure steam to  
Comments Date: 08121991

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments: remove any residual product and the rinsate was collected by  
Comments Date: 08121991  
Comments: vacume trucks and transferred to an on-site temporary  
Comments Date: 08121991  
Comments: storage tank for analysis. On August 12, 1991, soil from  
Comments Date: 08121991  
Comments: around the tanks was excavated and the tanks removed for  
Comments Date: 08121991  
Comments: disposal. The tanks had no visible holes, but it  
Comments Date: 08121991  
Comments: appeared that diesel had leaked into the soil. The  
Comments Date: 08121991  
Comments: excavated area was lined with a 10-mil synthetic material  
Comments Date: 08121991  
Comments: (to delineate the area) and the excavated soil was  
Comments Date: 08121991  
Comments: replaced.  
Comments Date: 08191991  
Comments: RA: Tank3 completed. Tank S-203 was a 300-gallon steel  
Comments Date: 08191991  
Comments: gasoline tank located south of Building 203 measuring  
Comments Date: 08191991  
Comments: approximately six feet long and three feet in diameter.  
Comments Date: 08191991  
Comments: Prior to this removal, soil-gas samples taken near the tank  
Comments Date: 08191991  
Comments: contained benzene, toluene, and xylene. TCA, DCE, DCA, and  
Comments Date: 08191991  
Comments: TCE were found in samples taken near the tank. Soil was  
Comments Date: 08191991  
Comments: excavated from around the tank and the tank was removed on  
Comments Date: 08191991  
Comments: August 1, 1991. The excavated area was lined with a 10-mil  
Comments Date: 08191991  
Comments: synthetic material (to delineate the area) before clean  
Comments Date: 08191991  
Comments: backfill material was placed into the hole. Excavated soil  
Comments Date: 08191991  
Comments: was placed into roll-off bins for analysis to determine  
Comments Date: 08191991  
Comments: proper disposal.  
Comments Date: 08191991  
Comments: Not reported  
Comments Date: 08191991  
Comments: Tanks S-304 and S-305 were 6,880-gallon steel gasoline tanks  
Comments Date: 08191991  
Comments: located approximately 20 feet east of Building 304. They  
Comments Date: 08191991  
Comments: were approximately nine feet in diameter and 14 feet long.  
Comments Date: 08191991  
Comments: Asphalt covered the surface above the tanks. The tanks  
Comments Date: 08191991  
Comments: supplied gasoline to two fuel pumps located at a service  
Comments Date: 08191991  
Comments: station island about 30 feet west of Building 304. Soil-  
Comments Date: 08191991  
Comments: gas samples collected prior to the removal contained

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments Date: 08191991  
Comments: benzene, toluene, and xylene. TCA, DCE, DCA, and TCE were  
Comments Date: 08191991  
Comments: also found near the tanks, but the source of contamination  
Comments Date: 08191991  
Comments: is unknown. The tanks were rinsed with high pressure steam  
Comments Date: 08191991  
Comments: to remove any residual product, and the rinsate was  
Comments Date: 08191991  
Comments: collected by vacuum trucks and transferred to an on-site  
Comments Date: 08191991  
Comments: temporary storage tank for analysis. Soil from around the  
Comments Date: 08191991  
Comments: tanks was excavated and the tanks removed on August 19th.  
Comments Date: 08191991  
Comments: The following day the prudect pipelines were removed. The  
Comments Date: 08191991  
Comments: hole was lined with a 10-mil synthetic material (to  
Comments Date: 08191991  
Comments: delineate the area) before clean backfill material was  
Comments Date: 08191991  
Comments: placed into the hole. The excavated soil was placed into  
Comments Date: 08191991  
Comments: roll-off bins for analysis to determine proper disposal.  
Comments Date: 08231991  
Comments: removed. The hole was lined with a 10-mil synthetic  
Comments Date: 08231991  
Comments: material (to delineate the area), before clean backfill  
Comments Date: 08231991  
Comments: material was placed into the hole. The excavated soil was  
Comments Date: 08231991  
Comments: placed in roll-off bins for analysis to determine proper  
Comments Date: 08231991  
Comments: disposal.  
Comments Date: 08231991  
Comments: RA: Tank1 completed. Tanks S-435 (1) and S-435 (2) were  
Comments Date: 08231991  
Comments: 750-gallon steel solvent tanks located approximately 15 feet  
Comments Date: 08231991  
Comments: east of Building 435. The surface above the tanks was  
Comments Date: 08231991  
Comments: covered with concrete. Prior to this removal action,  
Comments Date: 08231991  
Comments: soil-gas samples collected near the tanks were found to  
Comments Date: 08231991  
Comments: contain benzene, toluene, and xylene. TCA, DCE, DCA, and  
Comments Date: 08231991  
Comments: TCE were also found in samples near the tanks. On August 6,  
Comments Date: 08231991  
Comments: the tanks were removed. The tanks were in good condition.  
Comments Date: 08231991  
Comments: The hole was lined with a 10-mil synthetic material (to  
Comments Date: 08231991  
Comments: delineate the area), before clean backfill material was  
Comments Date: 08231991  
Comments: placed into the hole. Excavated soil was placed in roll-off  
Comments Date: 08231991

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments: bins for analysis to determine proper disposal.  
ID Name: BEP DATABASE PCODE  
ID Value: P23058  
Alternate Name: HUNTERS POINT NAVAL SHIPYARD, PARCEL E  
HUNTERS POINT NAVAL SHIPYARD, BASEWIDETRIPL  
A MACHINE SHOPHUNTERS PT NAVAL SHIPYD- TREASURE ISLANDHUNTERS  
POINT NAVAL SHIPYARD, GROUP 5HUNTERS POINT NAVAL SHIPYARD, PARCEL E \*

Special Programs Code: BRAC2  
Special Programs Name: BASE REALIGNMENT & CLOSURE, 2ND ROUND  
Special Programs Code: DSMOA  
Special Programs Name: DEFENSE MEMORANDUM OF AGREEMENT

Facility ID: 38440007  
Region: 2  
Region Name: BERKELEY  
Branch: NO  
Branch Name: OMF-NORTHERN CALIF  
File Name: Not reported  
State Senate District: 07211999  
Status: ANNUAL WORKPLAN (AWP) - ACTIVE SITE  
Status Name: ANNUAL WORKPLAN - ACTIVE SITE  
Lead Agency: DTSC  
Lead Agency: DEPT OF TOXIC SUBSTANCES CONTROL  
Facility Type: CLOSE  
Type Name: CLOSED MILITARY BASE  
NPL: Not Listed  
SIC Code: 44  
SIC Name: WATER TRANSPORTATION  
Access: Not reported  
Cortese: Not reported  
Hazardous Ranking Score: Not reported  
Date Site Hazard Ranked: Not reported  
Groundwater Contamination: Suspected  
Staff Member Responsible for Site: TLANPHAR  
Supervisor Responsible for Site: Not reported  
Region Water Control Board: SF  
Region Water Control Board Name: SAN FRANCISCO BAY  
Lat/Long Direction: Not reported  
Lat/Long (dms): 0 0 0 / 0 0 0  
Lat/long Method: Not reported  
Lat/Long Description: PAR F IS SUBMERGED PORTION OF SHIPYARD  
State Assembly District Code: 13  
State Senate District Code: 03  
Facility ID: 38440007  
Activity: RMDL  
Activity Name: REMEDIAL ACTION (RAP REQUIRED)  
AWP Code: PAR-F  
Proposed Budget: 0  
AWP Completion Date: 07312009  
Revised Due Date: Not reported  
Comments Date: Not reported  
Est Person-Yrs to complete: 0  
Estimated Size: Not reported  
Request to Delete Activity: Not reported  
Activity Status: AWP  
Definition of Status: ANNUAL WORKPLAN - ACTIVE SITE  
Liquids Removed (Gals): 0  
Liquids Treated (Gals): 0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

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HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

S101272855

Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440007
Activity:	DES
Activity Name:	DESIGN
AWP Code:	PAR-F
Proposed Budget:	0
AWP Completion Date:	06302008
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440007
Activity:	CERT
Activity Name:	CERTIFICATION
AWP Code:	PAR-F
Proposed Budget:	0
AWP Completion Date:	12312009
Revised Due Date:	Not reported
Comments Date:	Not reported
Est Person-Yrs to complete:	0
Estimated Size:	Not reported
Request to Delete Activity:	Not reported
Activity Status:	AWP
Definition of Status:	ANNUAL WORKPLAN - ACTIVE SITE
Liquids Removed (Gals):	0
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	Not reported
Action Included Fencing:	Not reported
Removal Action Certification:	Not reported
Activity Comments:	Not reported
For Commercial Reuse:	0
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Alternate Address: 965 ACRES; SE PORTION OF SF, CA  
Alternate City,St,Zip: SAN FRANCISCO, CA 94101  
Background Info: The site is located on a promontory in southeast San Francisco. The promontory is bounded on the north and east by the San Francisco Bay and on the south and west by the Bayview-Hunters Point district of the City of San Francisco. The entire site covers 936 acres, 493 of which are on land and 443 of which are under water. It was used as a naval shipyard by the Navy from 1941 until it was decommissioned in 1974. In 1976, the Navy leased the site to Triple A Machine Shop. Triple A Machine Shop was indicted and convicted for illegal disposal of hazardous substances at Hunters Point. In 1986, Triple A Machine shops 10-year lease expired and was not renewed. Currently, the Site is occupied by Navy personnel and approximately 200 small businesses which employ about 1,000 workers. To facilitate environmental investigation and remediation, as well as the ultimate transfer of the property to the City, this facility has been divided into six parcels, Parcel A through F. Parcel F is located offshore, and consists of all 443 acres of underwater land surrounding the central Hunters Point Shipyard. From 1991 through 1996, field investigations were conducted at Parcel F. These investigations included the Phase 1A and Phase 1B investigation and the Ecological Sampling and Analysis Plan sampling activities.

Comments Date: Not reported  
Comments: Not reported  
ID Name: Not reported  
ID Value: Not reported  
Alternate Name: HUNTERS POINT NAVAL SHIPYARD, PARCEL CHUNTERS POINT NAVAL SHIPYARD, PARCEL F  
Special Programs Code: Not reported  
Special Programs Name: Not reported

**CORTESE:**

Region: CORTESE  
Envirostor Id: 38440002  
Site/Facility Type: FEDERAL SUPERFUND - LISTED  
Cleanup Status: ACTIVE  
Status Date: 05/01/1986  
Site Code: 200050  
Latitude: 37.729722  
Longitude: -122.36388  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: export  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported

Region: CORTESE  
Envirostor Id: 38440003  
Site/Facility Type: FEDERAL SUPERFUND - LISTED  
Cleanup Status: ACTIVE  
Status Date: 05/01/1986

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Site Code: 200050  
Latitude: 37.726111  
Longitude: -122.35888  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: export  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported

Region: CORTESE  
Envirostor Id: 38440004  
Site/Facility Type: FEDERAL SUPERFUND - LISTED  
Cleanup Status: ACTIVE  
Status Date: 05/01/1986  
Site Code: 200050  
Latitude: 37.721111  
Longitude: -122.36416  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: export  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported

Region: CORTESE  
Envirostor Id: 38440005  
Site/Facility Type: FEDERAL SUPERFUND - LISTED  
Cleanup Status: ACTIVE  
Status Date: 05/01/1986  
Site Code: 200050  
Latitude: 37.719722  
Longitude: -122.37138  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: export  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported

Region: CORTESE  
Envirostor Id: 38440007

Map ID  
Direction  
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MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Site/Facility Type: FEDERAL SUPERFUND - LISTED  
Cleanup Status: ACTIVE  
Status Date: 07/21/1999  
Site Code: 200050  
Latitude: 37.718888  
Longitude: -122.37416  
Owner: Not reported  
Enf Type: Not reported  
Swat R: Not reported  
Flag: export  
Order No: Not reported  
Waste Discharge System No: Not reported  
Effective Date: Not reported  
Region 2: Not reported  
WID Id: Not reported  
Solid Waste Id No: Not reported  
Waste Management Uit Name: Not reported

**ENVIROSTOR:**

Site Type: Federal Superfund  
Site Type Detailed: Closed Base  
Acres: 446  
NPL: YES  
Regulatory Agencies: SMBRP, RWQCB 2 - San Francisco Bay, US EPA  
Lead Agency: SMBRP,US EPA  
Program Manager: Ryan Miya  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Facility ID: 38440007  
Site Code: 200050  
Assembly: 17  
Senate: 11  
Special Program: Navy  
Status: Active  
Status Date: 07/21/1999  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: \* Defense Environmental Restoration Program (DERP)  
Latitude: 37.71888  
Longitude: -122.3741  
APN: NONE SPECIFIED  
Past Use: DRY DOCKS, SHIPYARD - SHIP BUILDING/REPAIR, DRY DOCKS, LANDFILL - CONSTRUCTION, LANDFILL - DOMESTIC, LANDFILL - HAZARDOUS WASTE, SAND BLASTING, SHIPYARD - SHIP BUILDING/REPAIR  
Potential COC: 30013, 30014, 30018, 30020, 30018, 30019, 30020  
Confirmed COC: 30020-NO,30018,30013,30014,, ,30018,30019,30020-NO  
Potential Description: SED, SURFW, SED, SURFW  
Alias Name: HUNTERS POINT NAVAL SHIPYARD, PARCEL C  
Alias Type: Alternate Name  
Alias Name: 110033615023  
Alias Type: EPA (FRS #)  
Alias Name: 200050  
Alias Type: Project Code (Site Code)  
Alias Name: 38440002  
Alias Type: Envirostor ID Number  
Alias Name: 38440003  
Alias Type: Envirostor ID Number

Map ID  
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MAP FINDINGS

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Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Alias Name: 38440004  
Alias Type: Envirostor ID Number  
Alias Name: 38440005  
Alias Type: Envirostor ID Number  
Alias Name: 38440007  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 06/03/2011  
Comments: The Community Involvement Plan presents the Navy's plans to inform and involve the community in the environmental cleanup program moving forward based on feedback obtained from the Hunters Point Shipyard community about past communication and community involvement program activities.

Completed Area Name: PARCEL-F  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 08/08/2012  
Comments: This Removal Action Completion Summary Report describes the actions that were conducted for survey and removal of wooden pier structures that were deemed potentially radiologically-impacted at designated piers and wharfs in Parcel F at Hunters Point Naval Shipyard (HPNS), San Francisco, California. This project addressed Submarine Piers B and C, the wooden portion of the submarine quay wall, the wooden remnants of Berths 61 and 64, and the wooden portion of Wharf No. 2. Field activities also included the removal of above-pier structures that potentially contained hazardous materials. The concrete cantilevered quay wall was left in place between Pier C and Berth 64. The objective of this project was to remove derelict over-water structures that were potentially radiologically impacted and presented hazards to navigation in the San Francisco Bay (Bay). The required removal action was comprised of pier and wharf removal, radiological screening, waste segregation, and waste characterization activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/23/2000  
Comments: This document presents a comprehensive history of radiological operations conducted by the U.S. Department of the Navy (Navy) and Navy contractors at the Hunters Point Shipyard (HPS), San Francisco, California. The Navy prepared the HPS Historical Radiological Assessment (HRA) as a two volume set. Volume I (the current document) addresses radioactivity associated with the Naval Nuclear Propulsion Program (NNPP).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/31/2004  
Comments: This document presents a comprehensive history of radiological operations conducted by the U.S. Department of the Navy (Navy) and Navy contractors at the Hunters Point Shipyard (HPS), San Francisco,

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

California. The Navy prepared the HPS Historical Radiological Assessment (HRA) as a two volume set. Volume I was published in August 2000 and addressed radioactivity associated with the Naval Nuclear Propulsion Program (NNPP). Volume I concluded that berthing of and work on nuclear-powered ships at HPS resulted in no adverse effect on the human population or the environment. Volume II of the HRA has been prepared pursuant to the Navy's Installation Restoration (IR) Program, which encompasses the Navy's Base Realignment and Closure (BRAC) Program, and in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). Volume II describes the history of operations involving general radioactive material (G-RAM) that, for the purposes of this document, is defined as any radioactive material used by the Navy or Navy contractors not associated with the NNPP.

Completed Area Name: PARCEL-F  
Completed Sub Area Name: Not reported  
Completed Document Type: Fieldwork  
Completed Date: 08/31/2011  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 12/23/2009  
Comments: Also included as an appendix (Appendix E) to the Community Involvement Plan.

Completed Area Name: PARCEL-F  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 04/23/2001  
Comments: The primary objective of the validation study is to more clearly define the extent of sediments that pose an unacceptable risk to the environment and that require evaluation in a Feasibility Study of remedial options.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Enforceable Schedule  
Completed Date: 09/26/2012  
Comments: Serves as the new comprehensive baseline schedule for the Installation Restoration Program at HPNS.

Completed Area Name: PARCEL-F  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 06/12/2001  
Comments: Sediment dynamics were evaluated to characterize the fate and transport of sediment-bound contaminants, identify areas of sediment deposition and erosion, estimate rates of sediment accumulation, and predict the likelihood of subsurface sediment remobilization under various weather conditions. This memorandum presents the results of site-specific hydrodynamic data collection and analysis completed in early 2001. Complete analysis of the sediment dynamic results will be provided in the Parcel F Validation Study Report.

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: PARCEL-F  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 05/27/2008  
Comments: No further comments on final FS. Radiological addendum must be completed prior to draft proposed plan.

Completed Area Name: PARCEL-F  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 10/05/2005  
Comments: DTSC has no further comments on report

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 05/26/2009  
Comments: Letter serves as the Navy's notice of intent to dissolve the Hunters Point Naval Shipyard Restoration Advisory Board.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 09/02/2009  
Comments: RAB Dissolution Public Notice and Comment Period Announcement sent via e-mail.

Completed Area Name: PARCEL-F  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 08/31/2011  
Comments: Specific objectives of the Parcel F Phase 2 data gap investigation are as follows: (1) Use two primary lines of evidence (measurements and modeling) to identify areas of surface sediments that pose an unacceptable risk to human health and/or the environment. Measurements will be made of the radionuclide activity in sediments and in clams (*Macoma nasuta*). Modeling will be performed to determine the potential for impacts to biota as well as to evaluate risks to human receptors based on a conceptual site model for Parcel F. (2) Collect data at locations that span the range of radionuclide activity levels and, if possible, develop exposure-response relationships and protective sediment radionuclide activity levels that can be compared with subsurface radionuclide activity levels in order to identify potential areas of concern for subsurface sediments. (3) Collect data regarding sediment characteristics and sediment dynamics to support the assessment of risk presented by subsurface sediments and the evaluation of remedial alternatives for sediments with levels of radiological activity that pose unacceptable risk to human health and/or the environment.

Completed Area Name: PARCEL-F  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 01/24/2011  
Comments: This Pier Demolition Work Plan presents the basis for the deconstruction and removal of all potentially radiological and dilapidated shoreline wooden structures including: Berth 61 and 64,

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Piers B and C, the wood supported quay wall adjacent to Pier C, and Wharf No. 2 between Dry Docks 2 and 3 at Hunters Point Shipyard.

Completed Area Name: PARCEL-F  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 07/14/2010  
Comments: DTSC did not review and/or comment on this document, which is provided here for informational purposes.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 06/03/1996  
Comments: The basewide environmental baseline survey (EBS) report prepared for Hunters Point Annex (HPA), San Francisco, California, summarizes environmental information gathered by PRC Environmental Management, Inc. (PRC), for the Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC), Engineering Field Activity West (EFA WEST). This document is based on existing environmental information gathered during the period of May to December 1995 related to the storage, release, treatment, or disposal of hazardous substances or petroleum products at HPA.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Federal Facility Agreement  
Completed Date: 10/29/1991  
Comments: Federal Facilities Agreement signed by the United States Navy, DTSC and US EPA.

Future Area Name: PARCEL-F  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2018  
Future Area Name: PARCEL-F  
Future Sub Area Name: Not reported  
Future Document Type: Design/Implementation Workplan  
Future Due Date: 2016  
Future Area Name: PARCEL-F  
Future Sub Area Name: Not reported  
Future Document Type: Proposed Plan  
Future Due Date: 2014  
Future Area Name: PARCEL-F  
Future Sub Area Name: Not reported  
Future Document Type: Record of Decision  
Future Due Date: 2015  
Future Area Name: PARCEL-F  
Future Sub Area Name: Not reported  
Future Document Type: Feasibility Study Report  
Future Due Date: 2014  
Future Area Name: PARCEL-F  
Future Sub Area Name: Not reported  
Future Document Type: Finding of Suitability to Transfer  
Future Due Date: 2018  
Future Area Name: PROJECT WIDE  
Future Sub Area Name: Not reported

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Future Document Type: Public Participation Plan / Community Relations Plan  
Future Due Date: 2013  
Future Area Name: PARCEL-F  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2018  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

Site Type: Federal Superfund  
Site Type Detailed: Closed Base  
Acres: 88  
NPL: DELISTED  
Regulatory Agencies: DTSC  
Lead Agency: DTSC  
Program Manager: Tom Lanphar  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Facility ID: 38440001  
Site Code: 200050  
Assembly: 17  
Senate: 11  
Special Program: Not reported  
Status: Certified  
Status Date: 06/21/1998  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: BRAC 91  
Latitude: 37.72611  
Longitude: -122.3663  
APN: NONE SPECIFIED  
Past Use: OFFICE BUILDING, RESIDENTIAL AREA, UNDERGROUND STORAGE TANKS  
Potential COC: 10061, 10028, 30013  
Confirmed COC: 30013  
Potential Description: SOIL

Alias Name: HUNTERS POINT ANNEX  
Alias Type: Alternate Name  
Alias Name: HUNTERS POINT NAVAL SHIPYARD, GROUP 1  
Alias Type: Alternate Name  
Alias Name: HUNTERS POINT NAVAL SHIPYARD, PARCEL B  
Alias Type: Alternate Name  
Alias Name: TREASURE ISLAND NAVAL STATION  
Alias Type: Alternate Name  
Alias Name: TREASURE ISLAND NAVAL STATION HNTRS PT  
Alias Type: Alternate Name  
Alias Name: TRIPLE A MACHINE SHOP  
Alias Type: Alternate Name  
Alias Name: CA1170090087  
Alias Type: EPA Identification Number  
Alias Name: 110033615023  
Alias Type: EPA (FRS #)  
Alias Name: T0607502801  
Alias Type: GeoTracker Global ID  
Alias Name: T0607505439

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HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

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Alias Type:	GeoTracker Global ID
Alias Name:	T0607506557
Alias Type:	GeoTracker Global ID
Alias Name:	T0607506769
Alias Type:	GeoTracker Global ID
Alias Name:	T0607508353
Alias Type:	GeoTracker Global ID
Alias Name:	T0607508881
Alias Type:	GeoTracker Global ID
Alias Name:	T0607509304
Alias Type:	GeoTracker Global ID
Alias Name:	T0607511507
Alias Type:	GeoTracker Global ID
Alias Name:	T0607513526
Alias Type:	GeoTracker Global ID
Alias Name:	T0607516125
Alias Type:	GeoTracker Global ID
Alias Name:	T0607517432
Alias Type:	GeoTracker Global ID
Alias Name:	T0607525844
Alias Type:	GeoTracker Global ID
Alias Name:	T0607526039
Alias Type:	GeoTracker Global ID
Alias Name:	T0607533301
Alias Type:	GeoTracker Global ID
Alias Name:	T0607536036
Alias Type:	GeoTracker Global ID
Alias Name:	T0607536444
Alias Type:	GeoTracker Global ID
Alias Name:	T0607540551
Alias Type:	GeoTracker Global ID
Alias Name:	T0607542350
Alias Type:	GeoTracker Global ID
Alias Name:	T0607549666
Alias Type:	GeoTracker Global ID
Alias Name:	T0607550028
Alias Type:	GeoTracker Global ID
Alias Name:	T0607551487
Alias Type:	GeoTracker Global ID
Alias Name:	T0607551727
Alias Type:	GeoTracker Global ID
Alias Name:	T0607552007
Alias Type:	GeoTracker Global ID
Alias Name:	T0607556477
Alias Type:	GeoTracker Global ID
Alias Name:	T0607556758
Alias Type:	GeoTracker Global ID
Alias Name:	T0607557950
Alias Type:	GeoTracker Global ID
Alias Name:	T0607564936
Alias Type:	GeoTracker Global ID
Alias Name:	T0607565171
Alias Type:	GeoTracker Global ID
Alias Name:	T0607567369
Alias Type:	GeoTracker Global ID
Alias Name:	T0607570886
Alias Type:	GeoTracker Global ID

Map ID  
Direction  
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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Alias Name: T0607572144  
Alias Type: GeoTracker Global ID  
Alias Name: T0607575685  
Alias Type: GeoTracker Global ID  
Alias Name: T0607577558  
Alias Type: GeoTracker Global ID  
Alias Name: T0607579626  
Alias Type: GeoTracker Global ID  
Alias Name: T0607579922  
Alias Type: GeoTracker Global ID  
Alias Name: T0607580147  
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Alias Name: T0607584422  
Alias Type: GeoTracker Global ID  
Alias Name: T0607585313  
Alias Type: GeoTracker Global ID  
Alias Name: T0607586516  
Alias Type: GeoTracker Global ID  
Alias Name: T0607590963  
Alias Type: GeoTracker Global ID  
Alias Name: T0607591402  
Alias Type: GeoTracker Global ID  
Alias Name: T0607591567  
Alias Type: GeoTracker Global ID  
Alias Name: T0607591997  
Alias Type: GeoTracker Global ID  
Alias Name: T0607599590  
Alias Type: GeoTracker Global ID  
Alias Name: T0609592166  
Alias Type: GeoTracker Global ID  
Alias Name: P22129  
Alias Type: PCode  
Alias Name: 200050  
Alias Type: Project Code (Site Code)  
Alias Name: 38440001  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PAR-A  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision  
Completed Date: 11/29/1995  
Comments: Parcel A is comprised of about 88 acres of both residential and commercial areas. Early investigation coupled with soil removals lead to two areas that required further work. Discovery of sandblast grit lead to the discovery of soil contaminated with DDT. Both sandblast grit and DDT contaminated soils were removed. Finally, the motor oil found in the groundwater lead the Regional Water Quality Control Board to require a deed notification to alert the future owner(s) of the presence of low levels of motor oil in the groundwater at parcel A. The risk assessment indicated no or minimum risk at Parcel A. The Navy proposed a No Action ROD that was accepted by all the parties. Volume Trenched, Stabilized or disposed: Approximately 600 cubic yards. Approximate Cost and Funding Source: about \$100,000

Completed Area Name: PAR-A  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

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Database(s)

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EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Document Type: Feasibility Study Report  
Completed Date: 09/30/1995  
Comments: RIFS completion Size of activity: X-Large Parcel A is comprised of about 88 acres of both residential and commercial areas. Early investigation coupled with soil removals led to two areas that required further work. Discovery of sandblast grit led to soil contaminated with DDT. Both sandblast grit and DDT contaminated soils were removed. Finally, the motor oil found in the groundwater led the RWQCB to ask for deed notification to alert future land owner(s) of the presence of low levels of motor oil in the groundwater at Parcel A. The risk assessment indicated no or diminimus risk at Parcel A. The Navy proposed no action in the feasibility study. Volume trenched, stabilized or disposed: Approximately 600 cubic yards Approximate cost: \$700,000

Completed Area Name: PAR-A  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Report  
Completed Date: 10/15/1993  
Comments: Not reported

Completed Area Name: PAR-A  
Completed Sub Area Name: UGTS  
Completed Document Type: Removal Action Completion Report  
Completed Date: 12/17/1992  
Comments: Removal of 23 underground storage tanks ranging in size from 500 - 210,000 gallons. Tanks contained either gasoline, diesel, solvents, waste oils, water or a mixture of solvent and water. 1,378 cubic yards of solvent-contaminated soil was excavated and disposed offsite. Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Screening  
Completed Date: 04/24/1987  
Comments: Site Screening Done: Mitre Model required.

Completed Area Name: PAR-A  
Completed Sub Area Name: Not reported  
Completed Document Type: Finding of Suitability to Transfer  
Completed Date: 10/06/2004  
Comments: The Department of Toxic Substances Control (DTSC) concurs that Parcel A is suitable for transfer to the San Francisco Redevelopment Agency and can we accept that sufficient remedial actions have been taken to protect public health and the environment Even though DTSC's draft Finding of Suitability to Transfer (FOST) comments relating to lead-based paint remains unresolved, DTSC is able to support the transfer of Parcel A due to the assurances made by the City and County of San Francisco that lead-based paint from structures will be managed in a way that is protective of public health. These assurances were made in a letter to DTSC dated September 30, 2004, from Dr. Rajiv Bhatia, Department of Public Health, Medical Director, Occupational and Environmental Health, City and County of San Francisco.

Completed Area Name: PAR-A  
Completed Sub Area Name: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

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EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Document Type: Certification  
Completed Date: 06/30/1998  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Federal Facility Agreement  
Completed Date: 10/15/1991  
Comments: Not reported

Future Area Name: Not reported  
Future Sub Area Name: Not reported  
Future Document Type: Not reported  
Future Due Date: Not reported  
Schedule Area Name: Not reported  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Not reported  
Schedule Due Date: Not reported  
Schedule Revised Date: Not reported

Site Type: Federal Superfund  
Site Type Detailed: Closed Base  
Acres: 54  
NPL: YES  
Regulatory Agencies: SMBRP, RWQCB 2 - San Francisco Bay, US EPA  
Lead Agency: SMBRP, US EPA  
Program Manager: Ryan Miya  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Facility ID: 38440002  
Site Code: 200050  
Assembly: 17  
Senate: 11  
Special Program: Navy  
Status: Active  
Status Date: 05/01/1986  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: BRAC 91  
Latitude: 37.72972  
Longitude: -122.3638  
APN: NONE SPECIFIED  
Past Use: DEGREASING FACILITY, DRY DOCKS, FUEL TERMINALS, LABORATORIES-  
RADIOACTIVE, LANDFILL - CONSTRUCTION, MACHINE SHOP, METAL FINISHING,  
METAL PLATING - OTHER, OIL/WATER SEPARATORS, PAINT/DEPAINT FACILITY,  
PORT, SAND BLASTING, SHIPYARD - SHIP BUILDING/REPAIR, TRANSPORTATION  
- WAREHOUSING  
Potential COC: 30001, 30002, 30005, 30013, 30014, 30015, 30018, 30019, 30020, 30024,  
30025, 3002502, 30027, 30028  
Confirmed COC: 30001,30002,30005,30013,30014,30015,30018,30019,30020,30024,30025,  
30027,30028,3002502  
Potential Description: OTH, SOIL  
Alias Name: HUNTERS POINT NAVAL SHIPYARD, GROUP 2  
Alias Type: Alternate Name  
Alias Name: HUNTERS POINT NAVAL SHIPYARD, PARCEL B  
Alias Type: Alternate Name  
Alias Name: HUNTERS PT NAVAL SHIPYD- TREASURE ISLAND

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Alias Type: Alternate Name  
Alias Name: HUNTERS PT NAVAL SHIPYD- TREASURE ISLAND  
Alias Type: Alternate Name  
Alias Name: TRIPLE A MACHINE SHOP  
Alias Type: Alternate Name  
Alias Name: 110033615023  
Alias Type: EPA (FRS #)  
Alias Name: T10000001251  
Alias Type: GeoTracker Global ID  
Alias Name: T10000001252  
Alias Type: GeoTracker Global ID  
Alias Name: T10000001254  
Alias Type: GeoTracker Global ID  
Alias Name: T10000001256  
Alias Type: GeoTracker Global ID  
Alias Name: P23055  
Alias Type: PCode  
Alias Name: 200050  
Alias Type: Project Code (Site Code)  
Alias Name: 38440002  
Alias Type: Envirostor ID Number  
Alias Name: 38440003  
Alias Type: Envirostor ID Number  
Alias Name: 38440004  
Alias Type: Envirostor ID Number  
Alias Name: 38440005  
Alias Type: Envirostor ID Number  
Alias Name: 38440007  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Operations and Maintenance Plan  
Completed Date: 11/01/2012  
Comments: The Operation and Maintenance Plan describes the long-term maintenance and monitoring requirements fo the soil cover, asphalt pavement cover, and shoreline revetment at Installation Restoration Sites 07 and 18 in Parcel B at Hunters Point Naval Shipyard.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Enforceable Schedule  
Completed Date: 09/26/2012  
Comments: Serves as the new comprehensive baseline schedule for the Installtion Restoration Program at HPNS.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Federal Facility Agreement  
Completed Date: 10/29/1991  
Comments: Federal Facilities Agreement signed by the United States Navy, DTSC and US EPA.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 01/12/2007

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

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EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments: No further comments, DTSC, EPA, RWQCB and Navy continue to work to improve groundwater monitoring program.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2007  
Comments: Revision 1 of document. This is a quarterly groundwater monitoring report. DTSC, RWQCB, EPA and the Navy continue to discuss improvements to program and reports.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2007  
Comments: Revision 1 of document. DTSC, RWQCB, EPA and Navy continue to discuss improvements to monitoring program and reports.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2007  
Comments: Revision 1 of document. DTSC, RWQCB, EPA and Navy continue to discuss improvements to groundwater monitoring program and reports.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 11/26/1996  
Comments: RIFS - PARCEL B Investigated 66 acres. Identified areas of concern and provided several alternatives in mitigating the risk areas. soil alternatives range from no action to off- site disposal and on-site treatment. The concern from the groundwater contamination is the possible threat to the Bay. Since groundwater contamination is far from the Bay, ground- water monitoring seems to be sufficient. And in case of exceedences, there will be a contingency plan to mitigate the threat. Due to high salinity and low yield, the ground- water is not suited for drinking. In addition, access to the groundwater will be controlled by placing restrictions in the deed. The Navy has decided to cleanup the parcel to residential scenario. The Reuse Plan calls for mixed use at Parcel B.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 10/01/2008  
Comments: Reports on excavations were specified in the original Parcel B ROD (1997) and two Findings of Significant Difference (1998, 2000). The Parcel B ROD is currently being amended. No comments on final report. Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 10/01/2008  
Comments: San Francisco Regional Water Quality Control Board is lead agency on the petroleum program at Hunters Point. Concurrence letter from

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Direction  
Distance  
Elevation

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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RWQCB is uploaded on this site.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Design - Preliminary/Intermediate  
Completed Date: 09/07/1999  
Comments: DES - PAR-B -- Review, comment, and approval of engineering design and construction specifications for soil remediation and groundwater monitoring wells.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision  
Completed Date: 10/09/1997  
Comments: The Navy has selected excavation and off-site disposal as the final remedy for Parcel B soil. The major components of the selected remedy for soil are as follows: (a) Excavation of contaminated soil to the groundwater table or 1x10<sup>-6</sup> cancer risk (residential), (b) Off-site disposal of contaminated soil, (c) Placement of clean backfill in the excavated areas, and (d) Deed notification indicating that soil below the groundwater table in remediated areas, as specified in the remedial action close-out report, may be contaminated. The major components of the selected remedy for groundwater are as follows: (a) Lining of the storm drains and pressure grouting of the storm drain bedding material at sites IR-07 and IR-10, (b) Removal of steam and fuel lines, (c) Deed restrictions on Parcel B such as prohibiting all uses of groundwater within the shallow water-bearing zone, (d) Deed notification indicating that contamination may be present in the groundwater in the remediated areas as specified in the remedial action close-out report, and (e) Groundwater monitoring for up to 30 years to evaluate the effectiveness of the soil source removal actions and to monitor concentrations of hazardous substances that may migrate toward San Francisco Bay.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 12/22/1994  
Comments: RA - IR-06 -- A Removal Action was completed at Parcel B. Two underground storage tanks and associated pipes were removed. In addition, 20 tons of contaminated soils were excavated. Both the soils and pipes were transported and disposed offsite. Approximate cost = \$50,000; funding = BRAC.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 12/15/1993  
Comments: Removal of Asbestos-containing material, tanks, tank piping, petroleum fuel and solvents, foundations for the 17 tanks, demolition of the two pump houses and buildings 111 and 112, and removal of contaminated soil.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 10  
Completed Document Type: Treatability Study Report

Map ID  
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Distance  
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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Date: 01/12/2007  
Comments: No further comments.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision - Amendment  
Completed Date: 02/15/2008  
Comments: DTSC's final letter on the TMSRA states that DTSC generally support the conclusions and recommendations in the final TMSRA. The letter from DTSC includes comments and identifies DTSC's preference for remedial activities and identifies issues still needing clarification or agreement. These issues will be addressed and resolved in proposed plan.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Proposed Plan  
Completed Date: 07/25/2008  
Comments: The Navy proposes the following actions to address contamination in soil, groundwater, and structures at Parcel B: (a) Removing soil in areas where concentrations of organic chemicals and metals are higher than the levels considered safe for human health and ecological receptors; (b) Installing covers over the entire parcel to prevent contact with any metals or radiological contaminants that are not excavated; (c) Surveying and decontaminating buildings, former building sites, sewer lines, and other areas affected by radiological sources; (d) Screening, separating, and disposing of radiological sources and radiologically-contaminated materials and soil; (e) Transporting excavated contaminated soil and materials off site to an appropriate landfill; (f) Operating a soil vapor extraction (SVE) system to remove and treat volatile organic compounds (VOCs) in soil at Installation Restoration (IR) Site 10; (f) Building a shoreline revetment in required areas to protect ecological receptors from chemicals in shoreline sediments; (g) Treating groundwater at IR Site 10 by injecting chemicals to break down the contaminants; (h) Implementing a groundwater monitoring program to verify that remediation efforts meet the remediation goals defined in the amended ROD; (i) Using engineering controls (ECs) and institutional controls (ICs) to limit exposure to contaminated soil and groundwater by restricting specified land uses and activities on the parcel.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision - Amendment  
Completed Date: 01/30/2009  
Comments: The remedy selected in the 1997 ROD needed to be amended to be protective of human health and the environment in the long term and that the proposed amendments to the remedy will fundamentally alter its basic features. The original remedy for soil involved excavation and off-site disposal; however, this strategy was unable to achieve cleanup goals across Parcel B. The widespread distribution of metals, especially arsenic and manganese, in soil was the primary obstacle to this strategy. The amended remedy incorporates covers for the remaining soil containing hazardous substances to prevent exposure. Likewise, groundwater contamination has been found to be more widespread and at higher concentrations than was known when the original remedy for groundwater was selected. The original remedy

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Distance  
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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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relied on monitoring; the amended remedy includes active treatment for groundwater. Finally, the original remedy did not address radiological contaminants, and the amended remedy incorporates actions to address radioactive chemicals found in soil and structures at Parcel B.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Site Summary Report  
Completed Date: 10/03/2005  
Comments: The tech memo summarizes a two-phase soil gas survey at IR Sites 07 and 18. The initial investigation (Phase I) consisted of soil gas measurements for methane and for total VOCs on a grid at locations across the site. If methane was detected at any location greater than or equal to 1.25% or if total VOCs were determined at concentrations greater than or equal to 1,000 parts per million, then additional measurements (Phase II) for methane and total VOCs were implemented to refine the distribution, extent, and concentrations. Methane concentrations in soil gas above 1.25% were limited to a small geographic area in the eastern portion of IR07, limited to an area of about 8,850 square feet.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/05/2005  
Comments: continued concerns with monitoring program will be discussed at meeting on October 13, 2005

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/05/2005  
Comments: continued issues with groundwater monitoring program will be discussed at October 13, 2005 meeting.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 09/20/2006  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 01/12/2007  
Comments: No further action. Much improvement, but more work needed, included new Sampling and Analysis Plan.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 01/12/2007  
Comments: No further comments, much improvement, but more work needed including revised Sampling and Analysis Plan.

Completed Area Name: PARCEL-B

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 01/12/2007  
Comments: No further comments. Much improvement but more work needed including revised Sampling and Analysis Plan

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 04/24/2012  
Comments: The Removal Action Completion Report (RACR) summarizes the building and former building site Final Status Survey activities as well as the storm drain and sanitary sewer time-critical removal action on Parcel B. The RACR does not address chemical contamination except in relation to disposal of excavated soil. During the Parcel B removal action, 24,826 linear feet of storm drain and sanitary sewer lines were excavated resulting in approximately 65,184 cubic yards of soil removed from 70 trench survey units. Based on surface scans and soil sample analytical results, approximately 692 cubic yards of peripheral material and 2,218 cubic yards of excavated soil were remediated from excavated soil sampled and scanned in radiological screening yards. In addition, approximately 3,731 cubic yards of contaminated soil was further remediated from the excavated Parcel B storm drain and sanitary sewer trench survey units. Six buildings (Buildings 103, 113, 113A, 130, 140, and 146), three former building sites (114, 142, and 157), and the Building 140 discharge channel were also identified as radiologically-impacted and have been cleared for unrestricted radiological free release by the California Department of Public Health u Environmental Management Branch (CDPH-EMB). Removal actions were initiated on May 23, 2006 and completed on September 23, 2010.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/23/2008  
Comments: DTSC has no comments on the final (Revision 1) of the Groundwater Monitoring Report. The Navy is in the process of revising the Groundwater Sampling and Analysis Plan. DTSC and Navy will resolve any issues with monitoring program through the Sampling and Analysis Plan revision.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 03/29/2010  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision - Amendment  
Completed Date: 04/21/2008  
Comments: The document was prepared to address potential radioactive contamination in buildings, fill areas, former building sites, storm drains, and sanitary sewers in Parcel B at Hunters Point Shipyard. The overall purpose of this addendum is to provide information to support the future Proposed Plan to modify the final remedy selected

MAP FINDINGS

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

for Parcel B in 1997. The modified plan will reflect new information concerning the nature and extent of contamination, including heavy metals, radionuclides, and methane.

Completed Area Name: PARCEL-B  
 Completed Sub Area Name: IR 07/18  
 Completed Document Type: Time Critical Removal Action Workplan  
 Completed Date: 06/13/2008  
 Comments: The proposed time-critical removal action (TCRA) involves delineation and removal of methane in soil gas and the associated methane-generating material in order to eliminate the threat to human health in the event of fire or explosion. The TCRA consists of sampling to identify and delineate the methane and methane-generating material, removal of the methane-generating material by excavation, post-excavation confirmatory and characterization sampling, and site restoration. DTSC has no further comments on Action Memorandum.

Completed Area Name: PARCEL-B  
 Completed Sub Area Name: IR-26  
 Completed Document Type: Time Critical Removal Action Workplan  
 Completed Date: 05/27/2008  
 Comments: The work will be conducted as a Time Critical Removal Action (TCRA). Mercury has been identified in the groundwater at concentrations that a Screening-Level Ecological Risk Assessment identified as posing an unacceptable risk to aquatic receptors in the San Francisco Bay, where the groundwater ultimately discharges. The purpose of this TCRA is to reduce or eliminate the risks to aquatic receptors from mercury in groundwater by identifying, delineating, and removing the mercury source. DTSC has no further comments on Final Action Memorandum.

Completed Area Name: PARCEL-B  
 Completed Sub Area Name: Building 114  
 Completed Document Type: Technical Report  
 Completed Date: 11/04/2010  
 Comments: Based on the documentation provided in the FSS Report as well as the results of CDPH's confirmatory soil sampling, the DTSC and CDPH support release for unrestricted use, with respect to radiological issues, at the Building 114 Site.

Completed Area Name: PARCEL-B  
 Completed Sub Area Name: Building 142 Site  
 Completed Document Type: Technical Report  
 Completed Date: 11/04/2010  
 Comments: Based on the documentation provided in the FSS Report as well as the results of CDPH's confirmatory soil sampling, the DTSC and CDPH support release for unrestricted use, with respect to radiological issues, at the Building 142 Site.

Completed Area Name: PARCEL-B  
 Completed Sub Area Name: Not reported  
 Completed Document Type: 5 Year Review Reports  
 Completed Date: 12/19/2008  
 Comments: DTSC concurs with the final Five Year Review

Completed Area Name: PARCEL-B  
 Completed Sub Area Name: IR-26  
 Completed Document Type: Removal Action Workplan

Map ID  
Direction  
Distance  
Elevation

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Site

Database(s)

EDR ID Number  
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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Date: 10/28/2008  
Comments: DTSC has no comments on final work plan for mercury source removal at IR-26. DTSC will review the Removal Action Completion Report and evaluate groundwater monitoring data to determine if action was successful in removing mercury source for contaminated groundwater. Groundwater data must be consistent with remedial action goals specified in Parcel B ROD Addendum. Additional action may be necessary if groundwater remains contaminated with mercury.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Removal Action Workplan  
Completed Date: 09/19/2008  
Comments: Work plan for Time Critical Removal Action to remove the source of methane gas in soil at Installation Restoration (IR) sites 7 and 18. A small area, less than 1 acre, will be excavated to remove source material. Confirmation gas sampling will determine the effectiveness of removal action.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Removal Action Completion Report  
Completed Date: 05/22/2009  
Comments: The Removal Action Completion Report has been prepared to document the results and conclusions of a time-critical removal action (TCRA) of methane in soil gas and its source material at Installation Restoration (IR) Site 07 (IR-07) in Parcel B at Hunters Point Shipyard (HPS), San Francisco, California. The primary objective of the TCRA was to remove methane in soil gas and its source material from IR-07 to eliminate possible threats to public welfare. To achieve this objective, the TCRA was performed utilizing a combination of historic data review, preliminary sampling, excavation and backfill, and post-restoration soil gas sampling. These separate lines of evidence were reviewed as part of a phased approach to the investigation to assure that the methanogenic material was identified and removed. The TCRA activities included confirming the presence of methane in soil gas, identification of possible source material, excavation of all potential source material, and backfilling the excavation to match pre-existing grade. Visually contaminated soil and soil or debris identified as potential methane-producing material was segregated for off-site disposal. The activities performed provide reasonable assurance that previous threats of explosion due to methane gas in the subsurface have been eliminated.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR-26  
Completed Document Type: Removal Action Completion Report  
Completed Date: 02/27/2009  
Comments: Removal action appears successful in identifying and removing high levels of mercury in soil (up to 300 mg/kg). Of the approximately 6,100 cubic yards of soil was excavated from this site, 4,500 cubic yards of soil contained mercury exceeding the removal action goal of 2.3 mg/kg. Ongoing groundwater monitoring will still be required.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

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EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Date: 08/24/2010  
Comments: Based on the review of all relevant submitted documents and confirmatory radiological survey, CDPH-EMB recommends unrestricted release, with respect to radiological issues for Building 103.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 04/06/2010  
Comments: Based on the review of all relevant submitted documents and confirmatory radiological surveys, Building 113A is suitable for unrestricted radiological release.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/02/2010  
Comments: DTSC/CDPH support release for unrestricted use, with respect to radiological issues, at Building 130.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/20/2012  
Comments: Based on the review of all relevant submitted documents and confirmatory analysis of completed surveys, DTSC and CDPH-EMB concur with radiological unrestricted release for the discharge channel of Building 140.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/16/2010  
Comments: Based on the review of all relevant submitted documents and confirmatory radiological survey CDPH0-EMB recommends unrestricted radiological release for Building 146.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/08/2011  
Comments: Based on the review of all relevant submitted documents and confirmatory analysis completed by Drinking Water & Radiation Laboratory Branch, CDPH-EMB recommends radiological unrestricted release for Building Site 157.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/07/2011  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Remedial Action Implementation Workplan

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Date: 07/10/2009  
Comments: The intent of the survey is to identify and remove radiological anomalies in the top 12 inches of soil at IR-18 within Parcel B.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: 5 Year Review Reports  
Completed Date: 12/10/2003  
Comments: The soil remedy at Parcel B is currently protective of human health and the environment because exposure pathways that could result in unacceptable risks are being controlled through extensive soil excavation and the use of fencing, locked gates, warning signs, and secured buildings that limit access to remaining contaminated areas. The groundwater remedy at Parcel B is currently protective of human health and the environment because the ongoing monitoring plan safeguards aquatic life in the Bay and addresses potential risk to future occupants of Parcel B buildings.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 05/26/2009  
Comments: Letter serves as the Navy's notice of intent to dissolve the Hunters Point Naval Shipyard Restoration Advisory Board.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/02/2010  
Comments: The DTSC/CDPH support release for unrestricted use, with respect to radiological issues, at Building 113.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 09/02/2009  
Comments: RAB Dissolution Public Notice and Comment Period Announcement sent via e-mail.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 07/05/2011  
Comments: Revised Final LUCRD report has been provided with revisions that make the updated document consistent with the Final Amended ROD for Parcel B. Responses to DTSC comments have been provided and adequately addressed.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/11/2011  
Comments: Approval of the Final SUPRs will occur as a part of DTSC review and concurrence with the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-B

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/21/2011  
Comments: Formal approval of the Final SUPRs will occur as a part of DTSC review and concurrence with the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/25/2011  
Comments: Formal approval of the Final SUPRs will occur as a part of DTSC review and concurrence with the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 05/05/2010  
Comments: Memo describes the proposed approach for establishing soil gas action levels at Hunters Point Shipyard (HPS) since more recent guidance documents for assessment of health risks from vapor intrusion have become available since Human Health Risk Assessments have been completed historically. All comments have been adequately addressed.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/27/2010  
Comments: This survey Unit Project Reports Abstract, was prepared to document work conducted under the Final, Base-wide Storm Drain and Sanitary Sewer Removal Work Plan (2006) and Final, Base-wide Storm Drain and Sanitary Sewer Removal Work Plan u Revision 3 (2008) (Work Plan) at Hunters Point Shipyard (HPS), which summarizes the scope, approach and radiological surveys used during removal of the sanitary sewer and storm drains located within HPS. This Abstract will be applicable to all Survey Unit Project Reports (SUPR) and data sets prepared for regulatory review.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/25/2011  
Comments: Formal approval of the Final SUPRs will occur as a part of DTSC review and concurrence with the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/11/2011  
Comments: Formal approval of the Final SUPRs will occur as a part of DTSC review and concurrence with the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

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Direction  
Distance  
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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Document Type: Technical Report  
Completed Date: 01/13/2011  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 03/23/2010  
Comments: Received via e-mail on 3/24/2010 from CDPH.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 04/20/2010  
Comments: Received hard copy in mail on 4/23/2010.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 07/09/2010  
Comments: This Remedial Action Work Plan (RAWP) describes how three separate remedial actions (RAs) will be performed at Parcels B, D-1, and G of Hunters Point Shipyard (HPS), in San Francisco, California. The first RA, to be performed at Installation Restoration (IR) Sites 07 and 18 in Parcel B, will address chemicals of concern (COCs) in soil and sediment and includes a soil cover and shoreline revetment to provide a physical barrier to prevent exposure of humans and wildlife with COCs in soil. This RA is described in detail in the oFinal Design Basis Report, Installation Restoration Sites 7 and 18, Parcel B, Hunters Point Shipyard, San Francisco, California. The second RA will include excavation and off-site disposal of soil hot spots contaminated with lead or polycyclic aromatic hydrocarbons (PAHs) at 11 locations in Parcels B, D-1, and G. The third RA will include characterization, removal, and off-site disposal of soil stockpiles at Parcels D-1 and G.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/13/2011  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/26/2011  
Comments: Approval of the Final SUPRs will occur as a part of DTSC review and concurrence with the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Date: 06/10/2011  
Comments: This Sampling and Analysis Plan (Appendix A of the Work Plan) describes the air and soil gas sampling and analysis activities to be performed for a base-wide soil gas investigation for Parcels B, D-1, G, and UC-2 at the Hunters Point Shipyard (HPS). The primary objective of the soil gas investigation is to refine areas requiring institutional controls (ARICs) and determine which ARICs should be reduced, expanded, or eliminated. Future land use and development hinges upon whether redevelopment blocks or grids will require institutional controls to reduce risk (i.e. soil vapor inhalation risk above action levels result in the requirement for institutional controls).

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 08/12/2010  
Comments: CDPH's sample results confirm that the Navy's remediation process is achieving the action level established for Ra-226 and Cs-137 at Hunters Point Shipyard.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/31/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/01/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 03/01/2009  
Comments: Not reported

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 10/09/2009  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 12/22/2000  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 08/31/2000  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/02/2001  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 01/22/2002  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/28/2002  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 08/13/2002  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 11/26/2002  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 05/01/2003  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Date: 11/01/2003  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/15/2004  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 08/19/2005  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/28/2003  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 04/01/2006  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/01/2006  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/01/2007  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Finding of Suitability to Transfer  
Completed Date: 02/26/2013  
Comments: Based on the information contained in this FOST and the notices, restrictions, and covenants that will be contained in the deed, DTSC concurs that Parcel B Installation Restoration Sites 7 and 18 are suitable for transfer. Consistent with the 2009 Amended Parcel B Record of Decision, it is DTSC's expectation that land use control documentation, in the form of a Covenant to Restrict the Use of the Property, will be recorded at the time of property transfer. Also, an enforceable agreement (through an Operation and Maintenance Agreement) will be negotiated with DTSC and any future property transferee.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Long Term Monitoring Report

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Date: 10/08/2010  
Comments: Methane was not detected by either field instrumentation or laboratory analysis at any of the locations monitored during the August 2009, October 2009, or February 2010 sampling events.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Workplan  
Completed Date: 12/17/1993  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/19/2010  
Comments: DTSC did not review / approve this document and it is being provided for informational purposes only.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 11/29/2010  
Comments: This plan was developed to ensure that the Navy maintains a coordinated approach for dust control and air monitoring activities across multiple contracts. At a minimum, all contractors will be required to adhere to the requirements set forth in the document. DTSC did not review / approve the document as dust control practices are evaluated on a project-specific basis and it has been provided for informational purposes as part of the administrative record.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 06/03/1996  
Comments: The basewide environmental baseline survey (EBS) report prepared for Hunters Point Annex (HPA), San Francisco, California, summarizes environmental information gathered by PRC Environmental Management, Inc. (PRC), for the Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC), Engineering Field Activity West (EFA WEST). This document is based on existing environmental information gathered during the period of May to December 1995 related to the storage, release, treatment, or disposal of hazardous substances or petroleum products at HPA.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Fieldwork  
Completed Date: 07/07/2011  
Comments: Installation of soil cover and revetment. Demobilized 7/7/2011. CDPH Post-Cover Scan of IR sites 07/18 occurred the week of 8/8/2011.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 12/23/2009  
Comments: Also included as an appendix (Appendix E) to the Community Involvement Plan.

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Supplemental Site Investigation Tech Memo  
Completed Date: 02/19/2001  
Comments: The technical memorandum presents the results of studies that evaluated the distribution of the Bay Mud aquitard and characterized the B-aquifer in parcel B.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 08/31/2001  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 05/16/2011  
Comments: The 2009 SAP was amended to incorporate the requirements of recent HPS Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) documents, such as Remedial Action Monitoring Plans (RAMPs), Records of Decision (RODs), and Feasibility Studies (FSs), and to update the SAP based on the recent work conducted (e.g. groundwater treatability studies and corrective actions).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 07/30/2010  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR-26  
Completed Document Type: Technical Workplan  
Completed Date: 07/18/2011  
Comments: This Work Plan details the procedures that will be followed to execute geotechnical investigations at Parcel E-2 (Installation Restoration [IR] Site 01/21) and Parcel B (IR Site 26) at Hunters Point Shipyard (HPS) in San Francisco, California. Geotechnical investigations at both sites are being performed for the Department of the Navy (Navy), in support of the Remedial Designs (RDs) for Parcels E-2 and B. The primary tasks include (1) subsurface exploration via geotechnical drilled borings and cone penetrometer test (CPT) borings, (2) geotechnical laboratory testing, and (3) data compilation.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/19/2011  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Date: 01/19/2011  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/21/2011  
Comments: Formal approval of the Final SUPRs will occur as a part of DTSC review and concurrence with the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/31/2011  
Comments: Formal approval of the Final SUPRs will occur as a part of DTSC review and concurrence with the Parcel B Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 02/08/2011  
Comments: Previously unknown underground storage tank (UST) adjacent to the southeast side of Building 113A (UST 113A) in Parcel B will be removed under CERCLA guidelines due to the presence of total chromium in the tank liquid.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 06/03/2011  
Comments: The Community Involvement Plan presents the Navy's plans to inform and involve the community in the environmental cleanup program moving forward based on feedback obtained from the Hunters Point Shipyard community about past communication and community involvement program activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/23/2011  
Comments: Documents groundwater data collected basewide from April 2010 through September 2010 during the second and third quarter 2010 monitoring events.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 04/21/2006  
Comments: Documents the Navy's decision to undertake time-critical removal actions at areas throughout Hunters Point Shipyard that may contain localized radioactive contamination as identified in the Historical Radiological Assessment.

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 07/03/1996  
Comments: Despite data gaps and inadequate explanations presented in the document, DTSC determined that it is possible to proceed with developing a feasibility study. The Department accepted the Draft Final RI report with the stipulation that the outstanding issues will be addressed in the upcoming CERCLA documentation.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/12/2012  
Comments: CDPH-EMB?s memorandum supporting release for unrestricted use, with respect to radiological issues, at the Building 140 suction channel and discharge piping is provided. This radiological free release for unrestricted use encompasses Building 140 and its associated Suction Channel, Pump Pit, and Discharge Piping structures located within Parcel B. CDPH-EMB?s memorandum supporting radiological free release of the Building 140 Discharge Channel was provided previously on January 20, 2012.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/31/2004  
Comments: This document presents a comprehensive history of radiological operations conducted by the U.S. Department of the Navy (Navy) and Navy contractors at the Hunters Point Shipyard (HPS), San Francisco, California. The Navy prepared the HPS Historical Radiological Assessment (HRA) as a two volume set. Volume I was published in August 2000 and addressed radioactivity associated with the Naval Nuclear Propulsion Program (NNPP). Volume I concluded that berthing of and work on nuclear-powered ships at HPS resulted in no adverse effect on the human population or the environment. Volume II of the HRA has been prepared pursuant to the Navy?s Installation Restoration (IR) Program, which encompasses the Navy?s Base Realignment and Closure (BRAC) Program, and in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). Volume II describes the history of operations involving general radioactive material (G-RAM) that, for the purposes of this document, is defined as any radioactive material used by the Navy or Navy contractors not associated with the NNPP.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/23/2000  
Comments: This document presents a comprehensive history of radiological operations conducted by the U.S. Department of the Navy (Navy) and Navy contractors at the Hunters Point Shipyard (HPS), San Francisco, California. The Navy prepared the HPS Historical Radiological Assessment (HRA) as a two volume set. Volume I (the current document) addresses radioactivity associated with the Naval Nuclear Propulsion Program (NNPP).

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/21/2011  
Comments: This monitoring report incorporates revisions made from comments received on the previous semiannual groundwater report (February 2011).

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 09/22/2011  
Comments: Final SUPR acceptance will be documented as part of regulatory acceptance of the Parcel B RACR.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 07/07/2011  
Comments: This revision to the SUPRA is a result of the Survey Unit Project Report (SUPR) prototype that was agreed upon by CDPH in August 2010. All SUPR reports dated after August 2010 incorporate the prototype changes, and now the SUPRA has been updated accordingly.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 10/17/2011  
Comments: The Remedial Design documents (RDs) specifically identified 11 hotspot locations (3 at Parcel B, 6 at Parcel D-1, and 2 at Parcel G) requiring remediation. The hotspot locations were delineated based on lead or polycyclic aromatic hydrocarbons (PAHs) concentrations that exceeded the remediation goals identified in the RODs. Soil hotspot activities conducted during this remedial action (RA) included (1) collection and analysis of pre-excavation characterization samples to delineate the extent of the soil hot spots; (2) excavation of the delineated hotspot soil location; (3) collection of confirmation samples to verify that the hot spots were removed; (4) additional excavation and confirmation sampling, as required, to complete the removal of soil hot spots; (5) characterization and off-site disposal of the excavated hotspot soil; and (6) backfilling of the hotspot excavations with clean backfill meeting Hunters Point Naval Shipyard (HPNS) criteria for import fill. In total, 9 of the 11 hotspot locations were successfully remediated, as demonstrated by the information presented in the Remedial Action Completion Report (RACR). At total of 569 cubic yards of soil was removed from the nine hot spots and disposed of off -site. The remaining two hotspot locations could not be removed as part of this RA because they are located in an area at HPNS that is currently being used to support other remedial activities. The Navy plans to remediate these hotspot locations at a later date, at which point this RACR will be amended to include the associated completion documentation. The RDs identified 16 soil stockpiles (5 in Parcel D-1 and 11 in Parcel G) to be removed, characterized, and disposed of off -site. In total, 13 of the 16 soil stockpiles were removed as part of previous removal actions implemented at HPNS. The three remaining soil stockpiles (one in Parcel D-1 and two in Parcel G) were removed during this RA, as

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

demonstrated by the information presented in the RACR. Soil stockpile removal activities conducted during this RA included (1) characterization and off-site disposal of the three soil stockpiles; (2) collection of confirmation samples beneath the stockpile locations to verify that all stockpile material was completely removed; (3) additional removal of stockpile material, as required, to complete the removal of the soil stockpiles; and (4) characterization and off-site disposal of the additional soil stockpile material. A total of 249 cubic yards of soil was removed and disposed of off-site.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision w/ESD  
Completed Date: 10/28/1998  
Comments: In the Parcel B ROD, the Navy's selected remedy for contaminated soils located on Parcel B was excavation to the groundwater table followed by offsite disposal. The depth to groundwater below Parcel B was believed to typically occur at 10 feet below ground surface (obgs"). However, in early 1998, fieldwork on the Site indicated that the depth to groundwater beneath Parcel B could be as shallow as 2.3 feet bgs. This ESD revises the selected remedy of the Parcel B ROD to require cleanup of contaminated soils to a cleanup level of 10-6 cancer risk (residential) or to a maximum depth of 10 feet bgs instead of to the groundwater table to ensure that the Parcel B remedy is protective of human health and the environment.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Assessment Report  
Completed Date: 04/15/1994  
Comments: Previous field investigations, document searches, and studies at HPA have focused primarily on sites considered eligible for funding through the Installation Restoration (IR) program. The Site Assessments were conducted to identify sites potentially contaminated during approximately the past 10 years that were not included in the IR programs in Parcels B, C, D, and E and to make recommendations for additional field activities. Some previously investigated sites were also assessed when new information and/or new areas of the sites were made available or accessible as a result of the Navy's recent building cleanout program or other ongoing activities.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/20/2012  
Comments: An underground storage tank (UST) of approximately 200 gallons containing a mixture of petroleum, metals, and solvents was removed in February 2011 (2/9 to 2/16/2011). Approximately 50 cubic yards of soil and 1,000 gallons of tank liquids and rinse water was also removed as a component of the UST removal.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 08/05/2011  
Comments: Updates the project personnel list and updates the list of analytes

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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to incorporate groundwater monitoring recommendations provided in the Final In-Situ Anaerobic Bioremediation Treatability Study Completion Report for RU-C1, Building 253, dated June 8, 2011.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 01/08/2001  
Comments: The technical memorandum provides the results of the Phase I Groundwater Data Gaps Investigation (GDGI) performed at Hunters Point Shipyard in San Francisco, California. The purpose of the technical memorandum is to document the results from the Phase I GDGI and to provide these results to the BCT such that the BCT can evaluate the Phase I sampling and recommend changes to the Phase II sampling, if necessary.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Remedial Investigation Workplan  
Completed Date: 12/22/1988  
Comments: Describes sampling fieldwork to be performed at the sub-base area IR-7.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 07/27/1993  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 09/07/1999  
Comments: Remedial Design documents include the (1) Remedial Design Work Plan, (2) Technical Specifications / Drawings, (3) Construction Quality Assurance Plan, (4) Confirmation Sampling and Analysis Plan, and (5) Remedial Action Monitoring Plan.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/05/2012  
Comments: A Scoping Survey was conducted for the concrete cantilevered submarine quay wall structure adjacent to Parcel B at Hunters Point Naval Shipyard, San Francisco, California. The purpose of the survey was to determine if elevated concentrations of residual radioactivity are present on the surface or within the materials in the near surface of the concrete cantilevered quay wall structure. The survey of this area has been designed as a Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) Class III survey. The executed methodology and survey results allow the use of survey data to support a Final Status Survey (FSS). This FSS Report presents the data collected during the scoping survey of the quay wall performed on July 8 and 11, 2011. No residual radioactivity exceeding the established release criteria was detected.

Completed Area Name: PARCEL-B

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Sub Area Name: IR 07/18  
Completed Document Type: Site Summary Report  
Completed Date: 11/07/2008  
Comments: Information provided by the Navy to support the findings and required actions of the Parcel B Record of Decision Amendment.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 03/05/2008  
Comments: Buildings 103, 104, 115, 116, 117, and 125 are currently leased for use as artist studios. Building 120 is vacant, and Open Spaces 1 and 2 are currently used for parking. Building 606 is currently occupied by the San Francisco Police Department. Reuse of the Leased Premises will continue under the current use scenario. The Lessee shall be required to obtain written Government approval prior to any proposed change in use of the Leased Premises as presently authorized. At no time should the leased premises be used for residential or childcare facilities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/20/2012  
Comments: Not reported

Completed Area Name: PARCEL-B  
Completed Sub Area Name: IR 07/18  
Completed Document Type: Remedial Action Completion Report  
Completed Date: 10/16/2012  
Comments: The remedial action at Installation Restoration Sites 07 and 18, Parcel B, included installation of durable covers, including soil covers, asphalt covers, and shoreline revetment, that provide physical barriers to prevent exposure of humans and wildlife to contaminants of concern and potential radionuclides of concern in soil. Institutional controls related to operation and maintenance and land use controls for the implemented remedy are still necessary and required before remedial action certification will be issued.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 01/10/2012  
Comments: Documents groundwater data collected basewide from April 2011 through September 2011 during the second and third quarter 2011 monitoring events.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/18/2012  
Comments: This Technical Memorandum summarizes and evaluates key groundwater analytical results, and recommends revisions to the Basewide Groundwater Monitoring Program (BGMP) related to continued groundwater monitoring in Parcels B, D-1, G, and UC-2. Remedial Action Monitoring Plans (RAMPs) and Remedial Designs (RDs) have been published for these parcels, and the current monitoring program is

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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based on the RAMPs. Other HPNS Parcels (including Parcels C, E, and E-2) have not yet reached the RAMP/RD phase, and investigations are ongoing.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 10/12/2012  
Comments: The design of the revetment in the original remedial design (RD) was contingent on an evaluation of the slope stability of the revetment based on additional, site-specific geotechnical data. The Navy collected site-specific geotechnical data, and this amended design basis report (DBR) presents the updated stability evaluation. The results of the stability evaluation indicated that a revision to the revetment design was necessary because the original design would not result in a geotechnically stable configuration. This amended DBR presents an updated revetment design. The primary revision to the revetment design was a reduction in the elevation of the crest of the revetment from about 16 feet to about 11 feet above mean sea level. This change greatly reduced the size of the revetment and the resultant load on the top of the shoreline slope that would have created instability. Other revetment design considerations, such as slope, thickness, and materials selection, are unchanged from the original RD, except for a segment of the revetment where the slope was reduced to address potential instability caused by a thick section of bay mud at that location. In addition, the design of the revetment increased the revetment length by about 300 feet (as measured at the toe of the revetment) to account for the Navy's removal of piers along the Parcel B shoreline during 2011.

Completed Area Name: PARCEL-B  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 11/20/2012  
Comments: This Remedial Action Work Plan (RAWP) describes how the remedial action (RA) will be implemented at Parcel B (excluding Installation Restoration [IR] Sites 07 and 18), Hunters Point Naval Shipyard (HPNS), San Francisco, California. The RA is described in detail in the oFinal Remedial Design Package, Parcel B (Excluding IR Sites 7 and 18), Hunters Point Shipyard, San Francisco, California and the oAmendment to Revised Final Design Basis Report for Parcel B (Excluding IR Sites 7 and 18), Hunters Point Naval Shipyard, San Francisco, California (RD). The basis and development of the RD were aligned with the remedy selected in the Final Amended Record of Decision (ROD) for Parcel B. The RA will address chemicals of concern (COCs) in soil and groundwater and includes installation of shoreline revetment; installation of durable covers made of soil and asphaltic concrete (AC); repair of existing building foundations; expansion of a soil vapor extraction (SVE) system; and injection of polylactate into the groundwater. The shoreline revetment and durable covers will provide a physical barrier that will prevent exposure of humans and wildlife to COCs in soil. The SVE system will be expanded and operated to remove COCs in soil gas, and polylactate will be injected to treat COCs in groundwater to address the risk from soil vapor intrusion at Parcel B.

Completed Area Name: PARCEL-B

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Sub Area Name: IR 07/18  
Completed Document Type: Correspondence  
Completed Date: 06/21/2012  
Comments: The transmittal presents the independent gamma scan survey results obtained by the California Department of Public Health's Radiologic Health Branch pre-cover (October 25-29, November 1-5, and November 15-17, 2010) and post-cover (August 8-12 and 15-19, 2011).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 06/13/2012  
Comments: Summary of independent regulatory testing conducted by DTSC/CDPH and USEPA.

Future Area Name: PROJECT WIDE  
Future Sub Area Name: Not reported  
Future Document Type: Public Participation Plan / Community Relations Plan  
Future Due Date: 2013  
Future Area Name: PARCEL-B  
Future Sub Area Name: Not reported  
Future Document Type: Operations and Maintenance Plan  
Future Due Date: 2014  
Future Area Name: PARCEL-B  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2014  
Future Area Name: PARCEL-B  
Future Sub Area Name: IR 07/18  
Future Document Type: Operations and Maintenance Plan  
Future Due Date: 2013  
Future Area Name: PARCEL-B  
Future Sub Area Name: Not reported  
Future Document Type: Finding of Suitability to Transfer  
Future Due Date: 2014  
Future Area Name: PARCEL-B  
Future Sub Area Name: IR 07/18  
Future Document Type: 5 Year Review Reports  
Future Due Date: 2014  
Future Area Name: PARCEL-B  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2014  
Future Area Name: PARCEL-B  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2014  
Schedule Area Name: PARCEL-B  
Schedule Sub Area Name: IR 07/18  
Schedule Document Type: Certification  
Schedule Due Date: 03/30/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: PARCEL-B  
Schedule Sub Area Name: IR 07/18  
Schedule Document Type: Land Use Restriction  
Schedule Due Date: 03/29/2013  
Schedule Revised Date: Not reported

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Site Type: Federal Superfund  
Site Type Detailed: Closed Base  
Acres: 78  
NPL: YES  
Regulatory Agencies: SMBRP, RWQCB 2 - San Francisco Bay, US EPA  
Lead Agency: SMBRP, US EPA  
Program Manager: Ryan Miya  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Facility ID: 38440003  
Site Code: 200050  
Assembly: 17  
Senate: 11  
Special Program: Navy  
Status: Active  
Status Date: 05/01/1986  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: BRAC 91  
Latitude: 37.72611  
Longitude: -122.3588  
APN: NONE SPECIFIED  
Past Use: DEGREASING FACILITY, DRY DOCKS, EQUIPMENT/INSTRUMENT REPAIR, FOUNDRY, FUEL - VEHICLE STORAGE/ REFUELING, FUEL HYDRANT PUMPING STATIONS, FUEL TERMINALS, LABORATORIES- RADIOACTIVE, OIL/WATER SEPARATORS, PAINT/DEPAINT FACILITY, PORT, SAND BLASTING, SHIPYARD - SHIP BUILDING/REPAIR, DRY DOCKS, RESEARCH - OTHER, SHIPYARD - SHIP BUILDING/REPAIR, DRY DOCKS, EQUIPMENT/INSTRUMENT REPAIR, FOUNDRY, FUEL - VEHICLE STORAGE/ REFUELING, SHIPYARD - SHIP BUILDING/REPAIR, DRY DOCKS, FUEL - VEHICLE STORAGE/ REFUELING, FUEL HYDRANT PUMPING STATIONS, OIL/WATER SEPARATORS  
Potential COC: 30001, 30002, 30005, 30013, 30018, 30019, 30020, 30195, 30560, 30001, 40001, 30003, 30013, 40002, 30018, 30020, 30022, 3002502, 30027, 30028, 30019, 30020, 30024, 30025, 3002502, 30027, 30472, 30024, 30025, 3002502  
Confirmed COC: 30001,30002,30005,30013,30560,30018,30019,30020,30195,, ,30001,30003,30020,30022,3002502,40001-NO,30018,30027,40002,30028, 30013,, ,30472,30019,30020,30024,30025,30027,3002502,, ,30024,30025,3002502  
Potential Description: OTH, SOIL, CSS, OTH, SOIL, SV, CSS, OTH, SOIL, SV, OTH, SOIL  
Alias Name: HUNTERS POINT NAVAL SHIPYARD, GROUP 3  
Alias Type: Alternate Name  
Alias Name: HUNTERS POINT NAVAL SHIPYARD, PARCEL C  
Alias Type: Alternate Name  
Alias Name: HUNTERS PT NAVAL SHIPYD- TREASURE ISLAND  
Alias Type: Alternate Name  
Alias Name: TRIPLE A MACHINE SHOP  
Alias Type: Alternate Name  
Alias Name: 110033615023  
Alias Type: EPA (FRS #)  
Alias Name: P23056  
Alias Type: PCode  
Alias Name: 200050  
Alias Type: Project Code (Site Code)  
Alias Name: 38440002  
Alias Type: Envirostor ID Number  
Alias Name: 38440003

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Alias Type: Envirostor ID Number  
Alias Name: 38440004  
Alias Type: Envirostor ID Number  
Alias Name: 38440005  
Alias Type: Envirostor ID Number  
Alias Name: 38440007  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PARCEL-C  
Completed Sub Area Name: RU-C5  
Completed Document Type: Site Characterization Workplan  
Completed Date: 02/02/2006  
Comments: No further comments on final work plan.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 04/28/2006  
Comments: Sent letter requesting that the final document include Response to DTSC comments.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 12/01/2005  
Comments: DTSC provided general comments and table on draft. DTSC comments not included in response to comments. DTSC letter requested that navy address DTSC comments.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/02/2007  
Comments: not an approval letter, more work needed on gw monitoring program and reports.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/02/2007  
Comments: not an approval letter, more work needed on gw monitoring program and reports.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/02/2007  
Comments: not an approval letter, more work needed on gw monitoring program and reports.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/02/2007  
Comments: This letter is not an approval letter, more work is needed on gw monitoring program and reports.

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2007  
Comments: final letter on Revision 1 of document. DTSC, RWQCB, EPA and Navy continue to discuss changes to the groundwater monitoring program.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2007  
Comments: revision 1 of document. DTSC, RWQCB, EPA and Navy continue to discuss improvements to the groundwater monitoring program

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 04/24/2008  
Comments: DTSC has no comments on final groundwater report. The Navy, DTSC, EPA and the Regional Water Quality Control Board are in the process of revising the groundwater monitoring Sampling and Analysis Plan (SAP). Groundwater issues will be resolved through the SAP, therefore, DTSC defers comments on groundwater issue to the SAP.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 08/18/2008  
Comments: The CDPH and DTSC have no further comments on final radiological addendum to the FS. Remediation alternatives evaluated for radionuclides include: (1) no action, (2) survey, decontamination, disposal, release, and institutional controls, and (3) survey, decontamination, disposal, release, close-in-place, and institutional controls.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/23/2012  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel C Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/27/2012  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel C Radiological Removal Action Completion Report.

Completed Area Name: UC-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 06/07/2012  
Comments: This Remedial Action Work Plan (RAWP) describes how the durable cover Remedial Action (RA) will be implemented at Parcels UC-1 and UC-2,

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Hunters Point Naval Shipyard (HPNS), San Francisco, California. The RA is described in detail in the Final Remedial Design Package, Parcels UC-1 and UC-2. The basis and development of the remedial design (RD) were aligned with the remedies selected in the records of decision (RODs) for Parcels UC-1 and UC-2. The remedies selected in the ROD include a durable cover, groundwater monitoring for natural attenuation, soil vapor controls, and institutional controls (ICs). This RAWP only discusses installation of the durable cover. The RA will address chemicals of concern (COCs) in soil and includes installation and restoration of durable covers made of soil and asphaltic concrete (AC) at Parcels UC-1 and UC-2. The durable covers will provide a physical barrier that will prevent exposure of humans and wildlife to COCs in soil.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 09/18/2012  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel C Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 09/20/2012  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel C Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 09/07/2012  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel C Radiological Removal Action Completion Report.

Completed Area Name: UC-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/18/2012  
Comments: This Technical Memorandum summarizes and evaluates key groundwater analytical results, and recommends revisions to the Basewide Groundwater Monitoring Program (BGMP) related to continued groundwater monitoring in Parcels B, D-1, G, and UC-2. Remedial Action Monitoring Plans (RAMPs) and Remedial Designs (RDs) have been published for these parcels, and the current monitoring program is based on the RAMPs. Other HPNS Parcels (including Parcels C, E, and E-2) have not yet reached the RAMP/RD phase, and investigations are ongoing.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Enforceable Schedule  
Completed Date: 09/26/2012  
Comments: Serves as the new comprehensive baseline schedule for the Installation

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Restoration Program at HPNS.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 10/25/2010  
Comments: Document provided for records only, not reviewed or approved by DTSC. A Design Plan, providing detailed design drawings and technical specifications for each trench segment in Parcel C will be provided under a separate cover.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision  
Completed Date: 09/30/2010  
Comments: Implementation of the remediation remedy at Parcel C will include soil, groundwater, and radiological remediation. Excavation and off-site disposal, soil vapor extraction, durable covers, and institutional controls will be implemented to address soil contamination; treatment of volatile organic compounds (VOCs) with zero-valent iron or a biological substrate, monitored natural attenuation, and institutional controls will be implemented to address groundwater contamination; and decontamination of buildings, removal of storm drains and sewer lines, decontamination or removal of structures below Building 205, and excavation of soil will be implemented to address radiologically-impacted structures and soil.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 08/04/2008  
Comments: Soil alternatives evaluated include: (1) no action, (2) institutional controls and maintained landscaping, (3) excavation, disposal, institutional controls, and maintained Landscaping, (4) covers and institutional controls, and (5) excavation, disposal, covers, soil vapor extraction, and institutional controls. Groundwater alternatives evaluated include: (1) no action, (2) institutional controls and long-term groundwater monitoring, (3a) In-situ bioremediation, monitored natural attenuation, and institutional controls, (3b) In-situ zero-valent iron reduction, bioremediation, monitored natural attenuation, and institutional controls, and (4) In-situ zero-valent iron reduction, plume-wide bioremediation, monitored natural attenuation, and institutional controls.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: IR 28  
Completed Document Type: Treatability Study Workplan  
Completed Date: 10/20/2004  
Comments: no agency approval letter

Completed Area Name: PARCEL-C  
Completed Sub Area Name: RU-C5  
Completed Document Type: Treatability Study Report  
Completed Date: 07/12/2006  
Comments: DTSC has no further comments at this time. An In-situ bioremediation (ISB) treatability study (TS) was conducted at Building 134 in Remedial Unit C-5 (RU-C5) from April 2004 until May 2005 and

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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evaluated the potential for in-situ bioremediation to treat chlorinated and non-chlorinated organics present in the groundwater. The TS demonstrated that sequential anaerobic and aerobic ISB is an effective treatment technology for mixed chlorinated organic plumes, such as that observed at RU-C5.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: IR 57  
Completed Document Type: Site Characterization Workplan  
Completed Date: 09/14/2005  
Comments: DTSC deferred to RWQCB on this issue. RWQCB sent a conditional approval letter of the Navy's decommissioning of Dry Dock 4 on Sept. 14, 2005

Completed Area Name: PARCEL-C  
Completed Sub Area Name: IR 28  
Completed Document Type: Treatability Study Report  
Completed Date: 10/05/2005  
Comments: Comments on final provided in order to influence FS and future groundwater monitoring in the area of IR 28.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Proposed Plan  
Completed Date: 03/02/2009  
Comments: The Navy proposes the following actions to address contamination in soil, building structures, and groundwater at Parcels C and UC-2: (a) Removing soil in selected areas where concentrations of organic chemicals and lead, mercury, and zinc are higher than the levels considered safe for human health; (b) Operating a soil vapor extraction (SVE) system to remove and treat volatile organic compounds (VOCs) in soil; (c) Installing soil covers to prevent contact with metals (found throughout the fill material quarried from local rock and soil) in areas that were not excavated; (d) Conducting radiological surveys and decontaminating buildings, former building sites, sewer lines, and other areas potentially affected by radiological sources; (e) Screening, separating, and disposing of radioactive sources and radiologically-contaminated building materials and soil at disposal facilities that meet federal and state requirements; (f) Transporting excavated contaminated soil off site to an appropriate landfill; (g) Treating groundwater by injecting chemicals or biological nutrients to break down the organic contaminants at RU-C1, RU-C2, RU-C4, and RU-C5 and immobilize metals; (h) Implementing a groundwater monitoring program to verify that remediation efforts meet remediation goals as defined in the RODs and that metals in groundwater do not impact the bay; (i) Using engineering controls (ECs) and institutional controls (ICs) to limit exposure to contaminated soil and groundwater by restricting specified land uses and activities on the parcel.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/15/2012  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel C Radiological Removal Action Completion Report.

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Distance  
Elevation

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/03/2012  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel C Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/06/2012  
Comments: DTSC concurs with CDPH-EMB's memorandum supporting release for unrestricted use, with respect to radiological issues, at Building 271.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/06/2012  
Comments: DTSC concurs with CDPH-EMB's memorandum supporting release for unrestricted use, with respect to radiological issues, at Building 272.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Treatability Study Report  
Completed Date: 06/10/2011  
Comments: An In Situ Bioremediation (ISB) Treatability Study (TS) was conducted at Building 253 in Remedial Unit C1 (RU-C1) at Hunters Point Naval Shipyard (HPNS). The TS, which was conducted from March 2009 until September 2010, evaluated the potential for ISB to treat chlorinated ethenes present in the groundwater at RU-C1. Prior to base closure, the TS area (a portion of Building 253) was used by the Navy as the location of machining, welding, assembly, painting, and the fabrication of electronic, optical, and ordnance-related equipment. Soil vapor samples collected during all steps of the TS contained notable detections of chlorinated ethenes. In turn the vadose zone associated with Building 253 remains an area where the nature and extent of VOC contamination should be evaluated further. The following recommendations were made based on the results of the TS:  
= Two to three additional monitoring events should be performed over the next 1.5 years to evaluate the effectiveness of Emulsified Vegetable Oil and Dehalococcoides spp. injections. = ISB may be considered as a potentially feasible remedial alternative for groundwater at Parcel C. Further evaluation of the technology should include an analysis of methods to increase efficiency of full-scale substrate distribution and groundwater extraction.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 04/27/2012  
Comments: All survey and sample results indicate that Building 214 meets the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of Building 214 for unrestricted radiological free release.

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: UC-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision  
Completed Date: 12/23/2009  
Comments: The selected remedy for Parcel UC-2 is maintained landscaping or installation of durable covers, and institutional controls for soil; monitored natural attenuation and institutional controls for groundwater; and surveying radiologically-impacted areas, excavating storm drains and sanitary sewers and associated soils, and screening, separating, and disposing of radioactive sources and contaminated soil at an off-site, low-level radioactive waste facility for radiologically-impacted structures (storm drains and sewer lines).

Completed Area Name: UC-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 10/21/2010  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel UC-1/UC-2 Removal Action Completion Report.

Completed Area Name: UC-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 10/25/2010  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel UC-1/UC-2 Removal Action Completion Report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 05/26/2009  
Comments: Letter serves as the Navy's notice of intent to dissolve the Hunters Point Naval Shipyard Restoration Advisory Board.

Completed Area Name: UC-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 09/14/2011  
Comments: A total of 20 survey units were delineated for Parcels UC-1 and UC-2 with 9 survey units located in Parcel UC-2 (Survey Units 136, 137, 138, 141, 142, 143, 144, 145, and 149). In total, 6,407 linear feet of trench (inclusive of excavated soil and pipe/manholes) was excavated during the removal action. The Parcel UC-2 storm drain and sanitary sewer lines primarily consisted of concrete, VCP, cast iron, or corrugated metal located at depths between 1 and 11 feet bgs with 4-inch to 24-inch diameters. The maximum depths of the excavated trenches ranged between 2 feet and 20 feet bgs. Approximately of 20,680 cubic yards of soil were excavated from the Parcels UC-1 and UC-2 storm drain and sanitary sewer lines. About 876 cubic yards of soil that exceeded the release criteria was removed and placed in low-level radioactive waste bins for disposal by the Navy's radiological waste contractor. Storm drain and sanitary sewer excavation activities commenced on March 20, 2009 and were completed on November 3, 2009.

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 09/02/2009  
Comments: RAB Dissolution Public Notice and Comment Period Announcement sent via e-mail.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 12/21/2009  
Comments: All DTSC comments have been adequately addressed and there are no further comments at this time. The specific goal of this investigation is to provide additional analytical data for soil under buildings (134, 203, 214, and 231E) that will be incorporated into the ROD, remedial design and subsequent remedial action for Parcel C.

Completed Area Name: UC-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 01/13/2011  
Comments: The design basis report (DBR) presents the design of the selected remedy to protect human health and the environment from actual or threatened releases of pollutants, chemicals, or hazardous substances at Parcels UC-1 and UC-2 at Hunters Point Shipyard (HPS) in San Francisco, California. The report develops the design for the remedy selected in the Records of Decision (ROD) for Parcels UC-1 and UC-2 to protect human health and the environment from chemicals of concern (COC) in soil and groundwater. The remedy selected in the RODs includes repair of the existing asphalt pavement, which is considered a durable cover, construction of a durable cover over the steeply sloped vegetated portions of the site, a focused soil gas survey to further delineate COCs in soil gas, and monitored natural attenuation for COCs in groundwater.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 05/05/2010  
Comments: Memo describes the proposed approach for establishing soil gas action levels at Hunters Point Shipyard (HPS) since more recent guidance documents for assessment of health risks from vapor intrusion have become available since Human Health Risk Assessments have been completed historically. All comments have been adequately addressed.

Completed Area Name: UC-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 05/29/2008  
Comments: This Design Plan describes the scope and approach for removing the storm drains and sanitary sewers from beneath Fisher Street (Parcel UC-2) and Spear Avenue (Parcel UC-1).

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/10/2012

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel C Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-C

Completed Sub Area Name: RU-C5

Completed Document Type: Treatability Study Workplan

Completed Date: 04/30/2010

Comments: The primary objective of the Treatability Study (TS) is to evaluate the effectiveness and costs of a multicomponent treatment strategy for reducing contaminant concentrations below their respective TS goals at RU-C5 using a suite of remedial technologies. If successful, the technologies may be incorporated in the Record of Decision and Remedial Design for Parcel C. Implementation of the TS will comprise three treatment components (TCs) based on the treatment technologies evaluated, characteristics of target treatment areas, and objectives: Treatment Component (TC-1): Hydraulic fracturing to enhance distribution of a longlived solid phase amendment, EHC<, which couples in situ bioremediation (ISB) with zero-valent iron (ZVI) to treat high concentration VOC contamination (> 1 mg/L) in the residual source area; TC-2: Thermally- enhanced ISB/ZVI using thermal conduction heating (TCH) to accelerate treatment of residual contaminants, including potential DNAPL, in the source area; and TC-3: hydraulic fracturing with EHC< within the dissolved phase plume, potentially coupled with biodegradation stimulated by sulfate-injection to polish residual contaminant degradation products that are recalcitrant under conditions prevalent during ISB/ZVI.

Completed Area Name: PROJECT WIDE

Completed Sub Area Name: Not reported

Completed Document Type: Technical Report

Completed Date: 01/27/2010

Comments: This survey Unit Project Reports Abstract, was prepared to document work conducted under the Final, Base-wide Storm Drain and Sanitary Sewer Removal Work Plan (2006) and Final, Base-wide Storm Drain and Sanitary Sewer Removal Work Plan u Revision 3 (2008) (Work Plan) at Hunters Point Shipyard (HPS), summarizes the scope, approach and radiological surveys used during removal of the sanitary sewer and storm drains located within HPS. This Abstract will be applicable to all Survey Unit Project Reports (SUPR) and data sets prepared for regulatory review.

Completed Area Name: PARCEL-C

Completed Sub Area Name: RU-C5

Completed Document Type: Treatability Study Report

Completed Date: 01/31/2012

Comments: This completion report presents the results of a groundwater treatability study (TS) conducted at Installation Restoration (IR) Site 25, Remedial Unit (RU)&#8208;C5, Building 134 in Parcel C, Hunters Point Naval Shipyard (HPNS) to demonstrate a multicomponent treatment strategy for a chlorinated organic contaminant source zone and contaminant groundwater plume. The TS was conducted to demonstrate treatment of various volatile organic contaminants (VOCs), including chlorinated ethenes and benzenes in the source zone and contaminant plume. A suite of technologies consistent with the selected CERCLA remedy in the Parcel C Feasibility Study (FS) was evaluated in the TS, including: [1] hydraulic fracturing to enhance

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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distribution of a long-lived solid phase amendment, EHC-, which couples in situ bioremediation (ISB) with zero valent iron (ZVI) reduction; [2] thermal conduction heating (TCH) within the dense nonaqueous phase liquid (DNAPL)-impacted source zone; and [3] LactOil- (proprietary mix of soybean oil and lactate) injection polishing. Report recommends that continued semiannual groundwater monitoring (integration with the basewide groundwater monitoring program) and soil vapor monitoring to evaluate concentrations once cooling has occurred and the soil vapor cap has been removed.

Completed Area Name: UC-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/15/2010  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel UC-1/UC-2 Removal Action Completion Report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 03/23/2010  
Comments: Received via e-mail on 3/24/2010.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 04/20/2010  
Comments: Received hard copy in mail on 4/23/2010.

Completed Area Name: UC-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/15/2010  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel UC-1/UC-2 Removal Action Completion Report.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/07/2010  
Comments: The specific goals of this investigation were to provide additional analytical data for soil under Buildings 134, 203, 214, and 231E that will be incorporated into the ROD, remedial design and subsequent remedial action for Parcel C.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/01/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/01/2010

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/01/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 03/01/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 10/09/2009  
Comments: 1

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 12/01/2005  
Comments: Not reported

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2007  
Comments: Not reported

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 04/01/2007  
Comments: Not reported

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 02/01/2013  
Comments: The Remedial Design (RD) and Design Basis Report (DBR) present the RD that was developed to implement the selected remedy for contaminated soil and groundwater at Parcel C. The selected remedy is described

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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in the 2010 Final Record of Decision for Parcel C. The objective of the DBR is to provide remedial design drawings and the basis of design to implement the selected remedial actions for soil and groundwater at Parcel C. Elements of this DBR include the RD approach for excavations, soil vapor extraction (SVE), durable covers, zero-valent iron (ZVI) injection, and bioremediation.

Completed Area Name: PARCEL-C  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Remedial Investigation Workplan  
 Completed Date: 12/17/1993  
 Comments: Not reported

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Other Report  
 Completed Date: 11/19/2010  
 Comments: DTSC did not review / approve this document and it is being provided for informational purposes only.

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Remedial Action Implementation Workplan  
 Completed Date: 07/30/2010  
 Comments: Not reported

Completed Area Name: PARCEL-C  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Technical Report  
 Completed Date: 08/06/2012  
 Comments: DTSC concurs with CDPH-EMB's memorandum supporting release for unrestricted use, with respect to radiological issues, at Building 203.

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Monitoring Report  
 Completed Date: 03/23/2011  
 Comments: Documents groundwater data collected basewide from April 2010 through September 2010 during the second and third quarter 2010 monitoring events.

Completed Area Name: PARCEL-C  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Treatability Study Workplan  
 Completed Date: 10/13/2006  
 Comments: This document describes the technical approach and operational requirements for testing sequential reductive/oxidative in situ bioremediation (ISB) for treating various organic compounds in groundwater at Remedial Unit (RU)-CI in Parcel C at Hunters Point Shipyard (HPS), San Francisco, California. The primary contaminants of concern (COCs) in groundwater at RU-C1 are tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene (DCE) isomers, and vinyl chloride (VC). Other contaminants that have been historically detected on site and may require treatment include: 1,1-dichloroethane (1,1-DCA), 1,2-dichloroethane (1,2-DCA), benzene, 1,4-dichlorobenzene (1,4-DCB), and total petroleum hydrocarbons (TPH)

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(diesel and motor oil range).

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 07/27/1994  
Comments: The property to be licensed is comprised of approximately 45,000 square feet within the interior of Building 281, and use of the paved area directly adjacent to the north side of Building 281 as a parking area. The property will be licensed on an interim basis for approximately 4 months to Skellington Productions, Twentieth century Fox Company (hereinafter, "company"), for constructing a film production set and filming an animated feature film.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 07/31/2000  
Comments: This FSP has been developed to provide specific details about the methods to be used for sample collection, the location and number of samples to be collected, field quality control (QC) procedures, sampling and handling procedures, and shipping. A quality assurance project plan (QAPP) has also been developed to supplement this document.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 11/29/2010  
Comments: The document describes the scope and approach for sanitary sewer and storm drain removal in Parcel C work areas (WA)-31, WA-32, WA-33, WA-34, and WA-35 at Hunters Point Shipyard. Removal of 22,907 linear feet of sanitary sewer and storm drain line within Parcel C will be executed. The document was not reviewed or approved by the DTSC and is provided for informational purposes only.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 11/29/2010  
Comments: This plan was developed to ensure that the Navy maintains a coordinated approach for dust control and air monitoring activities across multiple contracts. At a minimum, all contractors will be required to adhere to the requirements set forth in the document. DTSC did not review / approve the document as dust control practices are evaluated on a project-specific basis and it has been provided for informational purposes as part of the administrative record.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 06/03/1996  
Comments: The basewide environmental baseline survey (EBS) report prepared for Hunters Point Annex (HPA), San Francisco, California, summarizes environmental information gathered by PRC Environmental Management, Inc. (PRC), for the Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC), Engineering Field Activity West (EFA

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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WEST). This document is based on existing environmental information gathered during the period of May to December 1995 related to the storage, release, treatment, or disposal of hazardous substances or petroleum products at HPA.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 05/16/2011  
Comments: The 2009 SAP was amended to incorporate the requirements of recent HPS Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) documents, such as Remedial Action Monitoring Plans (RAMPs), Records of Decision (RODs), and Feasibility Studies (FSs), and to update the SAP based on the recent work conducted (e.g groundwater treatability studies and corrective actions).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 06/03/2011  
Comments: The Community Involvement Plan presents the Navy's plans to inform and involve the community in the environmental cleanup program moving forward based on feedback obtained from the Hunters Point Shipyard community about past communication and community involvement program activities.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 02/09/2012  
Comments: The objective of this investigation is to provide soil, groundwater, and soil vapor data to aid in the design and implementation of a remedial action primarily for groundwater treatment and localized soil source remediation using soil vapor extraction. The investigation is primarily focused on further defining the boundaries of existing groundwater plumes for remediation purposes and to help define the area warranting soil vapor extraction treatment per the Final Parcel C Record of Decision for localized soil impacts. Soil vapor and co-located soil sampling will be used to provide pre-design information for one soil vapor source treatment area (SVE Area 2). Grab groundwater and soil sampling will be used to refine the boundaries of the groundwater treatment areas within RU-C2.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: RU-C5  
Completed Document Type: Treatability Study Workplan  
Completed Date: 03/23/2011  
Comments: The original SAP assumed sulfate would be injected as a polishing agent to reduce benzene concentrations if necessary for TC3. The decision condition to inject sulfate was to be made if: 1) benzene was present, 2) parent compounds were below Project Action Limits (PALs), and 3) reductive daughter products were above PALs. However, after 4 rounds of groundwater performance monitoring at TC3, the following conditions have been observed: 1) benzene is present, 2) parent compound 1,4-dichlorobenzene and chlorobenzene concentrations are above PALs, and 3) reductive daughter products are above PALs. Injecting carbon in these conditions will therefore be more effective

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that injecting sulfate so that the 1,4- dichlorobenzene and chlorobenzene (parent compounds) concentrations can be reduced. Sulfate has been measured in the system; therefore it is not anticipated that sulfate injections will be necessary for TC3.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 03/13/1997  
Comments: Based on historic activities and uses, 12 areas of concern were identified in Parcel C where contaminants may have been released to soil and groundwater (IR-27, IR-28, IR-29, IR-30, IR-45, IR-49, IR-50, IR-51, IR-57, IR-58, IR-63, and IR-64). Contaminants of concern include metals, VOCs, SVOCs, pesticides, PCBs, petroleum hydrocarbons, were present in soil and groundwater exceeding screening criteria.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/23/2000  
Comments: This document presents a comprehensive history of radiological operations conducted by the U.S. Department of the Navy (Navy) and Navy contractors at the Hunters Point Shipyard (HPS), San Francisco, California. The Navy prepared the HPS Historical Radiological Assessment (HRA) as a two volume set. Volume I (the current document) addresses radioactivity associated with the Naval Nuclear Propulsion Program (NNPP).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/31/2004  
Comments: This document presents a comprehensive history of radiological operations conducted by the U.S. Department of the Navy (Navy) and Navy contractors at the Hunters Point Shipyard (HPS), San Francisco, California. The Navy prepared the HPS Historical Radiological Assessment (HRA) as a two volume set. Volume I was published in August 2000 and addressed radioactivity associated with the Naval Nuclear Propulsion Program (NNPP). Volume I concluded that berthing of and work on nuclear-powered ships at HPS resulted in no adverse effect on the human population or the environment. Volume II of the HRA has been prepared pursuant to the Navy's Installation Restoration (IR) Program, which encompasses the Navy's Base Realignment and Closure (BRAC) Program, and in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). Volume II describes the history of operations involving general radioactive material (G-RAM) that, for the purposes of this document, is defined as any radioactive material used by the Navy or Navy contractors not associated with the NNPP.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 07/07/2011  
Comments: This revision to the SUPRA is a result of the Survey Unit Project

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**S101272855**

Report (SUPR) prototype that was agreed upon by CDPH in August 2010. All SUPR reports dated after August 2010 incorporate the prototype changes, and now the SUPRA has been updated accordingly.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/21/2011

Comments: This monitoring report incorporates revisions made from comments received on the previous semiannual groundwater report (February 2011).

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 07/12/2002

Comments: Removal for non-volatile organic compound (non-VOC) soil sites and two fuel line sites within Installation Restoration (IR) sites 25, 28, 29, 30, 57, 58, and 64 within Parcel C was completed. More than 8,800 cubic yards of soil were removed from 46 excavated sites. 660 feet of steam system line and 470 feet of fuel line was also removed.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/27/2012

Comments: DTSC concurs with CDPH-EMB's memorandum supporting release for unrestricted use, with respect to radiological issues, at Building 241.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: RU-C5  
Completed Document Type: Fieldwork  
Completed Date: 06/29/2011

Comments: Fieldwork mobilization and pre-treatment (baseline) sampling started 30 April 2010. Hydraulic fracturing and amendment (EHC) emplacement in source area implemented by December 2010, followed by thermal conduction heating from December 2010 through April 2011, and then lactOil polish step within the dissolved groundwater plume. Demobilized from field in June 2011.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Assessment Report  
Completed Date: 04/15/1994

Comments: Previous field investigations, document searches, and studies at HPA have focused primarily on sites considered eligible for funding through the Installation Restoration (IR) program. The Site Assessments were conducted to identify sites potentially contaminated during approximately the past 10 years that were not included in the IR programs in Parcels B, C, D, and E and to make recommendations for additional field activities. Some previously investigated sites were also assessed when new information and/or new areas of the sites were made available or accessible as a result of the Navy's recent building cleanout program or other ongoing activities.

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 12/23/2009  
Comments: Also included as an appendix (Appendix E) to the Community Involvement Plan.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Treatability Study Report  
Completed Date: 05/13/1998  
Comments: Documents a soil vapor extraction treatability study (air sparging / soil vapor extraction) to assist the Navy in remedy selection.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Supplemental Site Investigation Tech Memo  
Completed Date: 05/29/2002  
Comments: A phased approach was used in the implementation of the groundwater data gaps investigation (GDGI) at HPS. Phase I was conducted at Parcel C from July through December 2000. Results from the Phase I GDGI at Parcel C were provided in the HPS revised information package for the Phase I GDGI. Phase II field activities were conducted at Parcel C from January through February 2001. Additional field activities are being planned at Parcel C as part of Phase III of the GDGI; these activities will be supplemented by characterization activities associated with the chemical oxidation treatability study currently being conducted at Parcel C Installation Restoration (IR) sites 25 and 28.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 10/18/2000  
Comments: It is DTSC's position that the actions proposed are interim measures and that final cleanup is subject to the Record of Decision approval process.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 08/05/2011  
Comments: Updates the project personnel list and updates the list of analytes to incorporate groundwater monitoring recommendations provided in the Final In-Situ Anaerobic Bioremediation Treatability Study Completion Report for RU-C1, Building 253, dated June 8, 2011.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: RU-C5  
Completed Document Type: Site Summary Report  
Completed Date: 11/16/2006  
Comments: The technical memorandum documents groundwater and passive soil gas sampling for additional site characterization at RU-C5 to delineate the lateral and vertical extent of VOC-contamination along the boundary between parcels B and C.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Document Type: Site Summary Report  
Completed Date: 05/02/1994  
Comments: Four utility sites (steam lines, fuel distribution lines, storm drains and sanitary sewers, and former transformer locations) and five building sites were investigated.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Treatability Study Report  
Completed Date: 10/05/2005  
Comments: The primary objective of the ZVI injection TS was to evaluate and document the effectiveness of ZVI injection technology at reducing or destroying chlorinated volatile organic compounds (VOC) in groundwater in the vicinity of Building 272 within Parcel C. This TS is a follow-on study to the previously conducted technology demonstration and evaluates the effectiveness of the ZVI technology in treating lower residual concentrations over a larger area, while still treating an area of similar geology. Secondary objectives of this study included assessing the zone of influence of the treatment technology, and monitoring the potential displacement of contamination due to the injection procedure. TCE concentrations within the treatment zone decreased from a baseline average of 1,385 8g/L to a post-injection average of 35 8g/L, indicating that the ZVI treatment was effective in reducing the contaminant concentrations. Significant reduction percentages were also observed for cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE, and vinyl chloride (with the exception of one well), which are intermediate degradation products of TCE. These reduction percentages indicate that, in general, TCE was reduced almost completely to ethene and chloride.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 01/18/2001  
Comments: The Navy has proposed to undertake a time-critical removal action (TCRA) for steam lines, fuel lines, and non-volatile organic compound (VOC) soil sites in Parcels C and D at Hunters Point Shipyard (HPS) in San Francisco, California. At the non-VOC soil sites in Parcel C, the Navy will collect preexcavation delineation soil samples and compare contaminant concentrations in these samples with cleanup goals for the removal action to evaluate the extent of excavation required. This sampling and analysis plan (SAP) documents the Navy's approach for delineating the non-VOC soil sites in Parcel C proposed for the TCRA. This SAP details requirements specific to Parcel C. The Navy will include data and discussions of the removal actions in the revised feasibility study (FS) for all the sites in Parcel C.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 01/08/2001  
Comments: The technical memorandum provides the results of the Phase I Groundwater Data Gaps Investigation (GDGI) performed at Hunters Point Shipyard in San Francisco, California. The purpose of the technical memorandum is to document the results from the Phase I GDGI and to provide these results to the BCT such that the BCT can evaluate the Phase sampling and recommend changes to the Phase II sampling, if

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

necessary.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 02/16/2012  
Comments: The sampling outlined in this work plan will characterize volatile organic compounds (VOCs) and chromium (VI) using a mobile laboratory and field screening methods to provide the data needed for zero-valent iron (ZVI) / in situ bioremediation (ISB) and soil vapor extraction (SVE) system design, and to prepare elements of the remedial action work plan that will be completed in accordance with forthcoming Remedial Design documentation. The overall remedial action objective will include removal of contaminants from RU-C1, RU-C4, and RU-C5 groundwater using ZVI injection and sequential (i.e., two-step) anaerobic ISB to reduce groundwater contaminants to levels that meet Final Parcel C Record of Decision (ROD) cleanup goals. For soil, the remedial activities include a combination of SVE and excavation to achieve the ROD cleanup goals.

Completed Area Name: PARCEL-C  
Completed Sub Area Name: Not reported  
Completed Document Type: Supplemental Site Investigation Tech Memo  
Completed Date: 05/11/2004  
Comments: The purpose of the groundwater data gaps investigation (GDGI) was to update the previous assessment of groundwater conditions and to address data gaps identified during and after the remedial investigation, which was conducted during the mid-1990s. The new information will be used to help evaluate groundwater remedial technologies in the parcel-specific revised feasibility study (FS) reports. This report summarizes the results of the GDGI in Parcel C. Investigation results are presented based primarily on the investigation at four groundwater remedial units (RU) where the major contaminants are volatile organic compounds (VOC): RU-C1, RU-C2, RU-C4, and RU-C5. Phase III of the GDGI for Parcel C consisted of installation, development, and sampling of seventeen new monitoring wells at Parcel C; measurement water levels in 73 A- and B-aquifer and bedrock WBZs in Parcel C, as part of a basewide effort to assess horizontal hydraulic gradients; collection of groundwater samples from 120 monitoring wells in Parcel C to help characterize the vertical extent of contamination and confirm the horizontal extents of the RUs; conduct tidal influence study at 30 locations in Parcel C to evaluate the tidal effects on groundwater levels in the A- and B-aquifers; conduct tidal mixing study to evaluate tidal effects on salinity levels in selected A-aquifer monitoring wells; and conduct aquifer tests at RU-C1, RU-C2, and RU-C5 to help refine the hydrogeologic conceptual model.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Federal Facility Agreement  
Completed Date: 10/29/1991  
Comments: Federal Facilities Agreement signed by the United States Navy, DTSC and US EPA.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Document Type: Correspondence  
Completed Date: 06/13/2012  
Comments: Summary of independent regulatory testing conducted by DTSC/CDPH and USEPA.

Future Area Name: PARCEL-C  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2016  
Future Area Name: PARCEL-C  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2015  
Future Area Name: PARCEL-C  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2016  
Future Area Name: PROJECT WIDE  
Future Sub Area Name: Not reported  
Future Document Type: Public Participation Plan / Community Relations Plan  
Future Due Date: 2013  
Future Area Name: PARCEL-C  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2015  
Future Area Name: UC-2  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2013  
Future Area Name: PARCEL-C  
Future Sub Area Name: Not reported  
Future Document Type: Removal Action Completion Report  
Future Due Date: 2016  
Future Area Name: PARCEL-C  
Future Sub Area Name: Not reported  
Future Document Type: Operations and Maintenance Plan  
Future Due Date: 2016  
Future Area Name: UC-2  
Future Sub Area Name: Not reported  
Future Document Type: 5 Year Review Reports  
Future Due Date: 2014  
Future Area Name: PARCEL-C  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2016  
Future Area Name: PARCEL-C  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2016  
Schedule Area Name: UC-2  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Operations and Maintenance Plan  
Schedule Due Date: 05/05/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: UC-2  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Land Use Restriction

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Schedule Due Date: 05/30/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: UC-2  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Certification  
Schedule Due Date: 06/15/2013  
Schedule Revised Date: Not reported

Site Type: Federal Superfund  
Site Type Detailed: Closed Base  
Acres: 98.34  
NPL: YES  
Regulatory Agencies: SMBRP, RWQCB 2 - San Francisco Bay, US EPA  
Lead Agency: SMBRP, US EPA  
Program Manager: Ryan Miya  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Facility ID: 38440004  
Site Code: 200050  
Assembly: 17  
Senate: 11  
Special Program: Navy  
Status: Active  
Status Date: 05/01/1986  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: BRAC 91  
Latitude: 37.72111  
Longitude: -122.3641  
APN: NONE SPECIFIED  
Past Use: DEGREASING FACILITY, FUEL HYDRANT PUMPING STATIONS, MACHINE SHOP, OFFICE BUILDING, OIL/WATER SEPARATORS, PAINT/DEPAINT FACILITY, PHOTOGRAPHIC PROCESSING, PORT, SAND BLASTING, SHIPYARD - SHIP BUILDING/REPAIR, TRANSPORTATION - WAREHOUSING, SHIPYARD - SHIP BUILDING/REPAIR, RESEARCH - OTHER, SHIPYARD - SHIP BUILDING/REPAIR, SHIPYARD - SHIP BUILDING/REPAIR, DRY DOCKS, SHIPYARD - SHIP BUILDING/REPAIR, LABORATORIES- RADIOACTIVE, SHIPYARD - SHIP BUILDING/REPAIR, SHIPYARD - SHIP BUILDING/REPAIR

Potential COC: 30001, 30002, 30013, 30019, 30020, 30027, 30153, 30353, 30594, 30001, 30003, 30013, 40002, 30018, 30019, 30020, 30022, 30027, 30028, 30136, 30001, 30013, 30018, 30027, 30136, 30353, 30472, 30001, 30013, 40002, 30020, 30026, 30027, 30136, 30353, 30472, 30476, 30478, 30001, 40002, 30020, 30027, 30136, 30153

Confirmed COC: 30001,30002,30013,30594,30353,30019,30020,30027,30153,, ,30001,30003,30019,30020,30022,30018,30027,30136,40002,30028,30013,, ,30001,30013,30472,30018,30027,30136,30353,, ,30001,30013,30472,30476,30020,30027,30136,30353,40002,30478,30026,, ,30001-NO,40002,, ,30020-NO,, ,30027,30136,30153

Potential Description: OTH, SOIL, CSS, OTH, SOIL, SV, OTH, SOIL, SV

Alias Name: HUNTERS POINT NAVAL SHIPYARD, GROUP 4  
Alias Type: Alternate Name  
Alias Name: HUNTERS PT NAVAL SHIPYD- TREASURE ISLAND  
Alias Type: Alternate Name  
Alias Name: TRIPLE A MACHINE SHOP  
Alias Type: Alternate Name  
Alias Name: 110033615023

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Alias Type: EPA (FRS #)  
Alias Name: P23057  
Alias Type: PCode  
Alias Name: 200050  
Alias Type: Project Code (Site Code)  
Alias Name: 38440002  
Alias Type: Envirostor ID Number  
Alias Name: 38440003  
Alias Type: Envirostor ID Number  
Alias Name: 38440004  
Alias Type: Envirostor ID Number  
Alias Name: 38440005  
Alias Type: Envirostor ID Number  
Alias Name: 38440007  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 02/15/2008  
Comments: Letter identified DTSC's preferred alternatives and stated soil cover designs needed to be vetted and approved during Remedial Design. Also, groundwater monitoring needs more discussion. DTSC supports continued monitoring of shoreline. In general, DTSC supports conclusions and recommendations in the final revised FS. Recommend moving ahead to the proposed plan.

Completed Area Name: G  
Completed Sub Area Name: IR-9  
Completed Document Type: Removal Action Completion Report  
Completed Date: 06/18/1999  
Comments: Pickling and Plate Yard Removal was completed on March 30, 1996. Contamination at the Pickling and Plate Yard was located at the surface and high in concentration. The site was an uncovered and exposed portion of the shipyard and was routinely exposed to winter storms and strong winds in the summer. The site is surrounded by buildings leased to commercial tenants. At the IR-9 Pickling and Plate Yard, zinc chromate residue within a temporary structure were removed and disposed of offsite along with the pickling tank and its content, containment vault contents, and the plate drying and storage racks. Contaminated groundwater and soil in the area will be addressed in the Parcel D RIFS process. Volume trenched, stabilized or disposed: Approximately 47,000 gallons of liquid and sludge and approximately 20 tons of debris and plating storage racks. Approximate cost and funding source: \$3,000,000; DSMOA/BRAC

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 11/23/2005  
Comments: Approximately 1,759 cubic yards of PAH-impacted soil was removed from De Minimis Area BK32 (DM BK32) and disposed offsite. A 35-foot section of steamline was removed and the asbestos-containing insulation around the pipe was properly disposed. The final footprint of the excavation was about 35 feet wide, 110 feet long, and 10 feet deep. Excavation was backfilled with clean soil. Approximately 7,924 tons (67 tons of RCRA hazardous waste, 6,282

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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tons of Class II hazardous waste, and 1,575 tons of California hazardous waste ) from existing soil and aggregate stockpiles were also removed and disposed offsite.

- Completed Area Name: D-1
- Completed Sub Area Name: Not reported
- Completed Document Type: Record of Decision
- Completed Date: 07/27/2009
- Comments: The selected remedy consists of excavation and offsite disposal, durable covers, and institutional controls to address soil contamination (arsenic, manganese, and polycyclic aromatic hydrocarbons); treatment of volatile organic compounds and metals (chromium IV and nickel) with biological substrate or zero valent iron, groundwater monitoring, and institutional controls to address groundwater contamination; and surveying, decontaminating, and removing all radiologically-impacted structures and soil.
  
- Completed Area Name: D
- Completed Sub Area Name: Not reported
- Completed Document Type: Proposed Plan
- Completed Date: 09/05/2008
- Comments: Not reported
  
- Completed Area Name: D
- Completed Sub Area Name: Not reported
- Completed Document Type: Monitoring Report
- Completed Date: 08/04/2006
- Comments: Final letter sent requesting that document include response to DTSC comments
  
- Completed Area Name: D
- Completed Sub Area Name: Not reported
- Completed Document Type: Monitoring Report
- Completed Date: 12/01/2005
- Comments: DTSC provided comments on draft. Final document did not include DTSC comments. Requested that Navy respond to DTSC comments
  
- Completed Area Name: D
- Completed Sub Area Name: Not reported
- Completed Document Type: Monitoring Report
- Completed Date: 02/02/2007
- Comments: not an approval letter, more work needed on gw monitoring program and reports.
  
- Completed Area Name: D
- Completed Sub Area Name: Not reported
- Completed Document Type: Monitoring Report
- Completed Date: 02/02/2007
- Comments: not an approval letter, more work needed on gw monitoring program and reports. Improvements noted.
  
- Completed Area Name: D
- Completed Sub Area Name: Not reported
- Completed Document Type: Monitoring Report
- Completed Date: 02/02/2007
- Comments: not an approval, more work needed on gw monitoring program and reports.

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/02/2007  
Comments: not an approval, more work needed on gw monitoring program and reports.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/28/2013  
Comments: Approval of the Final SUPRs will be documented as part of DTSC's review and acceptance of the Parcel D-1 Radiological Removal Action Completion Report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Enforceable Schedule  
Completed Date: 09/26/2012  
Comments: Serves as the new comprehensive baseline schedule for the Installation Restoration Program at HPNS.

Completed Area Name: G  
Completed Sub Area Name: IR-9  
Completed Document Type: Treatability Study Workplan  
Completed Date: 11/17/2008  
Comments: DTSC provided comments on final work plan. Including request to remove plating sump and ensure that agreements made in meetings are reflected in work plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 09/02/2009  
Comments: RAB Dissolution Public Notice and Comment Period Announcement sent via e-mail.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Base / Site Management Plan  
Completed Date: 06/20/2000  
Comments: A total of 19 IR sites on Parcel D were reevaluated during the risk management review process. These sites include IR-08, IR-09, IR-16, IR-17, IR-22, IR-32, IR-33, IR-33S, IR-34, IR-35, IR-37, IR-38, IR-39, IR-53, IR-55, IR-65, IR-68, IR-69, and IR-70.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 05/30/1994  
Comments: Four utility sites (steam lines, suspected steam lines, storm drains and sanitary sewers, and former transformer locations) and 11 building sites were investigated in Parcel D.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Date: 07/18/2007  
Comments: letter on Revision 1 of document. DTSC, RWQCB, EPA and Navy continue to discuss improvements to the groundwater monitoring program

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2007  
Comments: Revision 1 of document. DTSC, RWQCB, EPA and Navy continue to discuss improvements to the groundwater monitoring program.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 05/16/2008  
Comments: No further comments on final document.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 11/18/2011  
Comments: Final SUPR acceptance will be documented as a part of regulatory acceptance of the Parcel G RACR.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 10/18/2000  
Comments: It is DTSC's position that the actions proposed are interim measures and that final cleanup is subject to the Record of Decision approval process.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 04/24/2008  
Comments: DTSC has no comments on final groundwater report. The Navy, DTSC, EPA and the Regional Water Quality Control Board are in the process of revising the groundwater monitoring Sampling and Analysis Plan (SAP). Groundwater issues will be resolved through the SAP, therefore, DTSC defers comments on groundwater issue to the SAP.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 04/07/2011  
Comments: The Remedial Design Package is composed of five components as follows: (1) Design Basis Report presents a description (technical specifications and design drawings, etc.) of the durable cover remedy that will be constructed, (2) Remedial Action Monitoring Plan presents the approach for monitoring chemicals of concern in groundwater, (3) Land Use Control Remedial Design addresses the institutional controls and restrictions required by the Record of Decision, (4) Operation and Maintenance Plan describes the inspection, maintainance, monitoring, and repair approach for maintenance of the remedy, and (5) Opinion of Probable Construction Cost presents an estimate of the probable costs for construction of

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the remedy.

Completed Area Name: D-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision  
Completed Date: 08/09/2010  
Comments: The D-2 RACR Revision 1 and supporting documentation demonstrates that the soil meets the radiological release criteria of 1 picocurie per gram above background established for HPS. Radionuclides were the only potential contaminants of concern at Parcel D-2. Therefore, based on the currently available information, DTSC concurs with the No Further Action Record of Decision and the conclusion that any potential radiological contamination in Building 813 and the soil throughout Parcel D-2 has been adequately remediated.

Completed Area Name: D-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Finding of Suitability to Transfer  
Completed Date: 05/02/2012  
Comments: Based on the information contained in the Parcel D-2 FOST, the completion and certification of an approved radiological removal action, execution of a Parcel D-2 No Further Action Record of Decision, recommendation for radiological free release from CDPH-EMB, and the notices, restrictions, and covenants that will be contained in the deed, DTSC concurs with the finding that Parcel D-2 at Hunters Point Naval Shipyard is suitable for transfer.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision  
Completed Date: 02/09/2009  
Comments: The Selected Remedy for Parcel G is excavation, disposal, covers, and Institutional Controls (ICs) for soil; treatment, monitoring, and ICs for groundwater; and survey, decontamination, excavation, disposal, and release for radiologically-impacted structures and soil.

Completed Area Name: UC-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 09/14/2011  
Comments: A total of 20 survey units were delineated for Parcels UC-1 and UC-2 with 11 survey units located in Parcel UC-1 (Survey Units 133, 139, 140, 146, 147, 148, 150, 164, 167, 168, and 171). In total, 6,407 linear feet of trench (inclusive of excavated soil and pipe/manholes) was excavated during the removal action. The storm drain and sanitary sewer piping in Parcel UC-1 primarily consisted of concrete, VCP, or cast iron located at depths between 1 and 18 feet bgs with 6-inch to 33-inch diameters. The maximum depths of the excavated trenches ranged between 2 feet and 20 feet bgs. The total area of the exposed trench surface in Parcel UC-1 was 8,004 square meters with 3,509 linear feet of trench. Approximately of 20,680 cubic yards of soil were excavated from the Parcels UC-1 and UC-2 storm drain and sanitary sewer lines. About 876 cubic yards of soil that exceeded the release criteria was removed and placed in low-level radioactive waste bins for disposal by the Navy's radiological waste contractor. Storm drain and sanitary sewer excavation activities commenced on March 20, 2009 and were completed on July 10, 2010.

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Completed Area Name: UC-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Record of Decision  
Completed Date: 07/27/2009  
Comments: The selected remedy consists of excavation and offsite disposal, durable covers, and institutional controls to address soil contamination (arsenic, manganese, and polycyclic aromatic hydrocarbons); treatment of volatile organic compounds and metals (chromium IV and nickel) with biological substrate or zero valent iron, groundwater monitoring, and institutional controls to address groundwater contamination; and surveying, decontaminating, and removing all radiologically-impacted structures and soil.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 09/26/2012  
Comments: Approval of the Final SUPRs will be documented as part of DTSC's review and acceptance of the Parcel D-1 Radiological Removal Action Completion Report.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 09/19/2012  
Comments: Approval of the Final SUPRs will be documented as part of DTSC's review and acceptance of the Parcel D-1 Radiological Removal Action Completion Report.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 09/26/2012  
Comments: Approval of the Final SUPRs will be documented as part of DTSC's review and acceptance of the Parcel D-1 Radiological Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Design/Implementation Workplan  
Completed Date: 12/13/2010  
Comments: The remedial design describes the detailed actions selected by the Record of Decision for Parcel G to protect the public health, welfare, and the environment from actual or potential releases of contaminants from the site. The remedial action for Parcel G addresses metals, semivolatile organic compounds, and radionuclides in soil, and volatile organic compounds (VOC) in groundwater. The primary risk to human health and the environment from these chemicals is through direct contact with the soil. The remedial design developed in this report includes limited removal of chemicals in soil and a durable soil cover over the entire parcel to prevent exposure. The remedial design for Parcel G also includes monitoring for VOCs in groundwater and a focused soil gas survey to monitor vapors below ground. The remedial design includes land use restrictions to limit exposure of future landowners or users of the property to hazardous substances and to maintain the integrity of the remedy. The remedial design package includes five components: (1)

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design basis report, (2) remedial action monitoring plan, (3) land use control remedial design, (4) operation and maintenance plan, and (5) engineer's opinion of probable cost. Together, these components describe the detailed process for building and maintaining the remedy for Parcel G.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/08/2011  
Comments: Based on the review of all relevant submitted documents and confirmatory analysis completed by Drinking Water & Radiation Laboratory Branch, EMB recommends radiological unrestricted release for Building Site 317/364/365.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 08/02/2010  
Comments: DTSC/CDPH support release for unrestricted use, with respect to radiological issues, at Building 351.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/06/2010  
Comments: Based on the review of all relevant submitted documents and confirmatory radiological survey CDPH-EMB recommends and DTSC concurs with unrestricted release, with respect to radiological components, for Building 351A.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 04/01/2010  
Comments: Based on the review of all relevant submitted documents and confirmatory radiological survey CDPH recommends unrestricted radiological release for the structure known as Building 366.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/28/2009  
Comments: Concurrence for unrestricted radiological release of the building from CDPH received 10/23/09.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/06/2010  
Comments: Based on the review of all relevant submitted documents and confirmatory radiological survey CDPH-EMB recommends and DTSC concurs with unrestricted release, with respect to radiological components, for Building 411.

Completed Area Name: G  
Completed Sub Area Name: Not reported

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Document Type: Technical Report  
Completed Date: 03/17/2011  
Comments: Approval of the Final SUPRs will be documented as part of DTSC's review and acceptance of the Parcel G Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 07/29/2009  
Comments: DTSC and CDPH do not have any additional comments. CDPH will be conducting a final verification survey shortly. After completion and pending the results from CDPH's final verification scan, a memorandum supporting radiological release for unrestricted use at Building 408 will be presented under a separate cover.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/22/2011  
Comments: Approval of the Final SUPRs will be documented as part of DTSC's review and acceptance of the Parcel G Removal Action Completion Report.

Completed Area Name: UC-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/21/2010  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel UC-1/UC-2 Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 07/29/2009  
Comments: DTSC and CDPH do not have any additional comments. CDPH will be conducting a final verification survey shortly. After completion and pending the results from CDPH's final verification scan, a memorandum supporting radiological release for unrestricted use at Building 408 will be presented under a separate cover.

Completed Area Name: G  
Completed Sub Area Name: IR-9  
Completed Document Type: Pilot/Treatability Study Report  
Completed Date: 03/26/2010  
Comments: This report presents the results of a groundwater treatability study (GWTS) conducted on behalf of the U.S. Department of the Navy (Navy) to assess the effectiveness of zero-valent iron (ZVI) to remediate groundwater within Parcels D-1 and G. The GWTS was designed to address five separate groundwater plumes within Parcels D-1 and G that each contained metals or volatile organic compounds (VOC) at concentrations potentially exceeding human health risk criteria. The primary objectives of the GWTS were to (1) evaluate and document the technical performance and cost of ZVI to remediate VOCs and metals in groundwater and (2) assess potential risks to future commercial/industrial workers from VOC vapor intrusion to indoor air

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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both before and after ZVI injection (pre- and post-injection). Post-injection data show that ZVI reduced the average TCE groundwater concentration in IR-09 North by 87 percent and reduced the average chloroform concentration in IR-71 West by 98 percent. All measured TCE and chloroform concentrations in the shallow wells within these plumes were below the GWTS groundwater screening criteria. Soil vapor VOC concentrations were below the soil vapor risk screening criteria for future commercial/industrial workers except at one location in IR-71 West that just exceeded the criteria. Even with the single soil vapor result above the soil vapor risk screening criteria, the total estimated post-injection cancer risk at IR-71 West was calculated to be 8E-07 for future commercial/industrial workers, which is considered acceptable because it does not exceed the target cancer risk of 1E-06. Post-injection risks for commercial/industrial workers at IR-33, IR-09 South, and IR-71 East also were considered acceptable because the risks were less than the target cancer risk of 1E-06. Under the Basewide Groundwater Monitoring Program, 2 years of semiannual monitoring will be conducted at groundwater monitoring wells within the GWTS ZVI injection areas to provide additional data on ZVI effectiveness, including contaminant reduction trends, daughter-product generation, and residual VOC migration.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 05/26/2009  
Comments: Letter serves as the Navy's notice of intent to dissolve the Hunters Point Naval Shipyard Restoration Advisory Board.

Completed Area Name: D-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 01/13/2012  
Comments: Seven excavated trench survey units designated within Parcel D-2 primarily consisted of shallow storm drain lines that were between 2 and 12 feet below ground surface and five shallow sanitary sewer lines. Approximately 1,434 cubic yards of soil was excavated from the Parcel D-2 trenches, including about 45 cubic yards of soil removed from one trench segment in SU-35 and one trench segment in SU-135 that was disposed of as low-level radioactive waste (LLRW). A total of 1,988 linear feet of trench (including overburden soil, peripheral material, excavated soil, and pipe/manholes) was excavated during the removal actions. A total of 1,027 linear feet of pipe and seven manholes were removed from SU-31, -32, -34, -35, and -38 and segregated pending radiological survey activities. One of the seven manholes (MH208) was disposed of as LLRW due to the presence of 137-Cs activity above the release limits in its sediment sample, and one manhole (MH200) was disposed of as LLRW, but was not contaminated. Only 3 of the 1,027 linear feet of pipe excavated was disposed of as LLRW due to elevated static measurements. The remaining manholes and pipe removed from SU-31, -32, -34, -35, and -38 were disposed of by the Navy's nonradiological waste contractor. The 440 linear feet of pipe and four manholes removed from these trench survey units were placed directly into LLRW bins for off-site disposal. Relatively short segments of the storm drain lines remain at Parcel D-2 because: 1) their removal would adversely affect the

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integrity of Building 813; 2) they could not be removed due to worker safety issues; or 3) they were within 10 feet of the building face or other obstructions (stairways, loading docks, adjacent property retaining walls, or overhangs). Only five sanitary sewer trench lines are associated with Parcel D-2 and only 30 linear feet remain in place following the removal actions. Based on the currently available information, DTSC concurs with the findings in the D-2 RACR Revision 2 and the conclusion that any potential radiological contamination in Building 813 and the soil throughout Parcel D-2 has been adequately remediated.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 12/08/2011  
Comments: Fieldwork for the Parcel G removal action began in June 2007 and excavation of the storm drain and sanitary sewer system was initiated on July 19, 2007. The last truckload of Parcel G soil was excavated on March 10, 2009. In total, 22,705 linear feet of storm drain and sanitary sewer lines were excavated during the Parcel G removal action and 4,108 truckloads (approximately 49,296 cubic yards) of soil were transferred to the radiological screening yard for processing. A total of 173 screening pads containing soil derived from the Parcel G storm drain and sanitary sewer excavation activities were processed during the removal action activities. During processing, a total of 7,532 soil samples were collected from the Parcel G screening pads and analyzed by the laboratory. Based on the analytical results, material from 14 Parcel G screening pads was disposed of in its entirety as low-level radioactive waste (LLRW), and an additional 2,828 cubic yards of soil was remediated and disposed of by the DON's radiological waste contractor. Radiological release for unrestricted use of Buildings 351, 351A, 366, 401, 408, 411, and 439 as well as the Buildings 317/364/365 Site has been obtained from the California Department of Toxic Substances Control and the Department of Public Health. The purpose of this removal action was to meet the currently specified objective and achieve the unrestricted radiological release of the 40.34 acres of Parcel G property.

Completed Area Name: D-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 12/14/2011  
Comments: These two additional Survey Unit Project Reports (SUPRs) will be included with the SUPRs for survey units 31, 32, 34, 35, and 38 in the Final Parcel D-2 Removal Action Completion Report (D-2 RACR), Revision 2. The Navy has requested that the approval of the above SUPRs be documented as a part of DTSC's review and acceptance of the D-2 RACR. Revision 1 of the Final SUPRs was implemented in order to be consistent with the format approved by CDPH.

Completed Area Name: UC-1  
Completed Sub Area Name: Building 819  
Completed Document Type: Technical Report  
Completed Date: 10/28/2009  
Comments: Received concurrence from CDPH for radiological free release. The radiological free release memo issues radiological free release for

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all the above-grade portions of Building 819 and the subsurface sump structure located within the Building 819 footprint. The memorandum does not issue radiological free release of the subsurface sewer and utility lines emanating from Building 819 as removal of these components will be documented in forthcoming Survey Unit Project Reports (SUPRs), which are subject to separate regulatory review. The SUPRs will become appendices to the Parcel UC-1 Remedial Action Completion Report (RACR) and approval will occur with regulatory RACR concurrence.

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Technical Report  
 Completed Date: 05/05/2010  
 Comments: Memo describes the proposed approach for establishing soil gas action levels at Hunters Point Shipyard (HPS) since more recent guidance documents for assessment of health risks from vapor intrusion have become available since Human Health Risk Assessments have been completed historically. All comments have been adequately addressed.

Completed Area Name: PROJECT WIDE  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Technical Report  
 Completed Date: 01/27/2010  
 Comments: This survey Unit Project Reports Abstract, was prepared to document work conducted under the Final, Base-wide Storm Drain and Sanitary Sewer Removal Work Plan (2006) and Final, Base-wide Storm Drain and Sanitary Sewer Removal Work Plan u Revision 3 (2008) (Work Plan) at Hunters Point Shipyard (HPS), summarizes the scope, approach and radiological surveys used during removal of the sanitary sewer and storm drains located within HPS. This Abstract will be applicable to all Survey Unit Project Reports (SUPR) and data sets prepared for regulatory review.

Completed Area Name: D-2  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Technical Report  
 Completed Date: 12/14/2011  
 Comments: These Survey Unit Project Reports (SUPRs) will be included with the SUPRs for survey units 134 and 135 in the Final Parcel D-2 Removal Action Completion Report (D-2 RACR), Revision 2. The Navy has requested that the approval of the above SUPRs be documented as a part of DTSC's review and acceptance of the D-2 RACR. Revision 3 of the Final SUPRs was implemented in order to be consistent with the format approved by CDPH.

Completed Area Name: UC-1  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Design/Implementation Workplan  
 Completed Date: 01/13/2011  
 Comments: The design basis report (DBR) presents the design of the selected remedy to protect human health and the environment from actual or threatened releases of pollutants, chemicals, or hazardous substances at Parcels UC-1 and UC-2 at Hunters Point Shipyard (HPS) in San Francisco, California. The report develops the design for the remedy selected in the Records of Decision (ROD) for Parcels UC-1 and UC-2 to protect human health and the environment from chemicals of concern

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(COC) in soil and groundwater. The remedy selected in the RODs includes repair of the existing asphalt pavement, which is considered a durable cover, construction of a durable cover over the steeply sloped vegetated portions of the site, a focused soil gas survey to further delineate COCs in soil gas, and monitored natural attenuation for COCs in groundwater.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/23/2012  
Comments: Approval of the Final SUPRs will be documented as part of DTSC's review and acceptance of the Parcel D-1 Radiological Removal Action Completion Report.

Completed Area Name: D-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 04/01/2008  
Comments: California Department of Public Health (CDPH) reviewed documents associated with radiological issues regarding Building 813, performed confirmation surveys, and concluded that, with respect to radiological issues, this building is acceptable for unrestricted release.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 03/23/2010  
Comments: Received 3/24 via e-mail.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 04/20/2010  
Comments: Received hard copy on 4/23/2010.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/17/2011  
Comments: Approval of the Final SUPRs will be documented as part of DTSC's review and acceptance of the Parcel G Removal Action Completion Report.

Completed Area Name: UC-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 11/15/2010  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel UC-1/UC-2 Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 02/22/2011

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Comments: Approval of these SUPRs will be documented as a part of review and acceptance of the Parcel G Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 02/25/2011

Comments: Approval of these SUPRs will be documented as a part of review and acceptance of the Parcel G Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 02/25/2011

Comments: Approval of these SUPRs will be documented as a part of review and acceptance of the Parcel G Removal Action Completion Report.

Completed Area Name: G - MULTIPLE SITES  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 06/10/2011

Comments: This Work Plan describes the air and soil gas sampling and analysis activities to be performed for a base-wide soil gas investigation for Parcels B, D-1, G, and UC-2 at the Hunters Point Shipyard (HPS). The primary objective of the soil gas investigation is to refine areas requiring institutional controls (ARICs) and determine which ARICs should be reduced, expanded, or eliminated. Future land use and development hinges upon whether redevelopment blocks or grids will require institutional controls to reduce risk (i.e. soil vapor inhalation risk above action levels result in the requirement for institutional controls).

Completed Area Name: G - MULTIPLE SITES  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 08/12/2010

Comments: CDPH's sample results confirm that the Navy's remediation process is achieving the action level established for Ra-226 and Cs-137 at Hunters Point Shipyard.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/01/2009

Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/01/2010

Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/01/2010

Comments: Not reported

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Completed Area Name: G - MULTIPLE SITES  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 07/09/2010  
Comments: This Remedial Action Work Plan (RAWP) describes how three separate remedial actions (RAs) will be performed at Parcels B, D-1, and G of Hunters Point Shipyard (HPS), in San Francisco, California. The first RA, to be performed at Installation Restoration (IR) Sites 07 and 18 in Parcel B, will address chemicals of concern (COCs) in soil and sediment and includes a soil cover and shoreline revetment to provide a physical barrier to prevent exposure of humans and wildlife with COCs in soil. This RA is described in detail in the oFinal Design Basis Report, Installation Restoration Sites 7 and 18, Parcel B, Hunters Point Shipyard, San Francisco, California. The second RA will include excavation and off-site disposal of soil hot spots contaminated with lead or polycyclic aromatic hydrocarbons (PAHs) at 11 locations in Parcels B, D-1, and G. The third RA will include characterization, removal, and off-site disposal of soil stockpiles at Parcels D-1 and G.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/01/2009  
Comments: 1

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 03/01/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 10/09/2009  
Comments: 1

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 12/01/2005  
Comments: Not reported

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2007  
Comments: Not reported

Completed Area Name: D

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Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 04/01/2007  
Comments: Not reported

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Design  
Completed Date: 08/19/2010  
Comments: DTSC did not review or approve the document, which is being provided for informational purposes only.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 03/21/2011  
Comments: DTSC did not review or approve the document, which is being provided for informational purposes only.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 03/21/2011  
Comments: Revision 1 was provided to expand the Parcel D-1 work area to include remediation of the deteriorated portions of the Gun Mole Pier quay wall (ship berth areas 15, 18, and 20).

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 07/19/2010  
Comments: DTSC did not review or approve the document, which is being provided for informational purposes only.

Completed Area Name: UC-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 11/19/2010  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the Parcel UC-1/UC-2 Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/01/2011  
Comments: Approval of the Final SUPRs will be documented as a part of our review and acceptance of the Parcel G Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/03/2011  
Comments: Approval of the Final SUPRs will be documented as a part of our review and acceptance of the Parcel G Removal Action Completion Report.

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Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/03/2011  
Comments: Approval of the Final SUPRs will be documented as a part of our review and acceptance of the Parcel G Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/08/2011  
Comments: Formal approval of the Final SUPRs will be documented as part of review and acceptance of the Parcel G Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/10/2011  
Comments: Approval of the Final SUPRs will occur as a part of DTSC review and concurrence with the Parcel G Radiological Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/10/2011  
Comments: Approval of the Final SUPRs will occur as a part of DTSC review and concurrence with the Parcel G Radiological Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/15/2011  
Comments: Approval of the Final SUPRs will be documented as a part of review and acceptance of the forthcoming Parcel G Removal Action Completion Report.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 09/19/1994  
Comments: The property comprises of approximately 10,200 square feet within the interior of Building 383, and use of the paved area directly southeast of Building 383 as a parking area. The lease will be to the Aboriginal Black-Man Unlimited (ABU) for a 4-month period. ABU plans to use the licensed building for training and educational purposes. An interim license is currently being proposed because of the ABU's immediate need for a facility to operate their job training and educational programs.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 07/31/2000

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Comments: This FSP has been developed to provide specific details about the methods to be used for sample collection, the location and number of samples to be collected, field quality control (QC) procedures, sampling and handling procedures, and shipping. A quality assurance project plan (QAPP) has also been developed to supplement this document.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 07/14/2010  
Comments: This Demolition Plan for Gun Mole Pier and South Pier Buildings (Demolition Plan) has been prepared for conducting demolition activities at Gun Mole Pier and South Pier in Parcel D-1 at Hunters Point Shipyard (HPS), San Francisco, California. Activities that will be conducted in this Demolition Plan are summarized as follows:  
o Perform structural engineering surveys sufficient to ensure safe demolition  
o Use existing surveys or perform pre-demolition surveys and abatement for asbestos-containing materials (ACMs) and lead based paint for buildings on the Gun Mole Pier and the South Pier  
o Demolish buildings on the Gun Mole Pier and the South Pier  
o Remove material for disposal and recycle with others  
The buildings to be demolished on the Gun Mole Pier are Buildings 370, 375, 376, 377, 378, 379, 380, 383, 384, 385, and the storage shed. The Demolition Plan did not undergo DTSC review and approval but has been provided for informational purposes.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/19/2010  
Comments: DTSC did not review / approve this document and it is being provided for informational purposes only.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 08/05/2011  
Comments: Updates the project personnel list and updates the list of analytes to incorporate groundwater monitoring recommendations provided in the Final In-Situ Anaerobic Bioremediation Treatability Study Completion Report for RU-C1, Building 253, dated June 8, 2011.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 11/29/2010  
Comments: This plan was developed to ensure that the Navy maintains a coordinated approach for dust control and air monitoring activities across multiple contracts. At a minimum, all contractors will be required to adhere to the requirements set forth in the document. DTSC did not review / approve the document as dust control practices are evaluated on a project-specific basis and it has been provided for informational purposes as part of the administrative record.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

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Completed Document Type: Site Summary Report  
Completed Date: 06/03/1996  
Comments: The basewide environmental baseline survey (EBS) report prepared for Hunters Point Annex (HPA), San Francisco, California, summarizes environmental information gathered by PRC Environmental Management, Inc. (PRC), for the Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC), Engineering Field Activity West (EFA WEST). This document is based on existing environmental information gathered during the period of May to December 1995 related to the storage, release, treatment, or disposal of hazardous substances or petroleum products at HPA.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 05/16/2011  
Comments: The 2009 SAP was amended to incorporate the requirements of recent HPS Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) documents, such as Remedial Action Monitoring Plans (RAMPs), Records of Decision (RODs), and Feasibility Studies (FSs), and to update the SAP based on the recent work conducted (e.g groundwater treatability studies and corrective actions).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 07/30/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 06/03/2011  
Comments: The Community Involvement Plan presents the Navy's plans to inform and involve the community in the environmental cleanup program moving forward based on feedback obtained from the Hunters Point Shipyard community about past communication and community involvement program activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/23/2011  
Comments: Documents groundwater data collected basewide from April 2010 through September 2010 during the second and third quarter 2010 monitoring events.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 10/25/1996  
Comments: To evaluate the nature and extent of contaminants at Parcel D, preliminary assessments (PA), site inspections (SI), and RIs were conducted at 27 sites (IR-08, IR-09, IR-16, IR-17, IR-22, IR-32, IR-33, IR34, IR-35, IR-36, IR-37, IR-38, IR-39, IR-44, 1R-45, IR-48, IR-50, IR-51, IR-53, IR-55, IR-65, IR-66, IR-67, IR-68, IR-69, IR-70, and IR-71). The Human Health Risk Assessment (HHRA) portion for

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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soil presents the estimated excess lifetime cancer risk (ELCR) range, site where non-carcinogenic hazard index (HI) exceeds 1, and sites where lead exceeds a concentration of 221 mg/kg based on human exposure to affected soil in each IR site. The residential scenario, reasonable maximum exposure (RME) case is presented on the table because it is more conservative or health protective scenario presented in the HHRA. The site status portion indicates whether a site is recommended for an interim action and whether the site will be evaluated in the feasibility study (FS) based on screening criteria. Groundwater in the A-aquifer, B-aquifer, and the bedrock water-bearing zone at Parcel D is not expected to be used for drinking, industrial, or irrigation purposes in the future because of its high total dissolved solids, salinity, specific conductance, hardness, and sodium content. For all IR sites, however, all VOCs in A-aquifer groundwater are considered COPC for the purpose of evaluating volatilization of VOCs from A-aquifer groundwater through soil and into indoor air in current and future buildings located at Parcel D. In addition, the HHRA evaluated the groundwater in the B-aquifer and bedrock water-bearing zone as a potential drinking water source. Groundwater concentrations in the B-aquifer and bedrock water-bearing zone exceed the secondary maximum contaminant level (MCL) for TDS, chloride, and specific conductance, but are within the California criteria for a potential drinking water source. Therefore, the bedrock water-bearing zone is evaluated in IR-09 and the B-aquifer groundwater is evaluated in IR-36 North and IR-36 South as a potential drinking water source because data are available.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/23/2000  
Comments: This document presents a comprehensive history of radiological operations conducted by the U.S. Department of the Navy (Navy) and Navy contractors at the Hunters Point Shipyard (HPS), San Francisco, California. The Navy prepared the HPS Historical Radiological Assessment (HRA) as a two volume set. Volume I (the current document) addresses radioactivity associated with the Naval Nuclear Propulsion Program (NNPP).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/31/2004  
Comments: This document presents a comprehensive history of radiological operations conducted by the U.S. Department of the Navy (Navy) and Navy contractors at the Hunters Point Shipyard (HPS), San Francisco, California. The Navy prepared the HPS Historical Radiological Assessment (HRA) as a two volume set. Volume I was published in August 2000 and addressed radioactivity associated with the Naval Nuclear Propulsion Program (NNPP). Volume I concluded that berthing of and work on nuclear-powered ships at HPS resulted in no adverse effect on the human population or the environment. Volume II of the HRA has been prepared pursuant to the Navy's Installation Restoration (IR) Program, which encompasses the Navy's Base Realignment and Closure (BRAC) Program, and in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

(SARA). Volume II describes the history of operations involving general radioactive material (G-RAM) that, for the purposes of this document, is defined as any radioactive material used by the Navy or Navy contractors not associated with the NNPP.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 07/07/2011  
Comments: This revision to the SUPRA is a result of the Survey Unit Project Report (SUPR) prototype that was agreed upon by CDPH in August 2010. All SUPR reports dated after August 2010 incorporate the prototype changes, and now the SUPRA has been updated accordingly.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/21/2011  
Comments: This monitoring report incorporates revisions made from comments received on the previous semiannual groundwater report (February 2011).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 12/23/2009  
Comments: Also included as an appendix (Appendix E) to the Community Involvement Plan.

Completed Area Name: G - MULTIPLE SITES  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 10/17/2011  
Comments: The Remedial Design documents (RDs) specifically identified 11 hotspot locations (3 at Parcel B, 6 at Parcel D-1, and 2 at Parcel G) requiring remediation. The hotspot locations were delineated based on lead or polycyclic aromatic hydrocarbons (PAHs) concentrations that exceeded the remediation goals identified in the RODs. Soil hotspot activities conducted during this remedial action (RA) included (1) collection and analysis of pre-excavation characterization samples to delineate the extent of the soil hot spots; (2) excavation of the delineated hotspot soil location; (3) collection of confirmation samples to verify that the hot spots were removed; (4) additional excavation and confirmation sampling, as required, to complete the removal of soil hot spots; (5) characterization and off-site disposal of the excavated hotspot soil; and (6) backfilling of the hotspot excavations with clean backfill meeting Hunters Point Naval Shipyard (HPNS) criteria for import fill. In total, 9 of the 11 hotspot locations were successfully remediated, as demonstrated by the information presented in the Remedial Action Completion Report (RACR). A total of 569 cubic yards of soil was removed from the nine hot spots and disposed of off-site. The remaining two hotspot locations could not be removed as part of this RA because they are located in an area at HPNS that is currently being used to support other remedial activities. The Navy plans to remediate these hotspot locations at a later date, at which point this RACR will be amended to include the associated completion documentation. The RDs

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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identified 16 soil stockpiles (5 in Parcel D-1 and 11 in Parcel G) to be removed, characterized, and disposed of off-site. In total, 13 of the 16 soil stockpiles were removed as part of previous removal actions implemented at HPNS. The three remaining soil stockpiles (one in Parcel D-1 and two in Parcel G) were removed during this RA, as demonstrated by the information presented in the RACR. Soil stockpile removal activities conducted during this RA included (1) characterization and off-site disposal of the three soil stockpiles; (2) collection of confirmation samples beneath the stockpile locations to verify that all stockpile material was completely removed; (3) additional removal of stockpile material, as required, to complete the removal of the soil stockpiles; and (4) characterization and off-site disposal of the additional soil stockpile material. A total of 249 cubic yards of soil was removed and disposed of off-site.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Assessment Report  
Completed Date: 04/15/1994  
Comments: Previous field investigations, document searches, and studies at HPA have focused primarily on sites considered eligible for funding through the Installation Restoration (IR) program. The Site Assessments were conducted to identify sites potentially contaminated during approximately the past 10 years that were not included in the IR programs in Parcels B, C, D, and E and to make recommendations for additional field activities. Some previously investigated sites were also assessed when new information and/or new areas of the sites were made available or accessible as a result of the Navy's recent building cleanout program or other ongoing activities.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 12/06/2001  
Comments: Activities were completed at 15 non-VOC soil sites at Parcel D. Nine of the 15 Time-Critical Removal Action (TCRA) sites were excavated. Six sites were determined to require no excavation. The excavated sites are RA 8-1, RA 8-2, RA 8-3, RA 8-4 in IR-08; RA 37-1 and RA 37-2 in IR-37; DM 11260 in IR-53; DM 10676 in IR-55; and M 8866 in IR-55. The non-excavated sites are DM 6864, DM 6965, DM 6967, and DM 7167 in IR-09; and DM 6671 and DM 6771 in IR-37. The TCRA concluded that Contaminants of Potential Concern in soil were present at concentrations above the applicable cleanup goals at nine sites, and were not present in soil at concentrations above cleanup goals at six sites. A total of 1,643 cubic yards of contaminated soil was removed from these nine sites. In addition, the TCRA concluded that 14,500 feet of the steam system lines met the criteria for closure in place, and 2,100 feet of steam system line did not meet the criteria for closure in place and were removed. In addition, 150 feet of fuel line was removed.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/17/2000  
Comments: The purpose of the radiological sampling was to collect data to (1)

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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determine whether further action is required for Cesium-137 detected in the concrete or soil at Building 364 (Parcel G), and (2) further characterize the level of radioactive contaminants present at the Building 707 concrete pad (Parcel E).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 01/08/2001  
Comments: The technical memorandum provides the results of the Phase I Groundwater Data Gaps Investigation (GDGI) performed at Hunters Point Shipyard in San Francisco, California. The purpose of the technical memorandum is to document the results from the Phase I GDGI and to provide these results to the BCT such that the BCT can evaluate the Phase sampling and recommend changes to the Phase II sampling, if necessary.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 10/22/2003  
Comments: Surveys were conducted in and around 69 buildings in Parcel D to identify the potential for industrial process equipment (IPE) that may contain PCB-impacted oils, damaged asbestos containing materials (ACM), structural materials that may have been contaminated by industrial activities, paint booths, above-ground storage tanks, and other potential items that could pose a health risk. After surveys were completed, samples were collected from IPE items and ACM was removed or encapsulated, any impacted IPE was removed, any paint booths were removed, and equipment sumps, vaults, and trenches were decontaminated. It was explained to DTSC before this waste consolidation project started that it was intended to be a Navy's internal "house keeping" project to collect abandoned or outdated industrial process equipments for disposal purposes. We agreed that this would not be considered as a CERCLA activity. However, if any release of hazardous substances were uncovered during the process, the Navy is to report it to the regulatory agency and incorporate the investigation and cleanup of the release into the ongoing CERCLA program.

Completed Area Name: D  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 03/31/2003  
Comments: Three primary tasks were conducted in the IR-22 vicinity during Phase III of the GDGI: [1] As part of a basewide effort, groundwater levels were measured at selected Parcel D wells; [2] Tidal influence was evaluated at selected Parcel D wells in the vicinity of IR-22; and [3] Groundwater samples for chemical analysis were collected at selected Parcel D A-aquifer wells in the vicinity of IR-22. During Phase III GDGI, no new monitoring wells were installed at Parcel D. With the completion of the Phase III GDGI, groundwater conditions in the IR-22 vicinity are sufficiently characterized to evaluate potential remedial actions in the revised Parcel D FS.

Completed Area Name: D  
Completed Sub Area Name: Not reported

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Document Type: Site Summary Report  
 Completed Date: 03/08/2002  
 Comments: The overall objective of the Groundwater Data Gaps Investigation (GDGI) was to fill data gaps for groundwater. The following tasks were completed: [1] Assessed the current condition of existing monitoring wells and made necessary repairs; [2] Measured basewide water levels to determine the potentiometric surface at existing A- and B-aquifer wells; [3] Further characterized the B-aquifer by sampling existing and newly installed wells for analysis of hydrogeological and chemical parameters; and [4] Resampled existing A-aquifer and bedrock water-bearing zone wells for analysis of chemical parameters to confirm the extent of existing remedial units in groundwater.

Completed Area Name: UC-1  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Technical Workplan  
 Completed Date: 05/29/2008  
 Comments: This Design Plan describes the scope and approach for removing the storm drains and sanitary sewers from beneath Fisher Street (Parcel UC-2) and Spear Avenue (Parcel UC-1).

Completed Area Name: G  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Remedial Action Implementation Workplan  
 Completed Date: 12/19/2012  
 Comments: This Remedial Action Work Plan (RAWP) and the proposed implementation discussed have been developed in accordance with the Remedial Design (RD) package. The RD was developed to provide a final soil remedy design which is compliant with the Parcel G Record of Decision. This document describes the implementation of the durable cover component of the approved ROD at Parcel G and developed in the RD, which is the final component of the overall remedial action at Parcel G.

Completed Area Name: UC-1  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Remedial Action Implementation Workplan  
 Completed Date: 06/07/2012  
 Comments: This Remedial Action Work Plan (RAWP) describes how the durable cover Remedial Action (RA) will be implemented at Parcels UC-1 and UC-2, Hunters Point Naval Shipyard (HPNS), San Francisco, California. The RA is described in detail in the Final Remedial Design Package, Parcels UC-1 and UC-2. The basis and development of the remedial design (RD) were aligned with the remedies selected in the records of decision (RODs) for Parcels UC-1 and UC-2. The remedies selected in the ROD include a durable cover, groundwater monitoring for natural attenuation, soil vapor controls, and institutional controls (ICs). This RAWP only discusses installation of the durable cover. The RA will address chemicals of concern (COCs) in soil and includes installation and restoration of durable covers made of soil and asphaltic concrete (AC) at Parcels UC-1 and UC-2. The durable covers will provide a physical barrier that will prevent exposure of humans and wildlife to COCs in soil.

Completed Area Name: D-1  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Technical Report

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Distance  
Elevation

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Date: 10/12/2012  
Comments: Approval of the Final SUPRs will be documented as part of DTSC's review and acceptance of the Parcel D-1 Radiological Removal Action Completion Report.

Completed Area Name: D-1  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/22/2012  
Comments: Approval of the Final SUPRs will be documented as part of DTSC's review and acceptance of the Parcel D-1 Radiological Removal Action Completion Report.

Completed Area Name: G  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 06/15/2012  
Comments: The objective of the investigation is to provide supplemental data on potential soil, soil gas, and groundwater contamination associated with seven former (removed or cleaned and closed in-place) underground storage tanks (USTs), and one former (removed) aboveground storage tank (AST). The findings of the sampling will be used to determine if further action is necessary at the historic Parcel G USTs and ASTs.

Completed Area Name: G - MULTIPLE SITES  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 07/18/2012  
Comments: This Technical Memorandum summarizes and evaluates key groundwater analytical results, and recommends revisions to the Basewide Groundwater Monitoring Program (BGMP) related to continued groundwater monitoring in Parcels B, D-1, G, and UC-2. Remedial Action Monitoring Plans (RAMPs) and Remedial Designs (RDs) have been published for these parcels, and the current monitoring program is based on the RAMPs. Other HPNS Parcels (including Parcels C, E, and E-2) have not yet reached the RAMP/RD phase, and investigations are ongoing.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 06/13/2012  
Comments: Summary of independent regulatory testing conducted by DTSC/CDPH and USEPA.

Completed Area Name: D-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Certification  
Completed Date: 05/01/2012  
Comments: DTSC has determined that based on all the currently available information, all appropriate response actions have been completed, all acceptable engineering practices were implemented, and that no further removal/remedial action is necessary for Parcel D-2.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported

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Distance  
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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Document Type: Federal Facility Agreement  
Completed Date: 10/29/1991  
Comments: Federal Facilities Agreement signed by the United States Navy, DTSC and US EPA.

Completed Area Name: D-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 04/20/2012  
Comments: Survey data of Parcel D-2 conducted at Hunters Point Naval Shipyard by the staff of Radiologic Health Branch of the California Department of Public Health on August 23-25, 2010 and November 1, 2010.

Future Area Name: D-1  
Future Sub Area Name: Not reported  
Future Document Type: Removal Action Completion Report  
Future Due Date: 2014  
Future Area Name: D-1  
Future Sub Area Name: Not reported  
Future Document Type: Removal Action Completion Report  
Future Due Date: 2014  
Future Area Name: G  
Future Sub Area Name: Not reported  
Future Document Type: Operations and Maintenance Plan  
Future Due Date: 2014  
Future Area Name: G  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2014  
Future Area Name: D-1  
Future Sub Area Name: Not reported  
Future Document Type: Remedial Action Completion Report  
Future Due Date: 2016  
Future Area Name: PROJECT WIDE  
Future Sub Area Name: Not reported  
Future Document Type: Public Participation Plan / Community Relations Plan  
Future Due Date: 2013  
Future Area Name: UC-1  
Future Sub Area Name: Not reported  
Future Document Type: Removal Action Completion Report  
Future Due Date: 2013  
Future Area Name: G  
Future Sub Area Name: Not reported  
Future Document Type: Operations and Maintenance Plan  
Future Due Date: 2014  
Future Area Name: UC-1  
Future Sub Area Name: Not reported  
Future Document Type: 5 Year Review Reports  
Future Due Date: 2014  
Future Area Name: G  
Future Sub Area Name: Not reported  
Future Document Type: Finding of Suitability to Transfer  
Future Due Date: 2014  
Future Area Name: D-1  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2016

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Direction  
Distance  
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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Future Area Name: D-1  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2016  
Future Area Name: G  
Future Sub Area Name: Not reported  
Future Document Type: Land Use Restriction  
Future Due Date: 2014  
Future Area Name: G  
Future Sub Area Name: Not reported  
Future Document Type: Certification  
Future Due Date: 2014  
Schedule Area Name: UC-1  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Operations and Maintenance Plan  
Schedule Due Date: 05/05/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: UC-1  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Land Use Restriction  
Schedule Due Date: 04/30/2013  
Schedule Revised Date: Not reported  
Schedule Area Name: UC-1  
Schedule Sub Area Name: Not reported  
Schedule Document Type: Certification  
Schedule Due Date: 06/15/2013  
Schedule Revised Date: Not reported

Site Type: Federal Superfund  
Site Type Detailed: Closed Base  
Acres: 196.6  
NPL: YES  
Regulatory Agencies: SMBRP, RWQCB 2 - San Francisco Bay, US EPA  
Lead Agency: SMBRP,US EPA  
Program Manager: Ryan Miya  
Supervisor: Denise Tsuji  
Division Branch: Cleanup Berkeley  
Facility ID: 38440005  
Site Code: 200050  
Assembly: 17  
Senate: 11  
Special Program: Navy  
Status: Active  
Status Date: 05/01/1986  
Restricted Use: NO  
Site Mgmt. Req.: NONE SPECIFIED  
Funding: BRAC 91  
Latitude: 37.71972  
Longitude: -122.3713  
APN: NONE SPECIFIED  
Past Use: DRY DOCKS, FOUNDRY, LABORATORIES- RADIOACTIVE, LANDFILL - CONSTRUCTION, LANDFILL - DOMESTIC, LANDFILL - HAZARDOUS WASTE, PORT, RAIL ROAD MAINTENANCE SHOP, RAILROAD RIGHT OF WAY, SAND BLASTING, SHIPYARD - SHIP BUILDING/REPAIR

Potential COC: 10196, 10198, 10087, 40001, 10179, 30001, 30002, 30013, 30015, 30018, 30019, 30020, 30024, 30025, 3002502, 30027, 30470  
Confirmed COC: 30001,30002,30013,30015,30470-NO,30018,30019,30020,30024,30025,30027,

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HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

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Potential Description: 3002502  
OTH, SED, SOIL  
Alias Name: HUNTERS POINT NAVAL SHIPYARD, BASEWIDE  
Alias Type: Alternate Name  
Alias Name: HUNTERS POINT NAVAL SHIPYARD, GROUP 5  
Alias Type: Alternate Name  
Alias Name: HUNTERS POINT NAVAL SHIPYARD, PARCEL E  
Alias Type: Alternate Name  
Alias Name: HUNTERS PT NAVAL SHIPYD- TREASURE ISLAND  
Alias Type: Alternate Name  
Alias Name: TRIPLE A MACHINE SHOP  
Alias Type: Alternate Name  
Alias Name: 110033615023  
Alias Type: EPA (FRS #)  
Alias Name: P23058  
Alias Type: PCode  
Alias Name: 200050  
Alias Type: Project Code (Site Code)  
Alias Name: 38440002  
Alias Type: Envirostor ID Number  
Alias Name: 38440003  
Alias Type: Envirostor ID Number  
Alias Name: 38440004  
Alias Type: Envirostor ID Number  
Alias Name: 38440005  
Alias Type: Envirostor ID Number  
Alias Name: 38440007  
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 07/31/2008  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Fact Sheets  
Completed Date: 09/07/2011  
Comments: This fact sheet provides a summary of the Proposed Plan for Parcel E-2 on the Hunters Point Naval Shipyard. In addition, the Proposed Plan and other Parcel E-2 information can be viewed on the BRAC PMO website at: [www.bracpmo.navy.mil](http://www.bracpmo.navy.mil). The Navy is requesting public comment on the Proposed Plan in writing before October 24th, 2011 or in person at a 6:00pm public meeting on September 20, 2011 in the Alex L. Pitcher, Jr. Conference Room at the Southeast Community Facility Commission, located at 1800 Oakdale Avenue in San Francisco.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Removal Action Completion Report  
Completed Date: 02/07/2005  
Comments: On August 16, 2000, a brush fire was reported on the Industrial Landfill portion of Parcel E-2, Installation Restoration Site (IR) 01/21, at Hunters Point Shipyard (HPS) in San Francisco, California. The Navy responded to the fire by installing an interim landfill cap on the burned portion of the Landfill after the surface fire and the

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Distance  
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smoldering subsurface areas were extinguished. The interim landfill cap was designed and constructed to extinguish any remaining subsurface fire and to inhibit the occurrence of fire in the future. The interim cap was placed over the burn area of the Landfill. The Navy conducted perimeter air monitoring after the surface fire was extinguished and during installation of the interim landfill cap to assess whether any air contaminants from the landfill fire and subsequent construction activities migrated to adjacent areas of HPS or the nearby community.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/17/2000  
Comments: The purpose of the radiological sampling was to collect data to (1) determine whether further action is required for Cesium-137 detected in the concrete or soil at Building 364 (Parcel G), and (2) further characterize the level of radioactive contaminants present at the Building 707 concrete pad (Parcel E).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 01/08/2001  
Comments: The technical memorandum provides the results of the Phase I Groundwater Data Gaps Investigation (GDGI) performed at Hunters Point Shipyard in San Francisco, California. The purpose of the technical memorandum is to document the results from the Phase I GDGI and to provide these results to the BCT such that the BCT can evaluate the Phase sampling and recommend changes to the Phase II sampling, if necessary.

Completed Area Name: Par E and Par E2  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Workplan  
Completed Date: 01/10/1989  
Comments: Describes sampling fieldwork to be performed at the industrial landfill (including Triple A sites 1 and 16) or IR-1, Bay Fill Area (including Triple A Sites 2, 13, 14, 17, 18, and 19) or IR-2, and the Oil Reclamation Ponds (part of Triple A Site 17) or IR-3.

Completed Area Name: Par E and Par E2  
Completed Sub Area Name: Not reported  
Completed Document Type: Supplemental Site Investigation Tech Memo  
Completed Date: 05/29/2002  
Comments: The objectives of the Phase II Groundwater Data Gaps Investigation (GDGI) were to evaluate the condition of existing monitoring wells onsite, complete a basewide measurement of groundwater levels so that a potentiometric map could be developed, and conduct two sampling events at Parcel E to confirm the extent of remedial units for groundwater.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 10/17/2003  
Comments: The following Phase III field activities were conducted at Parcel E:

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= Installed, developed, and sampled six new monitoring wells. = Measured water levels in 86 A- and B-aquifer and bedrock water-bearing zone wells as part of a basewide effort to assess hydraulic gradients. = Collected groundwater samples from 112 monitoring wells to help characterize the vertical extent, and to confirm the horizontal extent, of contamination in Parcel E. = Collected groundwater samples from 42 monitoring wells at HPS to evaluate the levels of specific radionuclides in site groundwater. = Conducted a tidal influence study at 35 locations to evaluate the tidal effects on groundwater levels in the A- and B-aquifers. = Conducted a tidal mixing study to evaluate tidal effects on salinity levels in selected A-aquifer monitoring wells. = Conducted an aquifer test at the Oil Ponds Area to help refine the hydrogeologic conceptual model.

Completed Area Name: Par E and Par E2  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 03/24/2005  
Comments:

The data gaps investigation was planned and implemented in two parts: the standard data gaps investigation (SDGI) and the nonstandard data gaps investigation (NDGI). Under the SDGI, chemical data were collected from the Parcels E and E-2 shoreline and onshore areas, except in the vicinity of the Landfill, to assess potential source areas. Under the NDGI, physical parameters were evaluated to determine the lateral extent of the Landfill and chemical data were collected to evaluate the nature of chemical contamination in soils surrounding the Landfill. This report presents the chemical analytical results for both the SDGI and NDGI sampling events and describes the deviations from the SDGI sampling and analysis plan and the NDGI field sampling plan and quality assurance project plan.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 11/09/2011  
Comments:

The August 30 monitoring event had a detection of 5.0% exceeding the regulatory project action level of 5.0% for methane and active extraction was initiated directly at GMP24. Response monitoring was performed on August 31 (0.6%) and September 1 (0.0%), and active extraction at GMP24 was terminated on September 1 when observed methane levels were below 1.0% for two consecutive days, as specified in the Final Interim Landfill Gas Monitoring and Control Plan. The Navy sent out notification of the exceedance to the BRAC Closure Team, California Integrated Waste Management Board (now CalRecycle), and UCSF on Tuesday, September 6. All non-methane organic compounds (NMOCs) detected during the third quarter of 2011 were below the corresponding Hunters Point Naval Shipyard NMOC action levels; therefore, no action or follow-up monitoring was necessary due to NMOC concentrations during this period.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-606  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 03/05/2008  
Comments:

Buildings 103, 104, 115, 116, 117, and 125 are currently leased for use as artist studios. Building 120 is vacant, and Open Spaces 1 and

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2 are currently used for parking. Building 606 is currently occupied by the San Francisco Police Department. Reuse of the Leased Premises will continue under the current use scenario. The Lessee shall be required to obtain written Government approval prior to any proposed change in use of the Leased Premises as presently authorized. At no time should the leased premises be used for residential or childcare facilities.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Supplemental Site Investigation Tech Memo  
Completed Date: 10/02/2008  
Comments: The study was intended to provide supplemental data for the Feasibility Study (FS) for Parcel E-2 by providing data to evaluate [1] if landfill contaminants are present in A-Aquifer groundwater at the shoreline, [2] if landfill contaminants are present in A-Aquifer groundwater at the upper panhandle, [3] the effectiveness of the PCB Hot Spot Area soil removal action by collecting data from the A-Aquifer, and [4] if A-Aquifer groundwater beneath the metal slag excavation area of the Parcel E-2 panhandle has been impacted by dissolved metals. To meet these objectives, the following scope of work was performed: [1] A geophysical survey was conducted to identify potential subsurface obstructions. [2] 61 temporary wells were installed in the A-Aquifer using Direct Push Technology. [3] Grab groundwater samples were collected from the 61 temporary wells and 7 previously installed A-Aquifer piezometers using a peristaltic pump. [4] A location and elevation survey was conducted for the temporary well locations and to update horizontal coordinates and elevations of the seven piezometers. Data collected under this investigation will be incorporated as necessary into the remedial alternative evaluation and selection process for Parcel E-2.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Technical Workplan  
Completed Date: 05/29/2012  
Comments: The SAP presents the procedures and methods for collecting gas samples and provides guidelines for associated sample and data management currently implemented for the Interim Monitoring and Maintenance Program (IMMP) for the Landfill Gas Control System and Operation and Maintenance Services for the Closed Industrial Landfill Cap in Parcel E-2. The purpose of the SAP is to provide guidance for specific tasks, analysis, and quality assurance for specific sampling activities. This current SAP has been provided to update administrative items (e.g. current contractor, points of contact information, current monitoring points) and to conform to current guidance for SAP format.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-414  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 11/14/1995  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-258  
Completed Document Type: Finding of Suitability to Lease

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Distance  
Elevation

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Date: 11/21/1995  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: IR-02  
Completed Document Type: Removal Action Completion Report  
Completed Date: 02/13/1996  
Comments: The Parcel E/Basewide sandblast grit removal action was completed 09/30/95. Three thousand tons of sandblast grit was sent to an asphalt manufacturing plant for recycling. The sandblast grit contained elevated metals. The Department assisted the Navy in developing the recycling plan. It is hoped that the Navy will be able to recycle all the sandblast grit materials at Hunters Point. Approximate Cost and Funding Source: \$600,000 DSMOA Size of Activity: Large

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-368  
Completed Document Type: Environmental Baseline Survey  
Completed Date: 09/06/1995  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-368  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 08/08/1995  
Comments: SSEBS completed for building 368, 369, & berth 14 to be leased for materials storage and berthing. Approx 50,000 sf.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: POST  
Completed Document Type: Other Report  
Completed Date: 12/31/1994  
Comments: As part of the Parcel E remedial investigation, it became apparent that warning signs needed to be posted along side of the Bay. These signs warn fisherman, who fish illegally on the Navy's property, of possible contaminated fish. The submerged area owned by the Navy is contaminated with inorganics and pesticides. Five signs were installed. Approximate cost = \$20,000; funding = BRAC.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-606  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 07/01/1994  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: TANK  
Completed Document Type: Removal Action Completion Report  
Completed Date: 09/24/1991  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: TANK  
Completed Document Type: Removal Action Completion Report  
Completed Date: 01/17/1991  
Comments: Not reported

Map ID  
Direction  
Distance  
Elevation

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: PARCEL-E  
Completed Sub Area Name: ACM Removal  
Completed Document Type: Removal Action Completion Report  
Completed Date: 01/17/1991  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 06/13/2008  
Comments: Results of the nature and extent screening process identified metals, semivolatile organic compounds, PCBs, and TPH as the predominant chemicals present in soil and groundwater at Parcel E. The primary areas of contamination include Triple A sites across Parcel E, specifically Triple A Sites 2 (Industrial Disposal Area), 3 (Scrap Yard), 4 (Disposal Trench Area), 13 (former location of Tank S-505), and 17 (Former Waste Oil Reclamation Ponds at IR-03); PCB hotspot removal action area (IR-02 Northwest); IR-02 Northwest and Central removal action area (formerly Radium Dials Disposal Area); Building 406 trichloroethene source area, Building 709 benzene source area, and Navy industrial storage and scrap yard areas; and railroad spurs.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/12/2013  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/12/2013  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Enforceable Schedule  
Completed Date: 09/26/2012  
Comments: Serves as the new comprehensive baseline schedule for the Installation Restoration Program at HPNS.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 10/29/2012  
Comments: All methane detections were below the HPNS site action level for methane of 2.5%. All non-methane organic compound detections were also below established action levels. Therefore, no additional response action was necessary during this monitoring period.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 01/21/2013  
Comments: All methane detections were below the HPNS site action level for methane of 2.5%. All non-methane organic compound detections were also below established action levels. Therefore, no additional

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

response action was necessary during this monitoring period.

Completed Area Name: Parcel E-2  
 Completed Sub Area Name: IR 01/21  
 Completed Document Type: Operations and Maintenance Report  
 Completed Date: 08/31/2012  
 Comments: Cap inspections were conducted and documented quarterly. During the inspections there were no signs of damage to security fences, and batteries were replaced in electronic animal repelling devices that were functioning properly during this reporting period. The vegetation on the landfill cap and surrounding areas was mowed with a tractor-pulled rotary mower on the weeks of 8/20/2011 and 5/16/2012 to reduce fire hazards on the site and allow the grass to reclaim areas where invasive species had been present. The riprap central drainage swale continues to provide adequate erosion control. All warning signs were observed to be visible and in good condition.

Completed Area Name: Parcel E-2  
 Completed Sub Area Name: IR 01/21  
 Completed Document Type: Monitoring Report  
 Completed Date: 01/20/2012  
 Comments: Landfill gas monitoring and water level measurement activities took place on October 25-27, November 15 and December 13-14, 2011. The October 25 monitoring event had a detection of 4.8% exceeding the HPNS site action level of 2.5% for methane and active extraction was initiated directly at GMP24. Response monitoring was performed on October 26 (0.2%) and October 27 (0.1%), and active extraction at GMP24 was terminated on October 27 when observed methane levels were below 1.0% for two consecutive days, as specified in the Final Interim Landfill Gas Monitoring and Control Plan (MCP). The action levels for non-methane organic compounds (NMOCs) are 500 ppmv in gas monitoring probes (GMPs); 5 ppmv within Building 830; 5 ppmv in on-site utilities; 5 ppmv in ambient air (recorded in the breathing zone); and 100 ppmv for two consecutive days from a control system outlet. All NMOC detections during the fourth quarter of 2011 were below the corresponding NMOC action levels; therefore, no action or follow-up monitoring was necessary due to NMOC concentrations during this period.

Completed Area Name: PARCEL-E  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Technical Report  
 Completed Date: 04/17/2012  
 Comments: Final SUPR acceptance will be documented as a part of regulatory acceptance of the forthcoming Parcel E Radiological Removal Action Completion Report, which is a summation of all the SUPRs within Parcel E.

Completed Area Name: PARCEL-E  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Technical Report  
 Completed Date: 10/10/2012  
 Comments: Final SUPR acceptance will be documented as part of regulatory acceptance of the Parcel E Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-E

Map ID  
Direction  
Distance  
Elevation

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Site

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Sub Area Name: Not reported  
Completed Document Type: Treatability Study Workplan  
Completed Date: 07/12/2012  
Comments: The purpose of the additional Parcel E Groundwater Treatability Study investigation work described in this Work Plan Addendum is to [1] evaluate chlorinated volatile organic compounds (CVOCs) in vadose-zone soil that may continue to be a source to groundwater and soil gas, [2] evaluate CVOCs in shallow groundwater (i.e., the upper 2 feet of the saturated zone) that may continue to be a source to soil gas, and [3] provide data that will support the Remedial Design for Parcel E. The scope of the fieldwork includes [1] obtaining soil gas samples for laboratory analysis from up to eight existing soil gas monitoring wells, [2] conducting up to 55 membrane interface probe (MIP) borings to obtain semi-quantitative data on the concentrations of CVOCs and other VOCs in soil and shallow groundwater, and on soil texture (i.e., fine-grained versus coarse-grained soil), and [3] drilling up to 16 soil borings to collect soil and shallow groundwater grab samples for laboratory analysis.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Workplan  
Completed Date: 08/10/2012  
Comments: The work plan describes the soil sampling and analysis activities for the Parcel E Soil Excavation Characterization project at the Hunters Point Naval Shipyard (HPNS) in San Francisco, California. The objective of this project is to conduct an excavation characterization at HPNS Parcel E to determine the lateral and vertical extent of chemicals of concern (COCs) associated with proposed excavation areas in the Parcel E Feasibility Study. Additionally, soil samples will be collected from step-out locations surrounding the perimeter of the pothole locations within Parcel E identified in the Final Work Plan Addendum Time-Critical Removal Action for the PCB Hot Spot Area at Parcel E-2. Data collected during this project will support the excavation and off-site disposal of the excavation areas presented as part of the forthcoming Parcel E remedial design (RD), and will be used to develop a Technical Memorandum that will describe the lateral and vertical extent of contamination and provide an estimated volume of material to be removed from Parcel E.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 07/13/2012  
Comments: This Work Plan presents specific tasks and procedures that will be implemented during the time-critical removal action (TCRA) of the Experimental Ship Shielding Range located within the Panhandle Area of Parcel E-2 at Hunters Point Naval Shipyard, San Francisco, California. The purpose of this TCRA is to remove the Shielding Range berm and fan-shaped area. The Shielding Range and investigation zone will be radiologically surveyed and radioactive material and soil removed prior to excavation of the Shielding Range. Although Cobalt 60 (60-Co) is the driver for this TCRA, radiological controls will be included for all ROCs as they may be present at the site. The other ROCs and contaminants of concern will be addressed in

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

the final remedial action selected in the Parcel E-2 Record of Decision (ROD). The TCRA includes removal and screening of soil, sediment, and debris, which contain radiological sources and/or contamination, and a final conditions survey of the Shielding Range. Although complete removal of 60-Co at the Shielding Range is anticipated, further investigations for this isotope may still be warranted in other areas of Parcel E-2.

Completed Area Name: Parcel E-2  
 Completed Sub Area Name: IR 01/21  
 Completed Document Type: Monitoring Report  
 Completed Date: 04/25/2012  
 Comments: Landfill gas monitoring and water level measurement activities took place on January 10-12, February 21 and March 21, 2012. The January 10 monitoring event had a detection of 2.6% exceeding the HPNS site action level of 2.5% for methane and active extraction was initiated directly at GMP24. Response monitoring was performed on January 11 (0.1%) and January 12 (0.0%), and active extraction at GMP24 was terminated on January 12 when observed methane levels were below 1.0% for two consecutive days, as specified in the Final Interim Landfill Gas Monitoring and Control Plan (MCP). The action levels for non-methane organic compounds (NMOCs) are 500 ppmv in gas monitoring probes (GMPs); 5 ppmv within Building 830; 5 ppmv in on-site utilities; 5 ppmv in ambient air (recorded in the breathing zone); and 100 ppmv for two consecutive days from a control system outlet. All NMOC detections during the first quarter of 2012 were below the corresponding NMOC action levels; therefore, no action or follow-up monitoring was necessary due to NMOC concentrations during this period.

Completed Area Name: PARCEL-E  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Technical Report  
 Completed Date: 10/11/2012  
 Comments: Final SUPR acceptance will be documented as part of regulatory acceptance of the Parcel E Radiological Removal Action Completion Report.

Completed Area Name: Parcel E-2  
 Completed Sub Area Name: IR 01/21  
 Completed Document Type: Monitoring Report  
 Completed Date: 07/17/2012  
 Comments: All methane detections were below the HPS site action level for methane of 2.5%. All non-methane organic compound detections were well below established action levels for gas monitoring probes. Therefore, no additional response action was necessary.

Completed Area Name: Parcel E-2  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Technical Report  
 Completed Date: 01/11/2013  
 Comments: The stated purpose of this geotechnical investigation was to collect additional soil data needed to refine the engineering design if containment of solid waste at the Parcel E-2 Landfill is selected as a component of the final remedy. Information gathered through this geotechnical investigation provides the data necessary to complete the slope stability evaluation. The stability evaluation and

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HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)

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engineering design will be presented in the RD for Parcel E-2.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-813  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 10/27/1997  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-915  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 10/27/1997  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 05/13/1996  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 09/14/2012  
Comments: For Parcel E soil and shoreline sediments, PCBs is the primary Contaminant of Concern (COC) for the evaluation of human health along the Parcel E shoreline. Cadmium, copper, lead, mercury, molybdenum, zinc, DDTs, and PCBs were identified as chemicals of ecological concern (COECs). Parcel E groundwater has VOCs, metals, PCBs, petroleum hydrocarbons, and PAHs identified as COCs for human health. Metals, PCBs, pesticides, and petroleum hydrocarbons were identified as COECs by the aquatic risk evaluation for groundwater. Remediation alternatives were evaluated for soil and shoreline sediment, groundwater, and Non-Aqueous Phase Liquid (NAPL) that is present at Installation Restoration (IR) Site 03. The remedial alternatives evaluated for soil and shoreline sediment were: [S-1] No Action; [S-2] Covers, Institutional Controls, and Shoreline Protection; [S-3] Excavation and Off-Site Disposal of Tier 1 Locations, Followed by Covers, Institutional Controls, and Shoreline Protection; and [S-4] Excavation and Off-Site Disposal of Tier 1 and Tier 2 Locations, Followed by Covers, Soil Vapor Extraction, Institutional Controls, and Shoreline Protection. The remedial alternatives evaluated for groundwater were: [GW-1] No Action; [GW-2] Institutional Controls and Long-Term Groundwater Monitoring; [GW-3a] Groundwater Containment, In-Situ Bioremediation, Monitored Natural Attenuation, and Institutional Controls; [GW-3b] Groundwater Containment, In-Situ Bioremediation, Zero-Valent Iron Reduction, Monitored Natural Attenuation, and Institutional Controls; and [GW-4] Groundwater Containment, In-Situ Bioremediation, Air Sparging, Monitored Natural Attenuation, and Institutional Controls. The remedial alternatives evaluated for NAPL at IR Site 03 were: [N-1] No Action; [N-2] Source Containment, Monitoring, and Institutional Controls; [N-3] Source Removal or Treatment, Containment, Monitored Natural Attenuation, and Institutional Controls; [N-4a] Source Removal or Treatment, Groundwater Treatment by In-Situ Bioremediation, Containment, Monitored Natural Attenuation, and Institutional Controls; [N-4b] Source Removal or Treatment,

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Groundwater Treatment by Steaming, Containment, Monitored Natural Attenuation, and Institutional Controls; [N-5] Source Removal by Excavation and NAPL Extraction/Treatment, Groundwater Treatment by In-Situ Bioremediation, Monitored Natural Attenuation, and Institutional Controls; and [N-6] Source Removal by Excavation, Monitored Natural Attenuation, and Institutional Controls. The remedy for Parcel E will be selected in the Record of Decision following comment on this FS Report and the forthcoming Parcel E Proposed Plan.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-414  
Completed Document Type: Environmental Baseline Survey  
Completed Date: 11/13/1995  
Comments: Building 414 and the adjacent lot (lease area) are located in Parcel D and are included in Installation Restoration Site IR-36. Building 414 is a one story, metal warehouse building approximately 35 feet high constructed in 1944, covering 33,468 square feet. On the east end of the building is an approximately 1,200 square foot, raised wooden storage platform. The platform is approximately 12 feet above the floor of the warehouse. Offices and restrooms are located in the southeast corner of the building. The adjacent lot covers approximately the same amount of area. The outside lot is paved and the pavement is in good condition. The building was primarily used for furniture storage until 1974, and subsequently as a collection point for investigative derived waste (IDW) until April of 1995. Based on the review of available information, the IDW was containerized and no leaks or spills occurred while the IDW was stored in the building.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-258  
Completed Document Type: Environmental Baseline Survey  
Completed Date: 10/02/1995  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: B-808  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 11/14/1995  
Comments: Not reported

Completed Area Name: Par E and Par E2  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/02/2007  
Comments: not an approval, more work needed on gw monitoring program and reports.

Completed Area Name: Par E and Par E2  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/02/2007  
Comments: not an approval, more work needed on gw monitoring program and reports  
Not reported

Completed Area Name: Par E and Par E2

Map ID  
Direction  
Distance  
Elevation

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Database(s)

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2007  
Comments: DTSC, RWQCB, EPA and Navy continue to discuss improvements to the quarterly groundwater monitoring program.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/03/2006  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 10/01/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 03/01/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 10/09/2009  
Comments: 1

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 12/01/2005  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/18/2007  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 08/31/2010  
Comments: Presented as summary and information only documents.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report

Map ID  
Direction  
Distance  
Elevation

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Date: 04/01/2007  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: IR-02  
Completed Document Type: Removal Action Workplan  
Completed Date: 11/23/2005  
Comments: On 11/23/2005, DTSC concurred with a removal action workplan for excavation of radiologically contaminated soil at IR02 in Parcels e and E2. Approximately 40,000 cubic yards of soil will be removed. This action will advance evaluation and implementation of the final remedy for the parcels.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: IR-02  
Completed Document Type: Removal Action Workplan  
Completed Date: 11/23/2005  
Comments: On 11/23/2005, DTSC concurred with the removal action workplan for the metal debris reef and metal slag areas in Parcel E2. The workplan calls for removal of 5000 cubic yards of waste. This action will advance evaluation and implementation for a final remedy for the Parcel in 2011.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 10/04/2005  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 10/04/2005  
Comments: Sent no further comment letter.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 10/04/2005  
Comments: sent no further comment letter

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 10/04/2005  
Comments: sent no further comment letter

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 10/04/2005  
Comments: no further comment letter

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 10/04/2005

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Distance  
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Comments: no further comment letter

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 11/02/2005  
Comments: no draft final document. No further comments on final

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 11/16/2005  
Comments: Letter stated that we have no further comments at this time.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Removal Action Completion Report  
Completed Date: 02/08/2008  
Comments: DTSC agrees with the conclusion of the report. More removal is necessary along the shoreline of Parcel E2

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation / Feasibility Study  
Completed Date: 06/22/2011  
Comments: This RI/FS Report summarizes and evaluates the nature and extent of contamination using all available data, including information from removal actions that have removed potential contamination sources at Parcel E-2. Parcel E-2 consists of 47.4 acres of shoreline and lowland coast along the southwestern portion of HPS, and contains four distinct areas: (1) The oLandfill Area,o which comprises the entire Parcel E-2 Landfill and its immediate perimeter; (2) The oPanhandle Area,o located west and southwest of the Landfill Area; (3) The oEast Adjacent Area,o located to the east of the Landfill Area; and (4) The oShoreline Areao located at the interface with San Francisco Bay. Parcel E-2 is part of an area created in the 1940s, 1950s, and 1960s by filling in the bay margin with various materials, including soil, crushed bedrock, dredged sediments, and debris. The nature and extent evaluation was performed for the following media: (1) solid waste and soil in the Landfill Area; (2) landfill gas; (3) soil and isolated solid waste in the adjacent areas (Panhandle, East Adjacent, and Shoreline Areas); (4) groundwater; (5) surface water; and (6) shoreline sediment. The chemicals of concern identified include metals (lead, arsenic, antimony, cadmium, copper, manganese, mercury, nickel, vanadium, zinc), PCBs, PAHs, dieldrin, and DDT. Radionuclides in soil and groundwater are evaluated in the radiological addendum to the RI/FS Report. The following remedial alternatives were developed for Parcel E-2 from the technologies and process options retained: Alternative 1 u No Action; Alternative 2 u Excavate and Dispose of Solid Waste, Soil, and Sediment (including monitoring, institutional controls, and unlined freshwater wetlands); Alternative 3 u Contain Solid Waste, Soil, and Sediment with Hot Spot Removal (including monitoring, institutional controls, and lined freshwater wetlands); Alternative 4 u Contain Solid Waste, Soil, Sediment, and Groundwater with Hot Spot Removal (including monitoring, institutional controls, and lined freshwater wetlands); and Alternative 5 u Contain Solid Waste, Soil, Sediment, and

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**S101272855**

Groundwater with Hot Spot Removal (including monitoring, institutional controls, and unlined freshwater wetlands). Each remedial alternative was evaluated in comparison to the two threshold and five balancing evaluation criteria established in the NCP. The two modifying criteria, state and community acceptance, will be assessed in the Record of Decision. The no action alternative (Alternative 1) would not be effective in protecting human health and the environment. Alternatives 2, 3, 4, and 5 would be effective remedial alternatives for Parcel E-2. Alternatives 3, 4, and 5 appear to be significantly more feasible, predictable, cost effective, time-effective, and implementable remedies, when compared with Alternative 2. Alternatives 4 and 5 offer improved long-term effectiveness but have a higher cost relative to Alternative 3. The remedy for Parcel E-2 will be selected in the Record of Decision.

Completed Area Name: Parcel E-2  
 Completed Sub Area Name: IR 01/21  
 Completed Document Type: Removal Action Workplan  
 Completed Date: 11/23/2005  
 Comments: On 11/23/2005, DTSC concurred with the Removal Action Workplan for excavation of PCB hotspots in Parcel E2. Approximately 50,000 cubic yards of contaminated material will be removed. This will aid in preparation of the site for evaluation and implementation of a final remedy in 2011.

Completed Area Name: Parcel E-2  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Proposed Plan  
 Completed Date: 09/07/2011  
 Comments: Proposed Plan went out for public comment on 9/7/2011. All comments received will be addressed in the upcoming Parcel E-2 Record of Decision.

Completed Area Name: Parcel E-2  
 Completed Sub Area Name: Not reported  
 Completed Document Type: Record of Decision  
 Completed Date: 11/20/2012  
 Comments: The selected remedy consists of the following actions to address risks posed by contaminated media: = Remove and dispose of contaminated soil in selected areas that contain high concentrations of non-radioactive chemicals, and separate and dispose of materials and soil with radiological contamination found in these areas = Perform radiological surveys throughout Parcel E-2 and separate and dispose of materials and soil with radiological contamination found during the surveys = Install a soil cover over all of Parcel E-2, with a protective liner (consisting of a geomembrane with an overlying geocomposite drainage layer) where needed to minimize water seeping into the contaminated material = Install below-ground barriers to limit groundwater flow from the landfill to San Francisco Bay, including a contingency action to hydraulically control groundwater (behind the barrier) if necessary to satisfy pertinent applicable or relevant and appropriate requirements (ARARs) = Remove and treat landfill gas to prevent it from moving beyond the Parcel E-2 boundary = Build a shoreline revetment = Monitor and maintain the different parts of the selected remedy to ensure they are working properly = Use institutional controls to restrict specific land uses and activities on Parcel E-2

Map ID  
Direction  
Distance  
Elevation

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Site

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Design  
Completed Date: 07/31/2009  
Comments: Deferred final comments and approval to RWQCB.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: IR-02  
Completed Document Type: Removal Action Completion Report  
Completed Date: 02/08/2008  
Comments: Approximately 49,500 cubic yards of soil was removed. All post-excitation bottom and sidewall samples were below the radiological remedial action objectives (RAOs) for strontium-90 and cesium-137. 155 of 160 samples were below the RAOs for radium-226. 2,342 point sources and pieces of radiologically-impacted debris were removed during the excavation.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: IR-02  
Completed Document Type: Removal Action Completion Report  
Completed Date: 02/08/2008  
Comments: DTSC comment letter identified issues with Response to Comments and asked that they be addressed.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: \*Action Memorandum (if >\$1M)  
Completed Date: 10/17/2005  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 12/08/2005  
Comments: No further comments were necessary. Monthly landfill gas monitoring will continue.

Completed Area Name: Par E and Par E2  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 06/29/2007  
Comments: Dr. Jim Polisini provided comments to Navy's Response to Agency Comments

Completed Area Name: Par E and Par E2  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 08/04/2006  
Comments: Letter requested that DTSC comments be included in RTCs.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 12/01/2005  
Comments: DTSC provided comments on draft. Final document did not include response to DTSC comments. Letter requested that Navy include DTSC comments and respond.

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Area Name: Par E and Par E2  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/02/2007  
Comments: not an approval, more work needed on gw monitoring program and reports.

Completed Area Name: Par E and Par E2  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 04/19/2010  
Comments: CDFG has concerns that have been provided to the Navy but they will be evaluated and incorporated moving forward in the Remedial Investigation / Feasibility Study.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 03/30/2011  
Comments: The Final RI/FS Report for Parcel E-2 developed five remedial alternatives for Parcel E-2 that are also presented in this radiological addendum. The five remedial alternatives for Parcel E-2 are: (a) Alternative 1: No Action (b) Alternative 2: Excavate and Dispose of Solid Waste, Soil, and Sediment (including monitoring, institutional controls, and unlined freshwater wetlands) (c) Alternative 3: Contain Solid Waste, Soil, and Sediment with Hot Spot Removal (including monitoring, institutional controls, and lined freshwater wetlands) (d) Alternative 4: Contain Solid Waste, Soil, Sediment, and Groundwater with Hot Spot Removal (including monitoring, institutional controls, and lined freshwater wetlands) (e) Alternative 5: Contain Solid Waste, Soil, Sediment, and Groundwater with Hot Spot Removal (including monitoring, institutional controls, and unlined freshwater wetlands) Alternatives 2, 3, 4, and 5 were developed to address nonradioactive chemical contamination throughout Parcel E-2, and include varying amounts of intrusive work within radiologically impacted areas. As a result, Alternatives 2, 3, 4, and 5, as presented in the Final RI/FS Report, specify radiological control procedures to properly screen, segregate, characterize, and dispose of radioactive materials throughout Parcel E-2. The remedial alternatives evaluated in this radiological addendum are consistent with the remedial alternatives evaluated in the RI/FS Report, but also identify additional components of the alternatives that are needed to meet the RAO for radioactively contaminated media. The additional components are: [1] Removal and remediation of sanitary sewer, storm drain, and septic sewer lines that extend into the East Adjacent Area but are located outside of the IR Site 01/21 site boundary, [2] Removal and remediation of the ship-shielding berm in the Panhandle Area, and [3] Final status surveys of the excavated subgrade of Parcel E-2 prior to backfilling with soil meeting the radiological acceptance criteria.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 02/09/2010  
Comments: This Amended Action Memorandum is an amendment to the Final Action Memorandum, Time- Critical Removal Action for the PCB Hot Spot Area

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

at Parcels E and E-2, Hunters Point Shipyard San Francisco, California, prepared by the Department of the Navy (Navy), May 19, 2005. The purpose of this Amended Action Memorandum is to document the Navy's decision to undertake a follow-on time-critical removal action (TCRA) to address polychlorinated biphenyls (PCBs), total petroleum hydrocarbons (TPH), copper and lead in soil and sediment along the Parcel E-2 shoreline to the west and north of the previous PCB Hot Spot TCRA at Hunters Point Shipyard (HPS) in San Francisco, California. This TCRA will also address PCBs, TPH, copper, lead and four specific volatile organic compounds (VOCs) including tetrachloroethene (PCE) (also known as perchloroethene) in soil in the East Adjacent Area in the southeastern portion of Parcel E-2.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Pilot Study/Treatability Workplan  
Completed Date: 07/29/2009  
Comments: The Parcel E groundwater treatability study (GWTS) work plan was prepared for the characterization of eight groundwater contamination plumes and to assess zero-valent iron (ZVI) as a treatment technology for shallow, A-aquifer groundwater remediation.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Pilot/Treatability Study Report  
Completed Date: 06/08/2011  
Comments: The purpose of the groundwater treatability study (GWTS) was to evaluate the effectiveness of using zero-valent iron (ZVI) to destroy chlorinated volatile organic compounds (CVOCs) and to reduce metals concentrations in groundwater within Parcel E. The two main phases were (1) characterization of the CVOC plumes in groundwater and soil vapor and the metals plumes in groundwater (Phase I), and (2) treatment of the CVOCs and metals using ZVI (Phase II). The results of the GWTS in Area 1 and Area 3 of the IR36 plume indicated that, within the period of post-injection sampling conducted during this GWTS, ZVI remediation technology achieved the Project Goals (PGs) for CVOCs in groundwater in Parcel E. In addition, the spacing between injection points (approximately 12.5 ft) and the mass of ZVI per unit mass of soil (0.4 percent) used in this GWTS provided sufficient ZVI distribution and mass to attain the PGs. Additional groundwater data are needed to determine if CVOC concentrations in Areas 1 and 3 rebound after ZVI is no longer chemically capable of remediating CVOCs in those areas. Due to the small amount of ZVI injected in the IR12A plume area and the disperse nature of the injection scheme, insufficient data were available to evaluate the technical performance of ZVI injections at the IR12A plume. If treatability study or remedial efforts using ZVI are attempted in the future at the IR12A plume, a higher density of injection points covering a greater portion of the IR12A plume area is recommended.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 10/31/2012  
Comments: Based on the documentation provided in the FSS Report as well as the results of CDPH's confirmatory soil sampling, DTSC supports the release for unrestricted use, with respect to radiological issues, of

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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the Building 807 Site and the IR-04 Former Scrap Yard Site.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 04/22/2011  
Comments: Final SUPR acceptance will be documented as part of regulatory acceptance of the Parcel E Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 04/27/2011  
Comments: Final SUPR acceptance will be documented as part of regulatory acceptance of the Parcel E Radiological Removal Action Completion Report.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 04/28/2011  
Comments: Final SUPR acceptance will be documented as part of regulatory acceptance of the Parcel E Radiological Removal Action Completion Report.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 05/26/2009  
Comments: Letter serves as the Navy's notice of intent to dissolve the Hunters Point Naval Shipyard Restoration Advisory Board.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 09/02/2009  
Comments: RAB Dissolution Public Notice and Comment Period Announcement sent via e-mail.

Completed Area Name: Parcel UC-3  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 05/19/2011  
Comments: Revised to incorporate all DTSC comments. Final SUPR acceptance will be documented as a part of regulatory acceptance of the Parcel UC-3 RACR which will be a summation of all SUPRs along Crisp Road.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 07/30/2010  
Comments: All methane detections were below the HPS site action level for methane of 2.5%. All non-methane organic compound detections were well below established action levels for gas monitoring probes. Therefore, no additional response action was necessary.

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 05/05/2010  
Comments: Memo describes the proposed approach for establishing soil gas action levels at Hunters Point Shipyard (HPS) since more recent guidance documents for assessment of health risks from vapor intrusion have become available since Human Health Risk Assessments have been completed historically. All comments have been adequately addressed.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 01/27/2010  
Comments: This survey Unit Project Reports Abstract, was prepared to document work conducted under the Final, Base-wide Storm Drain and Sanitary Sewer Removal Work Plan (2006) and Final, Base-wide Storm Drain and Sanitary Sewer Removal Work Plan u Revision 3 (2008) (Work Plan) at Hunters Point Shipyard (HPS), summarizes the scope, approach and radiological surveys used during removal of the sanitary sewer and storm drains located within HPS. This Abstract will be applicable to all Survey Unit Project Reports (SUPR) and data sets prepared for regulatory review.

Completed Area Name: Parcel UC-3  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 04/16/2012  
Comments: The Parcel UC-3 Radiological RACR and supporting documentation demonstrates that the remaining Parcel UC-3 soil meets the radiological release criteria established for HPNS. Therefore, based on the currently available information, DTSC concurs with the findings in the Parcel UC-3 Radiological RACR that conclude the Parcel UC-3 removal action resulted in the reduction of the potential radiological risks to levels below remediation goals.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 05/24/2012  
Comments: The stated purpose of this Action Memorandum is to document the U.S. Department of the Navy's (Navy) decision to undertake a time-critical removal action (TCRA) to address localized radioactive contamination (cobalt-60) in soil at the Experimental Ship Shielding Range (herein referred to as the Shielding Range) located within the Panhandle Area of Parcel E-2 at Hunters Point Naval Shipyard (HPNS) in San Francisco, California.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 10/29/2010  
Comments: For information purposes. All methane results for Q3 2010 were below regulatory limits in onsite structures. On July 20, 2010, methane was detected in GMP24 at 4.6%. On August 24, 2010, methane was detected in GMP24 at 2.9%. On September 28, 2010, methane was detected in GMP24 at 2.7%. All of these detections exceeded the HPS

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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site action level for methane in GMPs (2.5% by volume); therefore, active extraction was initiated directly at GMP24 in each instance. Response monitoring was performed following each action level exceedance, and terminated after observed methane levels were below 1.0% for two consecutive days, as specified in the Master Control Plan.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Workplan Amendment  
Completed Date: 06/23/2010  
Comments: The Navy is initiating this TCRA to excavate soils and sediments containing PCBs, TPH, copper, and lead along the Parcel E-2 shoreline to the west and north of the previous Parcel E-2 PCB Hot Spot TCRA. This TCRA will also address PCBs, TPH, lead, and four specific volatile organic compounds (VOCs), including tetrachloroethene (PCE) in soil in the East Adjacent Area in the southeastern portion of Parcel E-2. The 2009 RI/FS identified five tiers of Hot Spots for remediation at Parcel E-2. The Hot Spot areas were identified based on the potential for the Hot Spot to be a continuing source to groundwater contamination, the magnitude of soil concentrations relative to risk-based evaluation criteria, and the proximity relative to the San Francisco Bay. This TCRA will use project action limits (PALs) consistent with the hot spot goals established in the Draft Final 2009 RI/FS.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 03/23/2010  
Comments: Received via e-mail on 3/24/2010.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 04/20/2010  
Comments: Received hard copy on 4/23/2010.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Feasibility Study Report  
Completed Date: 09/13/2012  
Comments: This report is a radiological addendum to the Final Feasibility Study (FS) Report for Parcel E. Two general sources of potential radioactive contamination exist at Parcel E: [1] Naval Radiological Defense Laboratory (NRDL) activities at the former 500 series buildings, Building 707 Triangle Area, and other buildings formerly occupied by NRDL, and [2] historic waste disposal activities that occurred along the shoreline, primarily at IR-02. The radionuclides of concern (ROCs) that are potentially present due to historic Navy activities at Parcel E include cesium-137, radium-226, strontium-90, plutonium-239, uranium-235, cobalt-60, and americium-241. As part of this radiological addendum, historical surface soil data for Parcel E were analyzed using the computer code Residual Radioactive (RESRAD) Model Version 6.5 to model radiological risk at the impacted sites. The remedial alternatives evaluated for radionuclides at Parcel E were: [R-1] No Action; [R-2] Survey, Removal, and Disposal (with

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2-foot-thick soil cover and institutional controls at IR-02 and IR-03); and [R-3] Survey, Removal, and Disposal (with 3-foot-thick soil cover and institutional controls at IR-02 and IR-03). The remedy for Parcel E will be selected in the ROD following this FS Radiological Addendum and the forthcoming Proposed Plan.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/08/2011  
Comments: Based on the review of all relevant submitted documents and confirmatory analysis of completed surveys, CDPH-EMB recommends radiological unrestricted release for Building 406.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 07/31/2009  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 03/31/2009  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 04/30/2009  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 04/30/2010  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 10/30/2009  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 01/30/2009  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 01/29/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 07/01/2009  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 02/01/2010  
Comments: Not reported

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/01/2010  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: IR-03  
Completed Document Type: Pilot Study/Treatability Workplan  
Completed Date: 09/01/2011  
Comments: The primary objectives of the activities performed in accordance with this Work Plan are: [1] To define the lateral and vertical extent of NAPL at IR-03; [2] To evaluate the effectiveness and estimate the cost of enhanced NAPL removal at IR-03 by in-situ thermal treatment with dual phase extraction as the NAPL extraction technology; and [3] To evaluate the feasibility of removing NAPL contaminated soil at IR-03 by excavation. These objectives will be accomplished through field investigations and a bench-scale treatability study.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Removal Action Completion Report  
Completed Date: 02/28/2013  
Comments: Not reported

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 09/14/2011  
Comments: Based on the review of all relevant submitted documents and analysis of completed confirmatory surveys, DTSC and CDPH-EMB recommend radiological unrestricted release for Building 810.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 03/30/2012  
Comments: Based on the documentation provided in the FSS Report as well as the results of CDPH's confirmatory soil sampling, DTSC and CDPH support radiological release for unrestricted use at the Building 701 Site.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Finding of Suitability to Lease  
Completed Date: 07/27/1994  
Comments: The property to be licensed is comprised of approximately 89,600

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square feet within the interior of Building 606, and use of the paved area directly adjacent to the north and south sides of Building 606 as parking areas. The property will be licensed on an interim basis for approximately 4 months to Skellington Productions, Twentieth Century Fox Company (hereinafter, "Company"), for constructing a film production set and filming a feature film.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 11/19/2010  
Comments: DTSC did not review / approve this document and it is being provided for informational purposes only.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 11/29/2010  
Comments: This plan was developed to ensure that the Navy maintains a coordinated approach for dust control and air monitoring activities across multiple contracts. At a minimum, all contractors will be required to adhere to the requirements set forth in the document. DTSC did not review / approve the document as dust control practices are evaluated on a project-specific basis and it has been provided for informational purposes as part of the administrative record.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 06/03/1996  
Comments: The basewide environmental baseline survey (EBS) report prepared for Hunters Point Annex (HPA), San Francisco, California, summarizes environmental information gathered by PRC Environmental Management, Inc. (PRC), for the Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC), Engineering Field Activity West (EFA WEST). This document is based on existing environmental information gathered during the period of May to December 1995 related to the storage, release, treatment, or disposal of hazardous substances or petroleum products at HPA.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 05/16/2011  
Comments: The 2009 SAP was amended to incorporate the requirements of recent HPS Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) documents, such as Remedial Action Monitoring Plans (RAMPs), Records of Decision (RODs), and Feasibility Studies (FSs), and to update the SAP based on the recent work conducted (e.g groundwater treatability studies and corrective actions).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Action Implementation Workplan  
Completed Date: 07/30/2010  
Comments: Not reported

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Technical Workplan  
Completed Date: 07/18/2011  
Comments: This Work Plan details the procedures that will be followed to execute geotechnical investigations at Parcel E-2 (Installation Restoration [IR] Site 01/21) and Parcel B (IR Site 26) at Hunters Point Shipyard (HPS) in San Francisco, California. Geotechnical investigations at both sites are being performed for the Department of the Navy (Navy), in support of the Remedial Designs (RDs) for Parcels E-2 and B. The primary tasks include (1) subsurface exploration via geotechnical drilled borings and cone penetrometer test (CPT) borings, (2) geotechnical laboratory testing, and (3) data compilation.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 01/20/2011  
Comments: This document was not reviewed or approved by DTSC and was provided for informational purposes only. A Design Plan providing detailed design drawings and technical specifications for each trench segment in Parcel E will be provided under separate cover.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 01/31/2011  
Comments: For information purposes. All methane results for Q4 2010 were below regulatory limits in onsite structures. On November 29, 2010, methane was detected in GMP24 at 2.8%, exceeding the HPS site action level for methane in GMPs (2.5% by volume); therefore, active extraction was initiated directly at GMP24. Response monitoring was performed following each action level exceedance, and terminated on December 1, after observed methane levels were below 1.0% for two consecutive days, as specified in the Master Control Plan.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Participation Plan / Community Relations Plan  
Completed Date: 06/03/2011  
Comments: The Community Involvement Plan presents the Navy's plans to inform and involve the community in the environmental cleanup program moving forward based on feedback obtained from the Hunters Point Shipyard community about past communication and community involvement program activities.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 04/03/2012  
Comments: Based on the documentation provided in the FSS Report as well as the results of CDPH's confirmatory soil sampling, DTSC supports the release for unrestricted use, with respect to radiological issues, of Building 414.

Completed Area Name: Parcel UC-3

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 05/24/2011  
Comments: Final SUPR acceptance will be documented as a part of regulatory acceptance of the Parcel UC-3 RACR which will be a summation of all SUPRs along Crisp Road.

Completed Area Name: Parcel UC-3  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 05/27/2011  
Comments: Final SUPR acceptance will be documented as part of regulatory acceptance of the Parcel UC-3 RACR.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 03/23/2011  
Comments: Documents groundwater data collected basewide from April 2010 through September 2010 during the second and third quarter 2010 monitoring events.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 02/18/2011  
Comments: The Design Plan provides design drawings and technical specifications for each trench segment in Parcel E, 500 series area for use during sanitary sewer and storm drain removal. The document was provided for informational purposes only. DTSC did not review or approve the document.

Completed Area Name: Parcel UC-3  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 06/24/2011  
Comments: Final Survey Unit Project Report acceptance and formal approval will be documented as part of regulatory approval for the Parcel UC-3 radiological Removal Action Completion Report.

Completed Area Name: Parcel UC-3  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 06/28/2011  
Comments: Final Survey Unit Project Report acceptance and formal approval will be documented as part of regulatory approval for the Parcel UC-3 radiological Removal Action Completion Report.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 05/12/2011  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Engineering Evaluation / Cost Analysis - Time Critical

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**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

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Completed Date: 07/26/1996  
Comments: Removal action documentation for four non-time critical removal actions which include (1) the storm drain system, (2) soil and floating product, (3) groundwater plume in site IR-1/21, and (4) exploratory excavations. The EE/CA identifies removal action screening criteria levels for groundwater, identifies areas of concern, and evaluates removal action alternatives for contaminated groundwater containment within site IR-1/21.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Report  
Completed Date: 04/03/2012  
Comments: Based on the documentation provided in the FSS Report as well as the results of CDPH's confirmatory soil sampling, DTSC supports the release for unrestricted use, with respect to radiological issues, of the Building 704 Site.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/23/2000  
Comments: This document presents a comprehensive history of radiological operations conducted by the U.S. Department of the Navy (Navy) and Navy contractors at the Hunters Point Shipyard (HPS), San Francisco, California. The Navy prepared the HPS Historical Radiological Assessment (HRA) as a two volume set. Volume I (the current document) addresses radioactivity associated with the Naval Nuclear Propulsion Program (NNPP).

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Summary Report  
Completed Date: 08/31/2004  
Comments: This document presents a comprehensive history of radiological operations conducted by the U.S. Department of the Navy (Navy) and Navy contractors at the Hunters Point Shipyard (HPS), San Francisco, California. The Navy prepared the HPS Historical Radiological Assessment (HRA) as a two volume set. Volume I was published in August 2000 and addressed radioactivity associated with the Naval Nuclear Propulsion Program (NNPP). Volume I concluded that berthing of and work on nuclear-powered ships at HPS resulted in no adverse effect on the human population or the environment. Volume II of the HRA has been prepared pursuant to the Navy's Installation Restoration (IR) Program, which encompasses the Navy's Base Realignment and Closure (BRAC) Program, and in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). Volume II describes the history of operations involving general radioactive material (G-RAM) that, for the purposes of this document, is defined as any radioactive material used by the Navy or Navy contractors not associated with the NNPP.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Remedial Investigation Report  
Completed Date: 04/28/1999

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EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Comments: Not reported

Completed Area Name: Parcel UC-3  
Completed Sub Area Name: Not reported  
Completed Document Type: Other Report  
Completed Date: 06/22/2011  
Comments: This report is the final as-built record of the utilites on Crisp Road and summarizes the utility relocation activities. It has been provided for informational purposes only and was not reviewed or approved by DTSC.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 08/10/2011  
Comments: This correspondence includes attachments provided from State Agencies and provides Requirements identified by the Department of Toxic Substances Control (DTSC), Air Resources Board, Bay Area Air Quality Management District, California Department of Fish and Game (DFG), California Department of Public Health (CDPH), California Department of Resources Recycling and Recovery (CalRecycle), and the San Francisco Bay Regional Water Quality Control Board.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Site Characterization Report  
Completed Date: 09/01/1994  
Comments: The purpose of the SI was to gather data to (1) evaluate weather contamination is present and if a release(s) to the environment has occurred, (2) assess site-specific hydrogeologic conditions where appropriate, and (3) evaluate each site for possible inclusion into the Navy's Installation Restoration program. Four utility sites, five building sites, and the offsite railroad right-of-way were investigated. The utility sites included PA-45 (steam lines), PA-47 (fuel distribution lines), PA-50 (storm drains and sanitary sewers), and PA-51 (former transformer locations). Building sites included PA-38 (former Buildings 506, 507, 509, and 510), PA-39 (Building 707), PA-40 (electrical substation, Building 527), PA-52 (offsite railroad right of way), PA-54 (former Building 511A), and PA-56 (Area VII, railroad yard). Radiological and underground storage tank sites were also present in Parcel E but were not investigated as part of the Site Investigation.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Technical Workplan  
Completed Date: 07/07/2011  
Comments: This revision to the SUPRA is a result of the Survey Unit Project Report (SUPR) prototype that was agreed upon by CDPH in August 2010. All SUPR reports dated after August 2010 incorporate the prototype changes, and now the SUPRA has been updated accordingly.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Report  
Completed Date: 06/21/2011  
Comments: This monitoring report incorporates revisions made from comments

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

received on the previous semiannual groundwater report (February 2011).

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Fieldwork  
Completed Date: 09/07/2012  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 08/10/2011  
Comments: All methane results for the second quarter 2011 were below regulatory limits of 5 percent by volume at the site boundary and 1.25 percent by volume in on-site structures. Active extraction was initiated at GMP24 when methane was detected at 3.9% exceeding the HPNS site action level for methane. Active extraction was terminated when observed methane levels were below 1.0% for two consecutive days, as specified in the Master Control Plan. All Non-Methane Organic Compound (NMOC) detections during the second quarter of 2011 were below corresponding HPNS NMOC action levels.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Operations and Maintenance Report  
Completed Date: 09/02/2011  
Comments: A breach in the fenceline was observed during one of the quarterly inspections of the landfill area (June 30, 2011) and repaired. Additional Molecontrol electronic animal-repelling devices were installed around the remaining portion of the landfill cap circumference in December 2010 in response to observations of burrowing animal evidence. Invasive plant species are being controlled by mowing which has allowed the grass to reclaim most of the cap proper, as well as reducing fire hazards.

Completed Area Name: PARCEL-E  
Completed Sub Area Name: Not reported  
Completed Document Type: Preliminary Assessment Report  
Completed Date: 04/15/1994  
Comments: Previous field investigations, document searches, and studies at HPA have focused primarily on sites considered eligible for funding through the Installation Restoration (IR) program. The Site Assessments were conducted to identify sites potentially contaminated during approximately the past 10 years that were not included in the IR programs in Parcels B, C, D, and E and to make recommendations for additional field activities. Some previously investigated sites were also assessed when new information and/or new areas of the sites were made available or accessible as a result of the Navy's recent building cleanout program or other ongoing activities.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: \*Correspondence - Received  
Completed Date: 12/23/2009  
Comments: Also included as an appendix (Appendix E) to the Community Involvement Plan.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Monitoring Report  
Completed Date: 06/14/2007  
Comments: Not reported

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Technical Workplan  
Completed Date: 09/13/1996  
Comments: The document proposes installation of a sheet pile barrier and well points for groundwater control to reduce the exposure to contaminants of concern for aquatic life and humans ingesting aquatic life.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: IR 01/21  
Completed Document Type: Technical Report  
Completed Date: 07/20/1999  
Comments: Documents the installation of a 600-foot long sheet pile wall keyed into the underlying bay mud.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Monitoring Plan  
Completed Date: 08/05/2011  
Comments: Updates the project personnel list and updates the list of analytes to incorporate groundwater monitoring recommendations provided in the Final In-Situ Anaerobic Bioremediation Treatability Study Completion Report for RU-C1, Building 253, dated June 8, 2011.

Completed Area Name: Parcel E-2  
Completed Sub Area Name: Not reported  
Completed Document Type: Public Notice  
Completed Date: 09/04/2011  
Comments: The public notice was published in the SF Bayview, SF Chronicle, and SF Sun Reporter.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Correspondence  
Completed Date: 06/13/2012  
Comments: Summary of independent regulatory testing conducted by DTSC/CDPH and USEPA.

Completed Area Name: PROJECT WIDE  
Completed Sub Area Name: Not reported  
Completed Document Type: Federal Facility Agreement  
Completed Date: 10/29/1991  
Comments: Federal Facilities Agreement signed by the United States Navy, DTSC and US EPA.

Completed Area Name: Par E and Par E2  
Completed Sub Area Name: Not reported  
Completed Document Type: Letter - Notice  
Completed Date: 08/28/2012  
Comments: The revised boundary results in the Shipyard South Multi-Use District

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

no longer being located in Parcel E-2, and the planned reuse for Parcel E-2 is now limited entirely to open space.

Future Area Name:	PARCEL-E
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Completion Report
Future Due Date:	2021
Future Area Name:	PARCEL-E
Future Sub Area Name:	Not reported
Future Document Type:	Design/Implementation Workplan
Future Due Date:	2015
Future Area Name:	Parcel E-2
Future Sub Area Name:	Not reported
Future Document Type:	Design/Implementation Workplan
Future Due Date:	2014
Future Area Name:	Parcel E-2
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Completion Report
Future Due Date:	2018
Future Area Name:	PARCEL-E
Future Sub Area Name:	Not reported
Future Document Type:	Record of Decision
Future Due Date:	2014
Future Area Name:	PARCEL-E
Future Sub Area Name:	Not reported
Future Document Type:	Proposed Plan
Future Due Date:	2013
Future Area Name:	PARCEL-E
Future Sub Area Name:	Not reported
Future Document Type:	Removal Action Completion Report
Future Due Date:	2016
Future Area Name:	Parcel E-2
Future Sub Area Name:	IR 01/21
Future Document Type:	Removal Action Completion Report
Future Due Date:	2013
Future Area Name:	PARCEL-E
Future Sub Area Name:	Not reported
Future Document Type:	Finding of Suitability to Transfer
Future Due Date:	2021
Future Area Name:	Parcel E-2
Future Sub Area Name:	Not reported
Future Document Type:	Finding of Suitability to Transfer
Future Due Date:	2018
Future Area Name:	Parcel E-2
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Completion Report
Future Due Date:	2018
Future Area Name:	Parcel UC-3
Future Sub Area Name:	Not reported
Future Document Type:	Proposed Plan
Future Due Date:	2013
Future Area Name:	Parcel UC-3
Future Sub Area Name:	Not reported
Future Document Type:	Record of Decision
Future Due Date:	2014
Future Area Name:	Parcel UC-3
Future Sub Area Name:	Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**HUNTERS POINT NAVAL SHIPYARD, PARCEL F (Continued)**

**S101272855**

Future Document Type:	Finding of Suitability to Transfer
Future Due Date:	2015
Future Area Name:	PARCEL-E
Future Sub Area Name:	IR-03
Future Document Type:	Remedial Action Completion Report
Future Due Date:	2014
Future Area Name:	Parcel E-2
Future Sub Area Name:	IR 01/21
Future Document Type:	Operations and Maintenance Report
Future Due Date:	2013
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Public Participation Plan / Community Relations Plan
Future Due Date:	2013
Future Area Name:	Parcel E-2
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Completion Report
Future Due Date:	2018
Future Area Name:	PARCEL-E
Future Sub Area Name:	IR-03
Future Document Type:	Design/Implementation Workplan
Future Due Date:	2014
Future Area Name:	PARCEL-E
Future Sub Area Name:	IR-03
Future Document Type:	Design/Implementation Workplan
Future Due Date:	2014
Future Area Name:	Parcel E-2
Future Sub Area Name:	Not reported
Future Document Type:	Certification
Future Due Date:	2018
Future Area Name:	PARCEL-E
Future Sub Area Name:	Not reported
Future Document Type:	Certification
Future Due Date:	2021
Future Area Name:	Parcel UC-3
Future Sub Area Name:	Not reported
Future Document Type:	Certification
Future Due Date:	2015
Future Area Name:	Parcel E-2
Future Sub Area Name:	Not reported
Future Document Type:	Land Use Restriction
Future Due Date:	2017
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 36 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
SAN FRANCISCO	S105688800	COMMERCIAL COSNTRUCTION SITE	5300 03RD ST	94124	LUST
SAN FRANCISCO	U003976203	CONSTRUCTION SITE	06TH ST & HARRISON ST	94124	UST
SAN FRANCISCO	U003976204	CONSTRUCTION SITE	08TH ST & BYRANT ST	94124	UST
SAN FRANCISCO	S113173082	CALTRANS SF SITE	1ST AND FOLSON ST	94124	HAZNET
SAN FRANCISCO	U003976392	TREASURE ISLAND, SITE 6	AVENUE M AND 14TH ST	94124	UST
SAN FRANCISCO	S107591769	BAY VIEW GREEN WASTE MGT. COMPANY	1300 CARROL WAY	94124	SWF/LF
SAN FRANCISCO	S111216337	SITE DEVELOPMENT AND HABITAT IMPRO	END OF MACARTHUR AVE	94124	NPDES
SAN FRANCISCO	S109285368	COMMERCIAL (STREET)	1200 EVANS AND KIETH ST	94124	LUST
SAN FRANCISCO	1004676878	U S S MEYERKORD F F1058 EX U S S M	HUNTERS PT	94124	RCRA-SQG
SAN FRANCISCO	1004678458	MARTINI TRUCKING INC	704 HUNTERS PT	94124	RCRA NonGen / NLR, FINDS
SAN FRANCISCO	1004677032	USS LANG EX USS LANG WMAC INC	HUNTERS PT	94124	RCRA-SQG
SAN FRANCISCO	1004677236	FEELY TRUCKING CORPORATION	405 F HUNTERS PT	94124	RCRA NonGen / NLR, FINDS
SAN FRANCISCO	1004675704	USS GREY SF1054 SUSF GREY WMAC INC	HUNTERS PT	94124	RCRA-SQG
SAN FRANCISCO	U003976065	BUILDING 116	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976066	BUILDING 118 (FORMER)	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976071	BUILDING 203	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976072	BUILDING 205	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976073	BUILDING 211	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976074	BUILDING 231	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976078	BUILDING 251	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976081	BUILDING 272	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976082	BUILDING 281	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976085	BUILDING 308	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976088	BUILDING 709	HUNTERS PT	94124	UST
SAN FRANCISCO	1004675478	U S S LOCKWOOD FF1064 EX LOCKWOOD-	HUNTERS PT	94124	RCRA-SQG
SAN FRANCISCO	U004003484	BUILDING 253	HUNTERS PT	94124	UST
SAN FRANCISCO	U003976402	US GOVERNMENT	HUNTERS PT	94124	UST
SAN FRANCISCO	S101592211	VACANT	2225 INGALLS ST	94124	UST
SAN FRANCISCO	U003713822	HENRY BROADCASTING	2277 JERROLD AVE.	94124	LUST, CA FID UST, SWEEPS UST,
SAN FRANCISCO	U003976205	CONSTRUCTION SITE	MERLIN	94124	LOS ANGELES CO. HMS
SAN FRANCISCO	U003982457	CCSF FREEWAY CONSTRUCTION SITE	OCTAVIA AND LINDEN ST	94124	LUST, SWEEPS UST, EMI
SAN FRANCISCO	1003878799	CANDLESTICK PT STATE REC AREA	S OF HUNTERS PT	94124	UST
SAN FRANCISCO	U003976206	CONSTRUCTION SITE	OWENS AND 06TH ST	94124	CERC-NFRAP
SAN FRANCISCO	S109689876	SF PIER 98 INDIA BASIN	PIER 98	94124	SWF/LF
SAN FRANCISCO	U004124344	PRESIDIO/FILL SITE 5	PRESIDIO OF SAN FRANCISCO	94124	UST
SAN FRANCISCO	1003878518	ISLAIS CREEK AREA	E SIDE OF BAY	94124	CERC-NFRAP

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

## STANDARD ENVIRONMENTAL RECORDS

### ***Federal NPL site list***

#### **NPL: National Priority List**

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/01/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: N/A
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 05/09/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Quarterly

#### **NPL Site Boundaries**

##### **Sources:**

EPA's Environmental Photographic Interpretation Center (EPIC)  
Telephone: 202-564-7333

EPA Region 1  
Telephone 617-918-1143

EPA Region 6  
Telephone: 214-655-6659

EPA Region 3  
Telephone 215-814-5418

EPA Region 7  
Telephone: 913-551-7247

EPA Region 4  
Telephone 404-562-8033

EPA Region 8  
Telephone: 303-312-6774

EPA Region 5  
Telephone 312-886-6686

EPA Region 9  
Telephone: 415-947-4246

EPA Region 10  
Telephone 206-553-8665

#### **Proposed NPL: Proposed National Priority List Sites**

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 02/01/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: N/A
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 05/09/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Quarterly

#### **NPL LIENS: Federal Superfund Liens**

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 08/15/2011
Number of Days to Update: 56	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ***Federal Delisted NPL site list***

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/01/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: N/A
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 05/09/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Quarterly

## ***Federal CERCLIS list***

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/04/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: 703-412-9810
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 04/05/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 06/10/2013
	Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/31/2012	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/09/2012	Telephone: 703-603-8704
Date Made Active in Reports: 12/20/2012	Last EDR Contact: 04/10/2013
Number of Days to Update: 72	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Varies

## ***Federal CERCLIS NFRAP site List***

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/05/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: 703-412-9810
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 04/05/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 03/11/2013
	Data Release Frequency: Quarterly

## ***Federal RCRA CORRACTS facilities list***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/12/2013  
Date Data Arrived at EDR: 02/21/2013  
Date Made Active in Reports: 02/27/2013  
Number of Days to Update: 6

Source: EPA  
Telephone: 800-424-9346  
Last EDR Contact: 05/02/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Quarterly

## ***Federal RCRA non-CORRACTS TSD facilities list***

### **RCRA-TSDF: RCRA - Treatment, Storage and Disposal**

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/12/2013  
Date Data Arrived at EDR: 02/15/2013  
Date Made Active in Reports: 02/27/2013  
Number of Days to Update: 12

Source: Environmental Protection Agency  
Telephone: (415) 495-8895  
Last EDR Contact: 05/02/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Quarterly

## ***Federal RCRA generators list***

### **RCRA-LQG: RCRA - Large Quantity Generators**

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/12/2013  
Date Data Arrived at EDR: 02/15/2013  
Date Made Active in Reports: 02/27/2013  
Number of Days to Update: 12

Source: Environmental Protection Agency  
Telephone: (415) 495-8895  
Last EDR Contact: 05/02/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Quarterly

### **RCRA-SQG: RCRA - Small Quantity Generators**

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/12/2013  
Date Data Arrived at EDR: 02/15/2013  
Date Made Active in Reports: 02/27/2013  
Number of Days to Update: 12

Source: Environmental Protection Agency  
Telephone: (415) 495-8895  
Last EDR Contact: 05/02/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Quarterly

### **RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators**

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/12/2013  
Date Data Arrived at EDR: 02/15/2013  
Date Made Active in Reports: 02/27/2013  
Number of Days to Update: 12

Source: Environmental Protection Agency  
Telephone: (415) 495-8895  
Last EDR Contact: 05/02/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ***Federal institutional controls / engineering controls registries***

### US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/14/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/29/2013	Telephone: 703-603-0695
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 03/11/2013
Number of Days to Update: 42	Next Scheduled EDR Contact: 06/24/2013
	Data Release Frequency: Varies

### US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/14/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/29/2013	Telephone: 703-603-0695
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 03/11/2013
Number of Days to Update: 42	Next Scheduled EDR Contact: 06/24/2013
	Data Release Frequency: Varies

### LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005	Source: Department of the Navy
Date Data Arrived at EDR: 12/11/2006	Telephone: 843-820-7326
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 05/20/2013
Number of Days to Update: 31	Next Scheduled EDR Contact: 09/02/2013
	Data Release Frequency: Varies

## ***Federal ERNS list***

### ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2012	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 01/17/2013	Telephone: 202-267-2180
Date Made Active in Reports: 02/15/2013	Last EDR Contact: 04/02/2013
Number of Days to Update: 29	Next Scheduled EDR Contact: 07/15/2013
	Data Release Frequency: Annually

## ***State- and tribal - equivalent NPL***

### RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 03/13/2013	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 03/14/2013	Telephone: 916-323-3400
Date Made Active in Reports: 03/27/2013	Last EDR Contact: 05/07/2013
Number of Days to Update: 13	Next Scheduled EDR Contact: 08/19/2013
	Data Release Frequency: Quarterly

## ***State- and tribal - equivalent CERCLIS***

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 03/13/2013	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 03/14/2013	Telephone: 916-323-3400
Date Made Active in Reports: 03/27/2013	Last EDR Contact: 05/07/2013
Number of Days to Update: 13	Next Scheduled EDR Contact: 08/19/2013
	Data Release Frequency: Quarterly

### **State and tribal landfill and/or solid waste disposal site lists**

#### SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/18/2013	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 02/18/2013	Telephone: 916-341-6320
Date Made Active in Reports: 03/20/2013	Last EDR Contact: 02/18/2013
Number of Days to Update: 30	Next Scheduled EDR Contact: 06/03/2013
	Data Release Frequency: Quarterly

### **State and tribal leaking storage tank lists**

#### LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005	Source: California Regional Water Quality Control Board Santa Ana Region (8)
Date Data Arrived at EDR: 02/15/2005	Telephone: 909-782-4496
Date Made Active in Reports: 03/28/2005	Last EDR Contact: 08/15/2011
Number of Days to Update: 41	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: Varies

#### LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

#### LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003	Source: California Regional Water Quality Control Board Lahontan Region (6)
Date Data Arrived at EDR: 09/10/2003	Telephone: 530-542-5572
Date Made Active in Reports: 10/07/2003	Last EDR Contact: 09/12/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

## LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008	Source: California Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 07/22/2008	Telephone: 916-464-4834
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 07/01/2011
Number of Days to Update: 9	Next Scheduled EDR Contact: 10/17/2011
	Data Release Frequency: No Update Planned

## LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004	Source: California Regional Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 09/07/2004	Telephone: 213-576-6710
Date Made Active in Reports: 10/12/2004	Last EDR Contact: 09/06/2011
Number of Days to Update: 35	Next Scheduled EDR Contact: 12/19/2011
	Data Release Frequency: No Update Planned

## LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/19/2003	Telephone: 805-542-4786
Date Made Active in Reports: 06/02/2003	Last EDR Contact: 07/18/2011
Number of Days to Update: 14	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: No Update Planned

## LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-622-2433
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: Quarterly

## LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-570-3769
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 08/01/2011
Number of Days to Update: 29	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 03/18/2013	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/19/2013	Telephone: see region list
Date Made Active in Reports: 03/27/2013	Last EDR Contact: 05/02/2013
Number of Days to Update: 8	Next Scheduled EDR Contact: 07/01/2013
	Data Release Frequency: Quarterly

## LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001	Source: California Regional Water Quality Control Board San Diego Region (9)
Date Data Arrived at EDR: 04/23/2001	Telephone: 858-637-5595
Date Made Active in Reports: 05/21/2001	Last EDR Contact: 09/26/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 01/09/2012
	Data Release Frequency: No Update Planned

## SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 03/18/2013	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/19/2013	Telephone: 866-480-1028
Date Made Active in Reports: 03/27/2013	Last EDR Contact: 05/02/2013
Number of Days to Update: 8	Next Scheduled EDR Contact: 07/01/2013
	Data Release Frequency: Varies

## SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003	Source: California Regional Water Quality Control Board, North Coast Region (1)
Date Data Arrived at EDR: 04/07/2003	Telephone: 707-576-2220
Date Made Active in Reports: 04/25/2003	Last EDR Contact: 08/01/2011
Number of Days to Update: 18	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

## SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004	Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-286-0457
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: Quarterly

## SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/18/2006	Telephone: 805-549-3147
Date Made Active in Reports: 06/15/2006	Last EDR Contact: 07/18/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: Semi-Annually

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004  
Date Data Arrived at EDR: 11/18/2004  
Date Made Active in Reports: 01/04/2005  
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)  
Telephone: 213-576-6600  
Last EDR Contact: 07/01/2011  
Next Scheduled EDR Contact: 10/17/2011  
Data Release Frequency: Varies

### SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005  
Date Data Arrived at EDR: 04/05/2005  
Date Made Active in Reports: 04/21/2005  
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)  
Telephone: 916-464-3291  
Last EDR Contact: 09/12/2011  
Next Scheduled EDR Contact: 12/26/2011  
Data Release Frequency: Semi-Annually

### SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005  
Date Data Arrived at EDR: 05/25/2005  
Date Made Active in Reports: 06/16/2005  
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch  
Telephone: 619-241-6583  
Last EDR Contact: 08/15/2011  
Next Scheduled EDR Contact: 11/28/2011  
Data Release Frequency: Semi-Annually

### SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004  
Date Data Arrived at EDR: 09/07/2004  
Date Made Active in Reports: 10/12/2004  
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region  
Telephone: 530-542-5574  
Last EDR Contact: 08/15/2011  
Next Scheduled EDR Contact: 11/28/2011  
Data Release Frequency: No Update Planned

### SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004  
Date Data Arrived at EDR: 11/29/2004  
Date Made Active in Reports: 01/04/2005  
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region  
Telephone: 760-346-7491  
Last EDR Contact: 08/01/2011  
Next Scheduled EDR Contact: 11/14/2011  
Data Release Frequency: No Update Planned

### SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008  
Date Data Arrived at EDR: 04/03/2008  
Date Made Active in Reports: 04/14/2008  
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)  
Telephone: 951-782-3298  
Last EDR Contact: 09/12/2011  
Next Scheduled EDR Contact: 12/26/2011  
Data Release Frequency: Semi-Annually

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007  
Date Data Arrived at EDR: 09/11/2007  
Date Made Active in Reports: 09/28/2007  
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)  
Telephone: 858-467-2980  
Last EDR Contact: 08/08/2011  
Next Scheduled EDR Contact: 11/21/2011  
Data Release Frequency: Annually

### INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/05/2013  
Date Data Arrived at EDR: 02/06/2013  
Date Made Active in Reports: 04/12/2013  
Number of Days to Update: 65

Source: EPA Region 10  
Telephone: 206-553-2857  
Last EDR Contact: 04/29/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Quarterly

### INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 09/28/2012  
Date Data Arrived at EDR: 11/01/2012  
Date Made Active in Reports: 04/12/2013  
Number of Days to Update: 162

Source: EPA Region 1  
Telephone: 617-918-1313  
Last EDR Contact: 05/01/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Varies

### INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/27/2012  
Date Data Arrived at EDR: 08/28/2012  
Date Made Active in Reports: 10/16/2012  
Number of Days to Update: 49

Source: EPA Region 8  
Telephone: 303-312-6271  
Last EDR Contact: 04/29/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Quarterly

### INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011  
Date Data Arrived at EDR: 09/13/2011  
Date Made Active in Reports: 11/11/2011  
Number of Days to Update: 59

Source: EPA Region 6  
Telephone: 214-665-6597  
Last EDR Contact: 04/29/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Varies

### INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/06/2013  
Date Data Arrived at EDR: 02/08/2013  
Date Made Active in Reports: 04/12/2013  
Number of Days to Update: 63

Source: EPA Region 4  
Telephone: 404-562-8677  
Last EDR Contact: 04/29/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Semi-Annually

### INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 12/31/2012  
Date Data Arrived at EDR: 02/28/2013  
Date Made Active in Reports: 04/12/2013  
Number of Days to Update: 43

Source: EPA Region 7  
Telephone: 913-551-7003  
Last EDR Contact: 04/29/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2013	Telephone: 415-972-3372
Date Made Active in Reports: 04/12/2013	Last EDR Contact: 04/29/2013
Number of Days to Update: 42	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Quarterly

## **State and tribal registered storage tank lists**

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/18/2013	Source: SWRCB
Date Data Arrived at EDR: 03/19/2013	Telephone: 916-341-5851
Date Made Active in Reports: 04/18/2013	Last EDR Contact: 05/02/2013
Number of Days to Update: 30	Next Scheduled EDR Contact: 07/01/2013
	Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities  
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/10/2009	Telephone: 916-327-5092
Date Made Active in Reports: 10/01/2009	Last EDR Contact: 04/08/2013
Number of Days to Update: 21	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/05/2013	Source: EPA Region 10
Date Data Arrived at EDR: 02/06/2013	Telephone: 206-553-2857
Date Made Active in Reports: 04/12/2013	Last EDR Contact: 04/29/2013
Number of Days to Update: 65	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/21/2013	Source: EPA Region 9
Date Data Arrived at EDR: 02/26/2013	Telephone: 415-972-3368
Date Made Active in Reports: 04/12/2013	Last EDR Contact: 04/29/2013
Number of Days to Update: 45	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/27/2012	Source: EPA Region 8
Date Data Arrived at EDR: 08/28/2012	Telephone: 303-312-6137
Date Made Active in Reports: 10/16/2012	Last EDR Contact: 04/29/2013
Number of Days to Update: 49	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 12/31/2012	Source: EPA Region 7
Date Data Arrived at EDR: 02/28/2013	Telephone: 913-551-7003
Date Made Active in Reports: 04/12/2013	Last EDR Contact: 04/29/2013
Number of Days to Update: 43	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Varies

## INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011	Source: EPA Region 6
Date Data Arrived at EDR: 05/11/2011	Telephone: 214-665-7591
Date Made Active in Reports: 06/14/2011	Last EDR Contact: 04/29/2013
Number of Days to Update: 34	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Semi-Annually

## INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/02/2012	Source: EPA Region 5
Date Data Arrived at EDR: 08/03/2012	Telephone: 312-886-6136
Date Made Active in Reports: 11/05/2012	Last EDR Contact: 04/29/2013
Number of Days to Update: 94	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Varies

## INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/06/2013	Source: EPA Region 4
Date Data Arrived at EDR: 02/08/2013	Telephone: 404-562-9424
Date Made Active in Reports: 04/12/2013	Last EDR Contact: 04/29/2013
Number of Days to Update: 63	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Semi-Annually

## INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 09/28/2012	Source: EPA, Region 1
Date Data Arrived at EDR: 11/07/2012	Telephone: 617-918-1313
Date Made Active in Reports: 04/12/2013	Last EDR Contact: 04/29/2013
Number of Days to Update: 156	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Varies

## FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010	Source: FEMA
Date Data Arrived at EDR: 02/16/2010	Telephone: 202-646-5797
Date Made Active in Reports: 04/12/2010	Last EDR Contact: 04/18/2013
Number of Days to Update: 55	Next Scheduled EDR Contact: 07/29/2013
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ***State and tribal voluntary cleanup sites***

### INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

### VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 03/13/2013	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 03/14/2013	Telephone: 916-323-3400
Date Made Active in Reports: 03/27/2013	Last EDR Contact: 05/07/2013
Number of Days to Update: 13	Next Scheduled EDR Contact: 08/19/2013
	Data Release Frequency: Quarterly

### INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/28/2012	Source: EPA, Region 1
Date Data Arrived at EDR: 10/02/2012	Telephone: 617-918-1102
Date Made Active in Reports: 10/16/2012	Last EDR Contact: 04/05/2013
Number of Days to Update: 14	Next Scheduled EDR Contact: 07/15/2013
	Data Release Frequency: Varies

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Brownfield lists***

#### US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/10/2012	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/11/2012	Telephone: 202-566-2777
Date Made Active in Reports: 12/20/2012	Last EDR Contact: 03/26/2013
Number of Days to Update: 9	Next Scheduled EDR Contact: 07/08/2013
	Data Release Frequency: Semi-Annually

### ***Local Lists of Landfill / Solid Waste Disposal Sites***

#### ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009  
Date Data Arrived at EDR: 05/07/2009  
Date Made Active in Reports: 09/21/2009  
Number of Days to Update: 137

Source: EPA, Region 9  
Telephone: 415-947-4219  
Last EDR Contact: 04/29/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: No Update Planned

## WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000  
Date Data Arrived at EDR: 04/10/2000  
Date Made Active in Reports: 05/10/2000  
Number of Days to Update: 30

Source: State Water Resources Control Board  
Telephone: 916-227-4448  
Last EDR Contact: 05/10/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: No Update Planned

## SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/18/2013  
Date Data Arrived at EDR: 03/19/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 8

Source: Department of Conservation  
Telephone: 916-323-3836  
Last EDR Contact: 03/19/2013  
Next Scheduled EDR Contact: 07/01/2013  
Data Release Frequency: Quarterly

## HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 04/26/2013  
Date Data Arrived at EDR: 04/26/2013  
Date Made Active in Reports: 05/16/2013  
Number of Days to Update: 20

Source: Integrated Waste Management Board  
Telephone: 916-341-6422  
Last EDR Contact: 05/20/2013  
Next Scheduled EDR Contact: 09/02/2013  
Data Release Frequency: Varies

## INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998  
Date Data Arrived at EDR: 12/03/2007  
Date Made Active in Reports: 01/24/2008  
Number of Days to Update: 52

Source: Environmental Protection Agency  
Telephone: 703-308-8245  
Last EDR Contact: 05/03/2013  
Next Scheduled EDR Contact: 08/19/2013  
Data Release Frequency: Varies

## **Local Lists of Hazardous waste / Contaminated Sites**

### US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/04/2013  
Date Data Arrived at EDR: 03/12/2013  
Date Made Active in Reports: 05/10/2013  
Number of Days to Update: 59

Source: Drug Enforcement Administration  
Telephone: 202-307-1000  
Last EDR Contact: 03/04/2013  
Next Scheduled EDR Contact: 06/17/2013  
Data Release Frequency: Quarterly

## HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005  
Date Data Arrived at EDR: 08/03/2006  
Date Made Active in Reports: 08/24/2006  
Number of Days to Update: 21

Source: Department of Toxic Substance Control  
Telephone: 916-323-3400  
Last EDR Contact: 02/23/2009  
Next Scheduled EDR Contact: 05/25/2009  
Data Release Frequency: No Update Planned

## SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 03/13/2013  
Date Data Arrived at EDR: 03/14/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 13

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400  
Last EDR Contact: 05/07/2013  
Next Scheduled EDR Contact: 08/19/2013  
Data Release Frequency: Quarterly

## TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995  
Date Data Arrived at EDR: 08/30/1995  
Date Made Active in Reports: 09/26/1995  
Number of Days to Update: 27

Source: State Water Resources Control Board  
Telephone: 916-227-4364  
Last EDR Contact: 01/26/2009  
Next Scheduled EDR Contact: 04/27/2009  
Data Release Frequency: No Update Planned

## CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2012  
Date Data Arrived at EDR: 04/03/2013  
Date Made Active in Reports: 05/14/2013  
Number of Days to Update: 41

Source: Department of Toxic Substances Control  
Telephone: 916-255-6504  
Last EDR Contact: 04/01/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Varies

## US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007  
Date Data Arrived at EDR: 11/19/2008  
Date Made Active in Reports: 03/30/2009  
Number of Days to Update: 131

Source: Drug Enforcement Administration  
Telephone: 202-307-1000  
Last EDR Contact: 03/23/2009  
Next Scheduled EDR Contact: 06/22/2009  
Data Release Frequency: No Update Planned

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## **Local Lists of Registered Storage Tanks**

### CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 09/05/1995	Telephone: 916-341-5851
Date Made Active in Reports: 09/29/1995	Last EDR Contact: 12/28/1998
Number of Days to Update: 24	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

### UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009	Source: Department of Public Health
Date Data Arrived at EDR: 09/23/2009	Telephone: 707-463-4466
Date Made Active in Reports: 10/01/2009	Last EDR Contact: 03/04/2013
Number of Days to Update: 8	Next Scheduled EDR Contact: 06/17/2013
	Data Release Frequency: Annually

### HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990	Source: State Water Resources Control Board
Date Data Arrived at EDR: 01/25/1991	Telephone: 916-341-5851
Date Made Active in Reports: 02/12/1991	Last EDR Contact: 07/26/2001
Number of Days to Update: 18	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

### SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/07/2005	Telephone: N/A
Date Made Active in Reports: 08/11/2005	Last EDR Contact: 06/03/2005
Number of Days to Update: 35	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

## **Local Land Records**

### LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/06/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 04/25/2013	Telephone: 202-564-6023
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 04/29/2013
Number of Days to Update: 15	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Varies

### LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/15/2013	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 03/15/2013	Telephone: 916-323-3400
Date Made Active in Reports: 03/27/2013	Last EDR Contact: 03/11/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 06/24/2013
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/11/2013  
Date Data Arrived at EDR: 03/12/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 13

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400  
Last EDR Contact: 03/12/2013  
Next Scheduled EDR Contact: 06/24/2013  
Data Release Frequency: Semi-Annually

## **Records of Emergency Release Reports**

### HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2012  
Date Data Arrived at EDR: 01/03/2013  
Date Made Active in Reports: 02/27/2013  
Number of Days to Update: 55

Source: U.S. Department of Transportation  
Telephone: 202-366-4555  
Last EDR Contact: 04/02/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Annually

### CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/06/2012  
Date Data Arrived at EDR: 01/29/2013  
Date Made Active in Reports: 03/19/2013  
Number of Days to Update: 49

Source: Office of Emergency Services  
Telephone: 916-845-8400  
Last EDR Contact: 05/01/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Varies

### LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 03/18/2013  
Date Data Arrived at EDR: 03/19/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 8

Source: State Water Quality Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 05/02/2013  
Next Scheduled EDR Contact: 07/01/2013  
Data Release Frequency: Quarterly

### MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 03/18/2013  
Date Data Arrived at EDR: 03/19/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 8

Source: State Water Resources Control Board  
Telephone: 866-480-1028  
Last EDR Contact: 05/02/2013  
Next Scheduled EDR Contact: 07/01/2013  
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

## Other Ascertainable Records

### RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/12/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/15/2013	Telephone: (415) 495-8895
Date Made Active in Reports: 02/27/2013	Last EDR Contact: 05/02/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 07/15/2013
	Data Release Frequency: Varies

### DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012	Source: Department of Transportation, Office of Pipeline Safety
Date Data Arrived at EDR: 08/07/2012	Telephone: 202-366-4595
Date Made Active in Reports: 09/18/2012	Last EDR Contact: 05/07/2013
Number of Days to Update: 42	Next Scheduled EDR Contact: 08/19/2013
	Data Release Frequency: Varies

### DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 04/19/2013
Number of Days to Update: 62	Next Scheduled EDR Contact: 07/29/2013
	Data Release Frequency: Semi-Annually

### FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2011	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 02/26/2013	Telephone: 202-528-4285
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 03/11/2013
Number of Days to Update: 15	Next Scheduled EDR Contact: 06/24/2013
	Data Release Frequency: Varies

### CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2011  
Date Data Arrived at EDR: 01/15/2013  
Date Made Active in Reports: 03/13/2013  
Number of Days to Update: 57

Source: Department of Justice, Consent Decree Library  
Telephone: Varies  
Last EDR Contact: 04/01/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Varies

## ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/18/2012  
Date Data Arrived at EDR: 03/13/2013  
Date Made Active in Reports: 04/12/2013  
Number of Days to Update: 30

Source: EPA  
Telephone: 703-416-0223  
Last EDR Contact: 03/13/2013  
Next Scheduled EDR Contact: 06/24/2013  
Data Release Frequency: Annually

## UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010  
Date Data Arrived at EDR: 10/07/2011  
Date Made Active in Reports: 03/01/2012  
Number of Days to Update: 146

Source: Department of Energy  
Telephone: 505-845-0011  
Last EDR Contact: 02/25/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/05/2013  
Date Data Arrived at EDR: 04/18/2013  
Date Made Active in Reports: 05/10/2013  
Number of Days to Update: 22

Source: Department of Labor, Mine Safety and Health Administration  
Telephone: 303-231-5959  
Last EDR Contact: 03/06/2013  
Next Scheduled EDR Contact: 06/17/2013  
Data Release Frequency: Semi-Annually

## TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009  
Date Data Arrived at EDR: 09/01/2011  
Date Made Active in Reports: 01/10/2012  
Number of Days to Update: 131

Source: EPA  
Telephone: 202-566-0250  
Last EDR Contact: 02/26/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Annually

## TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006  
Date Data Arrived at EDR: 09/29/2010  
Date Made Active in Reports: 12/02/2010  
Number of Days to Update: 64

Source: EPA  
Telephone: 202-260-5521  
Last EDR Contact: 03/28/2013  
Next Scheduled EDR Contact: 07/08/2013  
Data Release Frequency: Every 4 Years

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 02/25/2013
Number of Days to Update: 25	Next Scheduled EDR Contact: 06/10/2013
	Data Release Frequency: Quarterly

### FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 02/25/2013
Number of Days to Update: 25	Next Scheduled EDR Contact: 06/10/2013
	Data Release Frequency: Quarterly

### HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

### HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

### SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009	Source: EPA
Date Data Arrived at EDR: 12/10/2010	Telephone: 202-564-4203
Date Made Active in Reports: 02/25/2011	Last EDR Contact: 04/29/2013
Number of Days to Update: 77	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/10/2011	Telephone: 202-564-5088
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 04/15/2013
Number of Days to Update: 61	Next Scheduled EDR Contact: 07/29/2013
	Data Release Frequency: Quarterly

## PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2012	Source: EPA
Date Data Arrived at EDR: 01/16/2013	Telephone: 202-566-0500
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 04/19/2013
Number of Days to Update: 114	Next Scheduled EDR Contact: 07/29/2013
	Data Release Frequency: Annually

## MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/21/2011	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 07/15/2011	Telephone: 301-415-7169
Date Made Active in Reports: 09/13/2011	Last EDR Contact: 03/11/2013
Number of Days to Update: 60	Next Scheduled EDR Contact: 06/24/2013
	Data Release Frequency: Quarterly

## RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/09/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 04/11/2013	Telephone: 202-343-9775
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 04/11/2013
Number of Days to Update: 29	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Quarterly

## FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/23/2011	Source: EPA
Date Data Arrived at EDR: 12/13/2011	Telephone: (415) 947-8000
Date Made Active in Reports: 03/01/2012	Last EDR Contact: 03/12/2013
Number of Days to Update: 79	Next Scheduled EDR Contact: 06/24/2013
	Data Release Frequency: Quarterly

## RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/17/1995  
Date Data Arrived at EDR: 07/03/1995  
Date Made Active in Reports: 08/07/1995  
Number of Days to Update: 35

Source: EPA  
Telephone: 202-564-4104  
Last EDR Contact: 06/02/2008  
Next Scheduled EDR Contact: 09/01/2008  
Data Release Frequency: No Update Planned

### RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/08/2012  
Date Data Arrived at EDR: 05/25/2012  
Date Made Active in Reports: 07/10/2012  
Number of Days to Update: 46

Source: Environmental Protection Agency  
Telephone: 202-564-8600  
Last EDR Contact: 04/29/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Varies

### BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011  
Date Data Arrived at EDR: 02/26/2013  
Date Made Active in Reports: 04/19/2013  
Number of Days to Update: 52

Source: EPA/NTIS  
Telephone: 800-424-9346  
Last EDR Contact: 02/26/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Biennially

### CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989  
Date Data Arrived at EDR: 07/27/1994  
Date Made Active in Reports: 08/02/1994  
Number of Days to Update: 6

Source: Department of Health Services  
Telephone: 916-255-2118  
Last EDR Contact: 05/31/1994  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

### NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 02/18/2013  
Date Data Arrived at EDR: 02/18/2013  
Date Made Active in Reports: 03/20/2013  
Number of Days to Update: 30

Source: State Water Resources Control Board  
Telephone: 916-445-9379  
Last EDR Contact: 02/18/2013  
Next Scheduled EDR Contact: 06/03/2013  
Data Release Frequency: Quarterly

### UIC: UIC Listing

A listing of underground control injection wells.

Date of Government Version: 03/05/2013  
Date Data Arrived at EDR: 03/19/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 8

Source: Department of Conservation  
Telephone: 916-445-2408  
Last EDR Contact: 03/19/2013  
Next Scheduled EDR Contact: 12/31/2012  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 04/01/2013	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 04/02/2013	Telephone: 916-323-3400
Date Made Active in Reports: 05/14/2013	Last EDR Contact: 04/02/2013
Number of Days to Update: 42	Next Scheduled EDR Contact: 07/15/2013
	Data Release Frequency: Quarterly

## HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CAL SITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/22/2009	Telephone: 916-323-3400
Date Made Active in Reports: 04/08/2009	Last EDR Contact: 01/22/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

## NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993	Source: State Water Resources Control Board
Date Data Arrived at EDR: 11/01/1993	Telephone: 916-445-3846
Date Made Active in Reports: 11/19/1993	Last EDR Contact: 03/25/2013
Number of Days to Update: 18	Next Scheduled EDR Contact: 07/08/2013
	Data Release Frequency: No Update Planned

## DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/11/2012	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 12/12/2012	Telephone: 916-327-4498
Date Made Active in Reports: 01/04/2013	Last EDR Contact: 03/11/2013
Number of Days to Update: 23	Next Scheduled EDR Contact: 12/24/2012
	Data Release Frequency: Annually

## WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009	Source: Los Angeles Water Quality Control Board
Date Data Arrived at EDR: 07/21/2009	Telephone: 213-576-6726
Date Made Active in Reports: 08/03/2009	Last EDR Contact: 04/01/2013
Number of Days to Update: 13	Next Scheduled EDR Contact: 07/15/2013
	Data Release Frequency: Varies

## ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/26/2013	Source: State Water Resources Control Board
Date Data Arrived at EDR: 04/29/2013	Telephone: 916-445-9379
Date Made Active in Reports: 05/16/2013	Last EDR Contact: 04/26/2013
Number of Days to Update: 17	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2011	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 06/22/2012	Telephone: 916-255-1136
Date Made Active in Reports: 07/06/2012	Last EDR Contact: 04/19/2013
Number of Days to Update: 14	Next Scheduled EDR Contact: 07/29/2013
	Data Release Frequency: Annually

## EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008	Source: California Air Resources Board
Date Data Arrived at EDR: 09/29/2010	Telephone: 916-322-2990
Date Made Active in Reports: 10/18/2010	Last EDR Contact: 03/29/2013
Number of Days to Update: 19	Next Scheduled EDR Contact: 07/08/2013
	Data Release Frequency: Varies

## INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 12/08/2006	Telephone: 202-208-3710
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 04/19/2013
Number of Days to Update: 34	Next Scheduled EDR Contact: 07/29/2013
	Data Release Frequency: Semi-Annually

## SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/09/2011	Telephone: 615-532-8599
Date Made Active in Reports: 05/02/2011	Last EDR Contact: 05/06/2013
Number of Days to Update: 54	Next Scheduled EDR Contact: 08/05/2013
	Data Release Frequency: Varies

## US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/04/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/15/2013	Telephone: 202-566-1917
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 05/20/2013
Number of Days to Update: 56	Next Scheduled EDR Contact: 09/02/2013
	Data Release Frequency: Quarterly

## PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/19/2011	Telephone: 202-566-0517
Date Made Active in Reports: 01/10/2012	Last EDR Contact: 05/03/2013
Number of Days to Update: 83	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 03/18/2013  
Date Data Arrived at EDR: 03/19/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 8

Source: Department of Conservation  
Telephone: 916-323-3836  
Last EDR Contact: 03/19/2013  
Next Scheduled EDR Contact: 07/01/2013  
Data Release Frequency: Quarterly

## MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 03/06/2013  
Date Data Arrived at EDR: 03/12/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 13

Source: Department of Public Health  
Telephone: 916-558-1784  
Last EDR Contact: 03/11/2013  
Next Scheduled EDR Contact: 06/24/2013  
Data Release Frequency: Varies

## COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005  
Date Data Arrived at EDR: 08/07/2009  
Date Made Active in Reports: 10/22/2009  
Number of Days to Update: 76

Source: Department of Energy  
Telephone: 202-586-8719  
Last EDR Contact: 04/18/2013  
Next Scheduled EDR Contact: 07/29/2013  
Data Release Frequency: Varies

## COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010  
Date Data Arrived at EDR: 01/03/2011  
Date Made Active in Reports: 03/21/2011  
Number of Days to Update: 77

Source: Environmental Protection Agency  
Telephone: N/A  
Last EDR Contact: 03/15/2013  
Next Scheduled EDR Contact: 06/24/2013  
Data Release Frequency: Varies

## HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/15/2013  
Date Data Arrived at EDR: 04/16/2013  
Date Made Active in Reports: 05/17/2013  
Number of Days to Update: 31

Source: Department of Toxic Substances Control  
Telephone: 916-440-7145  
Last EDR Contact: 04/16/2013  
Next Scheduled EDR Contact: 07/29/2013  
Data Release Frequency: Quarterly

## HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/25/2013  
Date Data Arrived at EDR: 02/26/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 27

Source: Department of Toxic Substances Control  
Telephone: 916-323-3400  
Last EDR Contact: 02/26/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Quarterly

## Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/19/2013  
Date Data Arrived at EDR: 02/20/2013  
Date Made Active in Reports: 03/20/2013  
Number of Days to Update: 28

Source: California Integrated Waste Management Board  
Telephone: 916-341-6066  
Last EDR Contact: 05/20/2013  
Next Scheduled EDR Contact: 09/02/2013  
Data Release Frequency: Varies

## Financial Assurance 1: Financial Assurance Information Listing Financial Assurance information

Date of Government Version: 03/01/2007  
Date Data Arrived at EDR: 06/01/2007  
Date Made Active in Reports: 06/29/2007  
Number of Days to Update: 28

Source: Department of Toxic Substances Control  
Telephone: 916-255-3628  
Last EDR Contact: 05/03/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Varies

## LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/29/2013  
Date Data Arrived at EDR: 02/14/2013  
Date Made Active in Reports: 02/27/2013  
Number of Days to Update: 13

Source: Environmental Protection Agency  
Telephone: 703-603-8787  
Last EDR Contact: 04/08/2013  
Next Scheduled EDR Contact: 07/22/2013  
Data Release Frequency: Varies

## LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001  
Date Data Arrived at EDR: 10/27/2010  
Date Made Active in Reports: 12/02/2010  
Number of Days to Update: 36

Source: American Journal of Public Health  
Telephone: 703-305-6451  
Last EDR Contact: 12/02/2009  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

## 2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011  
Date Data Arrived at EDR: 05/18/2012  
Date Made Active in Reports: 05/25/2012  
Number of Days to Update: 7

Source: Environmental Protection Agency  
Telephone: 703-308-4044  
Last EDR Contact: 05/17/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: Varies

## FEDLAND: Federal and Indian Lands

Federally and Indian administered lands of the United States. Lands included are administered by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005  
Date Data Arrived at EDR: 02/06/2006  
Date Made Active in Reports: 01/11/2007  
Number of Days to Update: 339

Source: U.S. Geological Survey  
Telephone: 888-275-8747  
Last EDR Contact: 04/19/2013  
Next Scheduled EDR Contact: 07/29/2013  
Data Release Frequency: N/A

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 12/02/2012	Source: EPA
Date Data Arrived at EDR: 01/03/2013	Telephone: 202-564-6023
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 04/04/2013
Number of Days to Update: 69	Next Scheduled EDR Contact: 07/15/2013
	Data Release Frequency: Quarterly

## WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/20/2007	Telephone: 916-341-5227
Date Made Active in Reports: 06/29/2007	Last EDR Contact: 02/25/2013
Number of Days to Update: 9	Next Scheduled EDR Contact: 06/10/2013
	Data Release Frequency: Quarterly

## US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 01/23/2013	Source: EPA
Date Data Arrived at EDR: 01/30/2013	Telephone: 202-564-5962
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 04/01/2013
Number of Days to Update: 100	Next Scheduled EDR Contact: 07/15/2013
	Data Release Frequency: Annually

## US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 01/23/2013	Source: EPA
Date Data Arrived at EDR: 01/30/2013	Telephone: 202-564-5962
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 04/01/2013
Number of Days to Update: 100	Next Scheduled EDR Contact: 07/15/2013
	Data Release Frequency: Annually

## EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 12/31/2012	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/18/2013	Telephone: 617-520-3000
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 05/10/2013
Number of Days to Update: 81	Next Scheduled EDR Contact: 08/26/2013
	Data Release Frequency: Quarterly

## EDR HIGH RISK HISTORICAL RECORDS

### *EDR Exclusive Records*

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: EDR, Inc.  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

## EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: EDR, Inc.  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: Varies

## EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: EDR, Inc.  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: Varies

## EDR US Hist Cleaners: EDR Proprietary Historic Dry Cleaners - Cole

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: N/A  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: Varies

## EDR US Hist Auto Stat: EDR Proprietary Historic Gas Stations - Cole

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: N/A  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## COUNTY RECORDS

### ALAMEDA COUNTY:

#### Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 04/15/2013  
Date Data Arrived at EDR: 04/16/2013  
Date Made Active in Reports: 05/16/2013  
Number of Days to Update: 30

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700  
Last EDR Contact: 04/01/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Semi-Annually

#### Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/15/2013  
Date Data Arrived at EDR: 04/16/2013  
Date Made Active in Reports: 05/16/2013  
Number of Days to Update: 30

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700  
Last EDR Contact: 04/01/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Semi-Annually

### AMADOR COUNTY:

#### CUPA Facility List

Cupa Facility List

Date of Government Version: 03/13/2013  
Date Data Arrived at EDR: 03/14/2013  
Date Made Active in Reports: 04/04/2013  
Number of Days to Update: 21

Source: Amador County Environmental Health  
Telephone: 209-223-6439  
Last EDR Contact: 03/11/2013  
Next Scheduled EDR Contact: 06/24/2013  
Data Release Frequency: Varies

### BUTTE COUNTY:

#### CUPA Facility Listing

Cupa facility list.

Date of Government Version: 10/16/2012  
Date Data Arrived at EDR: 10/17/2012  
Date Made Active in Reports: 11/13/2012  
Number of Days to Update: 27

Source: Public Health Department  
Telephone: 530-538-7149  
Last EDR Contact: 04/26/2013  
Next Scheduled EDR Contact: 04/29/2013  
Data Release Frequency: Varies

### CALVERAS COUNTY:

#### CUPA Facility Listing

Cupa Facility Listing

Date of Government Version: 04/16/2013  
Date Data Arrived at EDR: 04/17/2013  
Date Made Active in Reports: 05/16/2013  
Number of Days to Update: 29

Source: Calveras County Environmental Health  
Telephone: 209-754-6399  
Last EDR Contact: 04/15/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Quarterly

### COLUSA COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA Facility List

Cupa facility list.

Date of Government Version: 01/04/2013  
Date Data Arrived at EDR: 01/14/2013  
Date Made Active in Reports: 03/01/2013  
Number of Days to Update: 46

Source: Health & Human Services  
Telephone: 530-458-0396  
Last EDR Contact: 05/13/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: Varies

## CONTRA COSTA COUNTY:

### Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 04/09/2013  
Date Data Arrived at EDR: 04/10/2013  
Date Made Active in Reports: 05/14/2013  
Number of Days to Update: 34

Source: Contra Costa Health Services Department  
Telephone: 925-646-2286  
Last EDR Contact: 05/06/2013  
Next Scheduled EDR Contact: 08/19/2013  
Data Release Frequency: Semi-Annually

## DEL NORTE COUNTY:

### CUPA Facility List

Cupa Facility list

Date of Government Version: 01/09/2013  
Date Data Arrived at EDR: 01/10/2013  
Date Made Active in Reports: 02/25/2013  
Number of Days to Update: 46

Source: Del Norte County Environmental Health Division  
Telephone: 707-465-0426  
Last EDR Contact: 05/06/2013  
Next Scheduled EDR Contact: 08/19/2013  
Data Release Frequency: Varies

## EL DORADO COUNTY:

### CUPA Facility List

CUPA facility list.

Date of Government Version: 02/27/2013  
Date Data Arrived at EDR: 02/28/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 25

Source: El Dorado County Environmental Management Department  
Telephone: 530-621-6623  
Last EDR Contact: 05/06/2013  
Next Scheduled EDR Contact: 08/19/2013  
Data Release Frequency: Varies

## FRESNO COUNTY:

### CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 03/31/2013  
Date Data Arrived at EDR: 04/16/2013  
Date Made Active in Reports: 05/16/2013  
Number of Days to Update: 30

Source: Dept. of Community Health  
Telephone: 559-445-3271  
Last EDR Contact: 04/15/2013  
Next Scheduled EDR Contact: 07/29/2013  
Data Release Frequency: Semi-Annually

## HUMBOLDT COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA Facility List

CUPA facility list.

Date of Government Version: 03/15/2013  
Date Data Arrived at EDR: 03/19/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 8

Source: Humboldt County Environmental Health  
Telephone: N/A  
Last EDR Contact: 02/25/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## IMPERIAL COUNTY:

### CUPA Facility List

Cupa facility list.

Date of Government Version: 05/01/2012  
Date Data Arrived at EDR: 05/02/2012  
Date Made Active in Reports: 06/11/2012  
Number of Days to Update: 40

Source: San Diego Border Field Office  
Telephone: 760-339-2777  
Last EDR Contact: 04/29/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Varies

## INYO COUNTY:

### CUPA Facility List

Cupa facility list.

Date of Government Version: 06/26/2012  
Date Data Arrived at EDR: 06/27/2012  
Date Made Active in Reports: 08/17/2012  
Number of Days to Update: 51

Source: Inyo County Environmental Health Services  
Telephone: 760-878-0238  
Last EDR Contact: 02/25/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## KERN COUNTY:

### Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010  
Date Data Arrived at EDR: 09/01/2010  
Date Made Active in Reports: 09/30/2010  
Number of Days to Update: 29

Source: Kern County Environment Health Services Department  
Telephone: 661-862-8700  
Last EDR Contact: 05/10/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: Quarterly

## KINGS COUNTY:

### CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/12/2013  
Date Data Arrived at EDR: 02/13/2013  
Date Made Active in Reports: 03/21/2013  
Number of Days to Update: 36

Source: Kings County Department of Public Health  
Telephone: 559-584-1411  
Last EDR Contact: 02/12/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## LAKE COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA Facility List

Cupa facility list

Date of Government Version: 01/23/2013  
Date Data Arrived at EDR: 01/25/2013  
Date Made Active in Reports: 02/27/2013  
Number of Days to Update: 33

Source: Lake County Environmental Health  
Telephone: 707-263-1164  
Last EDR Contact: 04/19/2013  
Next Scheduled EDR Contact: 08/05/2013  
Data Release Frequency: Varies

## LOS ANGELES COUNTY:

### San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009  
Date Data Arrived at EDR: 03/31/2009  
Date Made Active in Reports: 10/23/2009  
Number of Days to Update: 206

Source: EPA Region 9  
Telephone: 415-972-3178  
Last EDR Contact: 05/10/2013  
Next Scheduled EDR Contact: 07/01/2013  
Data Release Frequency: No Update Planned

### HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/31/2012  
Date Data Arrived at EDR: 12/28/2012  
Date Made Active in Reports: 01/25/2013  
Number of Days to Update: 28

Source: Department of Public Works  
Telephone: 626-458-3517  
Last EDR Contact: 04/15/2013  
Next Scheduled EDR Contact: 07/29/2013  
Data Release Frequency: Semi-Annually

### List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/24/2013  
Date Data Arrived at EDR: 04/24/2013  
Date Made Active in Reports: 05/17/2013  
Number of Days to Update: 23

Source: La County Department of Public Works  
Telephone: 818-458-5185  
Last EDR Contact: 04/24/2013  
Next Scheduled EDR Contact: 08/05/2013  
Data Release Frequency: Varies

### City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009  
Date Data Arrived at EDR: 03/10/2009  
Date Made Active in Reports: 04/08/2009  
Number of Days to Update: 29

Source: Engineering & Construction Division  
Telephone: 213-473-7869  
Last EDR Contact: 05/20/2013  
Next Scheduled EDR Contact: 09/02/2013  
Data Release Frequency: Varies

### Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/30/2013  
Date Data Arrived at EDR: 02/21/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 32

Source: Community Health Services  
Telephone: 323-890-7806  
Last EDR Contact: 04/19/2013  
Next Scheduled EDR Contact: 08/05/2013  
Data Release Frequency: Annually

### City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/22/2013  
Date Data Arrived at EDR: 04/29/2013  
Date Made Active in Reports: 05/17/2013  
Number of Days to Update: 18

Source: City of El Segundo Fire Department  
Telephone: 310-524-2236  
Last EDR Contact: 04/19/2013  
Next Scheduled EDR Contact: 08/05/2013  
Data Release Frequency: Semi-Annually

## City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003  
Date Data Arrived at EDR: 10/23/2003  
Date Made Active in Reports: 11/26/2003  
Number of Days to Update: 34

Source: City of Long Beach Fire Department  
Telephone: 562-570-2563  
Last EDR Contact: 04/26/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Annually

## City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/15/2013  
Date Data Arrived at EDR: 04/16/2013  
Date Made Active in Reports: 05/17/2013  
Number of Days to Update: 31

Source: City of Torrance Fire Department  
Telephone: 310-618-2973  
Last EDR Contact: 04/15/2013  
Next Scheduled EDR Contact: 07/29/2013  
Data Release Frequency: Semi-Annually

## MADERA COUNTY:

### CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 04/15/2013  
Date Data Arrived at EDR: 04/16/2013  
Date Made Active in Reports: 05/17/2013  
Number of Days to Update: 31

Source: Madera County Environmental Health  
Telephone: 559-675-7823  
Last EDR Contact: 04/01/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## MARIN COUNTY:

### Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 11/26/2012  
Date Data Arrived at EDR: 11/28/2012  
Date Made Active in Reports: 01/21/2013  
Number of Days to Update: 54

Source: Public Works Department Waste Management  
Telephone: 415-499-6647  
Last EDR Contact: 04/08/2013  
Next Scheduled EDR Contact: 07/22/2013  
Data Release Frequency: Semi-Annually

## MERCED COUNTY:

### CUPA Facility List

CUPA facility list.

Date of Government Version: 02/25/2013  
Date Data Arrived at EDR: 02/26/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 27

Source: Merced County Environmental Health  
Telephone: 209-381-1094  
Last EDR Contact: 02/25/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## MONO COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CUPA Facility List

### CUPA Facility List

Date of Government Version: 03/04/2013  
Date Data Arrived at EDR: 03/08/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 17

Source: Mono County Health Department  
Telephone: 760-932-5580  
Last EDR Contact: 03/04/2013  
Next Scheduled EDR Contact: 06/17/2013  
Data Release Frequency: Varies

## MONTEREY COUNTY:

### CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 03/14/2013  
Date Data Arrived at EDR: 03/15/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 12

Source: Monterey County Health Department  
Telephone: 831-796-1297  
Last EDR Contact: 02/25/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## NAPA COUNTY:

### Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011  
Date Data Arrived at EDR: 12/06/2011  
Date Made Active in Reports: 02/07/2012  
Number of Days to Update: 63

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269  
Last EDR Contact: 03/04/2013  
Next Scheduled EDR Contact: 06/17/2013  
Data Release Frequency: No Update Planned

### Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008  
Date Data Arrived at EDR: 01/16/2008  
Date Made Active in Reports: 02/08/2008  
Number of Days to Update: 23

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269  
Last EDR Contact: 03/04/2013  
Next Scheduled EDR Contact: 06/17/2013  
Data Release Frequency: No Update Planned

## NEVADA COUNTY:

### CUPA Facility List

CUPA facility list.

Date of Government Version: 03/08/2013  
Date Data Arrived at EDR: 03/08/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 17

Source: Community Development Agency  
Telephone: 530-265-1467  
Last EDR Contact: 05/17/2013  
Next Scheduled EDR Contact: 08/19/2013  
Data Release Frequency: Varies

## ORANGE COUNTY:

### List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/04/2013  
Date Data Arrived at EDR: 02/26/2013  
Date Made Active in Reports: 03/20/2013  
Number of Days to Update: 22

Source: Health Care Agency  
Telephone: 714-834-3446  
Last EDR Contact: 05/10/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: Annually

## List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/04/2013  
Date Data Arrived at EDR: 02/19/2013  
Date Made Active in Reports: 03/20/2013  
Number of Days to Update: 29

Source: Health Care Agency  
Telephone: 714-834-3446  
Last EDR Contact: 05/10/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: Quarterly

## List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/04/2013  
Date Data Arrived at EDR: 02/18/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 37

Source: Health Care Agency  
Telephone: 714-834-3446  
Last EDR Contact: 05/10/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: Quarterly

## PLACER COUNTY:

### Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/12/2013  
Date Data Arrived at EDR: 03/13/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 14

Source: Placer County Health and Human Services  
Telephone: 530-745-2363  
Last EDR Contact: 03/11/2013  
Next Scheduled EDR Contact: 06/24/2013  
Data Release Frequency: Semi-Annually

## RIVERSIDE COUNTY:

### Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/23/2013  
Date Data Arrived at EDR: 04/24/2013  
Date Made Active in Reports: 05/17/2013  
Number of Days to Update: 23

Source: Department of Environmental Health  
Telephone: 951-358-5055  
Last EDR Contact: 03/25/2013  
Next Scheduled EDR Contact: 07/08/2013  
Data Release Frequency: Quarterly

### Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 04/23/2013  
Date Data Arrived at EDR: 04/24/2013  
Date Made Active in Reports: 05/16/2013  
Number of Days to Update: 22

Source: Department of Environmental Health  
Telephone: 951-358-5055  
Last EDR Contact: 03/25/2013  
Next Scheduled EDR Contact: 07/08/2013  
Data Release Frequency: Quarterly

## SACRAMENTO COUNTY:

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/04/2013  
Date Data Arrived at EDR: 04/11/2013  
Date Made Active in Reports: 05/14/2013  
Number of Days to Update: 33

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406  
Last EDR Contact: 04/08/2013  
Next Scheduled EDR Contact: 07/22/2013  
Data Release Frequency: Quarterly

## Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/04/2013  
Date Data Arrived at EDR: 04/12/2013  
Date Made Active in Reports: 05/16/2013  
Number of Days to Update: 34

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406  
Last EDR Contact: 04/08/2013  
Next Scheduled EDR Contact: 07/22/2013  
Data Release Frequency: Quarterly

## SAN BERNARDINO COUNTY:

### Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 03/04/2013  
Date Data Arrived at EDR: 03/05/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 20

Source: San Bernardino County Fire Department Hazardous Materials Division  
Telephone: 909-387-3041  
Last EDR Contact: 05/13/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: Quarterly

## SAN DIEGO COUNTY:

### Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 08/17/2012  
Date Data Arrived at EDR: 08/20/2012  
Date Made Active in Reports: 10/03/2012  
Number of Days to Update: 44

Source: Hazardous Materials Management Division  
Telephone: 619-338-2268  
Last EDR Contact: 04/29/2013  
Next Scheduled EDR Contact: 06/24/2013  
Data Release Frequency: Quarterly

### Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2012  
Date Data Arrived at EDR: 11/06/2012  
Date Made Active in Reports: 11/30/2012  
Number of Days to Update: 24

Source: Department of Health Services  
Telephone: 619-338-2209  
Last EDR Contact: 04/26/2013  
Next Scheduled EDR Contact: 08/12/2013  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010  
Date Data Arrived at EDR: 06/15/2010  
Date Made Active in Reports: 07/09/2010  
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health  
Telephone: 619-338-2371  
Last EDR Contact: 03/12/2013  
Next Scheduled EDR Contact: 06/24/2013  
Data Release Frequency: No Update Planned

## SAN FRANCISCO COUNTY:

### Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008  
Date Data Arrived at EDR: 09/19/2008  
Date Made Active in Reports: 09/29/2008  
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County  
Telephone: 415-252-3920  
Last EDR Contact: 05/10/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: Quarterly

### Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010  
Date Data Arrived at EDR: 03/10/2011  
Date Made Active in Reports: 03/15/2011  
Number of Days to Update: 5

Source: Department of Public Health  
Telephone: 415-252-3920  
Last EDR Contact: 05/10/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: Quarterly

## SAN JOAQUIN COUNTY:

### San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 03/25/2013  
Date Data Arrived at EDR: 03/25/2013  
Date Made Active in Reports: 04/18/2013  
Number of Days to Update: 24

Source: Environmental Health Department  
Telephone: N/A  
Last EDR Contact: 03/25/2013  
Next Scheduled EDR Contact: 07/08/2013  
Data Release Frequency: Semi-Annually

## SAN LUIS OBISPO COUNTY:

### CUPA Facility List

Cupa Facility List.

Date of Government Version: 02/26/2013  
Date Data Arrived at EDR: 02/26/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 27

Source: San Luis Obispo County Public Health Department  
Telephone: 805-781-5596  
Last EDR Contact: 02/25/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## SAN MATEO COUNTY:

### Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/09/2013  
Date Data Arrived at EDR: 04/10/2013  
Date Made Active in Reports: 05/14/2013  
Number of Days to Update: 34

Source: San Mateo County Environmental Health Services Division  
Telephone: 650-363-1921  
Last EDR Contact: 03/18/2013  
Next Scheduled EDR Contact: 07/01/2013  
Data Release Frequency: Annually

## Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/18/2013  
Date Data Arrived at EDR: 03/19/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 8

Source: San Mateo County Environmental Health Services Division  
Telephone: 650-363-1921  
Last EDR Contact: 03/18/2013  
Next Scheduled EDR Contact: 07/01/2013  
Data Release Frequency: Semi-Annually

## SANTA BARBARA COUNTY:

### CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011  
Date Data Arrived at EDR: 09/09/2011  
Date Made Active in Reports: 10/07/2011  
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department  
Telephone: 805-686-8167  
Last EDR Contact: 05/20/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## SANTA CLARA COUNTY:

### Cupa Facility List

Cupa facility list

Date of Government Version: 03/04/2013  
Date Data Arrived at EDR: 03/05/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 20

Source: Department of Environmental Health  
Telephone: 408-918-1973  
Last EDR Contact: 03/04/2013  
Next Scheduled EDR Contact: 06/17/2013  
Data Release Frequency: Varies

### HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005  
Date Data Arrived at EDR: 03/30/2005  
Date Made Active in Reports: 04/21/2005  
Number of Days to Update: 22

Source: Santa Clara Valley Water District  
Telephone: 408-265-2600  
Last EDR Contact: 03/23/2009  
Next Scheduled EDR Contact: 06/22/2009  
Data Release Frequency: No Update Planned

### LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/04/2013  
Date Data Arrived at EDR: 03/06/2013  
Date Made Active in Reports: 03/25/2013  
Number of Days to Update: 19

Source: Department of Environmental Health  
Telephone: 408-918-3417  
Last EDR Contact: 03/04/2013  
Next Scheduled EDR Contact: 06/17/2013  
Data Release Frequency: Annually

### Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/12/2013  
Date Data Arrived at EDR: 02/14/2013  
Date Made Active in Reports: 03/20/2013  
Number of Days to Update: 34

Source: City of San Jose Fire Department  
Telephone: 408-535-7694  
Last EDR Contact: 05/13/2013  
Next Scheduled EDR Contact: 08/26/2013  
Data Release Frequency: Annually

## SANTA CRUZ COUNTY:

CUPA Facility List  
CUPA facility listing.

Date of Government Version: 02/26/2013  
Date Data Arrived at EDR: 02/26/2013  
Date Made Active in Reports: 03/20/2013  
Number of Days to Update: 22

Source: Santa Cruz County Environmental Health  
Telephone: 831-464-2761  
Last EDR Contact: 02/25/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## SHASTA COUNTY:

CUPA Facility List  
Cupa Facility List.

Date of Government Version: 03/15/2013  
Date Data Arrived at EDR: 03/15/2013  
Date Made Active in Reports: 03/27/2013  
Number of Days to Update: 12

Source: Shasta County Department of Resource Management  
Telephone: 530-225-5789  
Last EDR Contact: 02/25/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Varies

## SOLANO COUNTY:

Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 03/20/2013  
Date Data Arrived at EDR: 03/28/2013  
Date Made Active in Reports: 05/14/2013  
Number of Days to Update: 47

Source: Solano County Department of Environmental Management  
Telephone: 707-784-6770  
Last EDR Contact: 03/18/2013  
Next Scheduled EDR Contact: 07/01/2013  
Data Release Frequency: Quarterly

Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 03/20/2013  
Date Data Arrived at EDR: 03/28/2013  
Date Made Active in Reports: 05/13/2013  
Number of Days to Update: 46

Source: Solano County Department of Environmental Management  
Telephone: 707-784-6770  
Last EDR Contact: 03/18/2013  
Next Scheduled EDR Contact: 07/01/2013  
Data Release Frequency: Quarterly

## SONOMA COUNTY:

Cupa Facility List  
Cupa Facility list

Date of Government Version: 04/01/2013  
Date Data Arrived at EDR: 04/03/2013  
Date Made Active in Reports: 05/14/2013  
Number of Days to Update: 41

Source: County of Sonoma Fire & Emergency Services Department  
Telephone: 707-565-1174  
Last EDR Contact: 04/01/2013  
Next Scheduled EDR Contact: 07/15/2013  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/02/2013	Source: Department of Health Services
Date Data Arrived at EDR: 04/03/2013	Telephone: 707-565-6565
Date Made Active in Reports: 05/14/2013	Last EDR Contact: 04/01/2013
Number of Days to Update: 41	Next Scheduled EDR Contact: 07/15/2013
	Data Release Frequency: Quarterly

## SUTTER COUNTY:

### Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 03/13/2013	Source: Sutter County Department of Agriculture
Date Data Arrived at EDR: 03/14/2013	Telephone: 530-822-7500
Date Made Active in Reports: 03/27/2013	Last EDR Contact: 03/11/2013
Number of Days to Update: 13	Next Scheduled EDR Contact: 06/24/2013
	Data Release Frequency: Semi-Annually

## TUOLUMNE COUNTY:

### CUPA Facility List

Cupa facility list

Date of Government Version: 01/14/2013	Source: Division of Environmental Health
Date Data Arrived at EDR: 01/16/2013	Telephone: 209-533-5633
Date Made Active in Reports: 02/27/2013	Last EDR Contact: 05/15/2013
Number of Days to Update: 42	Next Scheduled EDR Contact: 07/29/2013
	Data Release Frequency: Varies

## VENTURA COUNTY:

### Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/30/2012	Source: Ventura County Environmental Health Division
Date Data Arrived at EDR: 05/25/2012	Telephone: 805-654-2813
Date Made Active in Reports: 07/06/2012	Last EDR Contact: 05/20/2013
Number of Days to Update: 42	Next Scheduled EDR Contact: 09/02/2013
	Data Release Frequency: Quarterly

### Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011	Source: Environmental Health Division
Date Data Arrived at EDR: 12/01/2011	Telephone: 805-654-2813
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 04/08/2013
Number of Days to Update: 49	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Annually

### Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008	Source: Environmental Health Division
Date Data Arrived at EDR: 06/24/2008	Telephone: 805-654-2813
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 02/18/2013
Number of Days to Update: 37	Next Scheduled EDR Contact: 06/03/2013
	Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 01/28/2013	Source: Ventura County Resource Management Agency
Date Data Arrived at EDR: 02/01/2013	Telephone: 805-654-2813
Date Made Active in Reports: 03/20/2013	Last EDR Contact: 01/29/2013
Number of Days to Update: 47	Next Scheduled EDR Contact: 05/13/2013
	Data Release Frequency: Quarterly

## Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 03/01/2013	Source: Environmental Health Division
Date Data Arrived at EDR: 03/28/2013	Telephone: 805-654-2813
Date Made Active in Reports: 05/13/2013	Last EDR Contact: 03/18/2013
Number of Days to Update: 46	Next Scheduled EDR Contact: 07/01/2013
	Data Release Frequency: Quarterly

## YOLO COUNTY:

### Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 03/25/2013	Source: Yolo County Department of Health
Date Data Arrived at EDR: 03/29/2013	Telephone: 530-666-8646
Date Made Active in Reports: 05/13/2013	Last EDR Contact: 03/25/2013
Number of Days to Update: 45	Next Scheduled EDR Contact: 07/08/2013
	Data Release Frequency: Annually

## YUBA COUNTY:

### CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 03/05/2013	Source: Yuba County Environmental Health Department
Date Data Arrived at EDR: 03/06/2013	Telephone: 530-749-7523
Date Made Active in Reports: 03/25/2013	Last EDR Contact: 05/20/2013
Number of Days to Update: 19	Next Scheduled EDR Contact: 08/19/2013
	Data Release Frequency: Varies

## OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

### CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 02/18/2013	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 02/18/2013	Telephone: 860-424-3375
Date Made Active in Reports: 03/21/2013	Last EDR Contact: 02/18/2013
Number of Days to Update: 31	Next Scheduled EDR Contact: 06/03/2013
	Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2011  
Date Data Arrived at EDR: 07/19/2012  
Date Made Active in Reports: 08/28/2012  
Number of Days to Update: 40

Source: Department of Environmental Protection  
Telephone: N/A  
Last EDR Contact: 04/19/2013  
Next Scheduled EDR Contact: 07/29/2013  
Data Release Frequency: Annually

## NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 02/01/2013  
Date Data Arrived at EDR: 02/07/2013  
Date Made Active in Reports: 03/15/2013  
Number of Days to Update: 36

Source: Department of Environmental Conservation  
Telephone: 518-402-8651  
Last EDR Contact: 05/09/2013  
Next Scheduled EDR Contact: 08/19/2013  
Data Release Frequency: Annually

## PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2011  
Date Data Arrived at EDR: 07/23/2012  
Date Made Active in Reports: 09/18/2012  
Number of Days to Update: 57

Source: Department of Environmental Protection  
Telephone: 717-783-8990  
Last EDR Contact: 04/23/2013  
Next Scheduled EDR Contact: 08/05/2013  
Data Release Frequency: Annually

## RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2011  
Date Data Arrived at EDR: 06/22/2012  
Date Made Active in Reports: 07/31/2012  
Number of Days to Update: 39

Source: Department of Environmental Management  
Telephone: 401-222-2797  
Last EDR Contact: 02/25/2013  
Next Scheduled EDR Contact: 06/10/2013  
Data Release Frequency: Annually

## WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2011  
Date Data Arrived at EDR: 07/19/2012  
Date Made Active in Reports: 09/27/2012  
Number of Days to Update: 70

Source: Department of Natural Resources  
Telephone: N/A  
Last EDR Contact: 03/18/2013  
Next Scheduled EDR Contact: 07/01/2013  
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

## Electric Power Transmission Line Data

Source: Rextag Strategies Corp.  
Telephone: (281) 769-2247

U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

## AHA Hospitals:

Source: American Hospital Association, Inc.  
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

### Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

### Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

### Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

### Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

### Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

## **STREET AND ADDRESS INFORMATION**

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## GEOCHECK<sup>®</sup> - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

900 INNES AVENUE SITE  
900 INNES AVE  
SAN FRANCISCO, CA 94124

### TARGET PROPERTY COORDINATES

Latitude (North):	37.7322 - 37° 43' 55.92"
Longitude (West):	122.3758 - 122° 22' 32.88"
Universal Transverse Mercator:	Zone 10
UTM X (Meters):	555003.4
UTM Y (Meters):	4176081.0
Elevation:	27 ft. above sea level

### USGS TOPOGRAPHIC MAP

Target Property Map:	37122-F4 SAN FRANCISCO SOUTH, CA
Most Recent Revision:	1999
East Map:	37122-F3 HUNTERS POINT, CA
Most Recent Revision:	1980

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

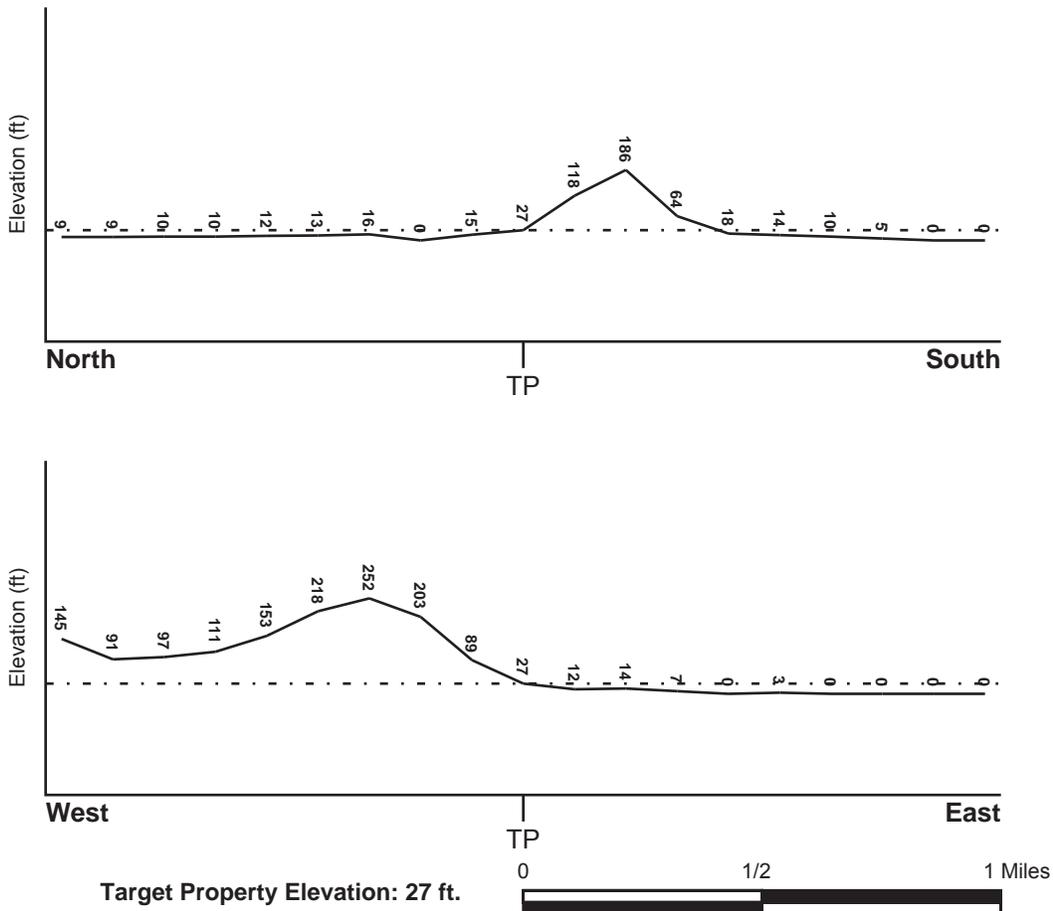
## TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

## TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE

## SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

## FEMA FLOOD ZONE

<u>Target Property County</u>	<u>FEMA Flood Electronic Data</u>
SAN FRANCISCO, CA	Not Available

Flood Plain Panel at Target Property: Not Reported

Additional Panels in search area: Not Reported

## NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
HUNTERS POINT	YES - refer to the Overview Map and Detail Map

## HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

### Site-Specific Hydrogeological Data\*:

Search Radius:	1.25 miles
Location Relative to TP:	1/2 - 1 Mile SSE
Site Name:	Treasure Island Naval Station-Hun Pt An
Site EPA ID Number:	CA1170090087
Groundwater Flow Direction:	INLAND ON THE SOUTH SIDE OF THE SITE AND TOWARD THE BAY IN THE AREA NORTH OF THE BEDROCK RIDGE AT THE CENTER OF THE SITE.
Measured Depth to Water:	2 feet to 12 feet.
Hydraulic Connection:	The bay mud acts as an aquitard between the surficial and lower aquifers.
Sole Source Aquifer:	No information about a sole source aquifer is available
Data Quality:	Information based on site-specific subsurface investigations is documented in the CERCLIS investigation report(s)

## AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
---------------	-------------------------	---

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
A1	0 - 1/8 Mile WSW	SE
A2	0 - 1/8 Mile WSW	SE
A3	0 - 1/8 Mile WNW	SW
4	1/8 - 1/4 Mile WNW	W
B5	1/2 - 1 Mile NNW	NW
B6	1/2 - 1 Mile NNW	NW
C7	1/2 - 1 Mile North	Varies
C8	1/2 - 1 Mile North	Varies
D9	1/2 - 1 Mile SW	NW
D10	1/2 - 1 Mile SW	NW
E11	1/2 - 1 Mile SSW	NE
E12	1/2 - 1 Mile SSW	NE
E13	1/2 - 1 Mile SSW	NE
F14	1/2 - 1 Mile WSW	Not Reported
F15	1/2 - 1 Mile WSW	Not Reported
G16	1/2 - 1 Mile SW	S
G17	1/2 - 1 Mile SW	S
H19	1/2 - 1 Mile WNW	SE, SW
I20	1/2 - 1 Mile West	SE
I21	1/2 - 1 Mile West	SE
I22	1/2 - 1 Mile West	NW
J23	1/2 - 1 Mile NW	W
J24	1/2 - 1 Mile NW	W
J25	1/2 - 1 Mile NW	E
J26	1/2 - 1 Mile NW	E
J27	1/2 - 1 Mile NW	E
K28	1/2 - 1 Mile WSW	S
K29	1/2 - 1 Mile WSW	S
L30	1/2 - 1 Mile SW	Not Reported
L31	1/2 - 1 Mile SW	Not Reported
M32	1/2 - 1 Mile NW	S
M33	1/2 - 1 Mile NW	S
34	1/2 - 1 Mile WSW	SE
M35	1/2 - 1 Mile NW	Varies
N36	1/2 - 1 Mile NW	SE
N37	1/2 - 1 Mile NW	SE

For additional site information, refer to Physical Setting Source Map Findings.

## **GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY**

### **GROUNDWATER FLOW VELOCITY INFORMATION**

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### **GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY**

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### **ROCK STRATIGRAPHIC UNIT**

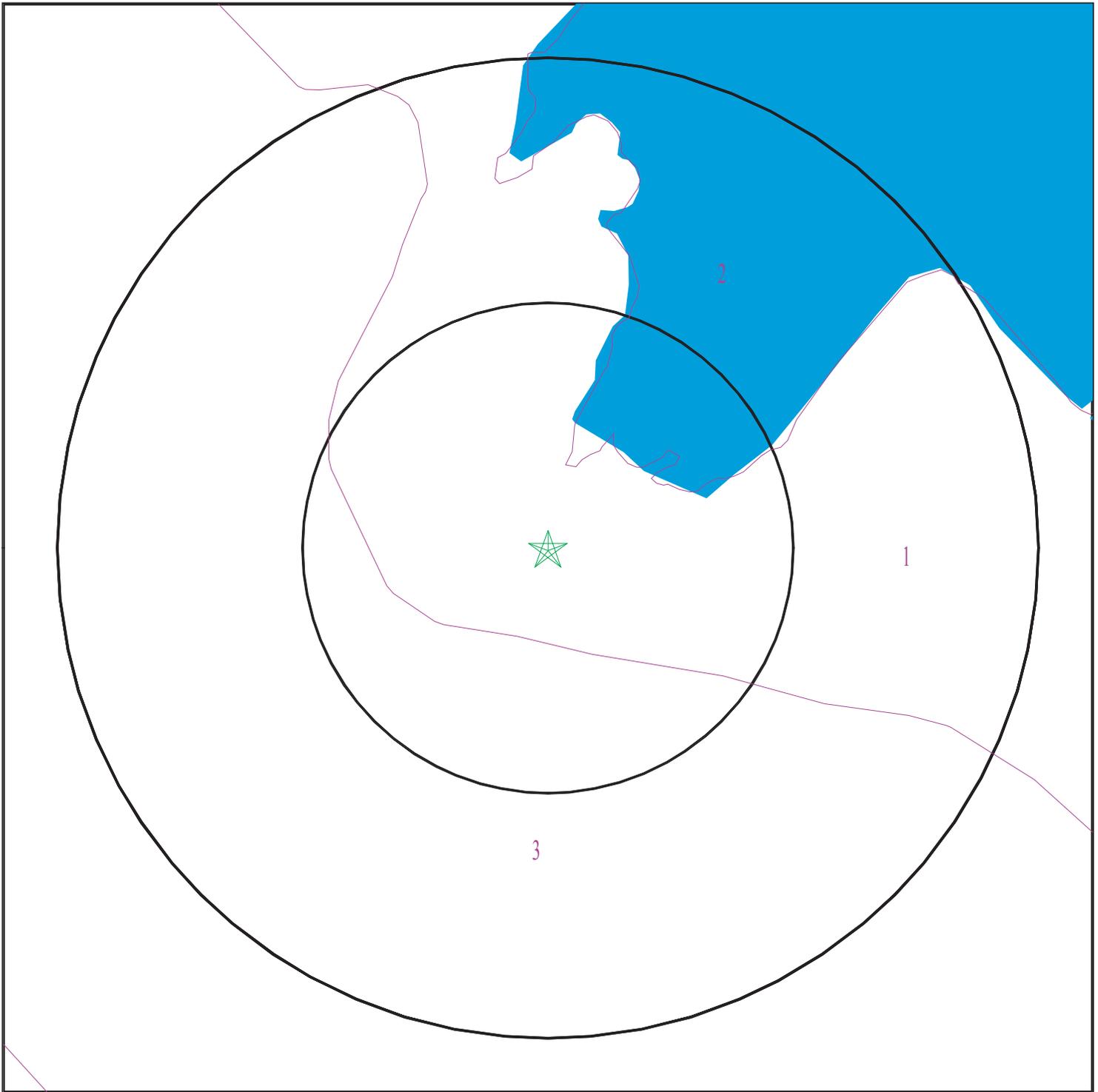
Era: Paleozoic  
System: Permian  
Series: Ultramafic rocks  
Code: uM *(decoded above as Era, System & Series)*

#### **GEOLOGIC AGE IDENTIFICATION**

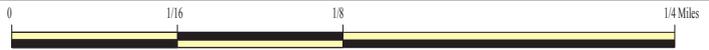
Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

# SSURGO SOIL MAP - 3611816.2s



- ★ Target Property
- SSURGO Soil
- Water



SITE NAME: 900 Innes Avenue Site  
ADDRESS: 900 Innes Ave  
San Francisco CA 94124  
LAT/LONG: 37.7322 / 122.3758

CLIENT: Weston Solutions, Inc.  
CONTACT: Ian Bruce  
INQUIRY #: 3611816.2s  
DATE: May 20, 2013 6:02 pm

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

### Soil Map ID: 1

Soil Component Name: Urban land

Soil Surface Texture:  
Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:  
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches		Not reported	Not reported	Max: 0.01 Min: 0	Max: Min:

### Soil Map ID: 2

Soil Component Name: Water

Soil Surface Texture:  
Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:  
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**Soil Map ID: 3**

Soil Component Name: Orthents

Soil Surface Texture:  
Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	59 inches		Not reported	Not reported	Max: Min:	Max: Min:

**LOCAL / REGIONAL WATER AGENCY RECORDS**

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

**WELL SEARCH DISTANCE INFORMATION**

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

**FEDERAL USGS WELL INFORMATION**

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
<u>                    </u>	<u>                    </u>	<u>                    </u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

## STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
<u>                    </u>	<u>                    </u>	<u>                    </u>
No Wells Found		

# PHYSICAL SETTING SOURCE MAP - 3611816.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: 900 Innes Avenue Site  
 ADDRESS: 900 Innes Ave  
 San Francisco CA 94124  
 LAT/LONG: 37.7322 / 122.3758

CLIENT: Weston Solutions, Inc.  
 CONTACT: Ian Bruce  
 INQUIRY #: 3611816.2s  
 DATE: May 20, 2013 6:02 pm

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID	Direction	Distance	Elevation	Database	EDR ID Number
<b>A1</b>	Site ID:	38-0705			
<b>WSW</b>	Groundwater Flow:	SE		<b>AQUIFLOW</b>	<b>70059</b>
<b>0 - 1/8 Mile</b>	Shallow Water Depth:	87			
<b>Higher</b>	Deep Water Depth:	90			
	Average Water Depth:	Not Reported			
	Date:	01/12/1996			
<hr/>					
<b>A2</b>	Site ID:	38-0705			
<b>WSW</b>	Groundwater Flow:	SE		<b>AQUIFLOW</b>	<b>70058</b>
<b>0 - 1/8 Mile</b>	Shallow Water Depth:	9.0			
<b>Higher</b>	Deep Water Depth:	18.0			
	Average Water Depth:	Not Reported			
	Date:	11/10/1995			
<hr/>					
<b>A3</b>	Site ID:	38-0264			
<b>WNW</b>	Groundwater Flow:	SW		<b>AQUIFLOW</b>	<b>69777</b>
<b>0 - 1/8 Mile</b>	Shallow Water Depth:	3.0			
<b>Higher</b>	Deep Water Depth:	10.5			
	Average Water Depth:	Not Reported			
	Date:	01/19/1996			
<hr/>					
<b>4</b>	Site ID:	38-10588			
<b>WNW</b>	Groundwater Flow:	W		<b>AQUIFLOW</b>	<b>69850</b>
<b>1/8 - 1/4 Mile</b>	Shallow Water Depth:	3.10			
<b>Higher</b>	Deep Water Depth:	7.15			
	Average Water Depth:	Not Reported			
	Date:	10/10/1989			
<hr/>					
<b>B5</b>	Site ID:	38-0207			
<b>NNW</b>	Groundwater Flow:	NW		<b>AQUIFLOW</b>	<b>51272</b>
<b>1/2 - 1 Mile</b>	Shallow Water Depth:	8.58			
<b>Lower</b>	Deep Water Depth:	18.90			
	Average Water Depth:	Not Reported			
	Date:	01/12/1995			
<hr/>					
<b>B6</b>	Site ID:	10208			
<b>NNW</b>	Groundwater Flow:	NW		<b>AQUIFLOW</b>	<b>51273</b>
<b>1/2 - 1 Mile</b>	Shallow Water Depth:	8.58			
<b>Lower</b>	Deep Water Depth:	18.90			
	Average Water Depth:	Not Reported			
	Date:	01/12/1995			
<hr/>					
<b>C7</b>	Site ID:	38-0847			
<b>North</b>	Groundwater Flow:	Varies		<b>AQUIFLOW</b>	<b>70676</b>
<b>1/2 - 1 Mile</b>	Shallow Water Depth:	9.0			
<b>Lower</b>	Deep Water Depth:	9.5			
	Average Water Depth:	Not Reported			
	Date:	09/06/1996			

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
<b>C8</b> <b>North</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0847	<b>AQUIFLOW</b>	<b>70677</b>
	Groundwater Flow:	Varies		
	Shallow Water Depth:	9.0		
	Deep Water Depth:	9.50		
	Average Water Depth:	Not Reported		
Date:	11/01/1997			
<b>D9</b> <b>SW</b> <b>1/2 - 1 Mile</b> <b>Higher</b>	Site ID:	38-0664	<b>AQUIFLOW</b>	<b>70765</b>
	Groundwater Flow:	NW		
	Shallow Water Depth:	54		
	Deep Water Depth:	76		
	Average Water Depth:	Not Reported		
Date:	07/06/1995			
<b>D10</b> <b>SW</b> <b>1/2 - 1 Mile</b> <b>Higher</b>	Site ID:	38-0664	<b>AQUIFLOW</b>	<b>70766</b>
	Groundwater Flow:	NW		
	Shallow Water Depth:	80.0		
	Deep Water Depth:	86.0		
	Average Water Depth:	Not Reported		
Date:	09/26/1995			
<b>E11</b> <b>SSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0677	<b>AQUIFLOW</b>	<b>70669</b>
	Groundwater Flow:	NE		
	Shallow Water Depth:	1.0		
	Deep Water Depth:	2.5		
	Average Water Depth:	Not Reported		
Date:	01/01/1987			
<b>E12</b> <b>SSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0677	<b>AQUIFLOW</b>	<b>70670</b>
	Groundwater Flow:	NE		
	Shallow Water Depth:	8.0		
	Deep Water Depth:	9.5		
	Average Water Depth:	Not Reported		
Date:	10/17/1995			
<b>E13</b> <b>SSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0677	<b>AQUIFLOW</b>	<b>70671</b>
	Groundwater Flow:	NE		
	Shallow Water Depth:	8.0		
	Deep Water Depth:	9.0		
	Average Water Depth:	Not Reported		
Date:	09/29/1998			
<b>F14</b> <b>WSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-00510	<b>AQUIFLOW</b>	<b>51246</b>
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	11.5		
Date:	06/27/1994			

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
<b>F15</b> <b>WSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	38-0510 Not Reported Not Reported Not Reported 11.5 06/27/1994	<b>AQUIFLOW</b>	<b>51244</b>
<b>G16</b> <b>SW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	38-11091 S Not Reported Not Reported 12.5 11/30/1998	<b>AQUIFLOW</b>	<b>69102</b>
<b>G17</b> <b>SW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	38-11091 S Not Reported Not Reported 10 ft 09/29/1998	<b>AQUIFLOW</b>	<b>69105</b>
<b>H18</b> <b>WNW</b> <b>1/2 - 1 Mile</b> <b>Higher</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	10191 Not Reported 11.60 12.78 Not Reported 12/31/1991	<b>AQUIFLOW</b>	<b>66814</b>
<b>H19</b> <b>WNW</b> <b>1/2 - 1 Mile</b> <b>Higher</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	38-0240 SE, SW Not Reported 42.5 Not Reported 01/15/1998	<b>AQUIFLOW</b>	<b>69217</b>
<b>I20</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Higher</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	38-0544 SE Not Reported Not Reported 6 02/22/1995	<b>AQUIFLOW</b>	<b>54166</b>
<b>I21</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Higher</b>	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	38-0544 SE Not Reported Not Reported Not Reported 09/11/1994	<b>AQUIFLOW</b>	<b>54165</b>

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
<b>I22</b> <b>West</b> <b>1/2 - 1 Mile</b> <b>Higher</b>	Site ID:	38-0544	<b>AQUIFLOW</b>	<b>69151</b>
	Groundwater Flow:	NW		
	Shallow Water Depth:	10.5		
	Deep Water Depth:	12.5		
	Average Water Depth:	Not Reported		
Date:	09/26/1995			
<b>J23</b> <b>NW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0266	<b>AQUIFLOW</b>	<b>54665</b>
	Groundwater Flow:	W		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	2		
Date:	01/25/1991			
<b>J24</b> <b>NW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0266	<b>AQUIFLOW</b>	<b>54735</b>
	Groundwater Flow:	W		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	Not Reported		
Date:	09/06/1995			
<b>J25</b> <b>NW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0624	<b>AQUIFLOW</b>	<b>54737</b>
	Groundwater Flow:	E		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	Not Reported		
Date:	05/06/1996			
<b>J26</b> <b>NW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0624	<b>AQUIFLOW</b>	<b>54738</b>
	Groundwater Flow:	E		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	Not Reported		
Date:	05/29/1995			
<b>J27</b> <b>NW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0624	<b>AQUIFLOW</b>	<b>54736</b>
	Groundwater Flow:	E		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	Not Reported		
Date:	08/21/1996			
<b>K28</b> <b>WSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	10113	<b>AQUIFLOW</b>	<b>51510</b>
	Groundwater Flow:	S		
	Shallow Water Depth:	3.46		
	Deep Water Depth:	10.66		
	Average Water Depth:	Not Reported		
Date:	02/24/1999			

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
<b>K29</b> <b>WSW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	10113	<b>AQUIFLOW</b>	<b>51512</b>
	Groundwater Flow:	S		
	Shallow Water Depth:	3.46		
	Deep Water Depth:	10.66		
	Average Water Depth:	Not Reported		
Date:	02/24/1999			
<b>L30</b> <b>SW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	11129	<b>AQUIFLOW</b>	<b>66825</b>
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	Unkno		
	Deep Water Depth:	9 ft		
	Average Water Depth:	Not Reported		
Date:	10/13/1995			
<b>L31</b> <b>SW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	11129	<b>AQUIFLOW</b>	<b>66826</b>
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	Unkno		
	Deep Water Depth:	9 ft		
	Average Water Depth:	Not Reported		
Date:	10/13/1995			
<b>M32</b> <b>NW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0150	<b>AQUIFLOW</b>	<b>53380</b>
	Groundwater Flow:	S		
	Shallow Water Depth:	7.02		
	Deep Water Depth:	9.35		
	Average Water Depth:	Not Reported		
Date:	09/22/1994			
<b>M33</b> <b>NW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0150	<b>AQUIFLOW</b>	<b>53382</b>
	Groundwater Flow:	S		
	Shallow Water Depth:	6.88		
	Deep Water Depth:	9.76		
	Average Water Depth:	Not Reported		
Date:	01/23/1996			
<b>34</b> <b>WSW</b> <b>1/2 - 1 Mile</b> <b>Higher</b>	Site ID:	38-0427	<b>AQUIFLOW</b>	<b>69104</b>
	Groundwater Flow:	SE		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	11 ft		
Date:	06/18/1991			
<b>M35</b> <b>NW</b> <b>1/2 - 1 Mile</b> <b>Lower</b>	Site ID:	38-0412	<b>AQUIFLOW</b>	<b>53373</b>
	Groundwater Flow:	Varies		
	Shallow Water Depth:	4.05		
	Deep Water Depth:	13.11		
	Average Water Depth:	Not Reported		
Date:	03/25/1999			

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

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<b>N36</b>	Site ID:	38-0253		
<b>NW</b>	Groundwater Flow:	SE	<b>AQUIFLOW</b>	<b>70151</b>
<b>1/2 - 1 Mile</b>	Shallow Water Depth:	3.5		
<b>Lower</b>	Deep Water Depth:	8.5		
	Average Water Depth:	Not Reported		
	Date:	09/09/1988		

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<b>N37</b>	Site ID:	38-0253		
<b>NW</b>	Groundwater Flow:	SE	<b>AQUIFLOW</b>	<b>70152</b>
<b>1/2 - 1 Mile</b>	Shallow Water Depth:	Not Reported		
<b>Lower</b>	Deep Water Depth:	Not Reported		
	Average Water Depth:	17		
	Date:	06/20/1995		

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

State Database: CA Radon

### Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
94124	7	0

Federal EPA Radon Zone for SAN FRANCISCO County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.  
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.  
 : Zone 3 indoor average level < 2 pCi/L.

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Federal Area Radon Information for Zip Code: 94124

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.000 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

### USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

### Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

## HYDROLOGIC INFORMATION

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

## HYDROGEOLOGIC INFORMATION

### AQUIFLOW<sup>R</sup> Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

### Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

### SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

### FEDERAL WATER WELLS

#### PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

#### USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

### STATE RECORDS

#### Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

#### California Drinking Water Quality Database

Source: Department of Health Services

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

## OTHER STATE DATABASE INFORMATION

#### California Oil and Gas Well Locations

Source: Department of Conservation

Telephone: 916-323-1779

Oil and Gas well locations in the state.

### RADON

#### State Database: CA Radon

Source: Department of Health Services

Telephone: 916-324-2208

Radon Database for California

#### Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

#### EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

## PHYSICAL SETTING SOURCE RECORDS SEARCHED

### OTHER

Airport Landing Facilities: Private and public use landing facilities  
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater  
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

### STREET AND ADDRESS INFORMATION

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**APPENDIX H - LABORATORY REPORTS**

**Available on attached CD**



**Curtis & Tompkins, Ltd.**  
Analytical Laboratories, Since 1878





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 248030  
ANALYTICAL REPORT**

Weston Solutions  
1340 Treat Blvd  
Walnut Creek, CA 94597

Project : 20074.063.095.1340  
Location : 900 Innes Avenue  
Level : III

<u>Sample ID</u>	<u>Lab ID</u>	<u>Sample ID</u>	<u>Lab ID</u>
IA-01	248030-001	IA-24B	248030-023
IA-08A	248030-002	IA-39B	248030-024
IA-08B	248030-003	IA-12	248030-025
IA-11A	248030-004	IA-16	248030-026
IA-11B	248030-005	IA-17	248030-027
IA-2A	248030-006	IA-18	248030-028
IA-2B	248030-007	IA-23D	248030-029
IA-35B	248030-008	IA-38D	248030-030
IA-03	248030-009	IA-25D	248030-031
IA-04	248030-010	IA-32D	248030-032
IA-10A	248030-011	IA-26	248030-033
IA-10B	248030-012	IA-33A	248030-034
IA-37	248030-013	IA-33B	248030-035
IA-14A	248030-014	IA-29A	248030-036
IA-14B	248030-015	IA-29B	248030-037
IA-7	248030-016	IA-40	248030-038
IA-6	248030-017	IA-20	248030-039
IA-5	248030-018	IA-22	248030-040
IA-9	248030-019	IA-27	248030-041
IA-34	248030-020	IA-28	248030-042
IA-15	248030-021	IA-30	248030-043
IA-24A	248030-022	IA-31	248030-044

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature:   
Isabelle Choy  
Project Manager  
(510) 486-0900

Date: 09/04/2013

## CASE NARRATIVE

Laboratory number: 248030  
Client: Weston Solutions  
Project: 20074.063.095.1340  
Location: 900 Innes Avenue  
Request Date: 08/15/13  
Samples Received: 08/15/13

This data package contains sample and QC results for forty three soil samples and one water sample, requested for the above referenced project on 08/15/13. See attached cooler receipt form for any sample receipt problems or discrepancies.

**TPH-Purgeables and/or BTXE by GC (EPA 8015B) Water:**

No analytical problems were encountered.

**TPH-Purgeables and/or BTXE by GC (EPA 8015B) Soil:**

No analytical problems were encountered.

**TPH-Extractables by GC (EPA 8015B) Water:**

No analytical problems were encountered.

**TPH-Extractables by GC (EPA 8015B) Soil:**

Low response was observed for motor oil C24-C36 in the CCV analyzed 08/20/13 12:02; affected data was qualified with "b".

High response was observed for diesel C10-C24 in the CCV analyzed 08/21/13 17:41.

Matrix spikes QC702892, QC702893 (batch 201939) were not reported because the parent sample required a dilution that would have diluted out the spikes.

High RPD was observed for diesel C10-C24 in the MS/MSD of IA-5 (lab # 248030-018).

Many samples were diluted due to the dark and viscous nature of the sample extracts.

No other analytical problems were encountered.

**Volatile Organics by GC/MS (EPA 8260B) Water:**

IA-40 (lab # 248030-038) had pH greater than 2.

No other analytical problems were encountered.

**Volatile Organics by GC/MS (EPA 8260B) Soil:**

Low response was observed for carbon disulfide in the CCV analyzed 08/20/13 12:05; this analyte met minimum response criteria.

## CASE NARRATIVE

Laboratory number: 248030  
Client: Weston Solutions  
Project: 20074.063.095.1340  
Location: 900 Innes Avenue  
Request Date: 08/15/13  
Samples Received: 08/15/13

### Volatile Organics by GC/MS (EPA 8260B) Soil:

Low internal standard response was observed for 1,4-dichlorobenzene-d4 in IA-14A (lab # 248030-014), due to matrix interference; the low internal standard response was confirmed by re-analysis.

High surrogate recoveries were observed for toluene-d8 in a number of samples.

High surrogate recovery was observed for bromofluorobenzene in IA-14A (lab # 248030-014).

No other analytical problems were encountered.

### Semivolatile Organics by GC/MS (EPA 8270C) Water:

No analytical problems were encountered.

### Semivolatile Organics by GC/MS (EPA 8270C) Soil:

Matrix spikes QC702579, QC702580 (batch 201864) were not reported because the parent sample required a dilution that would have diluted out the spikes.

Matrix spikes QC702850, QC702851 (batch 201931) were not reported because the parent sample required a dilution that would have diluted out the spikes.

Many samples were diluted due to the dark and viscous nature of the sample extracts.

IA-12 (lab # 248030-025) was diluted due to the viscous nature of the sample extract.

No other analytical problems were encountered.

### PCBs (EPA 8082) Water:

All samples underwent sulfuric acid cleanup using EPA Method 3665A.

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B.

No analytical problems were encountered.

### PCBs (EPA 8082) Soil:

All samples underwent sulfuric acid cleanup using EPA Method 3665A.

### CASE NARRATIVE

Laboratory number: 248030  
Client: Weston Solutions  
Project: 20074.063.095.1340  
Location: 900 Innes Avenue  
Request Date: 08/15/13  
Samples Received: 08/15/13

#### PCBs (EPA 8082) Soil:

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B.

Matrix spikes QC702599, QC702600 (batch 201867) were not reported because the parent sample required a dilution that would have diluted out the spikes.

Low recoveries were observed for Aroclor-1260 in the MS/MSD of IA-33A (lab # 248030-034); the LCS was within limits, and the associated RPD was within limits.

Low surrogate recoveries were observed for decachlorobiphenyl in many samples; the corresponding TCMX surrogate recoveries were within limits.

IA-08A (lab # 248030-002) was diluted due to the color of the sample extract.

IA-12 (lab # 248030-025) was diluted due to foaming.

No other analytical problems were encountered.

#### Dissolved Gases by GC/FID (RSK-175):

No analytical problems were encountered.

#### Metals (EPA 6010B and EPA 7470A) Water:

Low recovery was observed for silver in the post digest spike for batch 201943; the parent sample was not a project sample, and the BS/BSD were within limits.

No other analytical problems were encountered.

#### Metals (EPA 6010B and EPA 7471A) Soil:

High responses were observed for many analytes in the CCV analyzed 08/23/13 14:37.

Low recovery was observed for mercury in the MSD of IA-30 (lab # 248030-043); the BS/BSD were within limits, and the associated RPD was within limits.

Low recoveries were observed for silver and antimony in the MS/MSD of IA-11B (lab # 248030-005); the BS/BSD were within limits, and the associated RPDs were within limits. High recoveries were observed for cobalt, vanadium, and zinc; the BS/BSD were within limits, and the associated RPDs were within

### CASE NARRATIVE

Laboratory number: 248030  
Client: Weston Solutions  
Project: 20074.063.095.1340  
Location: 900 Innes Avenue  
Request Date: 08/15/13  
Samples Received: 08/15/13

#### Metals (EPA 6010B and EPA 7471A) Soil:

limits.

Low recovery was observed for silver in the post digest spike of IA-11B (lab # 248030-005); the BS/BSD were within limits.

Low recoveries were observed for antimony in the MS/MSD for batch 201938; the parent sample was not a project sample, the BS/BSD were within limits, and the associated RPD was within limits. High recoveries were observed for a number of analytes; the BS/BSD were within limits, and the associated RPDs were within limits.

Low recoveries were observed for antimony in the MS/MSD of IA-5 (lab # 248030-018); the BS/BSD were within limits, and the associated RPD was within limits.

Responses exceeding the instrument's linear range were observed for nickel and zinc in the MS/MSD of IA-11B (lab # 248030-005) and the MS/MSD of IA-5 (lab # 248030-018).

High % differences were observed for cadmium, cobalt, and lead in the serial dilution for batch 201938, the serial dilution of IA-11B (lab # 248030-005), and the serial dilution of IA-5 (lab # 248030-018).

No other analytical problems were encountered.

#### Ion Chromatography (EPA 300.0) Water:

No analytical problems were encountered.

#### Ion Chromatography (EPA 300.0) Soil:

Low recovery was observed for fluoride in the MSD of IA-08A (lab # 248030-002); the LCS was within limits, and the associated RPD was within limits.

IA-10A (lab # 248030-011) was diluted due to high sulfate concentration.

No other analytical problems were encountered.

#### Total Cyanide (SM4500CN-E) Water:

No analytical problems were encountered.

### CASE NARRATIVE

Laboratory number: 248030  
Client: Weston Solutions  
Project: 20074.063.095.1340  
Location: 900 Innes Avenue  
Request Date: 08/15/13  
Samples Received: 08/15/13

**Total Cyanide (SM4500CN-E) Soil:**

No analytical problems were encountered.

**Hexavalent Chromium (EPA 7196A) Water:**

No analytical problems were encountered.

**Hexavalent Chromium (EPA 7196A) Soil:**

No analytical problems were encountered.

**pH (EPA 9045D):**

No analytical problems were encountered.

**pH (EPA 9040C):**

No analytical problems were encountered.

**Moisture (ASTM D2216/CLP):**

No analytical problems were encountered.

**Organotins (PSEP):**

Cal Science in Garden Grove, CA performed the analysis (NELAP certified).  
Please see the Cal Science case narrative.

**CARB 435 Asbestos (CARB 435):**

Forensic Analytical in Hayward, CA performed the analysis (not NELAP certified). Please see the Forensic Analytical case narrative.

## Chain of Custody





# CHAIN OF CUSTODY



2323 Fifth Street  
Berkeley, CA 94710

In Business Since 1878

Phone (510) 486-0900  
Fax (510) 486-0532

Chain of Custody # \_\_\_\_\_

C&T LOGIN # 248030

Page 3 of 4

Project No: \_\_\_\_\_  
 Project Name: \_\_\_\_\_  
 Project P. O. No.: \_\_\_\_\_  
 EDD Format: Report Level  I  II  III  IV  
 Turnaround Time:  RUSH  Standard  Email: \_\_\_\_\_  
 Sampler: Ian Bove  
 Report To: Ian Bove  
 Company: Westh Solutions  
 Telephone: \_\_\_\_\_

Lab No.	Sample ID.	SAMPLING		MATRIX		# of Containers	CHEMICAL PRESERVATIVE							
		Date Collected	Time Collected	Water	Solid		HCl	H2SO4	HNO3	NaOH	None			
26	1A-10	8/15/13	1235	X	X	2	X	X	X	X	X	X	X	X
27	1A-17		1240	X	X	2	X	X	X	X	X	X	X	X
28	1A-18		1245	X	X	1	X	X	X	X	X	X	X	X
29	1A-23D		1250	X	X	2	X	X	X	X	X	X	X	X
30	1A-20D		1310	X	X	2	X	X	X	X	X	X	X	X
31	1A-25D		1255	X	X	2	X	X	X	X	X	X	X	X
32	1A-32D		1300	X	X	2	X	X	X	X	X	X	X	X
33	1A-26		1325	X	X	2	X	X	X	X	X	X	X	X
34	1A-33A		1330	X	X	4	X	X	X	X	X	X	X	X
35	1A-35B		1335	X	X	4	X	X	X	X	X	X	X	X
36	1A-29A		1315	X	X	4	X	X	X	X	X	X	X	X
37	1A-29A		1300	X	X	4	X	X	X	X	X	X	X	X
38	1A-40		1345	X	X	15	X	X	X	X	X	X	X	X

ANALYTICAL REQUEST														
	Metals	X	X	X	X	X	X	X	X	X	X	X	X	X
	TPH-dms	X	X	X	X	X	X	X	X	X	X	X	X	X
	PAH	X	X	X	X	X	X	X	X	X	X	X	X	X
	PCB	X	X	X	X	X	X	X	X	X	X	X	X	X
	Asbestos	X	X	X	X	X	X	X	X	X	X	X	X	X
	TRH-g	X	X	X	X	X	X	X	X	X	X	X	X	X
	VOCs	X	X	X	X	X	X	X	X	X	X	X	X	X
	Cryst. F. Comp.	X	X	X	X	X	X	X	X	X	X	X	X	X
	Organics	X	X	X	X	X	X	X	X	X	X	X	X	X
	RSK-175	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes: \_\_\_\_\_

Attn: Isabella Choy

SAMPLE RECEIPT <input type="checkbox"/> Intact <input type="checkbox"/> Cold <input checked="" type="checkbox"/> On Ice <input type="checkbox"/> Ambient	RELINQUISHED BY: <u>Ian Bove</u> DATE: 8/15/13 TIME: 636	RECEIVED BY: <u>Pat Kelly</u> DATE: 8/15/13 TIME: 1636
--	--	--



COOLER RECEIPT CHECKLIST



Login # 248030 Date Received 8/15/13 Number of coolers 4
Client WESTON Project 900

Date Opened 8/15/13 By (print) TR (sign) Tina Rankin
Date Logged in [arrow] By (print) [signature] (sign) [signature]

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
Shipping info

2A. Were custody seals present? ... [ ] YES (circle) on cooler on samples [X] NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO (N/A)

3. Were custody papers dry and intact when received? (YES) NO

4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO

5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO

6. Indicate the packing in cooler: (if other, describe)

- [ ] Bubble Wrap [X] Foam blocks [X] Bags [ ] None
[ ] Cloth material [ ] Cardboard [ ] Styrofoam [ ] Paper towels

7. Temperature documentation: \* Notify PM if temperature exceeds 6°C

Type of ice used: [X] Wet [ ] Blue/Gel [ ] None Temp(°C) 8.9, 2.4, 4.2

[ ] Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

[X] Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? (YES) NO
If YES, what time were they transferred to freezer? 1750

9. Did all bottles arrive unbroken/unopened? (YES) NO

10. Are there any missing / extra samples? YES (NO)

11. Are samples in the appropriate containers for indicated tests? (YES) NO

12. Are sample labels present, in good condition and complete? (YES) NO

13. Do the sample labels agree with custody papers? (YES) NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? (YES) NO N/A

16. Did you check preservatives for all bottles for each sample? (YES) NO N/A

17. Did you document your preservative check? (YES) NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? (YES) NO N/A

19. Did you change the hold time in LIMS for preserved terracores? (YES) NO N/A

20. Are bubbles > 6mm absent in VOA samples? (YES) NO N/A

21. Was the client contacted concerning this sample delivery? YES (NO)
If YES, Who was called? By Date:

COMMENTS

Multiple horizontal lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 248030

Sample	pH: <2	>9	>12	Other
-038a	[ ]	[ ]	[ ]	_____
b	[ ]	[ ]	[ ]	_____
c	[ ]	[ ]	[ ]	_____
d	[ ]	[ ]	[ ]	_____
e	[ ]	[ ]	[ ]	_____
f	[ ]	[ ]	[ ]	_____
g	[ ]	[ ]	[ ]	_____
h	[ ]	[ ]	[ ]	_____
i	[ ]	[ ]	[ ]	_____
j	[ ]	[ ]	[ ]	_____
k	[ ]	[ ]	[ ]	_____
l	[ ]	[ ]	[ ]	_____
m	[ ]	[ ]	[ ]	_____
n	[ ]	[ ]	[ ]	_____
o	[ ]	[ ]	[ ]	_____

Analyst: AA  
Date: 8/15/13

Laboratory Job Number 248030

ANALYTICAL REPORT

TPH-Purgeables and/or BTXE by GC

Matrix: Water

Total Volatile Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5030B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Field ID:	IA-40	Chemist:	DJA
Matrix:	Water	Sampled:	08/15/13
Units:	ug/L	Received:	08/15/13
Diln Fac:	1.000	Analyzed:	08/16/13
Batch#:	201812		

Type: SAMPLE Lab ID: 248030-038

Analyte	Result	RL
Gasoline C6-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	76-128

Type: BLANK Lab ID: QC702360

Analyte	Result	RL
Gasoline C6-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	76-128

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5030B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC702359	Batch#:	201812
Matrix:	Water	Chemist:	DJA
Units:	ug/L	Analyzed:	08/16/13

Analyte	Spiked	Result	%REC	Limits
Gasoline C6-C12	1,000	1,049	105	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	76-128

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5030B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	201812
MSS Lab ID:	247920-001	Chemist:	DJA
Matrix:	Water	Sampled:	08/13/13
Units:	ug/L	Received:	08/13/13
Diln Fac:	1.000	Analyzed:	08/17/13

Type: MS Lab ID: QC702361

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C6-C12	17.53	2,000	1,865	92	75-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	116	76-128

Type: MSD Lab ID: QC702362

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C6-C12	2,000	1,931	96	75-120	3	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	117	76-128

RPD= Relative Percent Difference

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCVOA Water: EPA 8015B

Inst : GC04  
 Calnum : 303262563001  
 Units : ng

Name : tvh/bfb\_182  
 Date : 01-JUL-2013 18:10  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	182_013	303262563013	TVH_14	01-JUL-2013 18:10	S22482 (1000X), S22692 (5000X)
L2	182_014	303262563014	TVH_15	01-JUL-2013 18:48	S22481 (1000X), S22692 (5000X)
L3	182_015	303262563015	TVH_16	01-JUL-2013 19:25	S22480 (1000X), S22692 (5000X)
L4	182_016	303262563016	TVH_17	01-JUL-2013 20:03	S22479 (2000X), S22692 (5000X)
L5	182_017	303262563017	TVH_18	01-JUL-2013 20:40	S22479 (1000X), S22692 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
Gasoline C6-C12	A	9482.1	7136.4	6779.2	6545.1	6630.2	AVRG		1.37E-4		7314.6	17		0.995	20	
Bromofluorobenzene (FID)	A	2999.1	3021.0	2997.2	3303.9	3585.3	AVRG		3.14E-4		3181.3	8		0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Gasoline C6-C12	A	250.00	30	2500.0	-2	10000	-7	25000	-11	50000	-9
Bromofluorobenzene (FID)	A	900.00	-6	900.00	-5	900.00	-6	900.00	4	900.00	13

MAC 07/02/13 : Corrected automatically drawn baseline in TVH\_17 (182\_016).

Analyst: MAC

Date: 07/02/13

Reviewer: EAH

Date: 07/02/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 GCVOA Water  
EPA 8015B

Inst : GC04  
Calnum : 303262563001

Name : tvh/bfb\_182  
Cal Date : 01-JUL-2013

ICV 303262563019 (182\_019 01-JUL-2013) stds: S22156 (1000X), S22692 (5000X)

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Gasoline C6-C12	A	10000	9078	ng	-9	15	

Analyst: MAC

Date: 07/02/13

Reviewer: EAH

Date: 07/02/13





CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCVOA Water  
EPA 8015B

Inst : GC04                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 303328995013        File : 228\_013                      Time : 16-AUG-2013 20:09  
 Cal : 303262563001        Caldate : 01-JUL-2013  
 Standards: S22386 (1000X), S22692 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C6-C12	A	7314.6	7002.9	10000	9574	ng	-4	15	
Bromofluorobenzene (FID)	A	3181.3	3455.8	900.0	977.7	ng	9	15	

Analyst: DJA                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/19/13



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCVOA Water  
EPA 8015B

Inst : GC04                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 303328995028        File : 228\_028                      Time : 17-AUG-2013 05:33  
 Cal : 303262563001        Caldate : 01-JUL-2013  
 Standards: S22386 (666.7X), S22692 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C6-C12	A	7314.6	7068.7	15000	14500	ng	-3	15	
Bromofluorobenzene (FID)	A	3181.3	3827.8	900.0	1083	ng	<b>20</b>	15	c+

DJA 08/19/13 : Corrected automatically drawn baseline for Ch. A.

DJA 08/19/13 [Bromofluorobenzene (FID) A]: Passes control limits.

Analyst: DJA                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/19/13

+=high bias    c=CCV

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 303262563

Instrument : GC04  
 Method : EPA 8015B, EPA 8021B

Begun : 07/01/13 08:03  
 SOP Version : TVH\_BTXE\_rv21

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	182_001	X	CMARKER			07/01/13 08:03	1.0	1 2
002	182_002	CCV	TVH			07/01/13 08:54	1.0	3 2
003	182_003	CCV	TVH			07/01/13 10:15	1.0	3 2
004	182_004	CCV	TVH			07/01/13 11:03	1.0	3 2
005	182_005	CCV	TVH			07/01/13 12:29	1.0	3 2
006	182_006	CCV	TVH			07/01/13 13:46	1.0	3 2
007	182_007	CCV	TVH			07/01/13 14:24	1.0	3 2
008	182_008	CCV	TVH			07/01/13 15:02	1.0	3 2
009	182_009	CCV	TVH			07/01/13 15:39	1.0	3 2
010	182_010	CCV	TVH			07/01/13 16:17	1.0	3 2
011	182_011	CCV	TVH			07/01/13 16:55	1.0	3 2
012	182_012	IB	CALIB			07/01/13 17:32	1.0	2
013	182_013	ICAL	TVH_14			07/01/13 18:10	1.0	4 2
014	182_014	ICAL	TVH_15			07/01/13 18:48	1.0	5 2
015	182_015	ICAL	TVH_16			07/01/13 19:25	1.0	6 2
016	182_016	ICAL	TVH_17			07/01/13 20:03	1.0	7 2
017	182_017	ICAL	TVH_18			07/01/13 20:40	1.0	7 2
018	182_018	X	IB			07/01/13 21:18	1.0	2
019	182_019	ICV	TVH			07/01/13 21:56	1.0	8 2
020	182_020	X	ICV			07/01/13 22:33	1.0	8 2
021	182_021	CMARKER	CMARK			07/01/13 23:11	1.0	1 2

MAC 07/02/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 21.

Reviewed by: MAC Date: 07/02/13

Standards used: 1=S21808 2=S22692 3=S22386 4=S22482 5=S22481 6=S22480 7=S22479 8=S22156

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 303328995

Instrument : GC04  
 Method : EPA 8015B, EPA 8021B

Begun : 08/16/13 11:15  
 SOP Version : TVH\_BTXE\_rv21

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	228_001	CCV/LCS	QC702359	Water	201812	08/16/13 11:15	1.0	1 2	
002	228_002	CCV/LCS	QC702363	Soil	201813	08/16/13 11:52	1.0	1 2	
003	228_003	CCV	STODDARD			08/16/13 12:53	1.0	3 2	
004	228_004	BLANK	QC702360	Water	201812	08/16/13 13:41	1.0	2	
005	228_005	BLANK	QC702364	Soil	201813	08/16/13 14:19	1.0	2	
006	228_006	X	CMARK			08/16/13 15:46	1.0	4 2	
007	228_007	MSS	247920-001	Water	201812	08/16/13 16:23	1.0	2	
008	228_008	SAMPLE	247920-002	Water	201812	08/16/13 17:01	1.0	2	
009	228_009	SAMPLE	247920-003	Water	201812	08/16/13 17:38	1.0	2	
010	228_010	SAMPLE	247973-001	Water	201812	08/16/13 18:16	1.0	2	
011	228_011	SAMPLE	248005-004	Soil	201813	08/16/13 18:54	1.0	2	
012	228_012	SAMPLE	248006-004	Soil	201813	08/16/13 19:32	1.0	2	
013	228_013	CCV	TVH			08/16/13 20:09	1.0	1 2	
014	228_014	CCV	STODDARD			08/16/13 20:47	1.0	3 2	
015	228_015	X	CMARK			08/16/13 21:25	1.0	4 2	
016	228_016	CCV	TVH			08/16/13 22:02	1.0	1 2	
017	228_017	CCV	STODDARD			08/16/13 22:40	1.0	3 2	
018	228_018	SAMPLE	248030-038	Water	201812	08/16/13 23:17	1.0	2	
019	228_019	SAMPLE	248024-001	Water	201812	08/16/13 23:55	1.0	2	
020	228_020	SAMPLE	248038-002	Water	201812	08/17/13 00:33	1.0	2	pH > 2
021	228_021	SAMPLE	248038-003	Water	201812	08/17/13 01:10	1.0	2	pH > 2
022	228_022	SAMPLE	248038-004	Water	201812	08/17/13 01:48	1.0	2	pH > 2
023	228_023	SAMPLE	248038-005	Water	201812	08/17/13 02:26	1.0	2	pH > 2
024	228_024	MS	QC702361	Water	201812	08/17/13 03:03	1.0	1 2	
025	228_025	MSD	QC702362	Water	201812	08/17/13 03:41	1.0	1 2	
026	228_026	SAMPLE	248040-001	Water	201812	08/17/13 04:18	1.0	2	
027	228_027	SAMPLE	248041-001	Water	201812	08/17/13 04:56	1.0	2	
028	228_028	CCV	TVH			08/17/13 05:33	1.0	1 2	
029	228_029	X	CMARK			08/17/13 06:11	1.0	4 2	
030	228_030	SAMPLE	248042-001	Water	201812	08/17/13 06:49	1.0	2	
031	228_031	SAMPLE	248043-001	Water	201812	08/17/13 07:26	1.0	2	
032	228_032	SAMPLE	248043-002	Water	201812	08/17/13 08:04	1.0	2	
033	228_033	SAMPLE	248043-003	Water	201812	08/17/13 08:41	1.0	2	
034	228_034	SAMPLE	247990-001	Water	201812	08/17/13 09:19	1.0	2	
035	228_035	SAMPLE	247990-002	Water	201812	08/17/13 09:56	1.0	2	
036	228_036	SAMPLE	247990-003	Water	201812	08/17/13 10:34	1.0	2	
037	228_037	SAMPLE	247990-004	Water	201812	08/17/13 11:12	1.0	2	
038	228_038	CCV	TVH			08/17/13 11:49	1.0	1 2	
039	228_039	X	CMARK			08/17/13 12:27	1.0	4 2	
040	228_040	MSS	248028-001	Soil	201813	08/17/13 13:04	1.0	2	
041	228_041	MS	QC702400	Soil	201813	08/17/13 13:42	1.0	1 2	
042	228_042	MSD	QC702401	Soil	201813	08/17/13 14:20	1.0	1 2	
043	228_043	SAMPLE	248028-002	Soil	201813	08/17/13 14:57	1.0	2	
044	228_044	SAMPLE	248039-005	Soil	201813	08/17/13 15:35	1.0	2	
045	228_045	SAMPLE	248039-006	Soil	201813	08/17/13 16:12	1.0	2	
046	228_046	SAMPLE	248039-007	Soil	201813	08/17/13 16:50	1.0	2	
047	228_047	SAMPLE	248039-008	Soil	201813	08/17/13 17:27	1.0	2	
048	228_048	SAMPLE	247981-017	Soil	201813	08/17/13 18:05	1.0	2	
049	228_049	SAMPLE	247981-018	Soil	201813	08/17/13 18:42	1.0	2	
050	228_050	X	TVH			08/17/13 19:20	1.0	1 2	
051	228_051	CCV	TVH			08/17/13 19:57	1.0	1 2	
052	228_052	X	CMARK			08/17/13 20:35	1.0	4 2	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 303328995

Instrument : GC04  
 Method : EPA 8015B, EPA 8021B

Begun : 08/16/13 11:15  
 SOP Version : TVH\_BTXE\_rv21

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
053	228_053	SAMPLE	247981-019	Soil	201813	08/17/13 21:12	1.0	2
054	228_054	SAMPLE	247981-020	Soil	201813	08/17/13 21:50	1.0	2
055	228_055	CCV	TVH			08/17/13 22:28	1.0	1 2
056	228_056	CCV	TVH			08/17/13 23:05	1.0	1 2
057	228_057	X	CMARK			08/17/13 23:43	1.0	4 2

DJA 08/19/13 : Opening CM ran at the end of the last sequence.

DJA 08/19/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 57.

Reviewed by: DJA Date: 08/19/13

Standards used: 1=S22386 2=S22692 3=S22688 4=S21808

TITLE TVH/IBTXE Soil Aliquot PROJECT

DATE

Continued from page

Sample	ID	Weight (g)	NaHSO <sub>4</sub> ?	Comments		
247980-1	comp A/B	1.0	No	DJA 8/15/13		
-2	comp A/B	0.94	↓			
-3	↓	1.04				
247822-2	A	0.90				
-2MS	↓	0.98				
-2MSD	↓	0.96				
247981-17	comp 1-4A	1.00				
-18	comp 5-8A	0.99				
-19	comp 9-12A	1.00				
-20	comp 13-16A	1.07				
247919-14	A	0.96		↓	↓	
-15	↓	1.00				
247994-2	B	3.94				
247900-4	Comp: 247919 (7A, 12A, 14A)		No			MAC 08/15/13
247928-3	B	4.31				
-4	↓	4.61				
-5	↓	4.48				
-6	↓	4.51				
-7	↓	4.60				
-8	↓	3.75				
247929-1	↓	3.83				
247930-1	↓	4.93				
247030-2	B	4.78		No	DJA 8/16/13	
-3	↓	6.57				
-6	A	6.84				
-7	↓	5.75				
-8	↓	7.22				
-14	B	6.88				
-15	↓	5.15				
-17	A	5.68				
-18	A	3.46				
-18MS	B	3.19				
-18MSD	C	3.51				
-21	A	5.95				
-34	↓	5.88				
-35	↓	6.35				
-39	↓	5.93				
-43	↓	4.56				
247905-4	Comp: 247890 (3A, 10A, 23A)		No	MAC 08/16/13		
		0.91				
		0.94	↓	↓		

SIGNATURE

DATE

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DATE

PROPRIETARY INFORMATION

TVA/BTXE Soil Aliquot PROJECT DATE

Continued from page

Sample	ID	Weight	NUMSD?	Comments
248006-4	Comp: 247919-(7A,12A,14A)	0.95	NO	MAC 08/14/13
248049-1	A	0.98		
↓ -1MS		0.91		
↓ -1MSD		0.92		
248050-13	Comp: 248050-(11A-4A)	0.99		
↓ -14	↓ -15A-8A	0.97		
↓ -15	↓ -19A-12A	0.99		
248028-1	MA 50816113 A113	0.93		
↓ -1MS		0.98		
↓ -1MSD		1.04		
248039-5	A, Comp: B,C,D,E,F,G	1.05		Comp'd by Login
↓ -6		1.10		
↓ -7		0.95		
↓ -8		0.93		
247981-17	Comp: 981-(11A-4A)	0.96		
↓ -18	↓ -15A-8A	0.97		
↓ -19	↓ -19A-12A	1.10		
↓ -20	↓ -13A-16A	0.92		
247929-2	C	0.99		
247930-1		4.13		
247928-3		5.10		
↓ -4		4.38		
↓ -5		4.76		
↓ -6		4.52		
↓ -8		4.46		
247994-2	D	4.11		
248046-1	A	3.78		
↓ -2		4.41		
↓ -3		4.17		
↓ -4		5.07		
↓ -5		4.25		
↓ -6		4.48		
248093-1	A	4.23		
↓ -2	A	1.02		
		1.04		

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PROPRIETARY INFORMATION

TITLE IVA/BTXE Soil Aliquot PROJECT DATE

Continued from page

Sample	ID	Weight	NaHSO <sub>4</sub> ?	Comments
248006-4	comp: 247919-(7A,12A,14A)	0.95	No	MAC 08/14/13
248049-1	A	0.98		
↓ -1MS	↓	0.91		
↓ -1MSD	↓	0.92		
248050-13	comp: 248050-(1A-4A)	0.99		
↓ 14	↓	0.97		
↓ 15	↓	0.99		
248028-1	MAC 08/14/13 A113	0.93		
↓ -1MS	↓	0.98		
↓ -1MSD	↓	1.04		
↓ 2	↓	1.05		
248039-5	A, comp: B,C,D,E,F,G	1.10		comp'd by Logan
↓ -6	↓	0.95		
↓ -7	↓	0.93		
↓ -8	↓	0.96		
247981-17	comp: 981-(1A-4A)	0.97		
↓ 18	↓	1.10		
↓ 19	↓	0.92		
↓ 20	↓	0.99		
247929-2	C	4.13		
247930-1	↓	5.10		
247928-3	↓	4.38		
↓ 4	↓	4.76		
↓ 5	↓	4.52		
↓ 6	↓	4.46		
↓ 8	↓	4.11		
247994-2	D	3.78		
248046-1	A	4.41		
↓ 2	↓	4.17		
↓ 3	↓	5.07		
↓ 4	↓	4.25		
↓ 5	↓	4.48		
↓ 6	↓	4.23		
248093-1	A	1.02	No	MAC 8/16/13
↓ 2	A	1.04	No	↓
248028-1MS	A	0.97	No	02A 8/19/13
↓ 1MSD	↓	1.00	↓	
248046-3	C	3.96	No	
↓ 5	C	4.48		
248030-14	C	3.10		
248097-1	B	4.32		
↓ 2	↓	4.69		
↓ 3	↓	4.46		

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PROPRIETARY INFORMATION

Continued to page

Laboratory Job Number 248030

ANALYTICAL REPORT

TPH-Purgeables and/or BTXE by GC

Matrix: Soil

Gasoline by GC/FID (5035 Prep)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Sampled:	08/15/13
Basis:	dry	Received:	08/15/13

Field ID:	IA-08A	Batch#:	201809
Type:	SAMPLE	Chemist:	MAC
Lab ID:	248030-002	Analyzed:	08/16/13
Moisture:	5%		

Analyte	Result	RL
Gasoline C7-C12	ND	0.22

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	64-139

Field ID:	IA-08B	Batch#:	201809
Type:	SAMPLE	Chemist:	MAC
Lab ID:	248030-003	Analyzed:	08/16/13
Moisture:	13%		

Analyte	Result	RL
Gasoline C7-C12	ND	0.17

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	96	64-139

Field ID:	IA-2A	Batch#:	201809
Type:	SAMPLE	Chemist:	MAC
Lab ID:	248030-006	Analyzed:	08/16/13
Moisture:	10%		

Analyte	Result	RL
Gasoline C7-C12	ND	0.16

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	64-139

Field ID:	IA-2B	Batch#:	201809
Type:	SAMPLE	Chemist:	MAC
Lab ID:	248030-007	Analyzed:	08/16/13
Moisture:	10%		

Analyte	Result	RL
Gasoline C7-C12	ND	0.19

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	64-139

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit







## Batch QC Report

Gasoline by GC/FID (5035 Prep)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC702348	Batch#:	201809
Matrix:	Soil	Chemist:	MAC
Units:	mg/Kg	Analyzed:	08/16/13

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.065	106	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	106	64-139



## Batch QC Report

Gasoline by GC/FID (5035 Prep)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	201863
Units:	mg/Kg	Chemist:	DJA
Diln Fac:	1.000	Analyzed:	08/19/13

Type: BS Lab ID: QC702574

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	0.9850	98	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	95	64-139

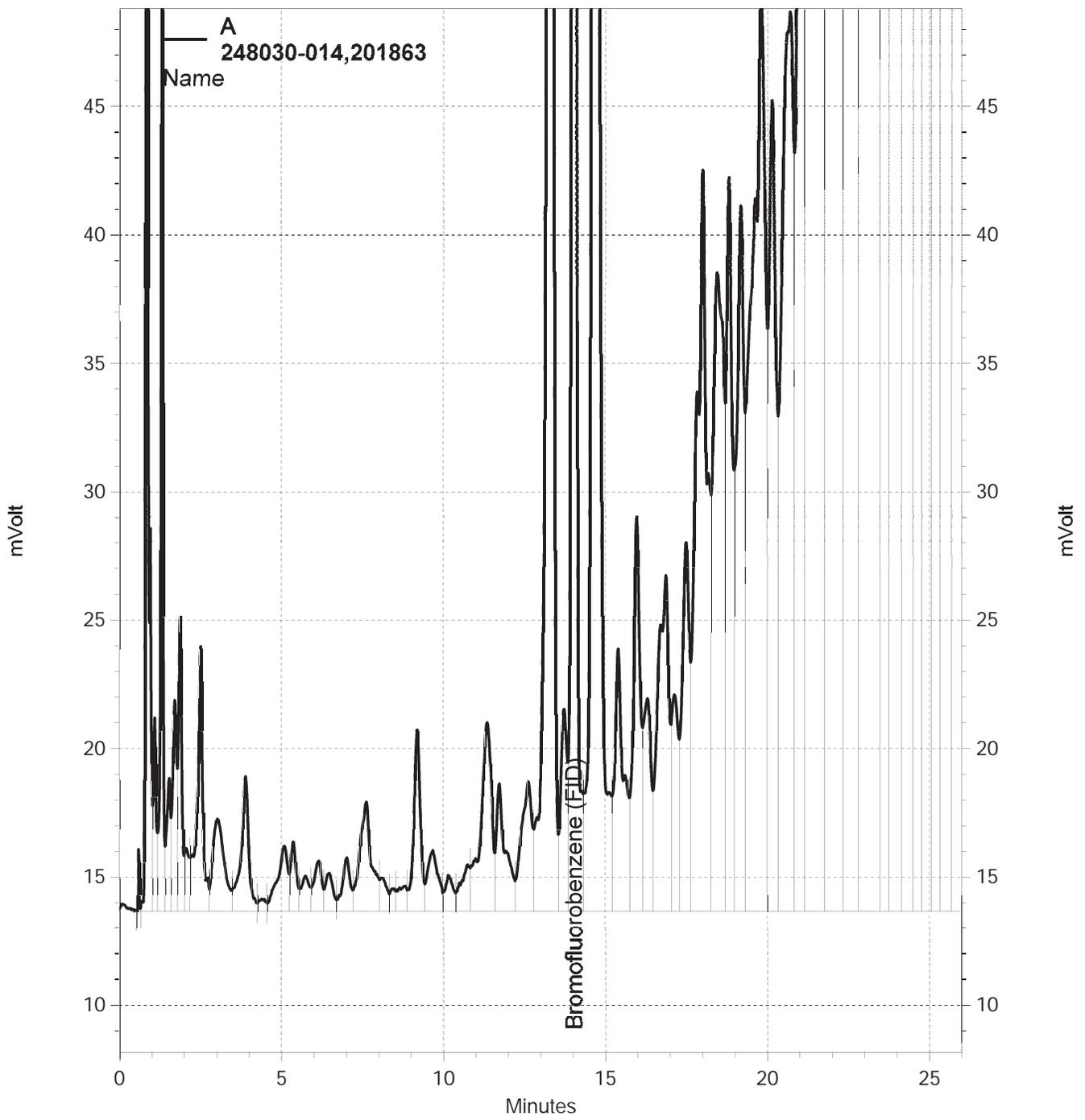
Type: BSD Lab ID: QC702575

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1.000	1.017	102	80-120	3	20

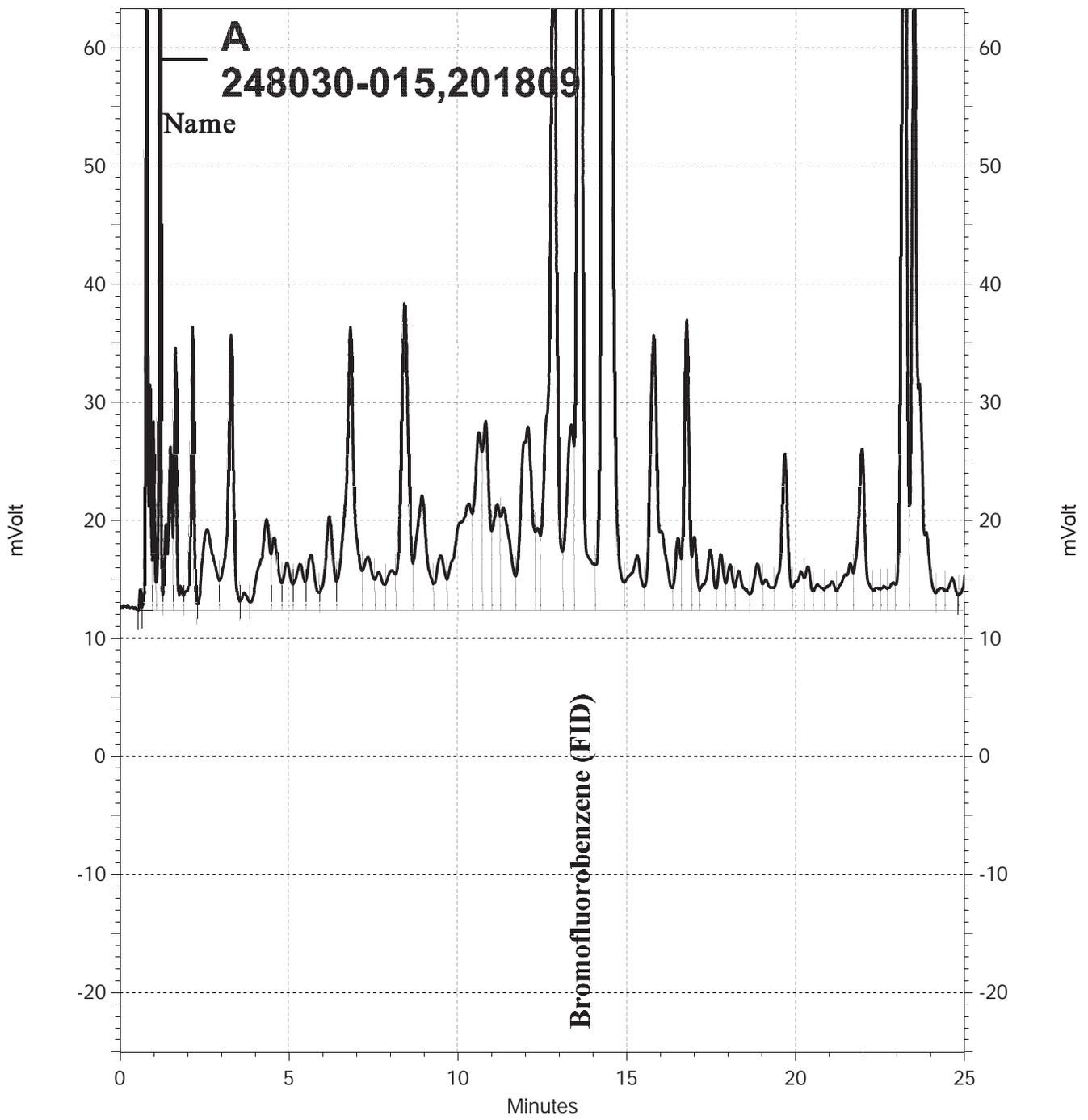
  

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	64-139

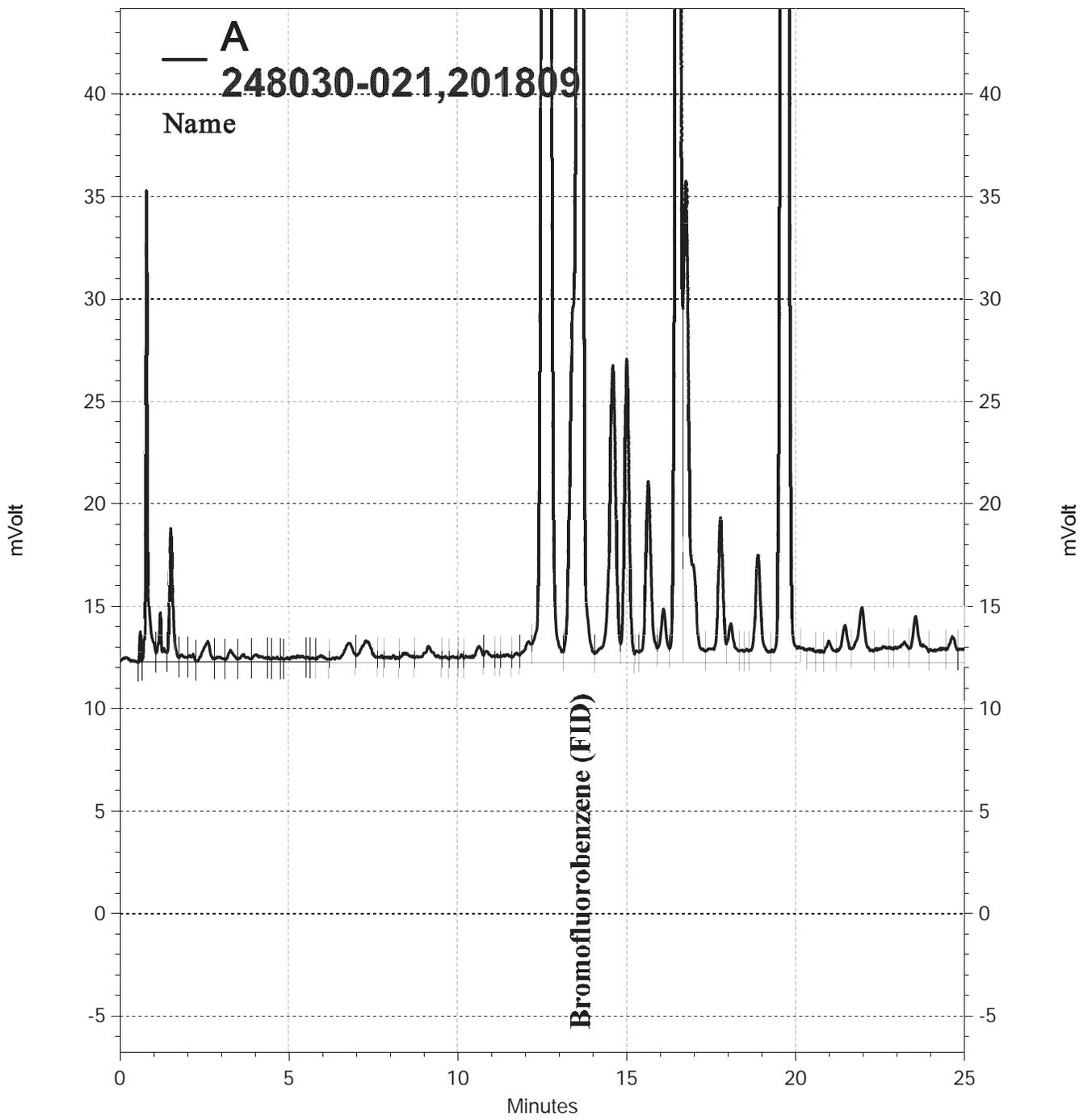
RPD= Relative Percent Difference



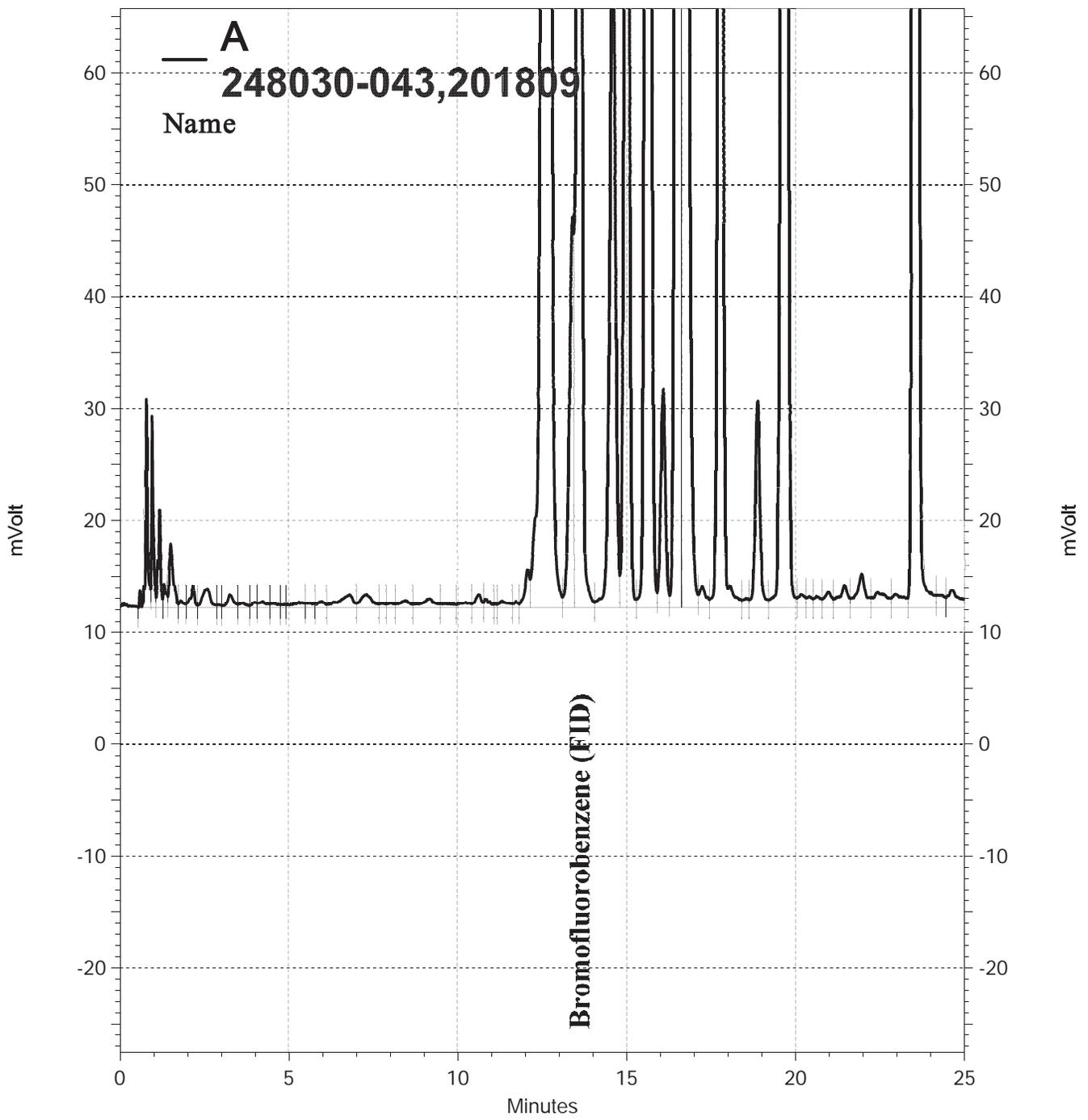
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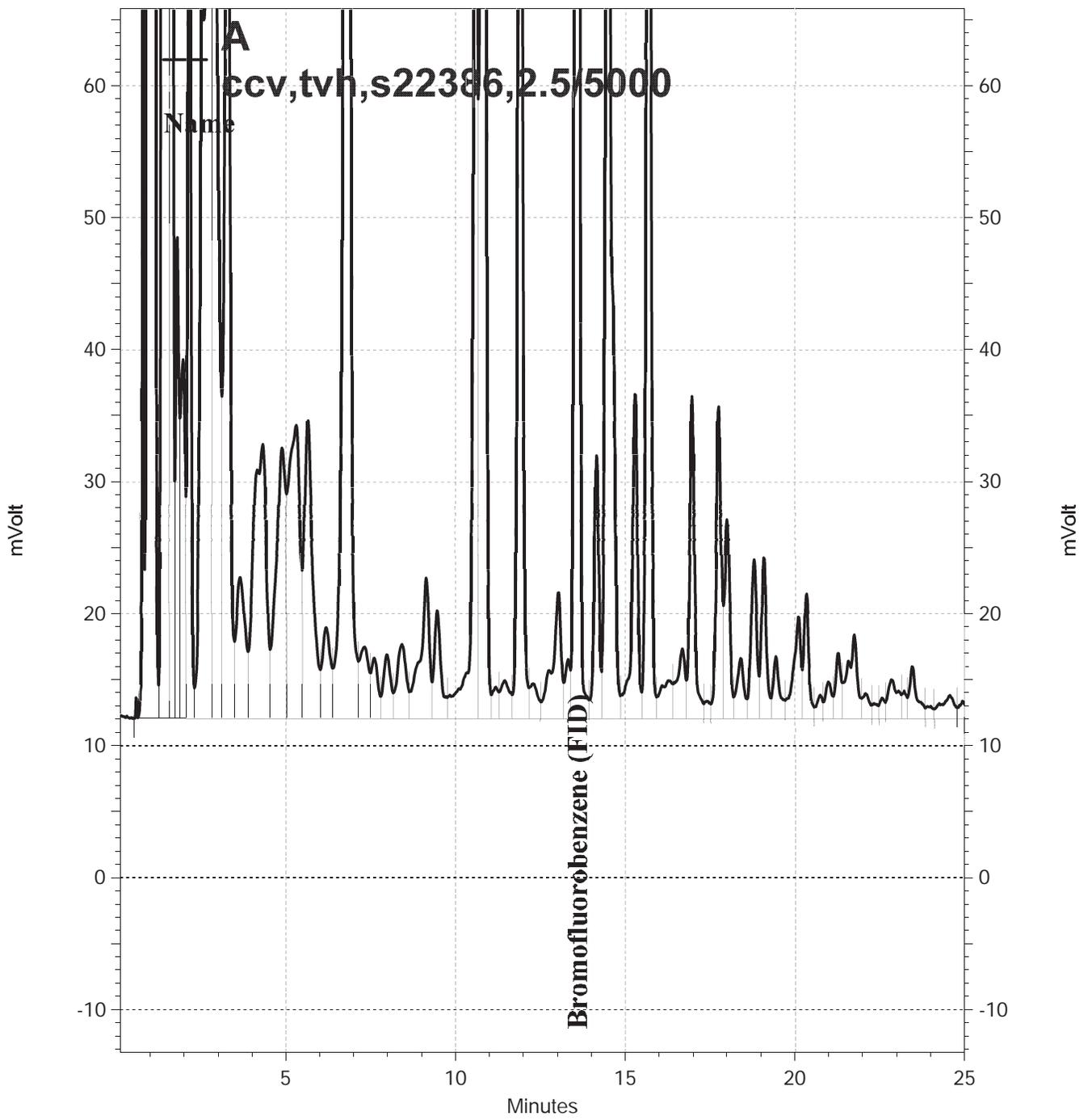
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— \\Lims\gdrive\ezchrom\Projects\GC05\Data\228-002, A

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCVOA Soil: EPA 8015B

Inst : GC05  
 Calnum : 313272651001  
 Units : ng

Name : tvh/bfb\_189  
 Date : 08-JUL-2013 21:05  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	189_017	313272651017	TVH_14	08-JUL-2013 21:05	S22482 (1000X), S22692 (5000X)
L2	189_018	313272651018	TVH_15	08-JUL-2013 21:43	S22481 (1000X), S22692 (5000X)
L3	189_019	313272651019	TVH_16	08-JUL-2013 22:21	S22480 (1000X), S22692 (5000X)
L4	189_020	313272651020	TVH_17	08-JUL-2013 22:58	S22479 (2000X), S22692 (5000X)
L5	189_021	313272651021	TVH_18	08-JUL-2013 23:36	S22479 (1000X), S22692 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	%RSD	MnR^2	MxRSD	Flg
Gasoline C7-C12	A	3293.6	2835.0	2751.4	2794.3	2775.8	AVRG		3.46E-4		2890.0	8		0.995	20	
Bromofluorobenzene (FID)	A	1901.5	2022.3	2073.2	2022.9	2097.2	AVRG		4.94E-4		2023.4	4		0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Gasoline C7-C12	A	250.00	14	2500.0	-2	10000	-5	25000	-3	50000	-4
Bromofluorobenzene (FID)	A	900.00	-6	900.00	0	900.00	2	900.00	0	900.00	4

MAC 07/09/13 [Bromofluorobenzene (FID) A]: Separated from coeluting peak in multiple levels.

Analyst: MAC Date: 07/09/13 Reviewer: EAH Date: 07/09/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 GCVOA Soil  
EPA 8015B

Inst : GC05  
Calnum : 313272651001

Name : tvh/bfb\_189  
Cal Date : 08-JUL-2013

ICV 313272651024 (189\_024 09-JUL-2013) stds: S22156 (1000X), S22692 (5000X)

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Gasoline C7-C12	A	10000	9671	ng	-3	15	

Analyst: MAC

Date: 07/09/13

Reviewer: EAH

Date: 07/09/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCVOA Soil: EPA 8015B

Inst : GC19  
 Calnum : 343288473001  
 Units : ng

Name : tvh/bfb\_200  
 Date : 20-JUL-2013 01:04  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	200_026	343288473026	TVH_14	20-JUL-2013 01:04	S22482 (1000X), S22692 (5000X)
L2	200_027	343288473027	TVH_15	20-JUL-2013 01:41	S22481 (1000X), S22692 (5000X)
L3	200_028	343288473028	TVH_16	20-JUL-2013 02:19	S22480 (1000X), S22692 (5000X)
L4	200_029	343288473029	TVH_17	20-JUL-2013 02:56	S22479 (2000X), S22692 (5000X)
L5	200_030	343288473030	TVH_18	20-JUL-2013 03:34	S22479 (1000X), S22692 (5000X)

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
Gasoline C7-C12	A	2577.9	1919.7	1955.3	1955.2	1948.5	AVRG		4.83E-4		2071.3	14		0.995	20	
Bromofluorobenzene (FID)	A	1484.3	1471.6	1546.7	1654.5	1781.5	AVRG		6.30E-4		1587.7	8		0.995	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Gasoline C7-C12	A	250.00	24	2500.0	-7	10000	-6	25000	-6	50000	-6
Bromofluorobenzene (FID)	A	900.00	-7	900.00	-7	900.00	-3	900.00	4	900.00	12

Analyst: DJA

Date: 07/22/13

Reviewer: EAH

Date: 07/22/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 GCVOA Soil  
EPA 8015B

Inst : GC19  
Calnum : 343288473001

Name : tvh/bfb\_200  
Cal Date : 20-JUL-2013

ICV 343288473033 (200\_033 20-JUL-2013) stds: S22156 (1000X), S22692 (5000X)

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Gasoline C7-C12	A	10000	11090	ng	11	15	

Analyst: DJA

Date: 07/22/13

Reviewer: EAH

Date: 07/22/13

CURTIS & TOMPKINS SPIKE USER REPORT FOR 248030 GCVOA Soil  
EPA 8015B

Inst : GC05                                      Run Name : QC702348                                      IDF : 1.0  
 Seqnum : 313328860002.2                      File : 228\_002                                      Time : 16-AUG-2013 09:38  
 Cal : 313272651001                              Caldate : 08-JUL-2013  
 Standards: S22386 (2000X), S22692 (5000X)

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	2890.0	3077.0	5000	5323	ng	6	15	u
Bromofluorobenzene (FID)	A	2023.4	2152.6	900.0	957.5	ng	6	15	u

MAC 08/19/13 [Bromofluorobenzene (FID) A]: Separated from coeluting peak for Ch. A. [general version]

MAC 08/19/13 : ccv/lcs,qc702348,201809 [general version]

Analyst: DJA                                      Date: 08/21/13                                      Reviewer: EAH                                      Date: 08/21/13

u=use

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCVOA Soil  
EPA 8015B

Inst : GC05                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 313328860005        File : 228\_005                      Time : 16-AUG-2013 12:52  
 Cal : 313272651001          Caldate : 08-JUL-2013  
 Standards: S22386 (2000X), S22692 (5000X)

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Gasoline C7-C12	A	2890.0	3101.4	5000	5366	ng	7	15	
Bromofluorobenzene (FID)	A	2023.4	2194.2	900.0	976.0	ng	8	15	

MAC 08/19/13 [Bromofluorobenzene (FID) A]: Separated from coeluting peak for Ch. A.

Analyst: MAC                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCVOA Soil  
EPA 8015B

Inst : GC05                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 313328860016        File : 228\_016                      Time : 16-AUG-2013 21:05  
 Cal : 313272651001        Caldate : 08-JUL-2013  
 Standards: S22386 (1000X), S22692 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2890.0	2945.9	10000	10190	ng	2	15	
Bromofluorobenzene (FID)	A	2023.4	2342.7	900.0	1042	ng	<b>16</b>	15	c+

MAC 08/19/13 [Bromofluorobenzene (FID) A]: Passes control limits.

Analyst: MAC                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/20/13

+=high bias    c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCVOA Soil  
EPA 8015B

Inst : GC05                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 313328860018        File : 228\_018                      Time : 16-AUG-2013 22:21  
 Cal : 313272651001            Caldate : 08-JUL-2013  
 Standards: S22386 (1000X), S22692 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2890.0	2931.1	10000	10140	ng	1	15	
Bromofluorobenzene (FID)	A	2023.4	2325.7	900.0	1034	ng	15	15	

Analyst: MAC                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCVOA Soil  
EPA 8015B

Inst : GC05                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 313328860029        File : 228\_029                      Time : 17-AUG-2013 05:14  
 Cal : 313272651001        Caldate : 08-JUL-2013  
 Standards: S22386 (666.7X), S22692 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2890.0	2833.4	15000	14710	ng	-2	15	
Bromofluorobenzene (FID)	A	2023.4	2370.2	900.0	1054	ng	<b>17</b>	15	c+

MAC 08/19/13 [Bromofluorobenzene (FID) A]: Passes control limits.

Analyst: MAC                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/20/13

+=high bias    c=CCV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 248030 GCVOA Soil  
EPA 8015B

Inst : GC19                                      Run Name : QC702574                                      IDF : 1.0  
 Seqnum : 343333140002.2                      File : 231\_002                                      Time : 19-AUG-2013 08:57  
 Cal : 343288473001                              Caldate : 20-JUL-2013  
 Standards: S22386 (2000X), S22692 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2071.3	2040.2	5000	4925	ng	-2	15	u
Bromofluorobenzene (FID)	A	1587.7	1512.6	900.0	857.4	ng	-5	15	u

DJA 08/20/13 : ccv/bs,qc702574,201863 [general version]

Analyst: DJA                                      Date: 08/21/13                                      Reviewer: EAH                                      Date: 08/21/13

u=use

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCVOA Soil  
EPA 8015B

Inst : GC19                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 343333140005        File : 231\_005              Time : 19-AUG-2013 12:30  
 Cal : 343288473001        Caldate : 20-JUL-2013  
 Standards: S22386 (2000X), S22692 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2071.3	2042.3	5000	4930	ng	-1	15	
Bromofluorobenzene (FID)	A	1587.7	1570.2	900.0	890.0	ng	-1	15	

Analyst: DJA                      Date: 08/20/13                      Reviewer: EAH                      Date: 08/21/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCVOA Soil  
EPA 8015B

Inst : GC19                      Run Name : TVH                      IDF : 1.0  
 Seqnum : 343333140017        File : 231\_017                      Time : 19-AUG-2013 20:45  
 Cal : 343288473001          Caldate : 20-JUL-2013  
 Standards: S22386 (1000X), S22692 (5000X)

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Gasoline C7-C12	A	2071.3	1973.0	10000	9525	ng	-5	15	
Bromofluorobenzene (FID)	A	1587.7	1574.3	900.0	892.4	ng	-1	15	

Analyst: DJA                      Date: 08/20/13                      Reviewer: EAH                      Date: 08/21/13

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 313272651

Instrument : GC05  
 Method : EPA 8015B, EPA 8021B

Begun : 07/08/13 08:11  
 SOP Version : TVH\_BTXE\_rv21

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	189_001	X	CMARKER				07/08/13 08:11	1.0	1 2
002	189_002	CCV/BS	QC696791		Water	200451	07/08/13 08:48	1.0	3 2
003	189_003	CCV	TVH				07/08/13 09:26	1.0	4 2
004	189_004	BSD	QC696792		Water	200451	07/08/13 10:04	1.0	3 2
005	189_005	CCV	TVH				07/08/13 11:30	1.0	4 2
006	189_006	CCV/BS	QC696798		Oil	200453	07/08/13 12:07	1.0	3 2
007	189_007	CCV	TVH				07/08/13 14:12	1.0	4 2
008	189_008	BSD	QC696799		Oil	200453	07/08/13 15:01	1.0	3 2
009	189_009	BLANK	QC696793		Water	200451	07/08/13 15:47	1.0	2
010	189_010	BLANK	QC696800		Oil	200453	07/08/13 16:25	1.0	2
011	189_011	SAMPLE	246679-004		Water	200451	07/08/13 17:20	20.0	2
012	189_012	X	IB				07/08/13 17:57	1.0	2
013	189_013	SAMPLE	246679-003	M	Oil	200453	07/08/13 18:35	25.0	2
014	189_014	X	BTXE				07/08/13 19:13	1.0	3 2
015	189_015	CCV	BTXE				07/08/13 19:50	1.0	3 2
016	189_016	IB	CALIB				07/08/13 20:28	1.0	2
017	189_017	ICAL	TVH_14				07/08/13 21:05	1.0	5 2
018	189_018	ICAL	TVH_15				07/08/13 21:43	1.0	6 2
019	189_019	ICAL	TVH_16				07/08/13 22:21	1.0	7 2
020	189_020	ICAL	TVH_17				07/08/13 22:58	1.0	8 2
021	189_021	ICAL	TVH_18				07/08/13 23:36	1.0	8 2
022	189_022	IB	CALIB				07/09/13 00:14	1.0	2
023	189_023	X	ICV				07/09/13 00:51	1.0	9 2
024	189_024	ICV	TVH				07/09/13 01:29	1.0	9 2
025	189_025	CMARKER					07/09/13 02:06	1.0	1 2

MAC 07/09/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 25.

MAC 07/09/13 : Matrix spikes were not performed for this analysis in batch 200451 due to limited sample volume or interferences from the solvent in sample dilutions.

Reviewed by: MAC Date: 07/09/13

Standards used: 1=S21808 2=S22692 3=S22385 4=S22386 5=S22482 6=S22481 7=S22480 8=S22479 9=S22156

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 313328860

Instrument : GC05  
 Method : EPA 8015B, EPA 8021B

Begun : 08/16/13 09:00  
 SOP Version : TVH\_BTXE\_rv21

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Std	Used
001	228_001	CCV	BTXE			08/16/13 09:00	1.0	1	2
002	228_002	CCV/LCS	QC702348	Soil	201809	08/16/13 09:38	1.0	3	2
003	228_003	CCV	BTXE			08/16/13 10:15	1.0	1	2
004	228_004	BLANK	QC702349	Soil	201809	08/16/13 11:03	1.0	2	
005	228_005	CCV	TVH			08/16/13 12:52	1.0	3	2
006	228_006	X	CMARKER			08/16/13 13:30	1.0	4	2
007	228_007	MSS	248030-018	Soil	201809	08/16/13 15:27	1.0	2	
008	228_008	MS	QC702350	Soil	201809	08/16/13 16:04	1.0	3	2
009	228_009	MSD	QC702351	Soil	201809	08/16/13 16:42	1.0	3	2
010	228_010	SAMPLE	248030-002	Soil	201809	08/16/13 17:20	1.0	2	
011	228_011	SAMPLE	248030-003	Soil	201809	08/16/13 17:57	1.0	2	
012	228_012	SAMPLE	248030-006	Soil	201809	08/16/13 18:35	1.0	2	
013	228_013	SAMPLE	248030-007	Soil	201809	08/16/13 19:13	1.0	2	
014	228_014	SAMPLE	248030-008	Soil	201809	08/16/13 19:50	1.0	2	
015	228_015	SAMPLE	248030-014	Soil	201809	08/16/13 20:28	1.0	2	
016	228_016	CCV	TVH			08/16/13 21:05	1.0	3	2
017	228_017	X	CMARKER			08/16/13 21:43	1.0	4	2
018	228_018	CCV	TVH			08/16/13 22:21	1.0	3	2
019	228_019	SAMPLE	248030-015	Soil	201809	08/16/13 22:58	1.0	2	
020	228_020	SAMPLE	248030-017	Soil	201809	08/16/13 23:36	1.0	2	
021	228_021	SAMPLE	248030-021	Soil	201809	08/17/13 00:13	1.0	2	
022	228_022	SAMPLE	248030-034	Soil	201809	08/17/13 00:51	1.0	2	
023	228_023	SAMPLE	248030-035	Soil	201809	08/17/13 01:29	1.0	2	
024	228_024	SAMPLE	248030-039	Soil	201809	08/17/13 02:06	1.0	2	
025	228_025	SAMPLE	248030-043	Soil	201809	08/17/13 02:44	1.0	2	
026	228_026	SAMPLE	248046-001	Soil	201809	08/17/13 03:21	1.0	2	
027	228_027	SAMPLE	248046-002	Soil	201809	08/17/13 03:59	1.0	2	
028	228_028	SAMPLE	248046-003	Soil	201809	08/17/13 04:37	1.0	2	
029	228_029	CCV	TVH			08/17/13 05:14	1.0	3	2
030	228_030	CCV	TVH			08/17/13 05:52	1.0	3	2
031	228_031	X	CMARKER			08/17/13 06:29	1.0	4	2
032	228_032	SAMPLE	248046-004	Soil	201809	08/17/13 07:07	1.0	2	
033	228_033	SAMPLE	248046-005	Soil	201809	08/17/13 07:44	1.0	2	
034	228_034	SAMPLE	247994-002	Soil	201809	08/17/13 08:22	1.0	2	
035	228_035	CCV	TVH			08/17/13 09:00	1.0	3	2
036	228_036	CCV	TVH			08/17/13 09:37	1.0	3	2
037	228_037	X	CMARKER			08/17/13 10:15	1.0	4	2

MAC 08/19/13 : Opening CM ran in previous sequence.

DJA 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 37.

Reviewed by: MAC Date: 08/19/13

Standards used: 1=S22385 2=S22692 3=S22386 4=S21808

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 343288473

Instrument : GC19  
 Method : EPA 8015B, EPA 8021B

Begun : 07/19/13 07:53  
 SOP Version : TVH\_BTXE\_rv21

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	200_001	X	CMARKER				07/19/13 07:53	1.0	1 2
002	200_002	CCV/LCS	QC698267		Soil	200817	07/19/13 08:31	1.0	3 2
003	200_003	BLANK	QC698268		Soil	200817	07/19/13 09:17	1.0	2
004	200_004	PREPBLK	QC698269	M	Soil	200817	07/19/13 10:04	25.0	2
005	200_005	SAMPLE	247083-010	M	Soil	200817	07/19/13 10:41	50.0	2
006	200_006	MSS	247083-011		Soil	200817	07/19/13 11:37	1.0	2
007	200_007	X	TVH				07/19/13 12:28	1.0	3 2
008	200_008	X	CMARKER				07/19/13 13:05	1.0	1 2
009	200_009	CCV	TVH				07/19/13 13:43	1.0	3 2
010	200_010	X	CMARKER				07/19/13 14:29	1.0	1 2
011	200_011	CCV	BTXE				07/19/13 15:07	1.0	4 2
012	200_012	CCV/BS	QC698355		Soil	200817	07/19/13 16:03	1.0	4 2
013	200_013	X	IB				07/19/13 16:55	1.0	2
014	200_014	BLANK	QC698268		Soil	200817	07/19/13 17:33	1.0	2
015	200_015	BSD	QC698356		Soil	200817	07/19/13 18:11	1.0	4 2
016	200_016	MSS	247115-002		Soil	200817	07/19/13 18:48	1.0	2
017	200_017	MS	QC698421		Soil	200817	07/19/13 19:26	1.0	3 2
018	200_018	MSD	QC698422		Soil	200817	07/19/13 20:03	1.0	3 2
019	200_019	CCV	BTXE				07/19/13 20:41	1.0	4 2
020	200_020	CCV	TVH				07/19/13 21:18	1.0	3 2
021	200_021	CCV	BTXE				07/19/13 21:56	1.0	4 2
022	200_022	CCV	TVH				07/19/13 22:34	1.0	3 2
023	200_023	X	CMARKER				07/19/13 23:11	1.0	1 2
024	200_024	X	IB				07/19/13 23:49	1.0	2
025	200_025	IB	CALIB				07/20/13 00:26	1.0	2
026	200_026	ICAL	TVH_14				07/20/13 01:04	1.0	5 2
027	200_027	ICAL	TVH_15				07/20/13 01:41	1.0	6 2
028	200_028	ICAL	TVH_16				07/20/13 02:19	1.0	7 2
029	200_029	ICAL	TVH_17				07/20/13 02:56	1.0	8 2
030	200_030	ICAL	TVH_18				07/20/13 03:34	1.0	8 2
031	200_031	X	IB				07/20/13 04:12	1.0	2
032	200_032	X	ICV				07/20/13 04:49	1.0	9 2
033	200_033	ICV	TVH				07/20/13 05:27	1.0	9 2
034	200_034	CMARKER					07/20/13 06:04	1.0	1 2

DJA 07/19/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 10.

DJA 07/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 11 through 34.

Reviewed by: DJA Date: 07/19/13

Standards used: 1=S21808 2=S22692 3=S22386 4=S22385 5=S22482 6=S22481 7=S22480 8=S22479 9=S22156

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 343333140

Instrument : GC19  
 Method : EPA 8015B, EPA 8021B

Begun : 08/19/13 08:20  
 SOP Version : TVH\_BTXE\_rv21

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	231_001	X	CMARKER			08/19/13 08:20	1.0	1 2
002	231_002	CCV/BS	QC702574	Soil	201863	08/19/13 08:57	1.0	3 2
003	231_003	BLANK	QC702576	Soil	201863	08/19/13 10:22	1.0	2
004	231_004	BSD	QC702575	Soil	201863	08/19/13 11:53	1.0	3 2
005	231_005	CCV	TVH			08/19/13 12:30	1.0	3 2
006	231_006	X	CMARKER			08/19/13 13:08	1.0	1 2
007	231_007	SAMPLE	248046-003	Soil	201863	08/19/13 14:03	1.0	2
008	231_008	SAMPLE	248046-005	Soil	201863	08/19/13 15:07	1.0	2
009	231_009	SAMPLE	248030-014	Soil	201863	08/19/13 15:44	1.0	2
010	231_010	SAMPLE	247997-003	Soil	201863	08/19/13 16:22	1.0	2
011	231_011	SAMPLE	247997-004	Soil	201863	08/19/13 17:00	1.0	2
012	231_012	SAMPLE	247997-005	Soil	201863	08/19/13 17:37	1.0	2
013	231_013	SAMPLE	247997-007	Soil	201863	08/19/13 18:15	1.0	2
014	231_014	SAMPLE	247997-008	Soil	201863	08/19/13 18:53	1.0	2
015	231_015	SAMPLE	248098-001	Soil	201863	08/19/13 19:30	1.0	2
016	231_016	SAMPLE	248098-002	Soil	201863	08/19/13 20:08	1.0	2
017	231_017	CCV	TVH			08/19/13 20:45	1.0	3 2
018	231_018	X	CMARKER			08/19/13 21:23	1.0	1 2
019	231_019	SAMPLE	248098-003	Soil	201863	08/19/13 22:00	1.0	2
020	231_020	SAMPLE	248098-004	Soil	201863	08/19/13 22:38	1.0	2
021	231_021	SAMPLE	248097-001	Soil	201863	08/19/13 23:16	1.0	2
022	231_022	SAMPLE	248097-002	Soil	201863	08/19/13 23:53	1.0	2
023	231_023	SAMPLE	248097-003	Soil	201863	08/20/13 00:31	1.0	2
024	231_024	SAMPLE	248097-004	Soil	201863	08/20/13 01:08	1.0	2
025	231_025	SAMPLE	248097-005	Soil	201863	08/20/13 01:46	1.0	2
026	231_026	SAMPLE	248097-006	Soil	201863	08/20/13 02:23	1.0	2
027	231_027	SAMPLE	248097-007	Soil	201863	08/20/13 03:01	1.0	2
028	231_028	SAMPLE	248097-008	Soil	201863	08/20/13 03:39	1.0	2
029	231_029	CCV	TVH			08/20/13 04:16	1.0	3 2
030	231_030	X	CMARKER			08/20/13 04:54	1.0	1 2

DJA 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 30.

Reviewed by: DJA Date: 08/20/13

Standards used: 1=S21808 2=S22692 3=S22386

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Sample	ID	Weight (g)	NaHSO <sub>4</sub> ?	Comments	
5 247980-1	comp A/B	1.0	No	DJA 8/15/13	
-2	comp A/B	0.94	↓		
-3	↓	1.04			
247822-2	A	0.90			
-2MS	↓	0.98			
-2MSD	↓	0.96			
247981-17	comp 1-4A	1.00			
-18	comp 5-8A	0.99			
-19	comp 9-12A	1.00			
-20	comp 13-16A	1.07			
15 247919-14	A	0.96		↓	MAC 08/15/13
-15	↓	1.00			
247994-2	B	3.94			
247900-4	comp: 247919 (7A, 12A, 14A)		0.91		
247928-3	B	4.31			
-4	↓	4.61			
-5	↓	4.48			
-6	↓	4.51			
-7	↓	4.66			
-8	↓	3.75			
25 247929-1	↓	3.83	No	DJA 8/16/13	
-2	↓	4.93			
247930-1	↓	4.68			
247030-2	B	4.78			
-3	↓	6.57			
-6	A	6.84			
-7	↓	5.75			
-8	↓	7.22			
-14	B	6.88			
-15	↓	5.15			
35 247917-17	A	5.68	No	MAC 08/16/13	
-18	A	3.46			
-18MS	B	3.19			
-18MSD	C	3.51			
-21	A	5.95			
40 247934-34	↓	5.88			
-35	↓	6.35			
-39	↓	5.93			
-43	↓	4.56			
45 247905-4	comp: 247890 (3A, 10A, 23A)				0.91
↓	↓	0.94			

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Sample	ID	Weight	NaHSO <sub>4</sub> ?	Comments
248006-4	comp: 247419-(7A,12A,14A)	0.95	No	MAC 08/16/13
248049-1	A	0.98	No	↓
↓ -1 MS	↓	0.91		
↓ -1 MSD	↓	0.92		
248050-13	comp: 248050-(11A-4A)	0.99		
↓ -14	↓	0.97		
↓ -15	↓	0.99		
248028-1	MA 5, 08/16/13 A113	0.93		
↓ -1 MS	↓	0.98		
↓ -1 MSD	↓	1.04		
↓ -2	↓	1.05		
248039-5	A, comp: B,C,D,E,F,G	1.10		
↓ -6	↓	0.95		
↓ -7	↓	0.93		
↓ -8	↓	0.96		
247981-17	comp: 981-(11A-4A)	0.97		
↓ -18	↓	1.10		
↓ -19	↓	0.92		
↓ -20	↓	0.99		
247929-2	C	4.13		
247930-1	↓	5.10		
247928-3	↓	4.38		
↓ -4	↓	4.76		
↓ -5	↓	4.52		
↓ -6	↓	4.46		
↓ -8	↓	4.11		
247994-2	D	3.78		
248046-1	A	4.41		
↓ -2	↓	4.17		
↓ -3	↓	5.07		
↓ -4	↓	4.25		
↓ -5	↓	4.48		
↓ -6	↓	4.23		
248043-1	A	1.02	No	MAC 8/16/13
↓ -2	A	1.04	↓	↓

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Sample	ID	Weight	NaHSO <sub>4</sub> ?	Comments
248006-4	comp: 247419-(7A,12A,14A)	0.95	No	MAC 08/14/13
248049-1	A	0.98	↓	↓
↓ -1MS	↓	0.91		
↓ -1MSD	↓	0.92		
248050-13	comp: 248050-(1A-4A)	0.99		
↓ -14	↓	0.97		
↓ -15	↓	0.99		
248028-1	MA 5076113 A	0.93		
↓ -1MS	↓	0.98		
↓ -1MSD	↓	1.04		
↓ -2	↓	1.05		
248039-5	A, comp: B,C,D,E,F,G	1.10		
↓ -6	↓	0.95		
↓ -7	↓	0.93		
↓ -8	↓	0.96		
247981-17	comp: 981-(1A-4A)	0.97		
↓ -18	↓	1.10		
↓ -19	↓	0.92		
↓ -20	↓	0.99		
247929-2	C	4.13		
247930-1	↓	5.10		
247928-3	↓	4.38		
↓ -4	↓	4.76		
↓ -5	↓	4.52		
↓ -6	↓	4.46		
↓ -8	↓	4.11		
247994-2	D	3.78		
248046-1	A	4.41		
↓ -2	↓	4.17		
↓ -3	↓	5.07		
↓ -4	↓	4.25		
↓ -5	↓	4.48		
↓ -6	↓	4.23		
248043-1	A	1.02	No	↓ 8/16/13 ↓ 8/19/13 ↓ Continued to page
248028-2	A	1.04	No	
248046-3	A	0.97	No	
↓ -1MS	↓	1.00	No	
↓ -1MSD	↓	3.96	No	
248046-3	C	4.48		
↓ -5	C	3.10		
248030-14	C	4.32		
248097-1	B	4.69		
↓ -2	↓	4.46		
↓ -3	↓			

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Sample	ID	Weight (g)	NaHSO4?	Comments
248097-4	B	4.70	No	b2A 8/19/13
-5	↓	4.44	↓	↓
-6	↓	4.76	↓	↓
-7	↓	4.27	↓	↓
-8	↓	4.89	↓	↓
248098-1	B	4.79		
-2	↓	4.45		
-3	↓	4.29		
-4	↓	5.94		
248097-3	D	5.78		
-4	↓	4.38		
-5	↓	2.61		
-7	↓	3.40		
-8	↓	4.76		
248100-1	B	4.32		
-2	↓	5.17		
248109-1	A	4.56		
248074-9	comp 1-4 A	1.04		
-10	comp 5-8 A	0.95		
-9MS	comp 1-1A	0.91		
-9MSB	↓			
<del>247997-8</del>				b2A 8/19
<del>b2A 8/19</del>				
248112-1	A	1.0	No	b2A 8/19/13
-1MS	↓	1.01	↓	↓
-1MSD	↓	0.95	↓	↓
-2	↓	0.94	↓	↓
247929-002	D	4.54	No	b2A 5/19/20
248123-1	A	0.95	No	MAC 05/20/13
248124-1	↓	1.05	↓	↓ MAC

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PROPRIETARY INFORMATION

Laboratory Job Number 248030

ANALYTICAL REPORT

TPH-Extractables by GC

Matrix: Water

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3520C
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Field ID:	IA-40	Sampled:	08/15/13
Matrix:	Water	Received:	08/15/13
Units:	ug/L	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/19/13
Batch#:	201802		

Type: SAMPLE Chemist: JDG  
 Lab ID: 248030-038 Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	53
Motor Oil C24-C36	ND	320

Surrogate	%REC	Limits
o-Terphenyl	123	62-133

Type: BLANK Chemist: EAH  
 Lab ID: QC702314 Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	96	62-133

ND= Not Detected  
 RL= Reporting Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3520C
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Type:	LCS	Batch#:	201802
Lab ID:	QC702315	Chemist:	JDG
Matrix:	Water	Prepared:	08/16/13
Units:	ug/L	Analyzed:	08/18/13
Diln Fac:	1.000		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,147	86	59-120

Surrogate	%REC	Limits
o-Terphenyl	107	62-133

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3520C
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Chemist:	JDG
MSS Lab ID:	247926-004	Sampled:	08/13/13
Matrix:	Water	Received:	08/13/13
Units:	ug/L	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/19/13
Batch#:	201802		

Type: MS Cleanup Method: EPA 3630C  
 Lab ID: QC702316

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<15.94	2,500	2,574	103	61-120

Surrogate	%REC	Limits
o-Terphenyl	128	62-133

Type: MSD Cleanup Method: EPA 3630C  
 Lab ID: QC702317

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,186	87	61-120	16	43

Surrogate	%REC	Limits
o-Terphenyl	109	62-133

RPD= Relative Percent Difference

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3520C
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Chemist:	JDG
MSS Lab ID:	247991-001	Sampled:	08/14/13
Matrix:	Water	Received:	08/14/13
Units:	ug/L	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/19/13
Batch#:	201802		

Type: MS Cleanup Method: EPA 3630C  
 Lab ID: QC702318

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<15.94	2,500	2,234	89	61-120

Surrogate	%REC	Limits
o-Terphenyl	110	62-133

Type: MSD Cleanup Method: EPA 3630C  
 Lab ID: QC702319

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,046	82	61-120	9	43

Surrogate	%REC	Limits
o-Terphenyl	97	62-133

RPD= Relative Percent Difference

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Water: EPA 8015B

Inst : GC14B  
 Calnum : 223242707001  
 Units : mg/L

Name : OTPHEX\_168  
 Date : 17-JUN-2013 15:53  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Std
L1	168_005	223242707005	HEX OTP_5	17-JUN-2013 15:53	S22417
L2	168_006	223242707006	HEX OTP_10	17-JUN-2013 16:22	S22418
L3	168_007	223242707007	HEX OTP_25	17-JUN-2013 16:51	S22419
L4	168_008	223242707008	HEX OTP_50	17-JUN-2013 17:19	S22420
L5	168_009	223242707009	HEX OTP_100	17-JUN-2013 17:48	S22421
L6	168_010	223242707010	HEX OTP_200	17-JUN-2013 18:16	S22422

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	MnR^2	MxRSD	Flg
o-Terphenyl	B	34126	33364	32977	33049	32593	31712	AVRG		3.03E-5		32970	2	0.995	20	

Spiked Amounts / Drifts	Ch	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D	%D	%D
o-Terphenyl	B	5.0000	10.000	4	10.000	1	25.000	0	50.000	0	100.00	100.00	-1	200.00	-4

JDG 06/18/13 [Hexacosane B]: Samples requiring Hexacosane will not be analyzed on this instrument.  
 JDG 06/18/13 : Corrected automatically drawn baseline in multiple levels.

Analyst: JDG Date: 06/18/13 Reviewer: EAH Date: 06/18/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Water: EPA 8015B

Inst : GC14B  
 Calnum : 223242707002  
 Units : mg/L

Name : DSL\_168  
 Date : 17-JUN-2013 19:13  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	168_012	223242707012	DSL_10	17-JUN-2013 19:13	S22008
L2	168_013	223242707013	DSL_100	17-JUN-2013 19:42	S22009
L3	168_014	223242707014	DSL_500	17-JUN-2013 20:10	S22010
L4	168_015	223242707015	DSL_1000	17-JUN-2013 20:39	S22011
L5	168_016	223242707016	DSL_5000	17-JUN-2013 21:07	S22007

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
Diesel C10-C24	B	38681	32029	30567	31028	30636	AVRG		3.07E-5		32588	11		0.995	20	
Spiked Amounts / Drifts																
	Ch	L1	L2	L3	L4	L5	%D	L3	%D	L4	%D	L5	%D	L5	%D	
Diesel C10-C24	B	10.000	19	100.00	-2	500.00	-6	1000.0	-5	5000.0	-6					

JDG 06/18/13 : Corrected automatically drawn baseline in DSL\_10 (168\_012).

Analyst: JDG Date: 06/18/13 Reviewer: EAH Date: 06/18/13  
 Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor  
 Page 1 of 1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 GCSV Water  
EPA 8015B

Inst : GC14B  
Calnum : 223242707002

Name : DSL\_168  
Cal Date : 17-JUN-2013

ICV 223242707018 (168\_018 17-JUN-2013) stds: S22427

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	B	500.0	453.7	mg/L	-9	15	

Analyst: JDG

Date: 06/18/13

Reviewer: EAH

Date: 06/18/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Water: EPA 8015B

Inst : GC14B  
 Calnum : 223242707003  
 Units : mg/L

Name : MO\_168  
 Date : 18-JUN-2013 00:00  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stdcs
L1	168_022	223242707022	MO_50	18-JUN-2013 00:00	S21419
L2	168_023	223242707023	MO_250	18-JUN-2013 00:28	S21418
L3	168_024	223242707024	MO_500	18-JUN-2013 00:57	S21417
L4	168_025	223242707025	MO_1000	18-JUN-2013 01:25	S21416
L5	168_026	223242707026	MO_2500	18-JUN-2013 01:54	S21415 (2X)
L6	168_027	223242707027	MO_5000	18-JUN-2013 02:23	S21415

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	MnR^2	MxRSD	Flg
Motor Oil C24-C36	B	17765	18358	18613	18167	16775	16346	AVRG		5.66E-5		17671	5	0.995	20	

Spiked Amounts / Drifts	Ch	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D	%D	%D	%D
Motor Oil C24-C36	B	50.000	250.00	1	250.00	4	500.00	5	1000.0	3	2500.0	L5	-5	5000.0	L6	-7

EAH 06/18/13 : Corrected automatically drawn baseline in all levels.

Analyst: JDG Date: 06/18/13 Reviewer: EAH Date: 06/18/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Water: EPA 8015B

Inst : GC15B  
 Calnum : 163115627001  
 Units : mg/L

Name : OTPHEX\_079  
 Date : 20-MAR-2013 13:31  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	079a004	163115627004	HEXOTP_5	20-MAR-2013 13:31	S21251
L2	079a005	163115627005	HEXOTP_10	20-MAR-2013 13:58	S21252
L3	079a006	163115627006	HEXOTP_25	20-MAR-2013 14:26	S21253
L4	079a007	163115627007	HEXOTP_50	20-MAR-2013 14:54	S21254
L5	079a008	163115627008	HEXOTP_100	20-MAR-2013 15:22	S21255
L6	079a009	163115627009	HEXOTP_200	20-MAR-2013 15:50	S21256

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
o-Terphenyl	56733	56252	56202	54053	56023	54329	AVRG		1.80E-5		55599	2		0.995	20	

Spiked Amounts / Drifts	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D	%D				
o-Terphenyl	5.0000	10.000	25.000	50.000	100.00	200.00	2	1	1	-3	100.00	1	1	200.00	L6	%D	-2

Analyst: JDG Date: 03/21/13 Reviewer: EAH Date: 03/21/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Water: EPA 8015B

Inst : GC15B  
 Calnum : 163115627002  
 Units : mg/L

Name : DSL\_079  
 Date : 20-MAR-2013 16:46  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	079a011	163115627011	DSL_10	20-MAR-2013 16:46	S21990
L2	079a012	163115627012	DSL_100	20-MAR-2013 17:14	S21991
L3	079a013	163115627013	DSL_500	20-MAR-2013 17:42	S21992
L4	079a014	163115627014	DSL_1000	20-MAR-2013 18:09	S21993
L5	079a015	163115627015	DSL_5000	20-MAR-2013 18:37	S21246

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r <sup>2</sup> %RSD	MnR <sup>2</sup>	MxRSD	Flg
Diesel C10-C24	42050	48707	50538	53472	52593	AVRG		2.02E-5		49472	9	0.995	20	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	L5	%D		
Diesel C10-C24	10.000	-15		100.00	-2	500.00	1000.0	8	5000.0	6

JDG 03/21/13 : Corrected automatically drawn baseline in multiple levels.

Analyst: SFL Date: 03/21/13 Reviewer: EAH Date: 03/21/13

Instrument amount = a0 + response \* a1 + response<sup>2</sup> \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 GCSV Water  
EPA 8015B

Inst : GC15B  
Calnum : 163115627002

Name : DSL\_079  
Cal Date : 20-MAR-2013

ICV 163115627017 (079a017 20-MAR-2013) stds: S21688

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	477.9	mg/L	-4	15	

Analyst: JDG

Date: 03/21/13

Reviewer: EAH

Date: 03/21/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Water: EPA 8015B

Inst : GC15B  
 Calnum : 163202056001  
 Units : mg/L

Name : MO\_140  
 Date : 20-MAY-2013 17:33  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	140b015	163202056015	MO_25	20-MAY-2013 17:33	S21419 (2X)
L2	140b016	163202056016	MO_50	20-MAY-2013 18:01	S21419
L3	140b017	163202056017	MO_250	20-MAY-2013 18:28	S21418
L4	140b018	163202056018	MO_500	20-MAY-2013 18:56	S21417
L5	140b019	163202056019	MO_1000	20-MAY-2013 19:23	S21416
L6	140b020	163202056020	MO_2500	20-MAY-2013 19:51	S21415 (2X)
L7	140b021	163202056021	MO_5000	20-MAY-2013 20:19	S21415

Analyte	L1	L2	L3	L4	L5	L6	L7	Type	a0	a1	a2	Avg	r^2	%RSD	MnR^2	MxRSD	Flg
Motor Oil C24-C36	33963	35915	35125	36858	36003	31433	26229	AVRG		2.97E-5		33647	11	0.995	20		

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D
Motor Oil C24-C36	25.000	1	50.000	7	250.00	4	500.00	10	1000.0	7	2500.0	-7	5000.0	-22

JDG 05/21/13 : Corrected automatically drawn baseline in multiple levels.

JDG: 05/21/13 SFL: 05/21/13 EAH: 05/21/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 223331779035              File : 230\_035                      Time : 19-AUG-2013 03:33  
 Standards: S22924

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	34803	250.0	267.0	mg/L	7	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	29692	50.00	45.03	mg/L	-10	15	

JDG 08/19/13 : Corrected automatically drawn baseline.

JDG 08/19/13 : DSL\_250: S22924

Analyst: JDG                      Date: 08/19/13                      Reviewer: SFL                      Date: 08/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC14B                                      Run Name : MO\_500                                      IDF : 1.0  
 Seqnum : 223331779036                                      File : 230\_036                                      Time : 19-AUG-2013 04:02  
 Standards: S22923

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	15427	500.0	436.5	mg/L	-13	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	35697	50.00	54.14	mg/L	8	15	

Analyst: JDG                                      Date: 08/19/13                                      Reviewer: SFL                                      Date: 08/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 223331779045              File : 230\_045                      Time : 19-AUG-2013 08:22  
 Standards: S22925

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	34331	500.0	526.7	mg/L	5	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	32194	50.00	48.82	mg/L	-2	15	

JDG 08/19/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/19/13                      Reviewer: SFL                      Date: 08/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223331779046              File : 230\_046                      Time : 19-AUG-2013 08:50  
 Standards: S22923

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	15736	500.0	445.3	mg/L	-11	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	37206	50.00	56.42	mg/L	13	15	

Analyst: JDG                      Date: 08/19/13                      Reviewer: SFL                      Date: 08/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 163331777019              File : 230b019                      Time : 18-AUG-2013 19:24  
 Standards: S22925

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	163115627002	20-MAR-2013	49472	54852	500.0	554.4	mg/L	11	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	62831	50.00	56.50	mg/L	13	15	

JDG 08/19/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/19/13                      Reviewer: SFL                      Date: 08/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC15B Run Name : DSL\_250 IDF : 1.0  
Seqnum : 163331777035 File : 230b035 Time : 19-AUG-2013 02:50  
Standards: S22924

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	163115627002	20-MAR-2013	49472	56154	250.0	283.8	mg/L	14	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	59874	50.00	53.84	mg/L	8	15	

JDG 08/19/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/19/13 Reviewer: SFL Date: 08/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC15B Run Name : DSL\_500 IDF : 1.0  
Seqnum : 163331777042 File : 230b042 Time : 19-AUG-2013 06:04  
Standards: S22925

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	163115627002	20-MAR-2013	49472	56753	500.0	573.6	mg/L	15	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	63309	50.00	56.93	mg/L	14	15	

JDG 08/19/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/19/13 Reviewer: SFL Date: 08/19/13  
Page 1 of 1 163331777042

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 163333110003              File : 231b003                      Time : 19-AUG-2013 08:47  
 Standards: S22924

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	163115627002	20-MAR-2013	49472	54831	250.0	277.1	mg/L	11	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	58440	50.00	52.56	mg/L	5	15	

JDG 08/19/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/19/13                      Reviewer: SFL                      Date: 08/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 163333110004              File : 231b004                      Time : 19-AUG-2013 09:14  
 Standards: S22923

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	163202056001	20-MAY-2013	33647	36665	500.0	544.9	mg/L	9	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	64810	50.00	58.28	mg/L	17	15	c+

JDG 08/19/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/19/13

+=high bias    c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 163333110012              File : 231b012                      Time : 19-AUG-2013 15:52  
 Standards: S22925

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	163115627002	20-MAR-2013	49472	54273	500.0	548.5	mg/L	10	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	60913	50.00	54.78	mg/L	10	15	

JDG 08/19/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/19/13                      Reviewer: SFL                      Date: 08/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Water  
EPA 8015B

Inst : GC15B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 163333110013              File : 231b013                      Time : 19-AUG-2013 16:19  
 Standards: S22923

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	163202056001	20-MAY-2013	33647	37039	500.0	550.4	mg/L	10	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	65526	50.00	58.93	mg/L	18	15	c+

SFL 08/19/13 : Corrected automatically drawn baseline.

Analyst: SFL                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/19/13

+=high bias    c=CCV

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163115627

Instrument : GC15B  
 Method : EPA 8015B

Begun : 03/20/13 11:42  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	079a001	X	IB			03/20/13 11:42	1.0	
002	079a002	X	IB			03/20/13 12:09	1.0	
003	079a003	IB	CALIB			03/20/13 13:03	1.0	
004	079a004	ICAL	HEXOTP_5			03/20/13 13:31	1.0	1
005	079a005	ICAL	HEXOTP_10			03/20/13 13:58	1.0	2
006	079a006	ICAL	HEXOTP_25			03/20/13 14:26	1.0	3
007	079a007	ICAL	HEXOTP_50			03/20/13 14:54	1.0	4
008	079a008	ICAL	HEXOTP_100			03/20/13 15:22	1.0	5
009	079a009	ICAL	HEXOTP_200			03/20/13 15:50	1.0	6
010	079a010	IB	CALIB			03/20/13 16:18	1.0	
011	079a011	ICAL	DSL_10			03/20/13 16:46	1.0	7
012	079a012	ICAL	DSL_100			03/20/13 17:14	1.0	8
013	079a013	ICAL	DSL_500			03/20/13 17:42	1.0	9
014	079a014	ICAL	DSL_1000			03/20/13 18:09	1.0	10
015	079a015	ICAL	DSL_5000			03/20/13 18:37	1.0	11
016	079a016	IB	CALIB			03/20/13 19:05	1.0	
017	079a017	ICV	DSL_500			03/20/13 19:33	1.0	12
018	079a018	X	ICV			03/20/13 20:01	1.0	12
019	079a019	IB	CALIB			03/20/13 20:28	1.0	
020	079a020	ICAL	MO_25			03/20/13 20:56	1.0	13
021	079a021	ICAL	MO_50			03/20/13 21:24	1.0	13
022	079a022	ICAL	MO_250			03/20/13 21:51	1.0	14
023	079a023	ICAL	MO_500			03/20/13 22:19	1.0	15
024	079a024	ICAL	MO_1000			03/20/13 22:47	1.0	16
025	079a025	ICAL	MO_2500			03/20/13 23:15	1.0	17
026	079a026	ICAL	MO_5000			03/20/13 23:43	1.0	17
027	079a027	IB	CALIB			03/21/13 00:10	1.0	
028	079a028	ICAL	JP5_10			03/21/13 00:38	1.0	18
029	079a029	ICAL	JP5_100			03/21/13 01:06	1.0	19
030	079a030	ICAL	JP5_500			03/21/13 01:33	1.0	20
031	079a031	ICAL	JP5_1500			03/21/13 02:01	1.0	21
032	079a032	ICAL	JP5_2500			03/21/13 02:29	1.0	22
033	079a033	ICAL	JP5_5000			03/21/13 02:56	1.0	23
034	079a034	IB	CALIB			03/21/13 03:24	1.0	
035	079a035	ICAL	BUNK_50			03/21/13 03:52	1.0	24
036	079a036	ICAL	BUNK_250			03/21/13 04:20	1.0	25
037	079a037	ICAL	BUNK_500			03/21/13 04:48	1.0	26
038	079a038	ICAL	BUNK_1250			03/21/13 05:15	1.0	27
039	079a039	ICAL	BUNK_2500			03/21/13 05:43	1.0	28
040	079a040	ICAL	BUNK_5000			03/21/13 06:11	1.0	29
041	079a041	IB	CALIB			03/21/13 06:39	1.0	
042	079a042	CMARKER	C8-C50			03/21/13 07:07	1.0	30
043	079a043	IB	CALIB			03/21/13 07:36	1.0	

JDG 03/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 43.

Standards used: 1=S21251 2=S21252 3=S21253 4=S21254 5=S21255 6=S21256 7=S21990 8=S21991 9=S21992 10=S21993 11=S21246  
 12=S21688 13=S21419 14=S21418 15=S21417 16=S21416 17=S21415 18=S21282 19=S21283 20=S21284 21=S21285 22=S21286  
 23=S21281 24=S21289 25=S21290 26=S21291 27=S21292 28=S21293 29=S21287 30=S21686

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163202056

Instrument : GC15B  
 Method : EPA 8015B

Begun : 05/20/13 07:36  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	140b001	X	IB			05/20/13 07:36	1.0	
002	140b002	X	CMARKER			05/20/13 08:05	1.0	1
003	140b003	CCV	DSL_500			05/20/13 08:32	1.0	2
004	140b004	CCV	MO_500			05/20/13 09:00	1.0	3
005	140b005	X	CMARKER			05/20/13 09:39	1.0	1
006	140b006	X	IB			05/20/13 13:34	1.0	
007	140b007	X	CMARKER			05/20/13 14:01	1.0	1
010	140b010	X	C8-C50			05/20/13 14:59	1.0	1
011	140b011	CCV	MO_500			05/20/13 15:27	1.0	3
012	140b012	CCV	DSL_500			05/20/13 15:54	1.0	2
013	140b013	CCV	MO_500			05/20/13 16:26	1.0	3
014	140b014	IB	CALIB			05/20/13 17:06	1.0	
015	140b015	ICAL	MO_25			05/20/13 17:33	1.0	4
016	140b016	ICAL	MO_50			05/20/13 18:01	1.0	4
017	140b017	ICAL	MO_250			05/20/13 18:28	1.0	5
018	140b018	ICAL	MO_500			05/20/13 18:56	1.0	6
019	140b019	ICAL	MO_1000			05/20/13 19:23	1.0	7
020	140b020	ICAL	MO_2500			05/20/13 19:51	1.0	8
021	140b021	ICAL	MO_5000			05/20/13 20:19	1.0	8
022	140b022	IB	CALIB			05/20/13 20:47	1.0	
023	140b023	CMARKER	C8-C50			05/20/13 21:14	1.0	1
024	140b024	IB	CALIB			05/20/13 21:42	1.0	

JDG 05/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 24.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163331777

Instrument : GC15B  
 Method : EPA 8015B

Begun : 08/18/13 09:37  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	230b001	X	IB				08/18/13 09:37	1.0	
002	230b002	X	CMARKER				08/18/13 10:04	1.0	1
003	230b003	X	MO_500				08/18/13 10:32	1.0	2
004	230b004	CCV	DSL_250				08/18/13 11:00	1.0	3
005	230b005	CCV	MO_500				08/18/13 11:28	1.0	2
006	230b006	CCV	JP5_250				08/18/13 11:58	1.0	4
007	230b007	BLANK	QC702370	S	Soil	201815	08/18/13 13:51	1.0	
008	230b008	SAMPLE	247928-002	S	Soil	201776	08/18/13 14:19	1.0	
009	230b009	SAMPLE	247928-006	S	Soil	201815	08/18/13 14:47	1.0	
010	230b010	SAMPLE	247928-007	S	Soil	201815	08/18/13 15:14	1.0	
011	230b011	SAMPLE	247928-008	S	Soil	201815	08/18/13 15:42	1.0	
012	230b012	SAMPLE	247929-001	S	Soil	201815	08/18/13 16:10	1.0	
013	230b013	SAMPLE	247929-002	S	Soil	201815	08/18/13 16:38	1.0	
014	230b014	SAMPLE	247996-002	S	Soil	201815	08/18/13 17:05	1.0	
015	230b015	SAMPLE	247930-001	S	Soil	201815	08/18/13 17:33	1.0	8:BUNKC:10-40=22000
016	230b016	SAMPLE	247996-001	S	Soil	201815	08/18/13 18:01	5.0	
017	230b017	X	IB				08/18/13 18:28	1.0	
018	230b018	MSS	247926-004	S	Water	201802	08/18/13 18:56	1.0	
019	230b019	CCV	DSL_500				08/18/13 19:24	1.0	5
020	230b020	CCV	MO_500				08/18/13 19:52	1.0	2
021	230b021	CCV	JP5_250				08/18/13 20:19	1.0	4
022	230b022	BLANK	QC702314	S	Water	201802	08/18/13 20:47	1.0	
023	230b023	LCS	QC702315	S	Water	201802	08/18/13 21:15	1.0	
024	230b024	SAMPLE	247987-001	S	Water	201802	08/18/13 21:42	1.0	
025	230b025	SAMPLE	247987-002	S	Water	201802	08/18/13 22:10	1.0	
026	230b026	SAMPLE	247989-001	S	Water	201802	08/18/13 22:38	1.0	
027	230b027	SAMPLE	247990-001	S	Water	201802	08/18/13 23:06	1.0	
028	230b028	SAMPLE	247990-002	S	Water	201802	08/18/13 23:34	1.0	
029	230b029	SAMPLE	247990-003	S	Water	201802	08/19/13 00:02	1.0	
030	230b030	SAMPLE	247990-004	S	Water	201802	08/19/13 00:30	1.0	
031	230b031	MSS	247991-001	S	Water	201802	08/19/13 00:58	1.0	
032	230b032	SAMPLE	247991-003	S	Water	201802	08/19/13 01:26	1.0	
033	230b033	SAMPLE	247991-004	S	Water	201802	08/19/13 01:54	1.0	
034	230b034	X	CMARKER				08/19/13 02:22	1.0	1
035	230b035	CCV	DSL_250				08/19/13 02:50	1.0	3
036	230b036	CCV	JP5_250				08/19/13 03:17	1.0	4
037	230b037	SAMPLE	247848-020		Water	201802	08/19/13 03:45	1.0	
038	230b038	MS	QC702316	S	Water	201802	08/19/13 04:13	1.0	
039	230b039	MSD	QC702317	S	Water	201802	08/19/13 04:41	1.0	
040	230b040	MS	QC702318	S	Water	201802	08/19/13 05:09	1.0	
041	230b041	MSD	QC702319	S	Water	201802	08/19/13 05:37	1.0	
042	230b042	CCV	DSL_500				08/19/13 06:04	1.0	5

JDG 08/19/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 42.

Standards used: 1=S22576 2=S22923 3=S22924 4=S22349 5=S22925



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 223242707

Instrument : GC14B  
 Method : EPA 8015B

Begun : 06/17/13 13:07  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	168_001	X	IB			06/17/13 13:07	1.0	
002	168_002	X	IB			06/17/13 13:35	1.0	
003	168_003	X	CMARKER			06/17/13 14:04	1.0	1
004	168_004	IB	CALIB			06/17/13 15:24	1.0	
005	168_005	ICAL	HEX OTP_5			06/17/13 15:53	1.0	2
006	168_006	ICAL	HEX OTP_10			06/17/13 16:22	1.0	3
007	168_007	ICAL	HEX OTP_25			06/17/13 16:51	1.0	4
008	168_008	ICAL	HEX OTP_50			06/17/13 17:19	1.0	5
009	168_009	ICAL	HEX OTP_100			06/17/13 17:48	1.0	6
010	168_010	ICAL	HEX OTP_200			06/17/13 18:16	1.0	7
011	168_011	IB	CALIB			06/17/13 18:45	1.0	
012	168_012	ICAL	DSL_10			06/17/13 19:13	1.0	8
013	168_013	ICAL	DSL_100			06/17/13 19:42	1.0	9
014	168_014	ICAL	DSL_500			06/17/13 20:10	1.0	10
015	168_015	ICAL	DSL_1000			06/17/13 20:39	1.0	11
016	168_016	ICAL	DSL_5000			06/17/13 21:07	1.0	12
017	168_017	IB	CALIB			06/17/13 21:36	1.0	
018	168_018	ICV	DSL_500			06/17/13 22:05	1.0	13
019	168_019	X	ICV			06/17/13 22:33	1.0	13
020	168_020	IB	CALIB			06/17/13 23:02	1.0	
021	168_021	ICAL	MO_25			06/17/13 23:31	1.0	14
022	168_022	ICAL	MO_50			06/18/13 00:00	1.0	14
023	168_023	ICAL	MO_250			06/18/13 00:28	1.0	15
024	168_024	ICAL	MO_500			06/18/13 00:57	1.0	16
025	168_025	ICAL	MO_1000			06/18/13 01:25	1.0	17
026	168_026	ICAL	MO_2500			06/18/13 01:54	1.0	18
027	168_027	ICAL	MO_5000			06/18/13 02:23	1.0	18
028	168_028	IB	CALIB			06/18/13 02:51	1.0	
029	168_029	ICAL	JETA_10			06/18/13 03:20	1.0	19
030	168_030	ICAL	JETA_100			06/18/13 03:49	1.0	20
031	168_031	ICAL	JETA_500			06/18/13 04:17	1.0	21
032	168_032	ICAL	JETA_1000			06/18/13 04:46	1.0	22
033	168_033	ICAL	JETA_2000			06/18/13 05:14	1.0	23
034	168_034	ICAL	JETA_3000			06/18/13 05:43	1.0	24
035	168_035	IB	CALIB			06/18/13 06:11	1.0	
036	168_036	CMARKER	C8-C50			06/18/13 06:40	1.0	1
037	168_037	IB	CALIB			06/18/13 07:08	1.0	

JDG 06/18/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 37.

Standards used: 1=S22576 2=S22417 3=S22418 4=S22419 5=S22420 6=S22421 7=S22422 8=S22008 9=S22009 10=S22010 11=S22011  
 12=S22007 13=S22427 14=S21419 15=S21418 16=S21417 17=S21416 18=S21415 19=S22220 20=S22221 21=S22222 22=S22223  
 23=S22224 24=S22225

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 223331779

Instrument : GC14B  
 Method : EPA 8015B

Begun : 08/18/13 09:39  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	230_001	X	IB				08/18/13 09:39	1.0	
002	230_002	CMARKER	C8-C50				08/18/13 10:07	1.0	1
003	230_003	CCV	DSL_1000				08/18/13 10:36	1.0	2
004	230_004	CCV	MO_500				08/18/13 11:05	1.0	3
005	230_005	CCV	HYFL_500				08/18/13 12:17	1.0	4
006	230_006	BLANK	QC702370		Soil	201815	08/18/13 13:35	1.0	
007	230_007	LCS	QC702371	S	Soil	201815	08/18/13 14:04	1.0	
008	230_008	LCS	QC702126	S	Water	201764	08/18/13 14:33	1.0	
009	230_009	MSS	247972-004		Soil	201815	08/18/13 15:02	1.0	
010	230_010	MS	QC702372		Soil	201815	08/18/13 15:31	1.0	
011	230_011	MSD	QC702373		Soil	201815	08/18/13 16:00	1.0	
012	230_012	MSS	247919-006		Soil	201776	08/18/13 16:29	1.0	
013	230_013	SAMPLE	247920-002		Water	201764	08/18/13 16:58	1.0	
014	230_014	SAMPLE	248074-010	S	Soil	201815	08/18/13 17:27	1.0	
015	230_015	SAMPLE	248049-001	S	Soil	201815	08/18/13 17:56	5.0	
016	230_016	SAMPLE	248074-009	S	Soil	201815	08/18/13 18:25	5.0	
017	230_017	X	IB				08/18/13 18:53	1.0	
018	230_018	SAMPLE	248093-001	S	Soil	201815	08/18/13 19:22	1.0	
019	230_019	SAMPLE	248093-002	S	Soil	201815	08/18/13 19:50	1.0	
020	230_020	CCV	DSL_500				08/18/13 20:19	1.0	5
021	230_021	CCV	MO_500				08/18/13 20:48	1.0	3
022	230_022	CCV	HYFL_500				08/18/13 21:17	1.0	4
023	230_023	MS	QC702127	S	Water	201764	08/18/13 21:45	1.0	
024	230_024	X	QC702128	S	Water	201764	08/18/13 22:14	1.0	
025	230_025	SAMPLE	247980-005	S	Water	201764	08/18/13 22:43	50.0	
026	230_026	X	IB				08/18/13 23:12	1.0	
027	230_027	SAMPLE	247976-001		Water	201764	08/18/13 23:41	1.0	
028	230_028	SAMPLE	247972-001		Soil	201815	08/19/13 00:10	1.0	
029	230_029	SAMPLE	247972-002		Soil	201815	08/19/13 00:39	1.0	
030	230_030	SAMPLE	247972-005		Soil	201815	08/19/13 01:08	1.0	
031	230_031	SAMPLE	247972-006		Soil	201815	08/19/13 01:37	1.0	
032	230_032	SAMPLE	247972-007		Soil	201815	08/19/13 02:06	1.0	
033	230_033	SAMPLE	247824-001		Water	201764	08/19/13 02:35	1.0	
034	230_034	X	CMARKER				08/19/13 03:04	1.0	1
035	230_035	CCV	DSL_250				08/19/13 03:33	1.0	6
036	230_036	CCV	MO_500				08/19/13 04:02	1.0	3
037	230_037	CCV	HYFL_500				08/19/13 04:31	1.0	4
038	230_038	BLANK	QC702314		Water	201802	08/19/13 04:59	1.0	
039	230_039	SAMPLE	247888-002	S	Water	201802	08/19/13 05:28	1.0	
040	230_040	SAMPLE	247888-003	S	Water	201802	08/19/13 05:57	1.0	
041	230_041	SAMPLE	247888-004	S	Water	201802	08/19/13 06:26	1.0	
042	230_042	SAMPLE	248024-001	S	Water	201802	08/19/13 06:55	1.0	
043	230_043	SAMPLE	248014-001	S	Water	201802	08/19/13 07:23	1.0	
044	230_044	SAMPLE	248030-038	S	Water	201802	08/19/13 07:52	1.0	
045	230_045	CCV	DSL_500				08/19/13 08:22	1.0	5
046	230_046	CCV	MO_500				08/19/13 08:50	1.0	3

JDG 08/19/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 46.

Standards used: 1=S22576 2=S22926 3=S22923 4=S22044 5=S22925 6=S22924

SAMPLE PREPARATION SUMMARY

Batch # : 201802  
 Started By : TFB  
 Method : 3520C  
 Spike #1 ID : S23042

Prep Date : 16-AUG-2013 13:00  
 SOP Version : TEH\_3520\_rv14  
 Spike #2 ID : S22987

Analysis : TEH  
 Finished By : TFB  
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
247848-020		Water	1000	5	1	0.005	7	1				TEH	QC-PE
247888-002		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
247888-003		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
247888-004		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
247926-004		Water	500	2.5	1	0.005	7	.5			3630C	TEH	MSS-1
247987-001		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
247987-002		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
247989-001		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
247990-001		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
247990-002		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
247990-003		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
247990-004		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
247991-001		Water	500	2.5	1	0.005	7	.5			3630C	TEH	MSS-2
247991-003		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
247991-004		Water	500	2.5	1	0.005	7	.5			3630C	TEH	
248014-001		Water	500	2.5	1	0.005	7	.5				TEHM	
248024-001		Water	500	2.5	1	0.005	7	.5			3630C	TEHM	
248030-038		Water	470	2.5	1	0.005319	5	.5				TEHM	
QC702314	BLANK	Water	500	2.5	1	0.005		.5			3630C		
QC702315	LCS	Water	500	2.5	1	0.005		.5	.5		3630C		
QC702316	MS	Water	500	2.5	1	0.005	7	.5	.5		3630C		
QC702317	MSD	Water	500	2.5	1	0.005	7	.5	.5		3630C		
QC702318	MS	Water	500	2.5	1	0.005	7	.5	.5		3630C		
QC702319	MSD	Water	500	2.5	1	0.005	7	.5	.5		3630C		

Analyst: SFL

Date: 08/19/13

Reviewer: TFB

Date: 08/19/13

LIMS Batch No: 201802  
 LIMS Analysis: TEH/M  
 Date Extracted: 8/16/13

Extraction Method:  
 EPA 3520c cont. L/L  
 \_\_\_\_\_

Cleanup Method (if needed):  
 EPA 3630c Silica Gel

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Cleanup (x if needed)	Comments
247848-020	A	<del>500</del> 1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> 2.5 <input checked="" type="checkbox"/> 5.0	<input type="checkbox"/> ≤2pH	QC-PE
247888-002	H	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
↓ -003	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
↓ -004	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
5 247926-004	G	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	MSS-1
247987-001	F	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
↓ -002	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
247989-001	F	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
247990-001	F	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
10 ↓ -002	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
↓ -003	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
↓ -004	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
247991-001	S	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	MSS-2
↓ -003	F	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
15 ↓ -004	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
248014-001	G	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
248024-001	D	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
248030-038	L	<input type="checkbox"/> 500 <input checked="" type="checkbox"/> 470	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
MB QC 702318	N/A	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
20 LCS	65	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> ↓	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
MS <sup>1</sup>	76	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
MSD <sup>1</sup>	87	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
MS <sup>2</sup>	98	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	
MSD <sup>2</sup>	9	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 7 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 2.5 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> ≤2pH	

Mfg & Lot# / LIMS # / Time Date/ Initials

1.0 / 0.5 mL of TEH\_SURR was added to all samples  
0.5 mL of TEH\_SP was added to all spikes  
 pH of all samples adjusted to pH ≤ 2 with H<sub>2</sub>SO<sub>4</sub>

3520c: Samples were continually extracted about 450 mL of CH<sub>2</sub>Cl<sub>2</sub>  
 Extraction Start Time: 1300  
 Extraction End Time: 740

3510c: Samples were extracted 3 times with 60 mL of CH<sub>2</sub>Cl<sub>2</sub>  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed granular Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C) 100°  
 Relinquished to TEH Department

S23042A	TFB 8/16/13
S22987E	
FS130041	
EMS3053	
	TFB 8/19/13
N/A	
EMVFI16	

  
 Extraction Chemist \_\_\_\_\_ Date 8/16/13

Continued from Page \_\_\_\_\_  
 Continued on Page \_\_\_\_\_

TFB 8/18/13  
 Reviewed by \_\_\_\_\_ Date \_\_\_\_\_



Laboratory Job Number 248030

ANALYTICAL REPORT

TPH-Extractables by GC

Matrix: Soil

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-01	Batch#:	201879
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-001	Prepared:	08/19/13
Moisture:	2%	Analyzed:	08/20/13
Diln Fac:	20.00		

Analyte	Result	RL
Diesel C10-C24	130 Y	20
Motor Oil C24-C36	410	100

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-08A	Batch#:	201879
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-002	Prepared:	08/19/13
Moisture:	5%	Analyzed:	08/20/13
Diln Fac:	20.00		

Analyte	Result	RL
Diesel C10-C24	22 Y	21
Motor Oil C24-C36	190	110

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-08B	Batch#:	201879
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-003	Prepared:	08/19/13
Moisture:	13%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Diesel C10-C24	1.7 Y	1.2
Motor Oil C24-C36	8.7	5.8

Surrogate	%REC	Limits
o-Terphenyl	112	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit



Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-2B	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-007	Prepared:	08/20/13
Moisture:	10%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Diesel C10-C24	1.3 Y	1.1
Motor Oil C24-C36	ND	5.5

Surrogate	%REC	Limits
o-Terphenyl	107	62-136

Field ID:	IA-35B	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-008	Prepared:	08/20/13
Moisture:	12%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Diesel C10-C24	1.7 Y	1.1
Motor Oil C24-C36	5.9	5.7

Surrogate	%REC	Limits
o-Terphenyl	106	62-136

Field ID:	IA-03	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-009	Prepared:	08/20/13
Moisture:	8%	Analyzed:	08/20/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	100 Y	5.5
Motor Oil C24-C36	380	27

Surrogate	%REC	Limits
o-Terphenyl	66	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-04	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-010	Prepared:	08/20/13
Moisture:	5%	Analyzed:	08/20/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	96 Y	5.2
Motor Oil C24-C36	230	26

Surrogate	%REC	Limits
o-Terphenyl	105	62-136

Field ID:	IA-10A	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-011	Prepared:	08/20/13
Moisture:	8%	Analyzed:	08/20/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	180 Y	5.4
Motor Oil C24-C36	330	27

Surrogate	%REC	Limits
o-Terphenyl	109	62-136

Field ID:	IA-10B	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-012	Prepared:	08/20/13
Moisture:	14%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Diesel C10-C24	1.2 Y	1.2
Motor Oil C24-C36	ND	5.8

Surrogate	%REC	Limits
o-Terphenyl	107	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-37	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-013	Prepared:	08/20/13
Moisture:	4%	Analyzed:	08/21/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	110 Y	5.2
Motor Oil C24-C36	180	26

Surrogate	%REC	Limits
o-Terphenyl	93	62-136

Field ID:	IA-14A	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-014	Prepared:	08/20/13
Moisture:	9%	Analyzed:	08/21/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	410 Y	5.5
Motor Oil C24-C36	510	28

Surrogate	%REC	Limits
o-Terphenyl	101	62-136

Field ID:	IA-14B	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-015	Prepared:	08/20/13
Moisture:	15%	Analyzed:	08/21/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	570 Y	5.9
Motor Oil C24-C36	610	29

Surrogate	%REC	Limits
o-Terphenyl	90	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-7	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-016	Prepared:	08/20/13
Moisture:	7%	Analyzed:	08/21/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	41 Y	5.4
Motor Oil C24-C36	160	27

Surrogate	%REC	Limits
o-Terphenyl	69	62-136

Field ID:	IA-6	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-017	Prepared:	08/20/13
Moisture:	6%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Diesel C10-C24	20 Y	1.1
Motor Oil C24-C36	58	5.3

Surrogate	%REC	Limits
o-Terphenyl	112	62-136

Field ID:	IA-5	Batch#:	201914
Type:	SAMPLE	Chemist:	SFL
Lab ID:	248030-018	Prepared:	08/20/13
Moisture:	2%	Analyzed:	08/20/13
Diln Fac:	20.00		

Analyte	Result	RL
Diesel C10-C24	240 Y	20
Motor Oil C24-C36	720	100

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-9	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-019	Prepared:	08/20/13
Moisture:	3%	Analyzed:	08/21/13
Diln Fac:	10.00		

Analyte	Result	RL
Diesel C10-C24	67 Y	10
Motor Oil C24-C36	350	52

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-34	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-020	Prepared:	08/20/13
Moisture:	3%	Analyzed:	08/21/13
Diln Fac:	10.00		

Analyte	Result	RL
Diesel C10-C24	110 Y	10
Motor Oil C24-C36	450	51

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-15	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-021	Prepared:	08/20/13
Moisture:	8%	Analyzed:	08/21/13
Diln Fac:	10.00		

Analyte	Result	RL
Diesel C10-C24	1,000 Y	11
Motor Oil C24-C36	510	54

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-24A	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-022	Prepared:	08/20/13
Moisture:	5%	Analyzed:	08/21/13
Diln Fac:	10.00		

Analyte	Result	RL
Diesel C10-C24	120 Y	11
Motor Oil C24-C36	310	53

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-24B	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-023	Prepared:	08/20/13
Moisture:	10%	Analyzed:	08/21/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	140 Y	5.6
Motor Oil C24-C36	320	28

Surrogate	%REC	Limits
o-Terphenyl	90	62-136

Field ID:	IA-39B	Batch#:	201914
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-024	Prepared:	08/20/13
Moisture:	10%	Analyzed:	08/21/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	180 Y	5.5
Motor Oil C24-C36	430	28

Surrogate	%REC	Limits
o-Terphenyl	99	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit



Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-18	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-028	Prepared:	08/20/13
Moisture:	10%	Analyzed:	08/22/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	9.8 Y	5.6
Motor Oil C24-C36	70	28

Surrogate	%REC	Limits
o-Terphenyl	111	62-136

Field ID:	IA-23D	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-029	Prepared:	08/20/13
Moisture:	25%	Analyzed:	08/22/13
Diln Fac:	20.00		

Analyte	Result	RL
Diesel C10-C24	100 Y	26
Motor Oil C24-C36	640	130

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-38D	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-030	Prepared:	08/20/13
Moisture:	31%	Analyzed:	08/22/13
Diln Fac:	20.00		

Analyte	Result	RL
Diesel C10-C24	67 Y	29
Motor Oil C24-C36	420	140

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit



Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-33A	Batch#:	202046
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-034	Prepared:	08/22/13
Moisture:	5%	Analyzed:	08/23/13
Diln Fac:	20.00		

Analyte	Result	RL
Diesel C10-C24	260 Y	21
Motor Oil C24-C36	1,900	110

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-33B	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-035	Prepared:	08/20/13
Moisture:	10%	Analyzed:	08/23/13
Diln Fac:	10.00		

Analyte	Result	RL
Diesel C10-C24	47 Y	11
Motor Oil C24-C36	400	55

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-29A	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-036	Prepared:	08/20/13
Moisture:	6%	Analyzed:	08/22/13
Diln Fac:	20.00		

Analyte	Result	RL
Diesel C10-C24	320 Y	21
Motor Oil C24-C36	1,700	110

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-29B	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-037	Prepared:	08/20/13
Moisture:	8%	Analyzed:	08/22/13
Diln Fac:	20.00		

Analyte	Result	RL
Diesel C10-C24	120 Y	22
Motor Oil C24-C36	800	110

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-20	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-039	Prepared:	08/20/13
Moisture:	1%	Analyzed:	08/22/13
Diln Fac:	20.00		

Analyte	Result	RL
Diesel C10-C24	93 Y	20
Motor Oil C24-C36	650	100

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-22	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-040	Prepared:	08/20/13
Moisture:	1%	Analyzed:	08/22/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	46 Y	5.1
Motor Oil C24-C36	260	25

Surrogate	%REC	Limits
o-Terphenyl	106	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-27	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-041	Prepared:	08/20/13
Moisture:	1%	Analyzed:	08/23/13
Diln Fac:	10.00		

Analyte	Result	RL
Diesel C10-C24	52 Y	10
Motor Oil C24-C36	440	50

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-28	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-042	Prepared:	08/20/13
Moisture:	1%	Analyzed:	08/23/13
Diln Fac:	20.00		

Analyte	Result	RL
Diesel C10-C24	580 Y	20
Motor Oil C24-C36	1,300	100

Surrogate	%REC	Limits
o-Terphenyl	DO	62-136

Field ID:	IA-30	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-043	Prepared:	08/20/13
Moisture:	0%	Analyzed:	08/23/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	69 Y	5.0
Motor Oil C24-C36	380	25

Surrogate	%REC	Limits
o-Terphenyl	80	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-31	Batch#:	201939
Type:	SAMPLE	Chemist:	JDG
Lab ID:	248030-044	Prepared:	08/20/13
Moisture:	0%	Analyzed:	08/23/13
Diln Fac:	5.000		

Analyte	Result	RL
Diesel C10-C24	28 Y	5.0
Motor Oil C24-C36	240	25

Surrogate	%REC	Limits
o-Terphenyl	101	62-136

Type:	BLANK	Chemist:	SFL
Lab ID:	QC702698	Prepared:	08/19/13
Diln Fac:	1.000	Analyzed:	08/20/13
Batch#:	201879		

Analyte	Result	RL
Diesel C10-C24	ND	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	109	62-136

Type:	BLANK	Chemist:	JDG
Lab ID:	QC702793	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/20/13
Batch#:	201914		

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	106	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry		

Type:	BLANK	Chemist:	JDG
Lab ID:	QC702890	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/21/13
Batch#:	201939		

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	109	62-136

Type:	BLANK	Chemist:	JDG
Lab ID:	QC703348	Prepared:	08/22/13
Diln Fac:	1.000	Analyzed:	08/23/13
Batch#:	202046		

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	114	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 b= See narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Type:	LCS	Batch#:	201879
Lab ID:	QC702699	Chemist:	JDG
Matrix:	Soil	Prepared:	08/19/13
Units:	mg/Kg	Analyzed:	08/20/13
Diln Fac:	1.000		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.11	51.49	103	62-130

Surrogate	%REC	Limits
o-Terphenyl	104	62-136



## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Type:	LCS	Batch#:	201914
Lab ID:	QC702794	Chemist:	JDG
Matrix:	Soil	Prepared:	08/20/13
Units:	mg/Kg	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.93	49.59	99	62-130

Surrogate	%REC	Limits
o-Terphenyl	95	62-136



## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Type:	LCS	Batch#:	201939
Lab ID:	QC702891	Chemist:	JDG
Matrix:	Soil	Prepared:	08/20/13
Units:	mg/Kg	Analyzed:	08/22/13
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.64	51.77	104	62-130

Surrogate	%REC	Limits
o-Terphenyl	102	62-136

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Type:	LCS	Batch#:	202046
Lab ID:	QC703349	Chemist:	JDG
Matrix:	Soil	Prepared:	08/22/13
Units:	mg/Kg	Analyzed:	08/23/13
Diln Fac:	1.000		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.30	42.27	84	62-130

Surrogate	%REC	Limits
o-Terphenyl	87	62-136

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	202046
MSS Lab ID:	248260-001	Chemist:	SFL
Matrix:	Soil	Sampled:	08/22/13
Units:	mg/Kg	Received:	08/22/13
Basis:	as received	Prepared:	08/22/13
Diln Fac:	1.000	Analyzed:	08/23/13

Type: MS Lab ID: QC703350

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	2.094	49.54	44.07	85	65-135

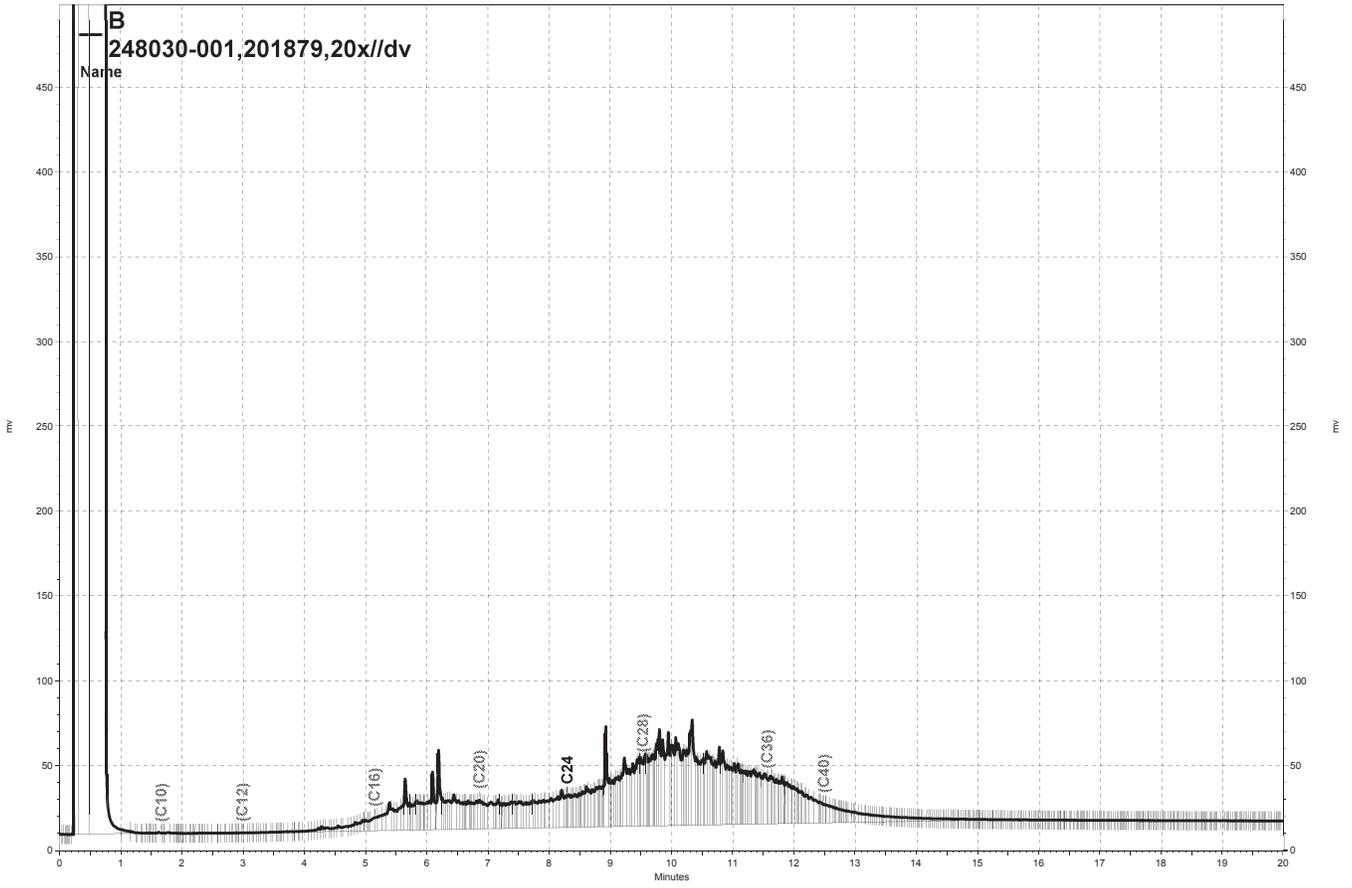
Surrogate	%REC	Limits
o-Terphenyl	102	62-136

Type: MSD Lab ID: QC703351

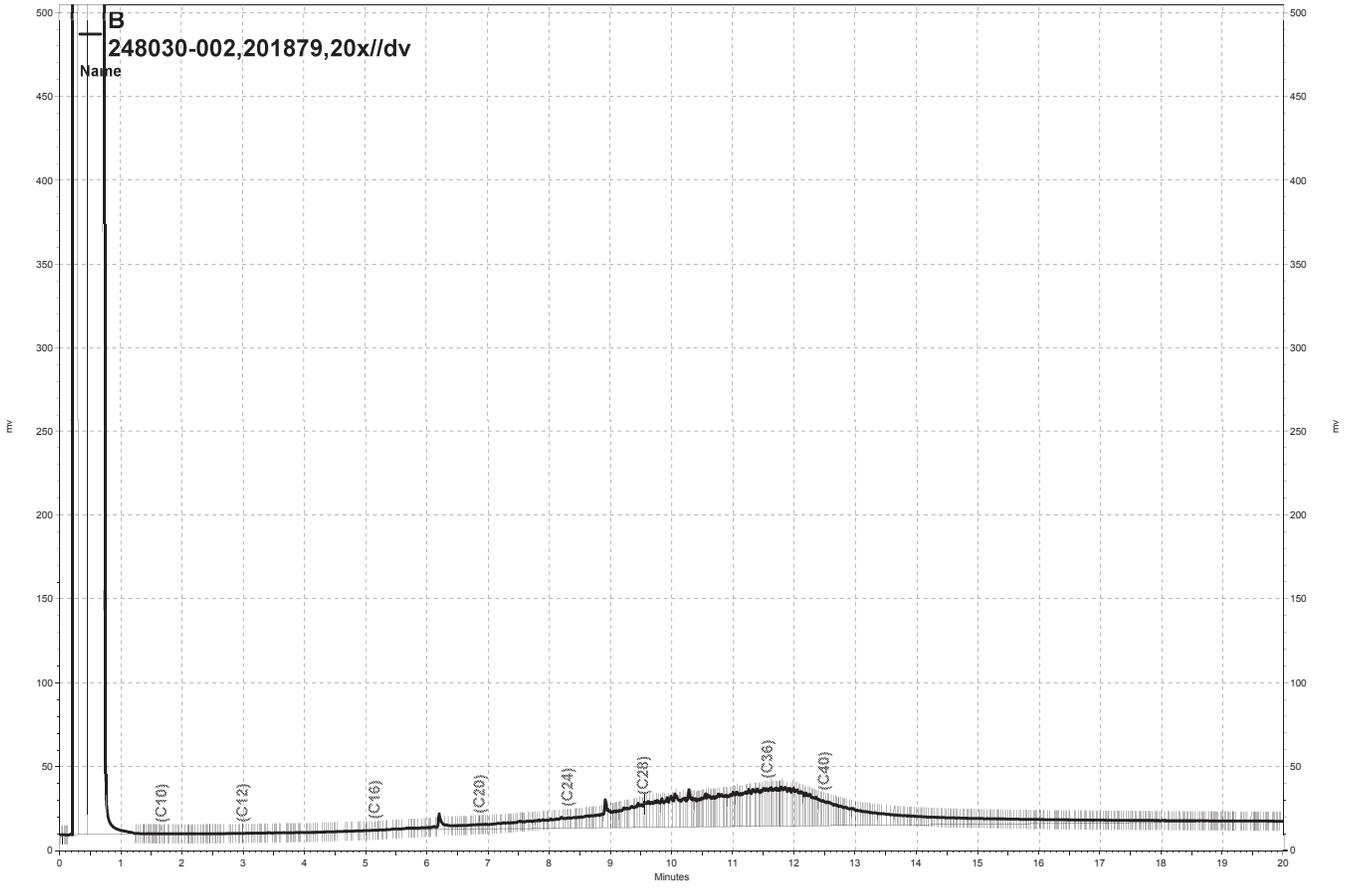
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.82	51.07	98	65-135	14	30

Surrogate	%REC	Limits
o-Terphenyl	106	62-136

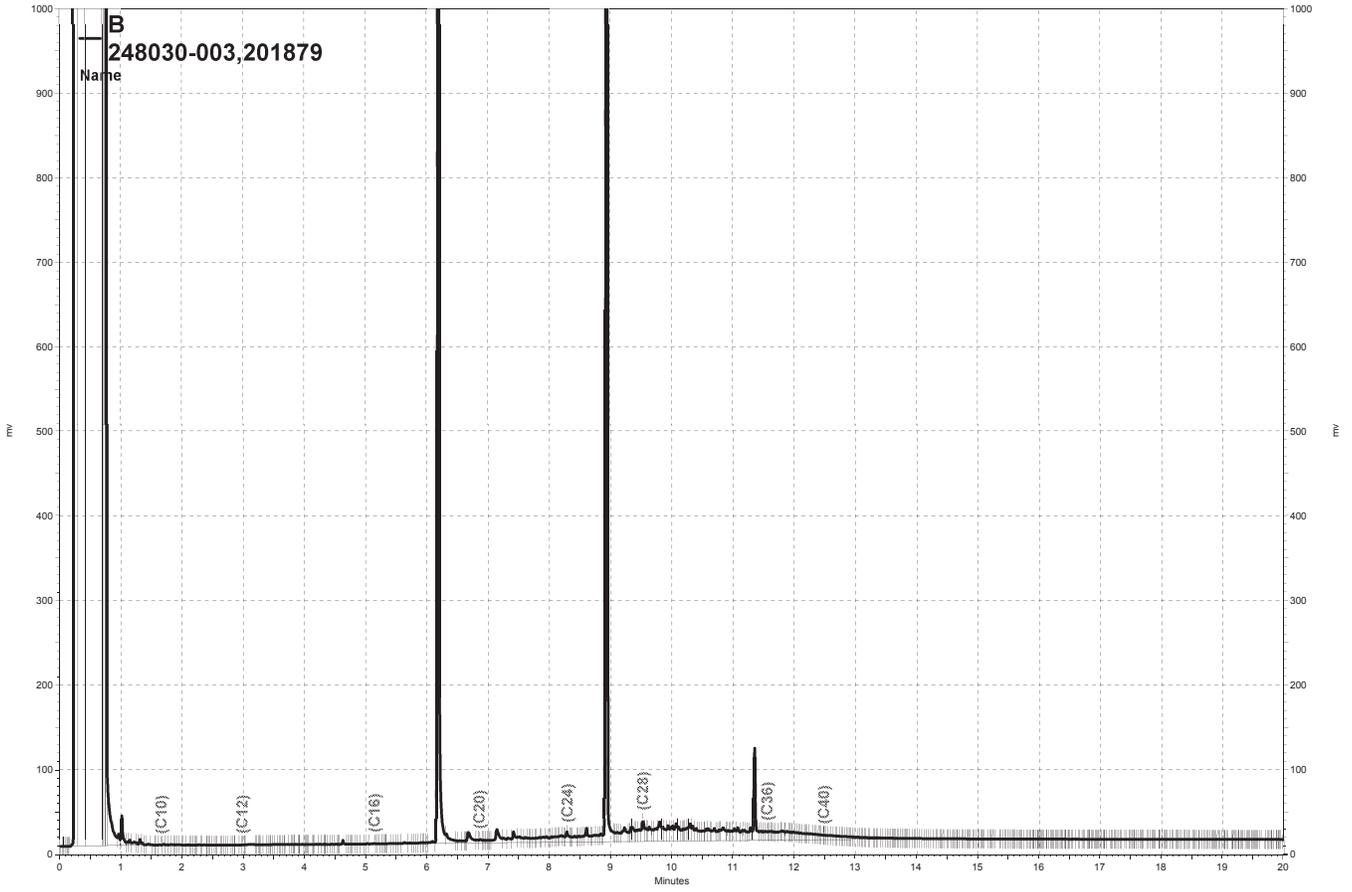
RPD= Relative Percent Difference



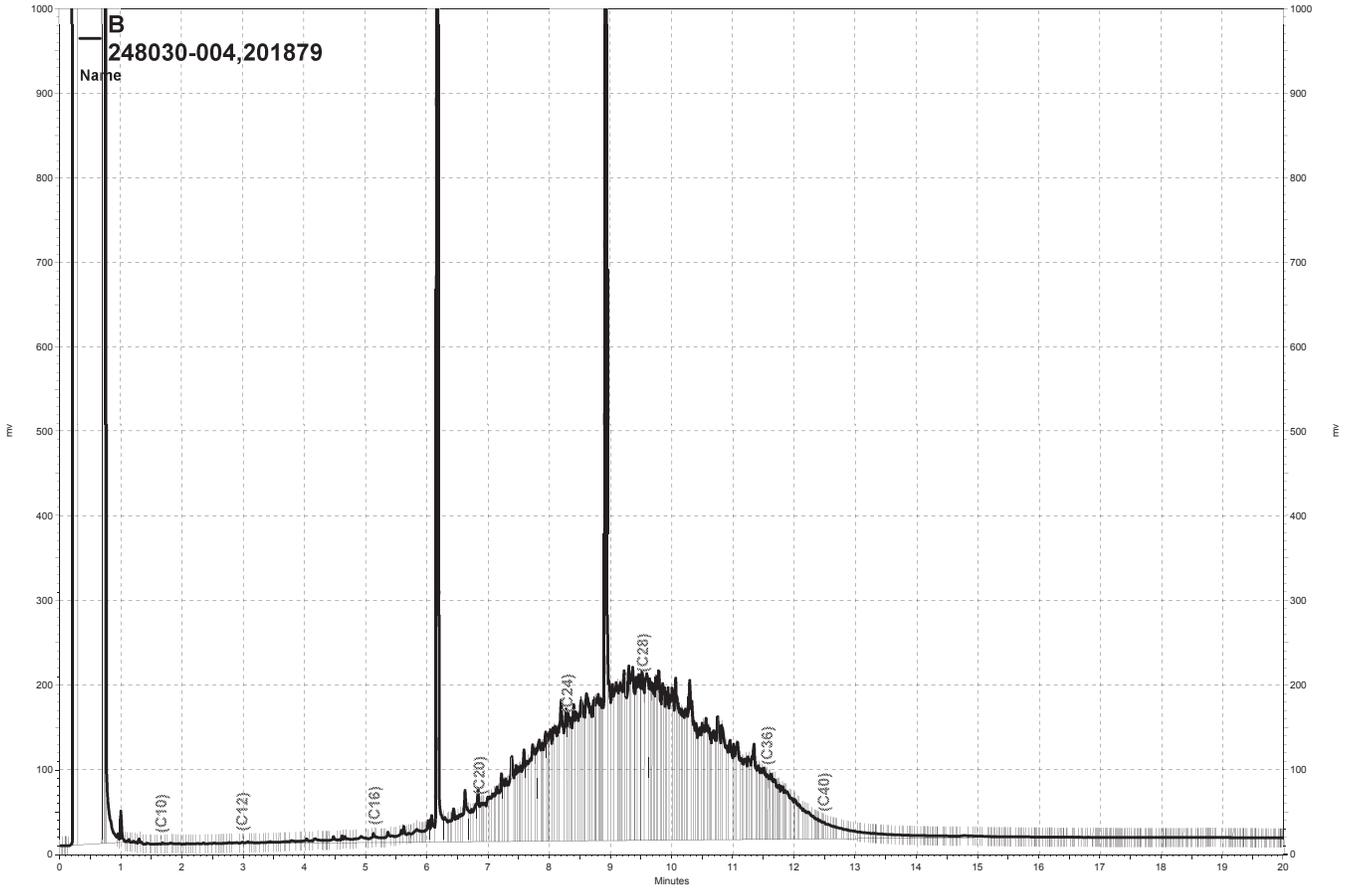
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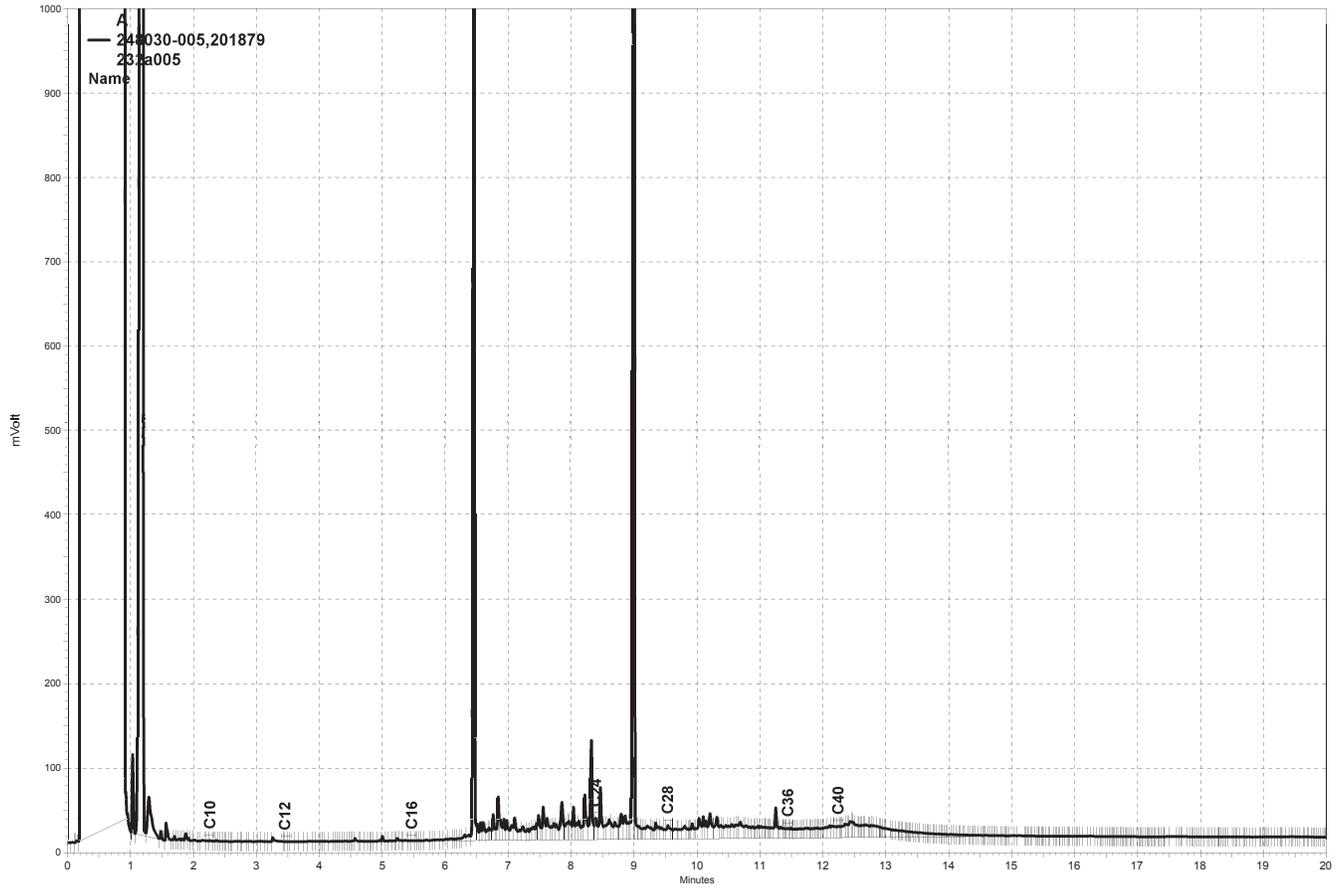
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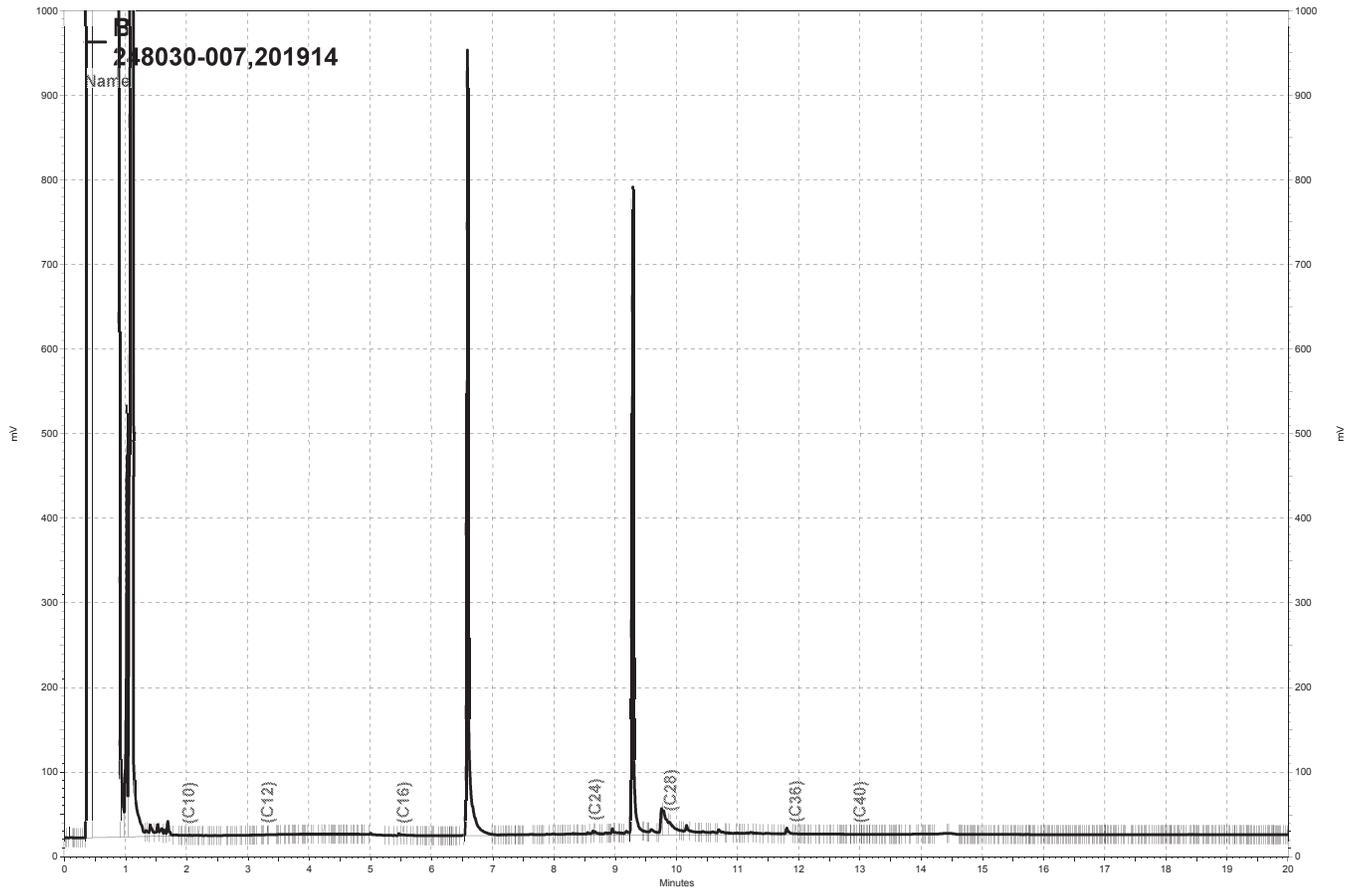


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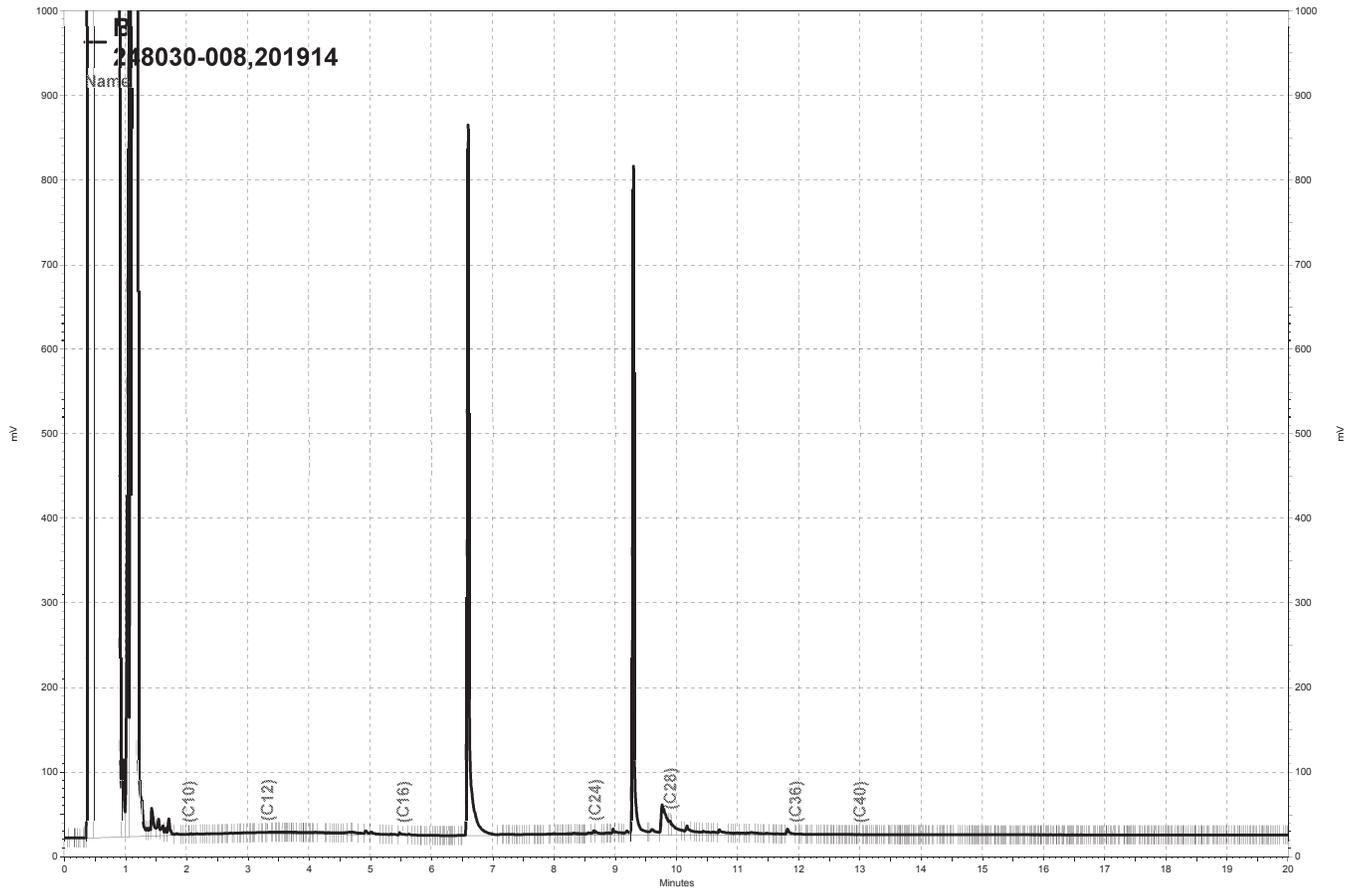


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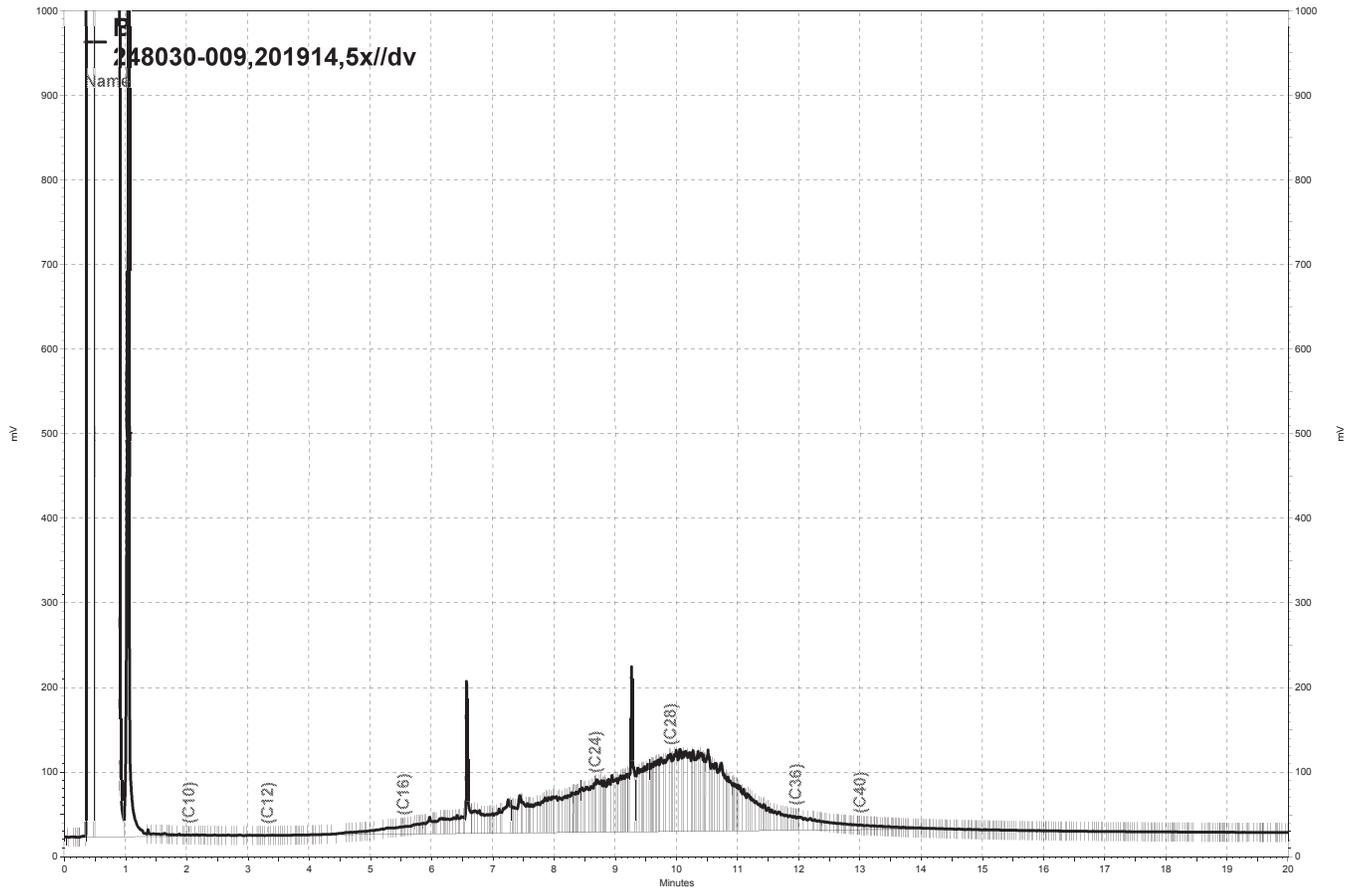




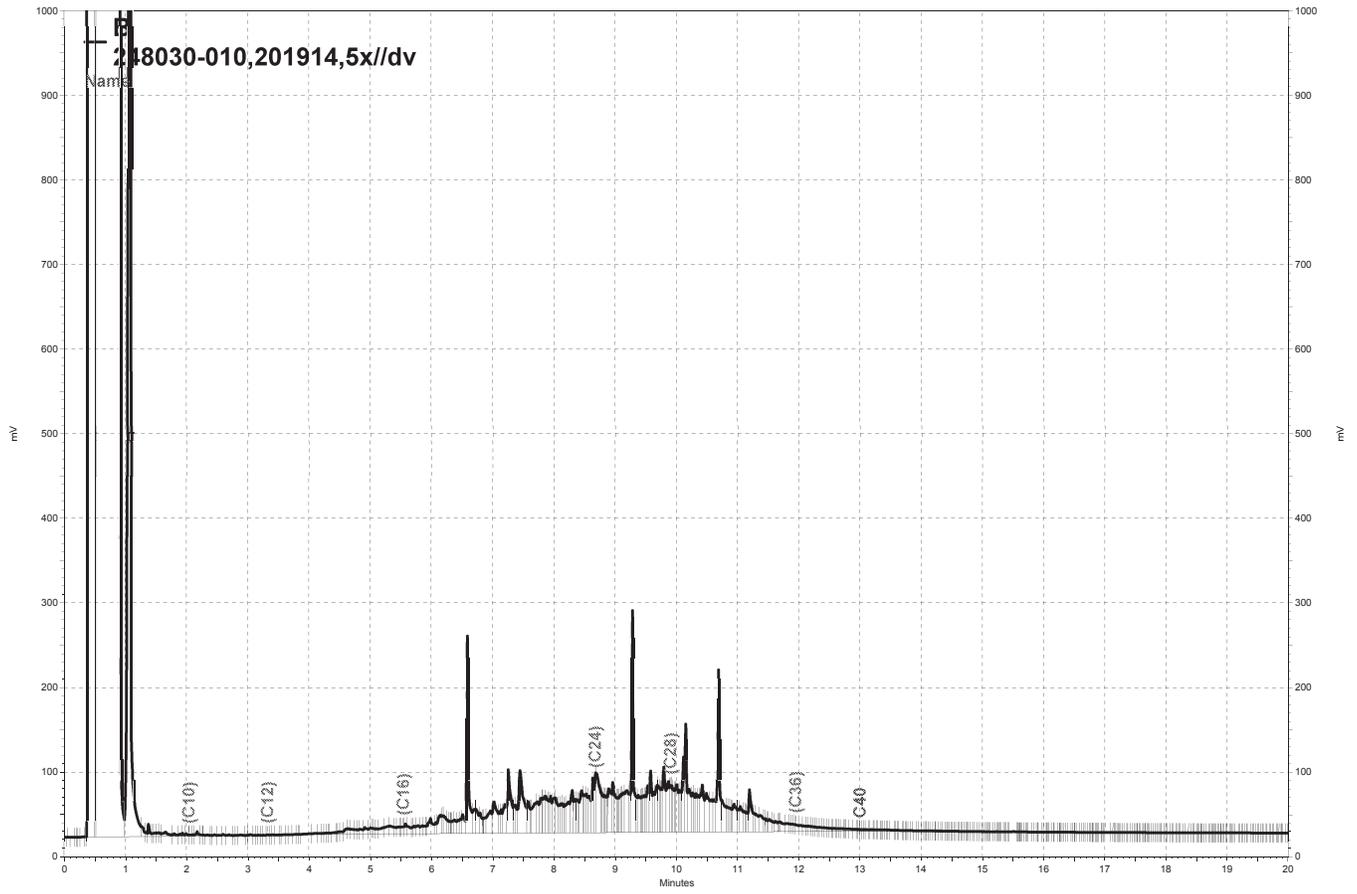
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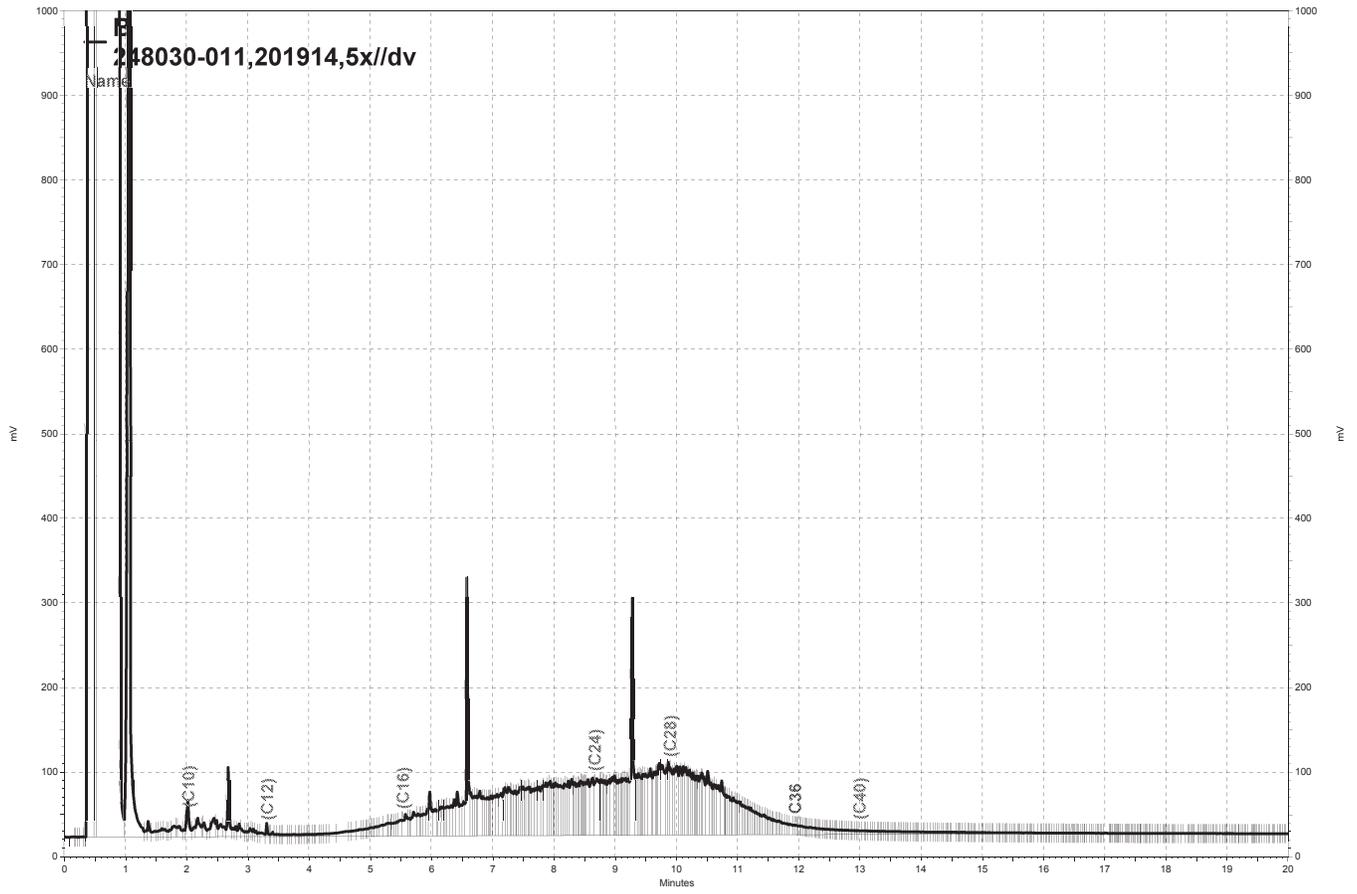
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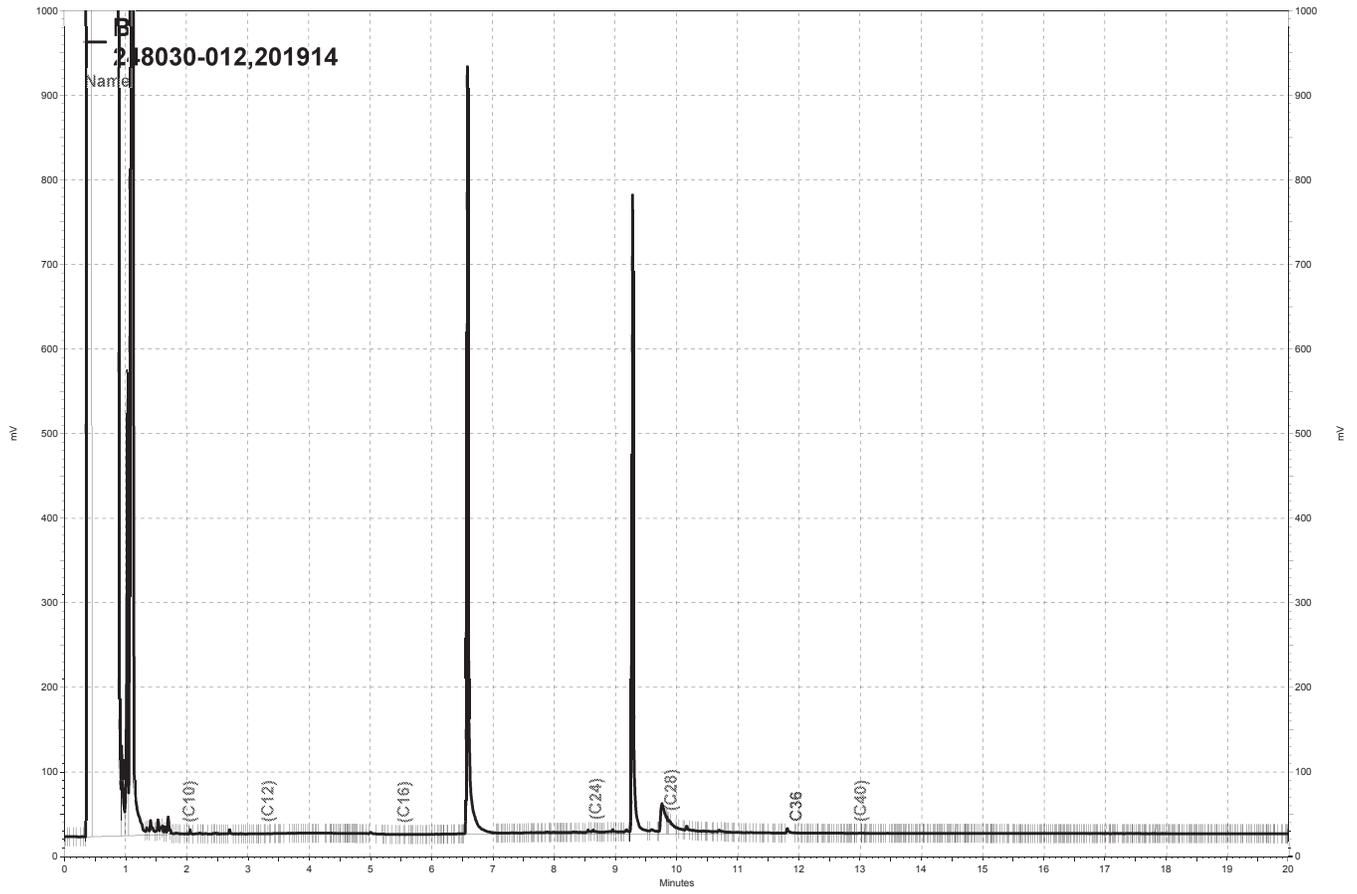
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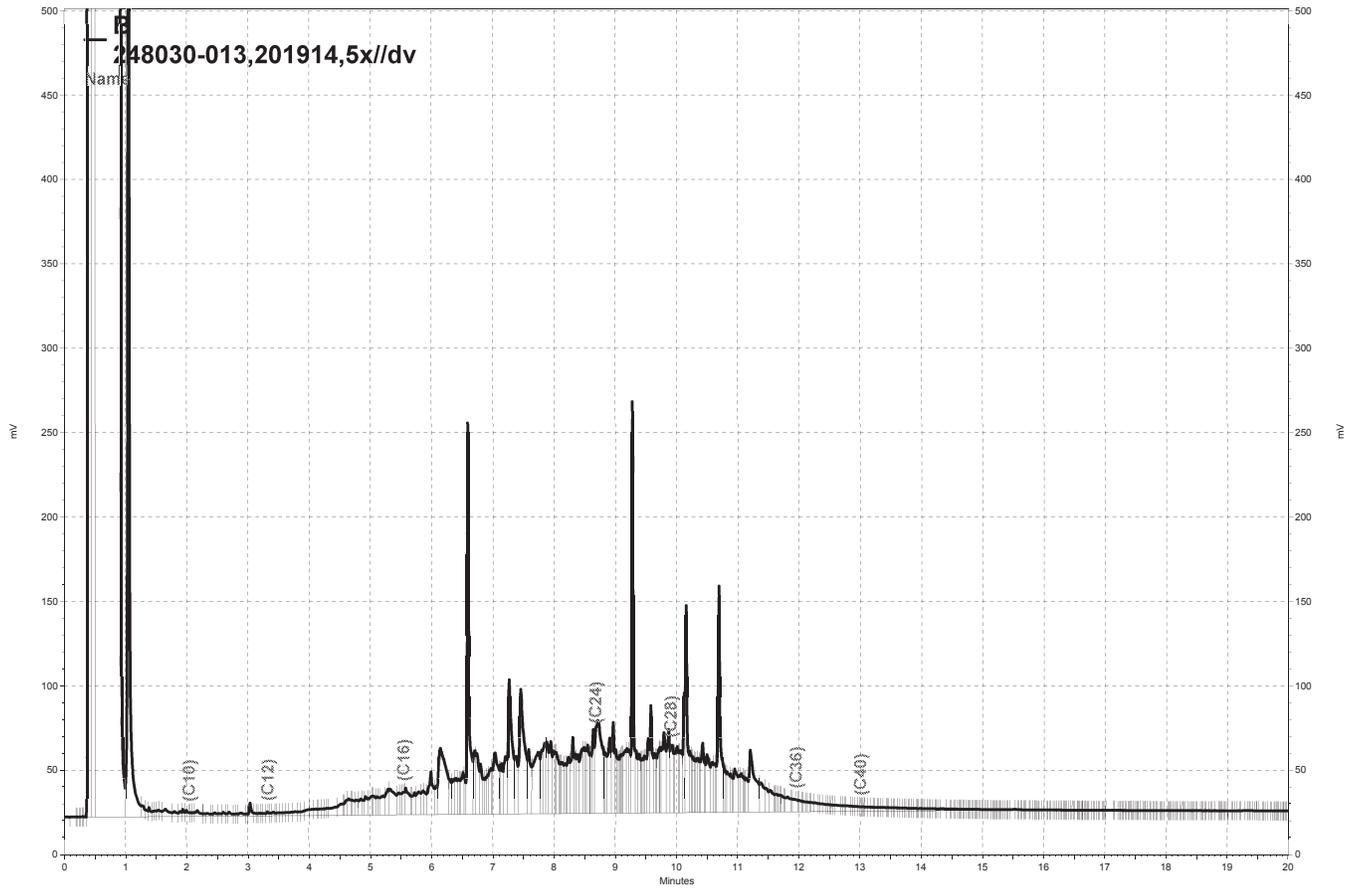
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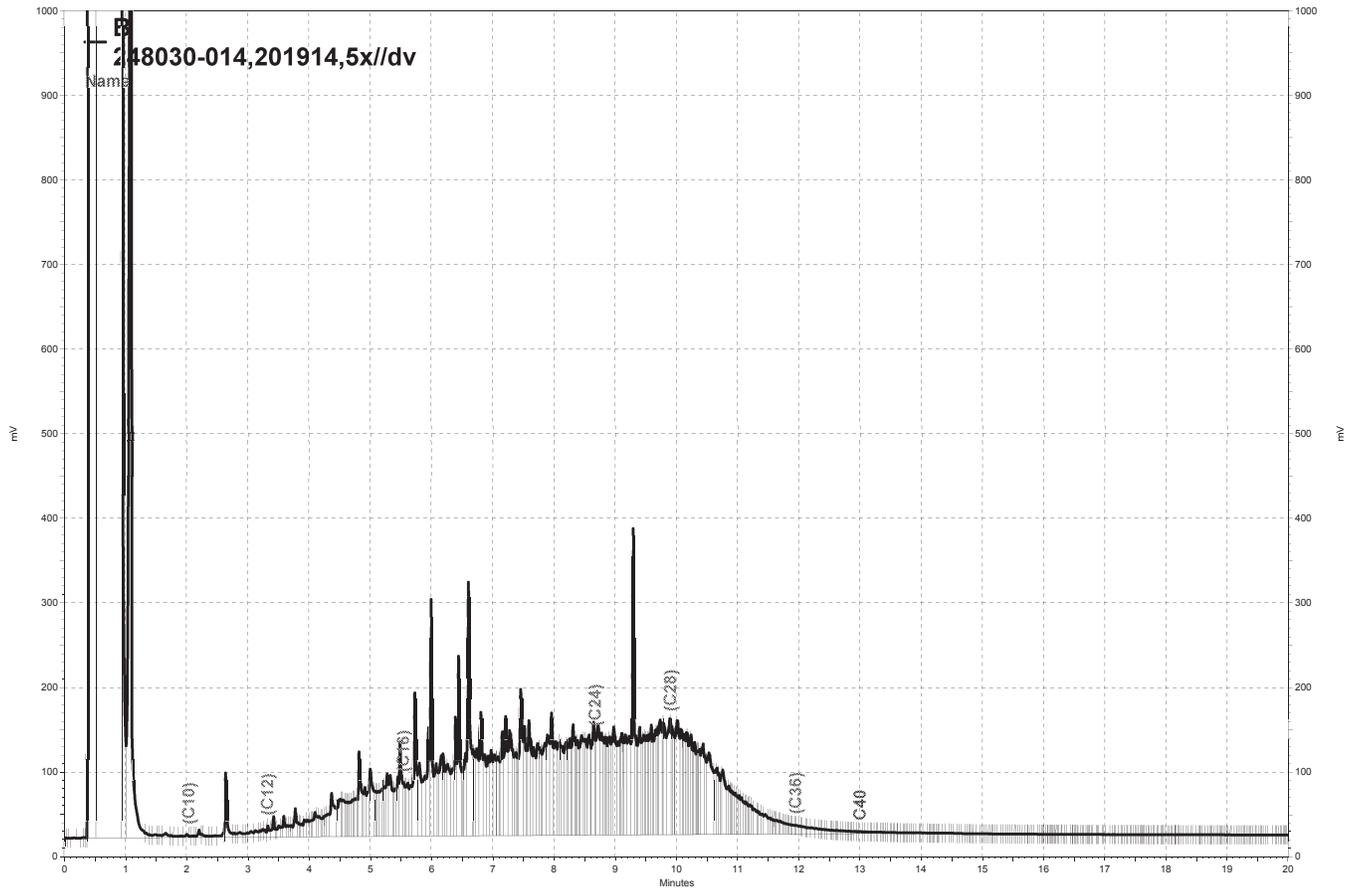
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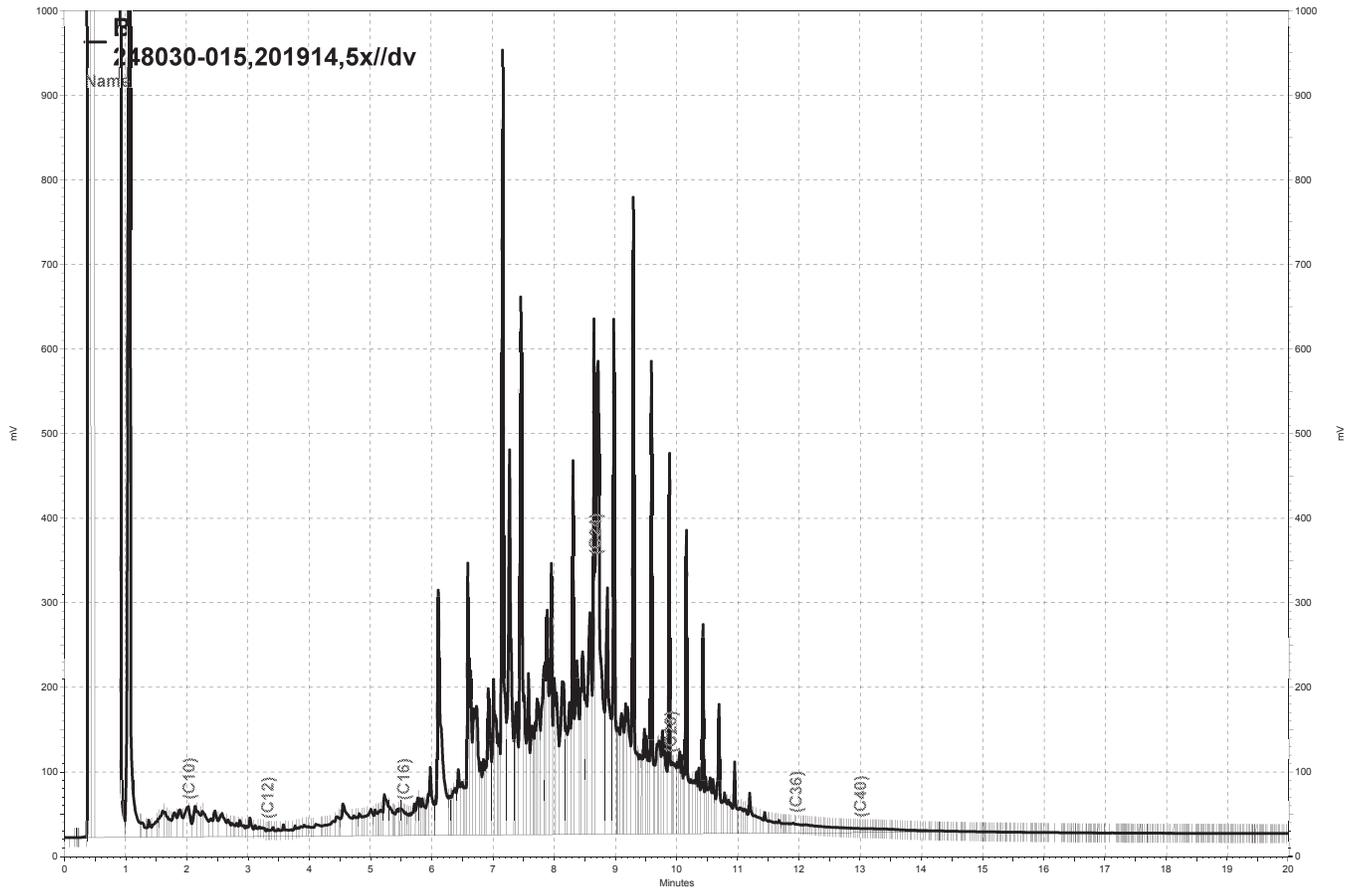
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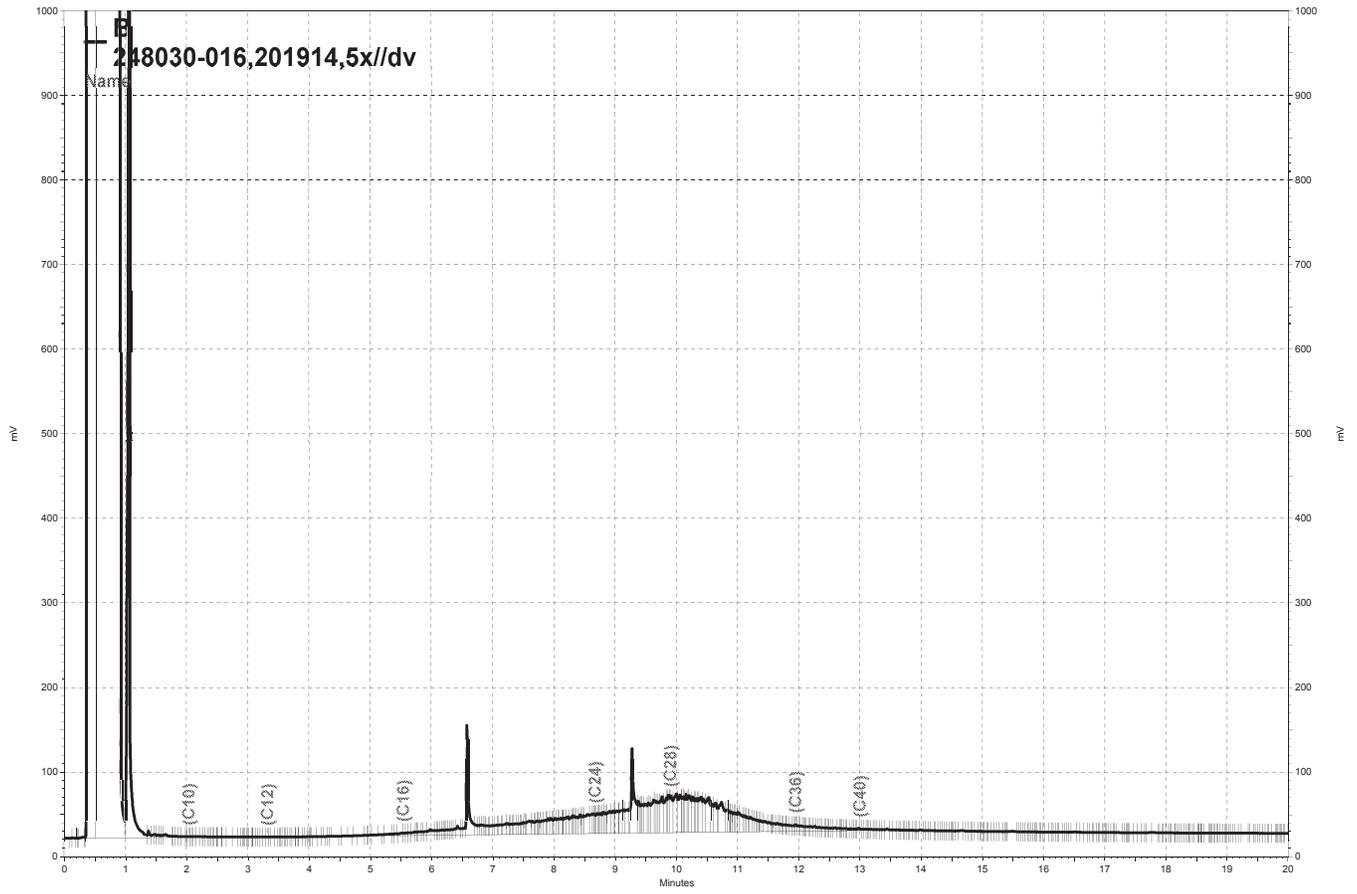
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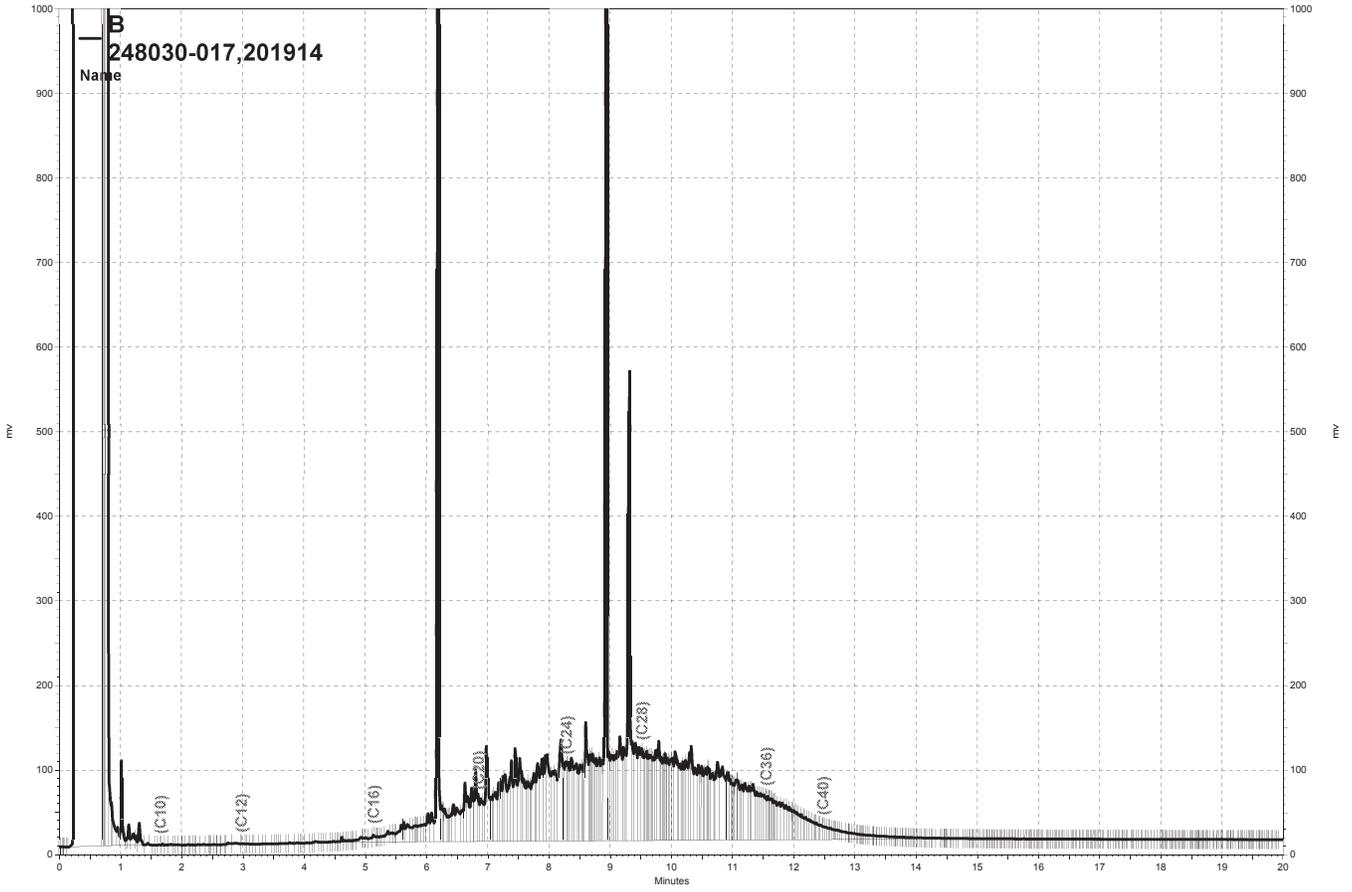
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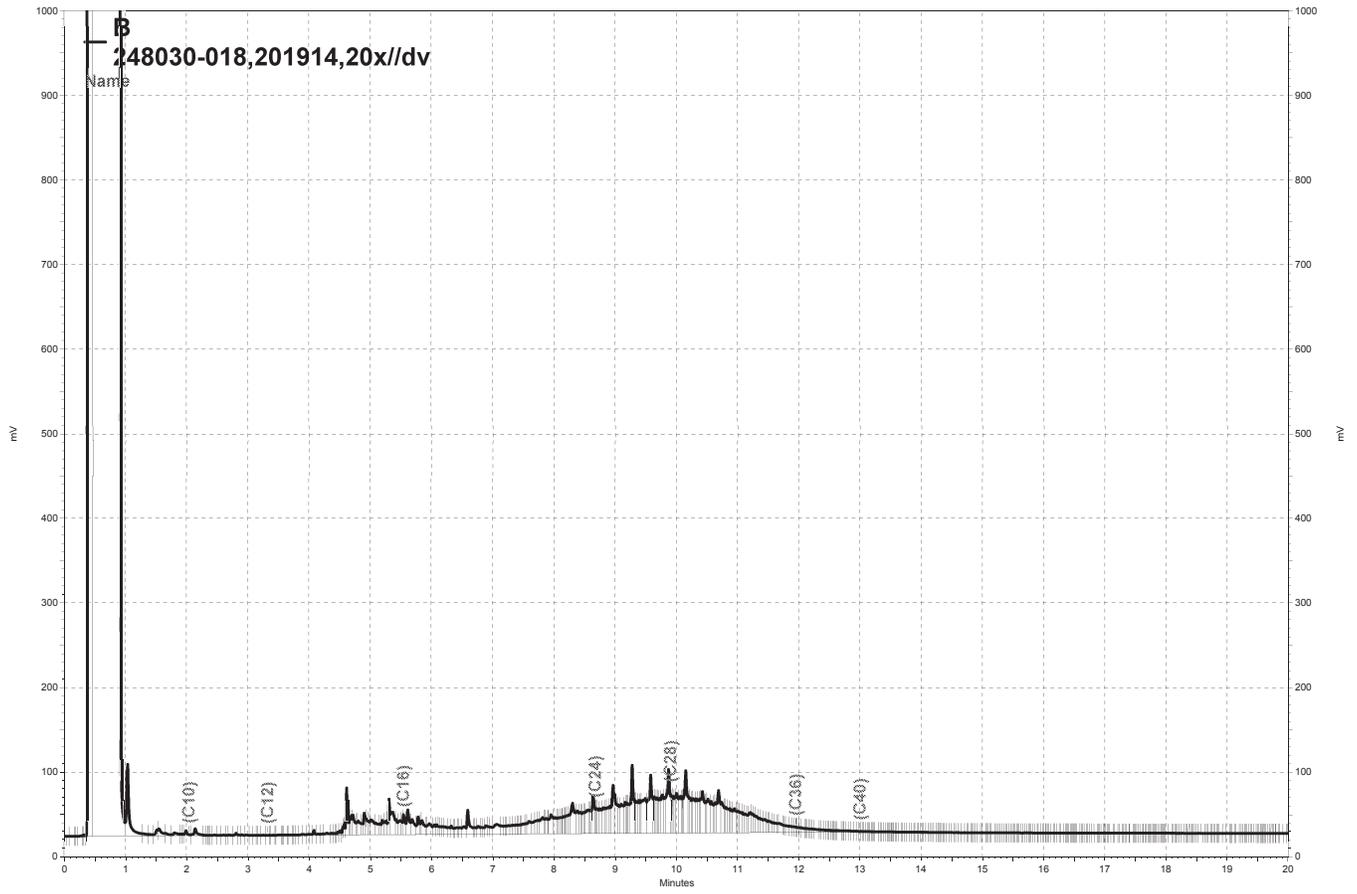
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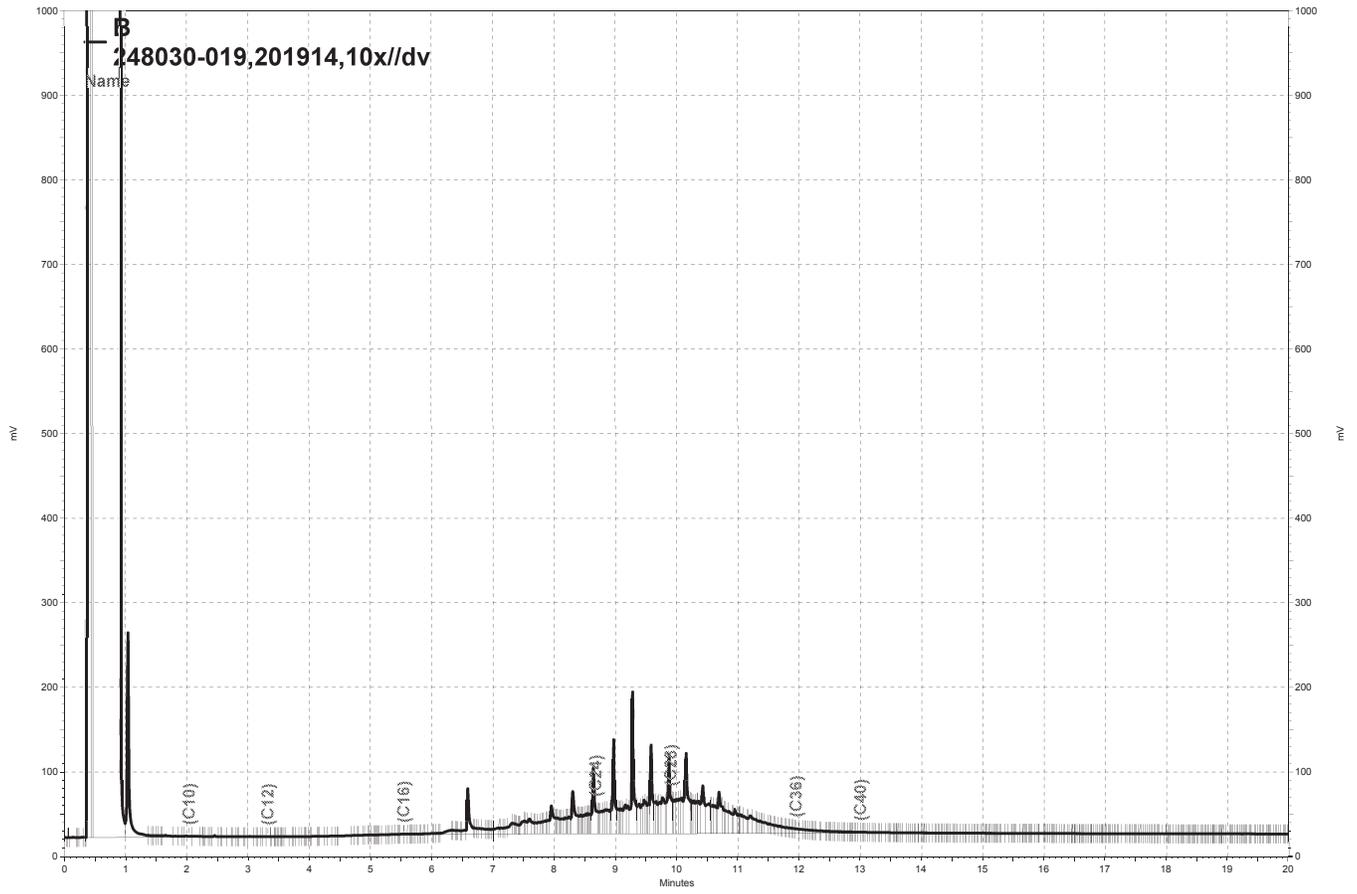
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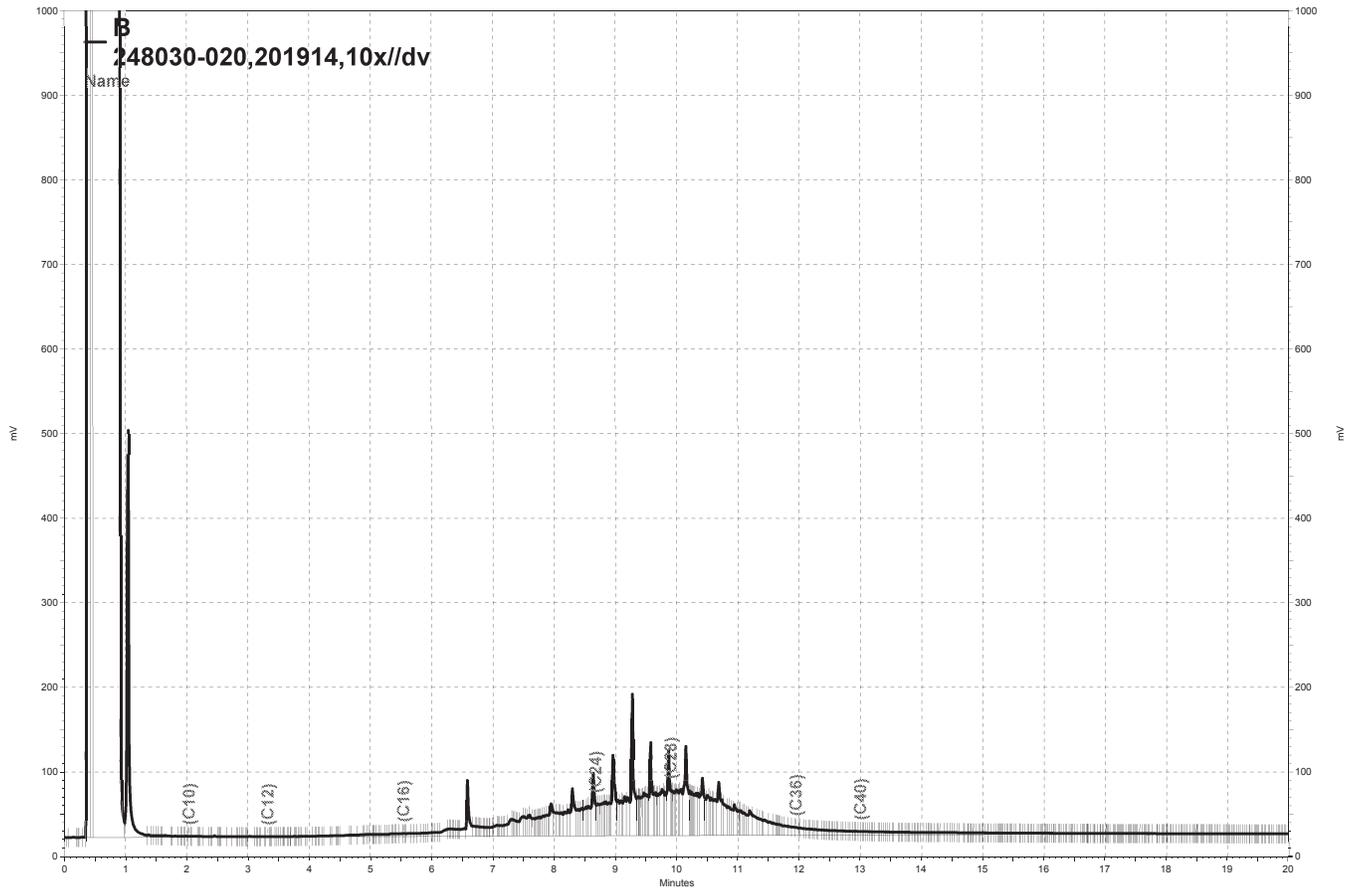
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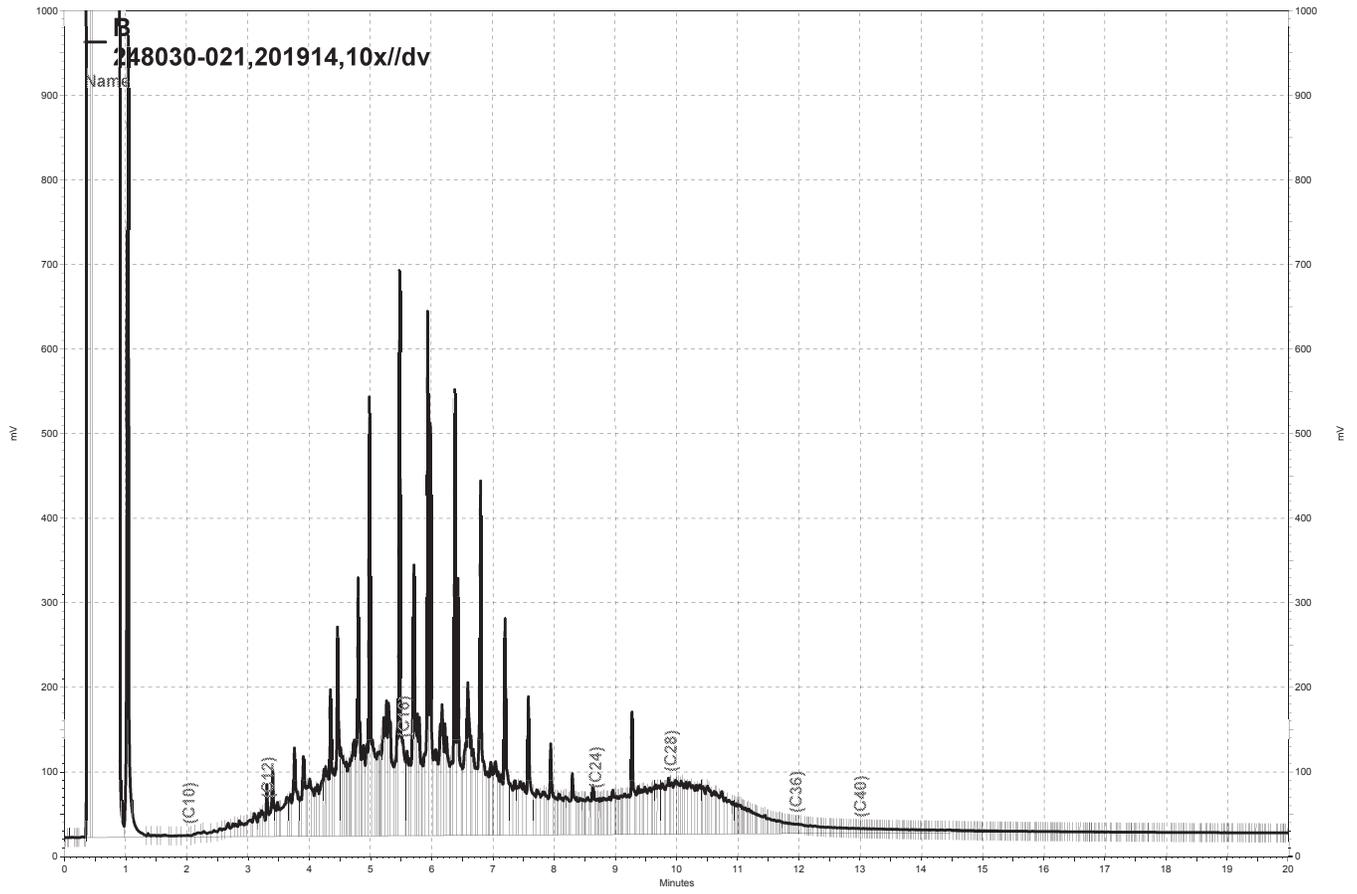
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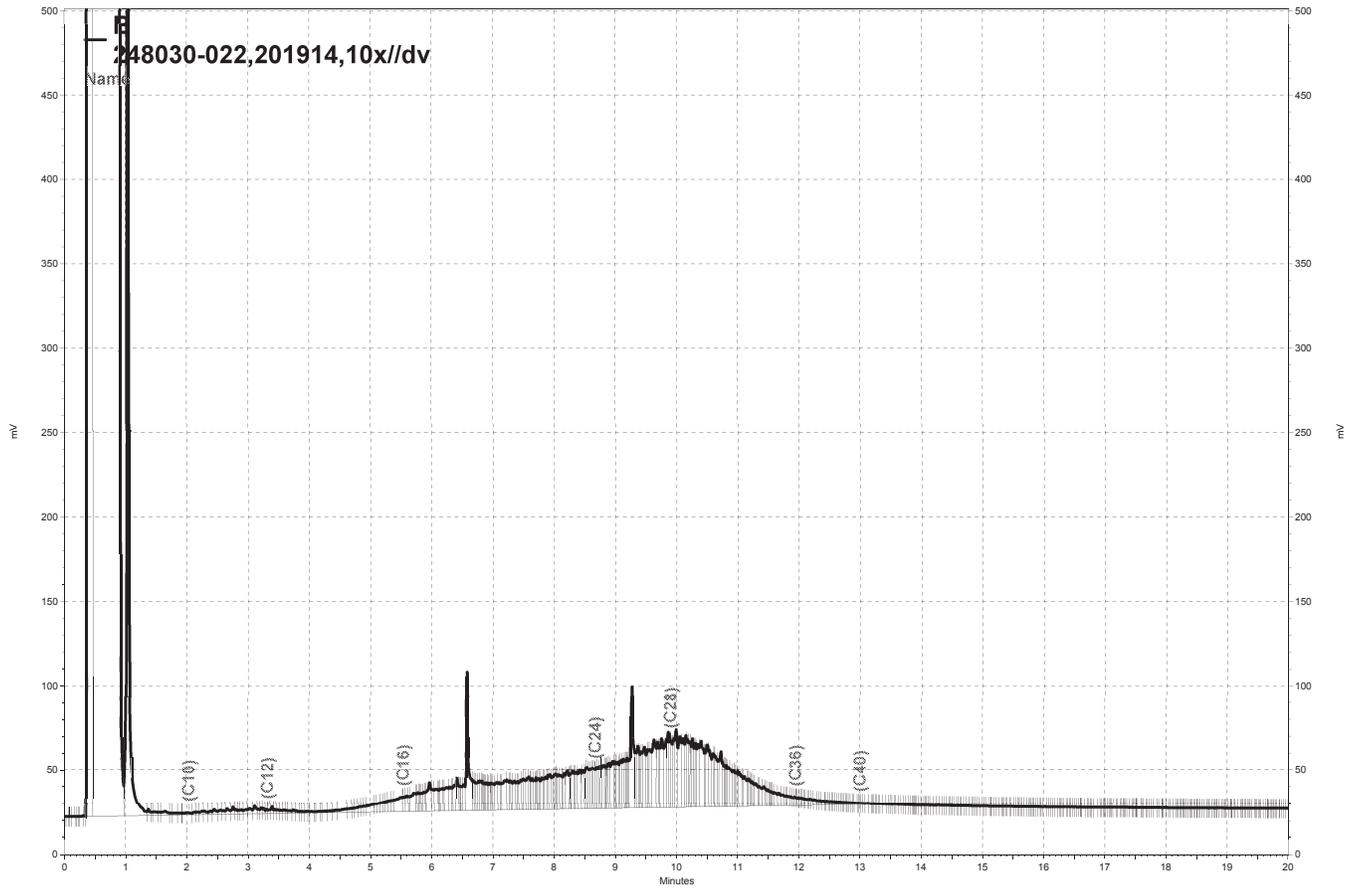
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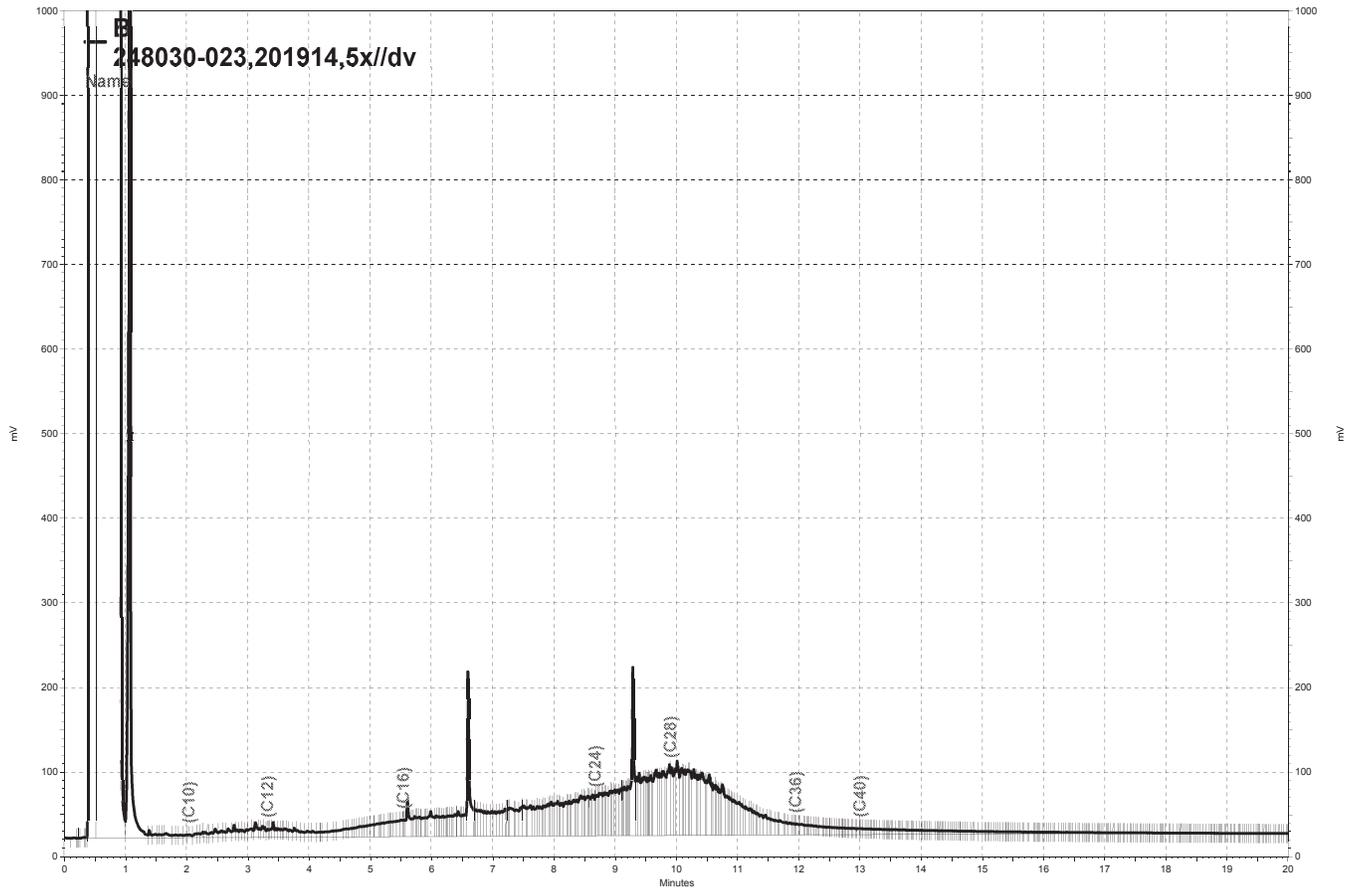
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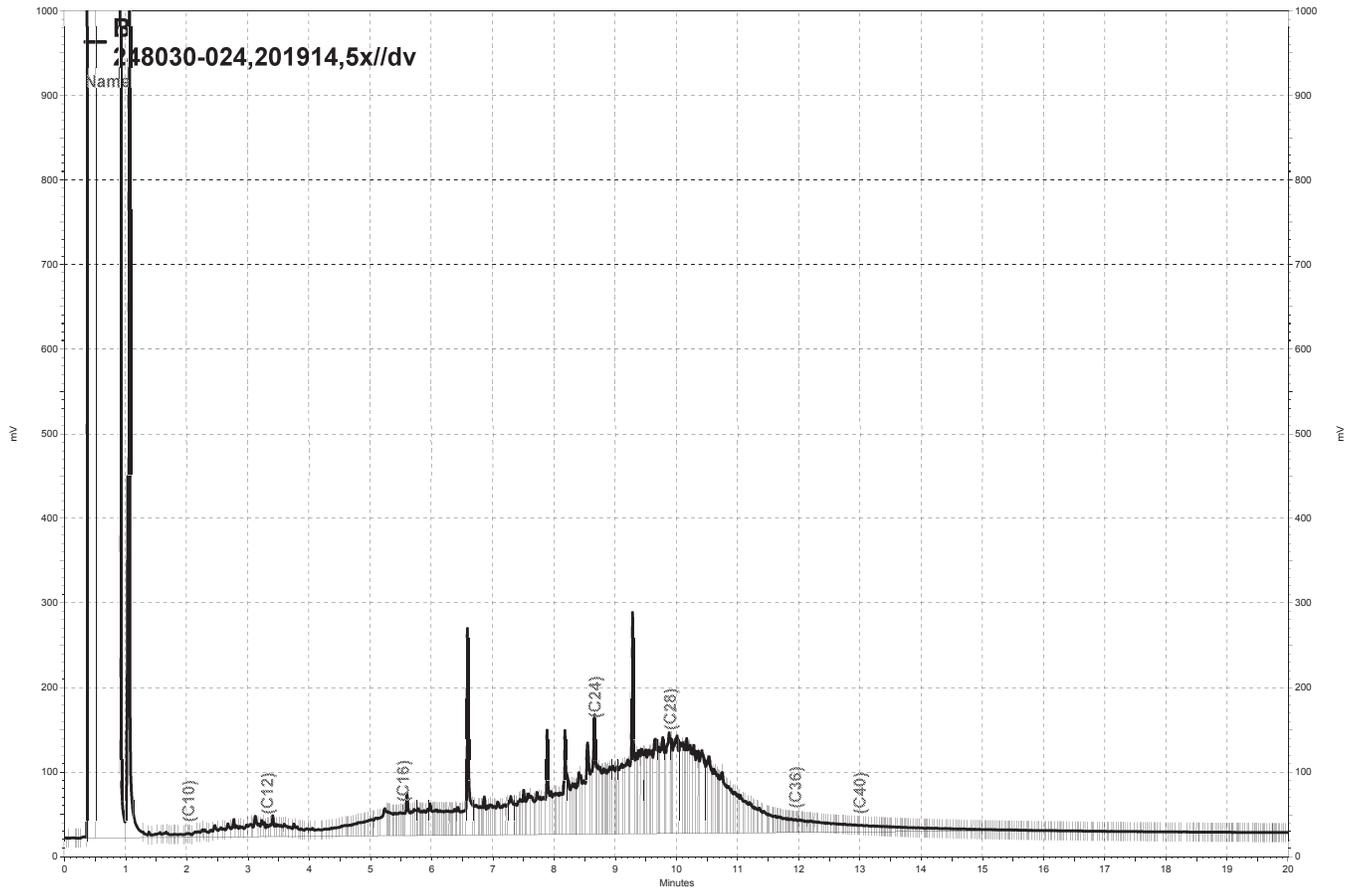
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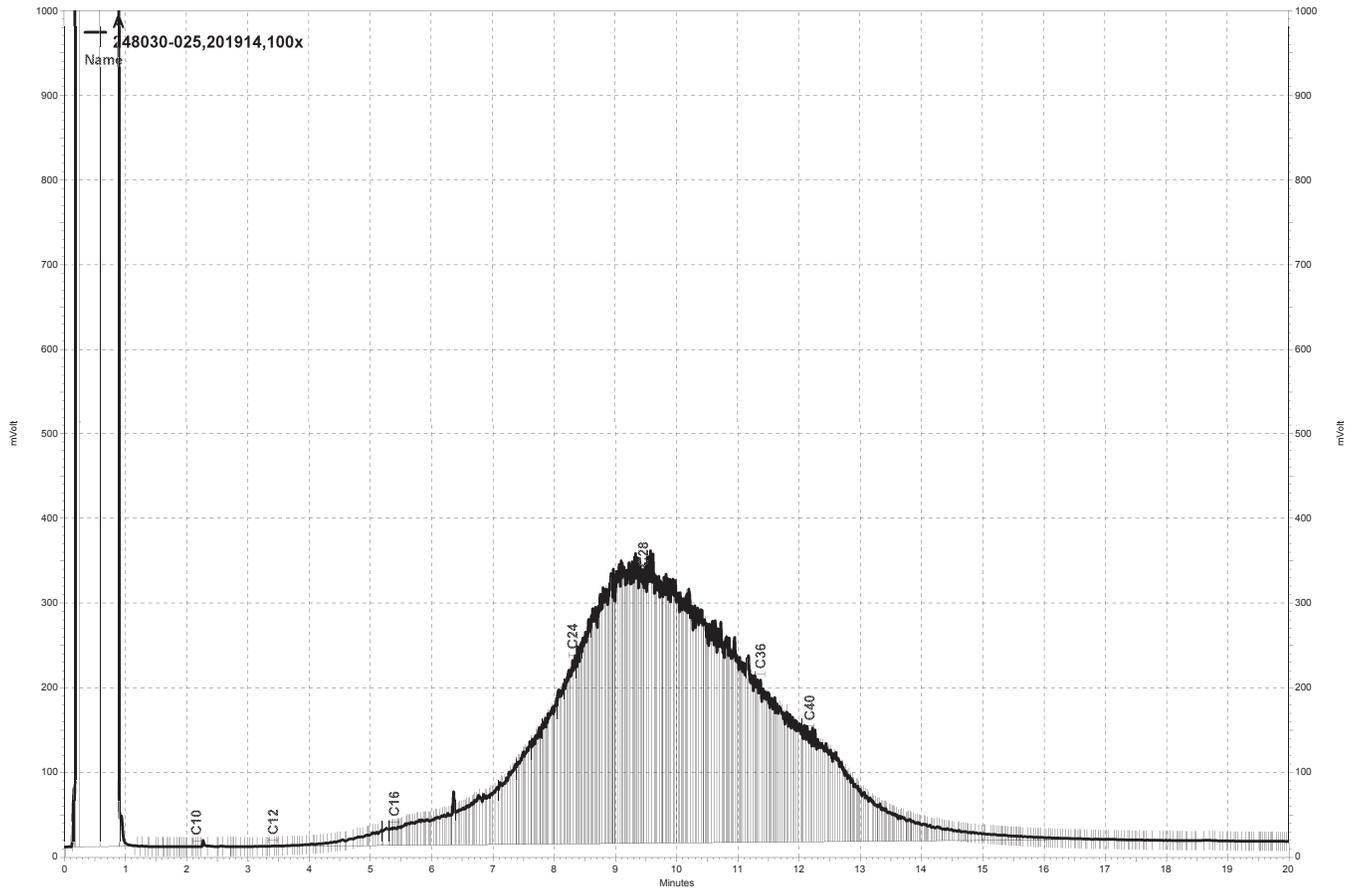
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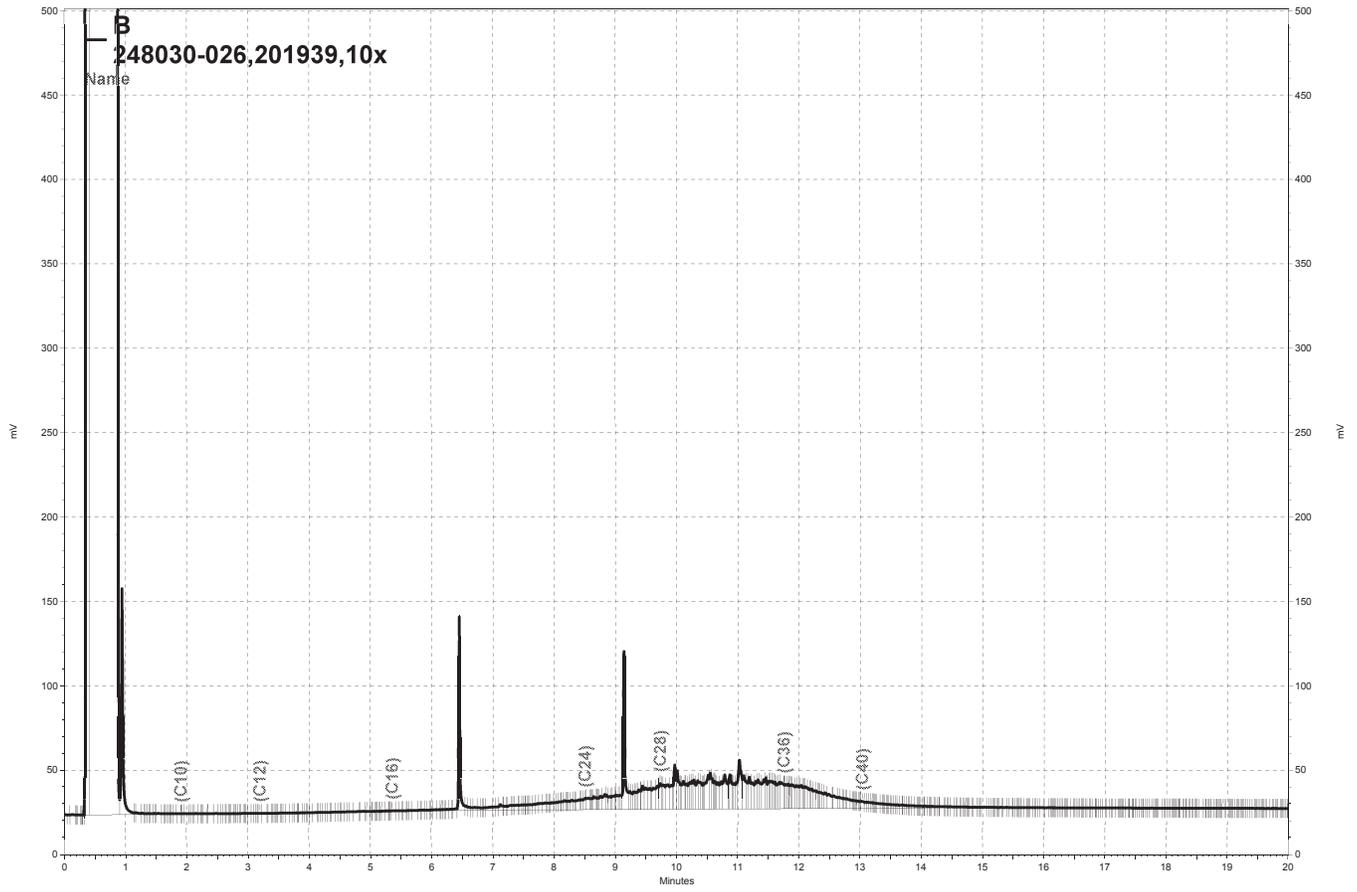
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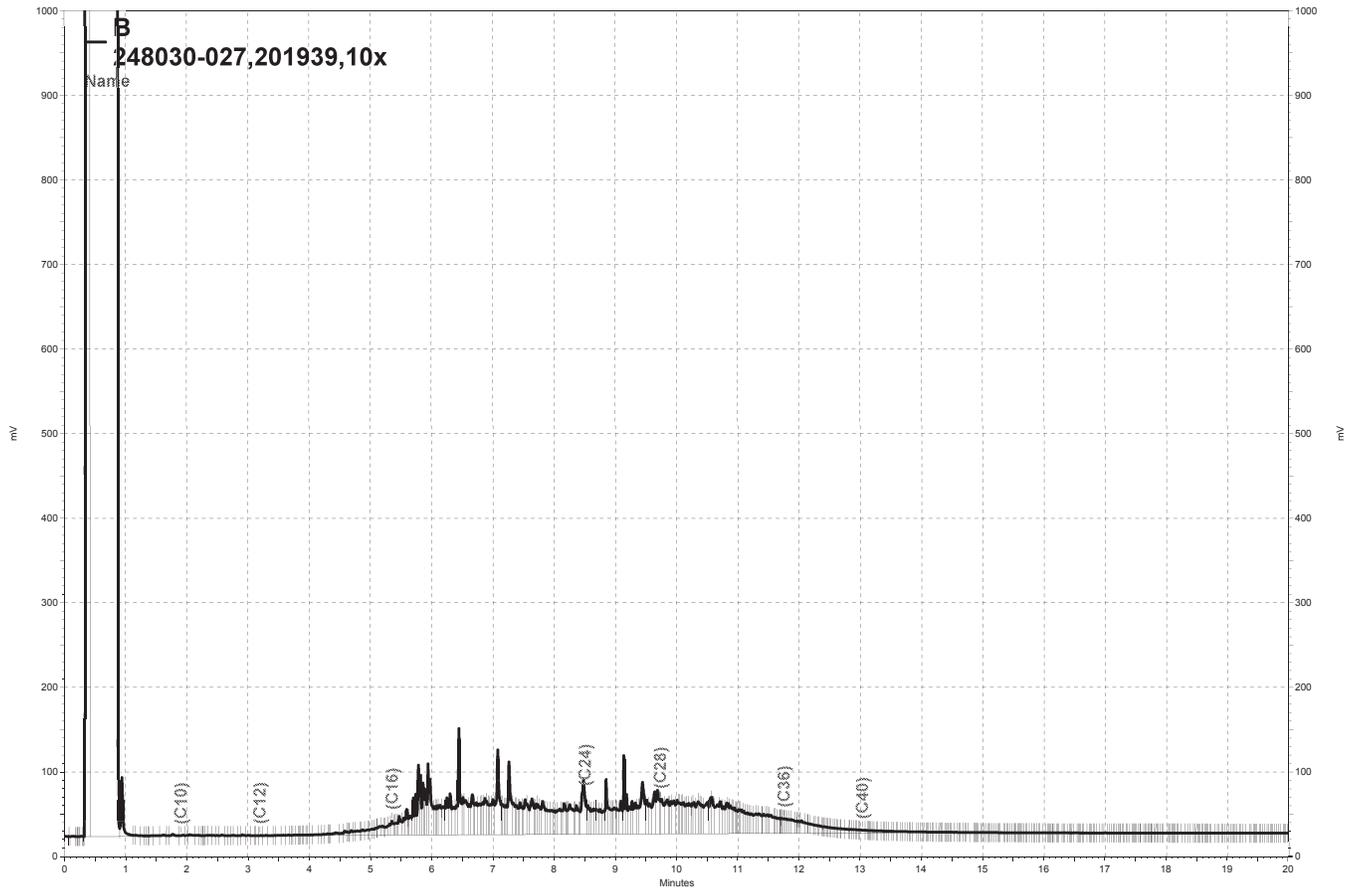
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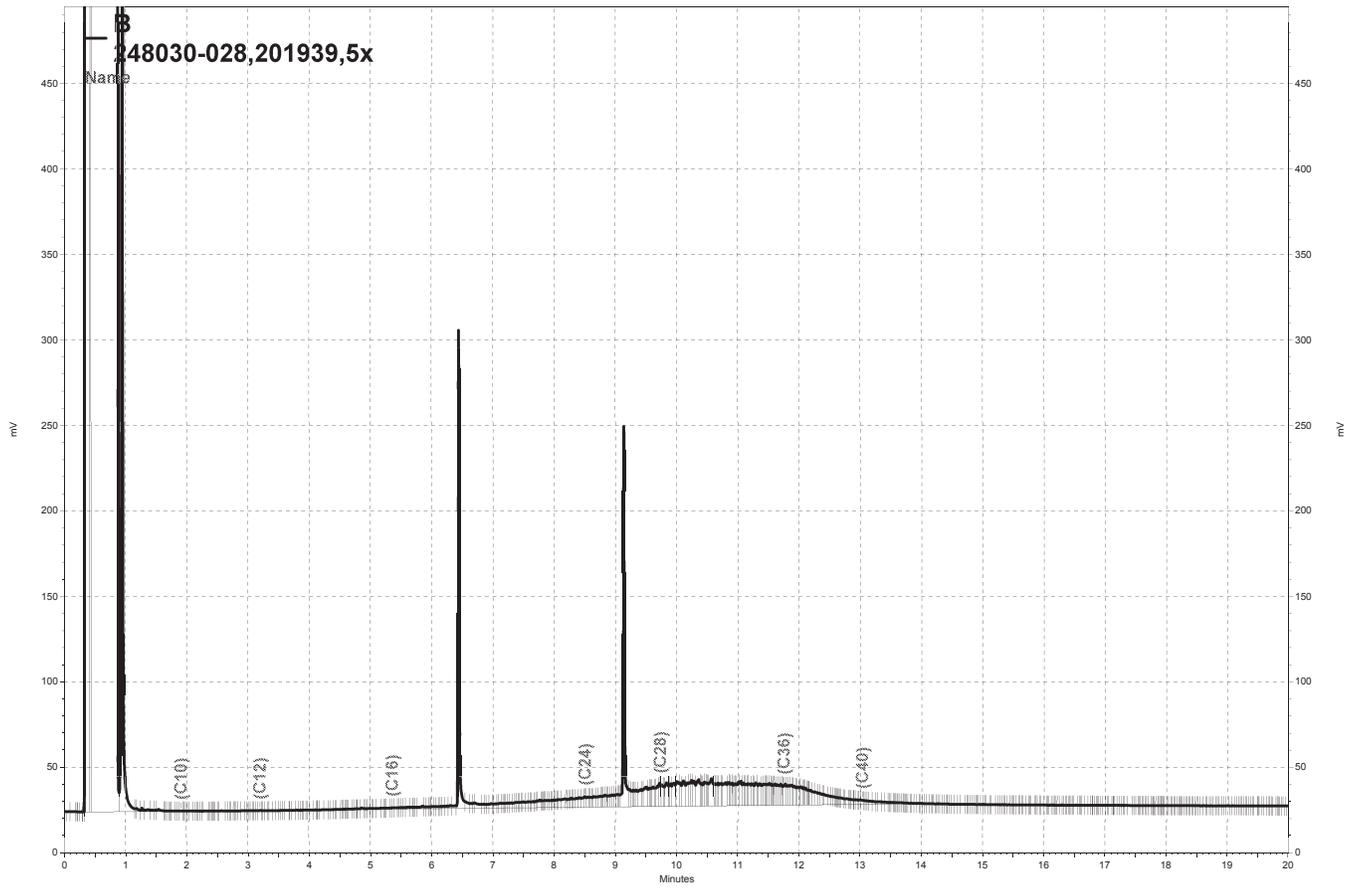
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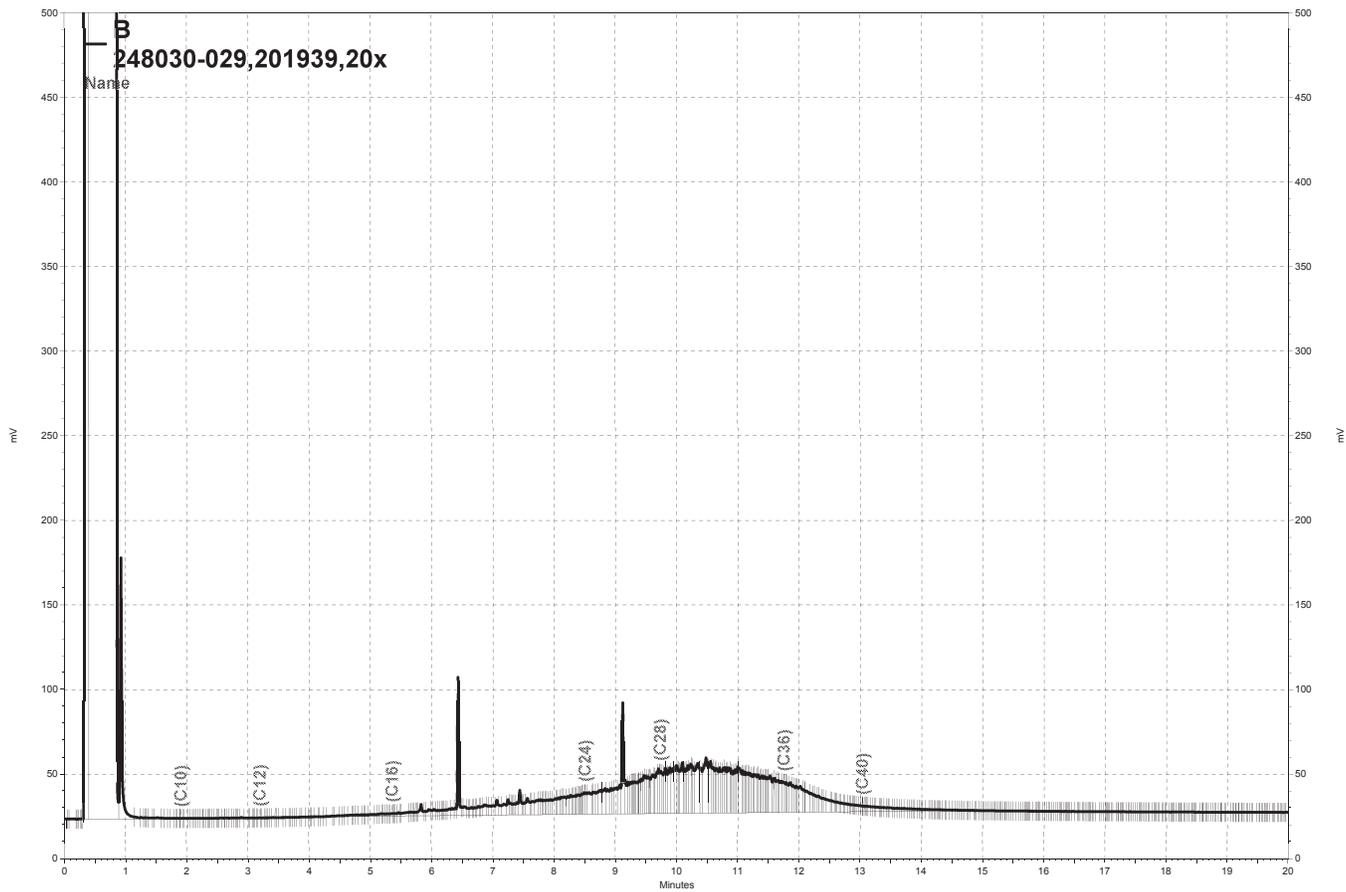
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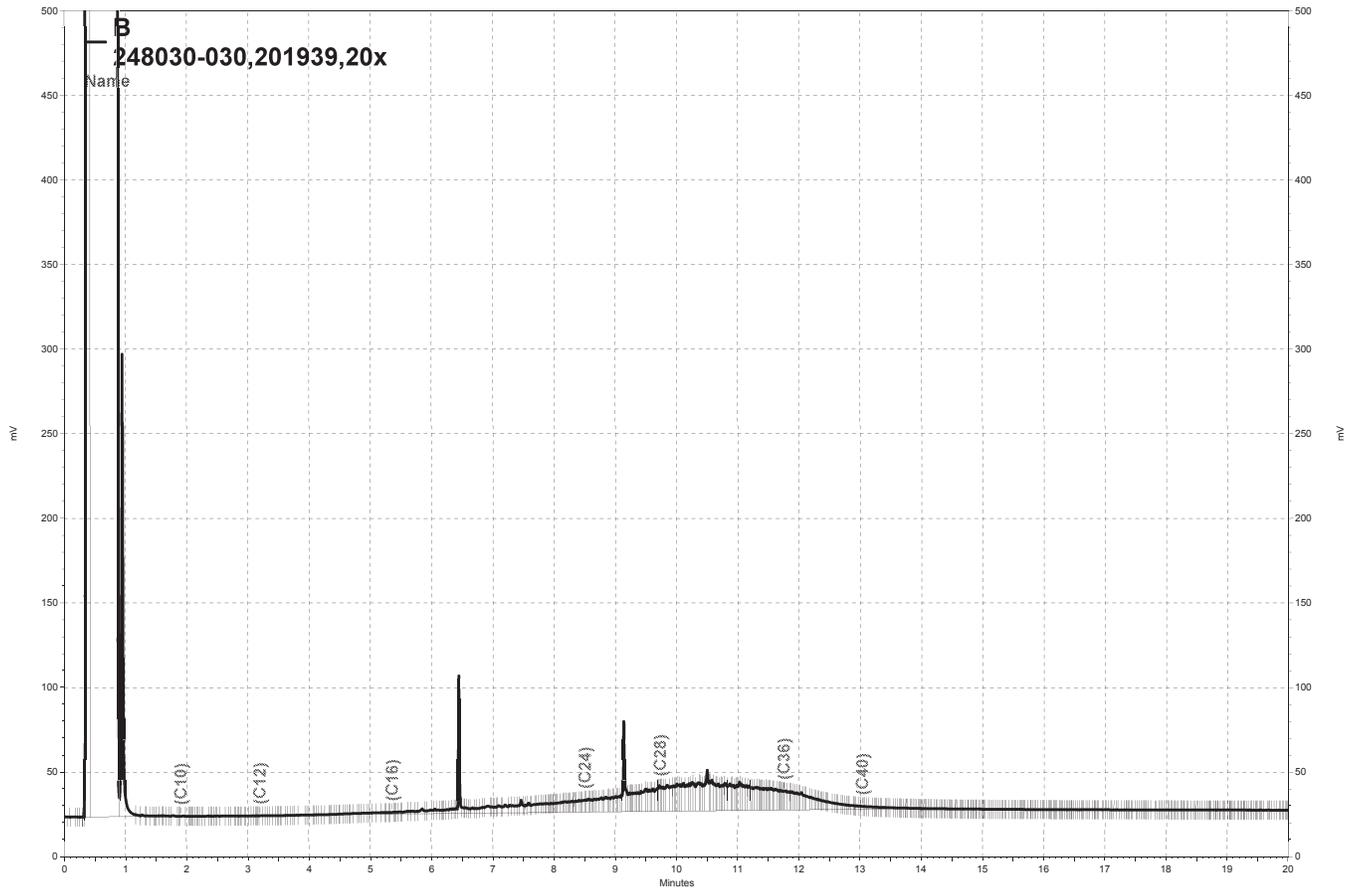
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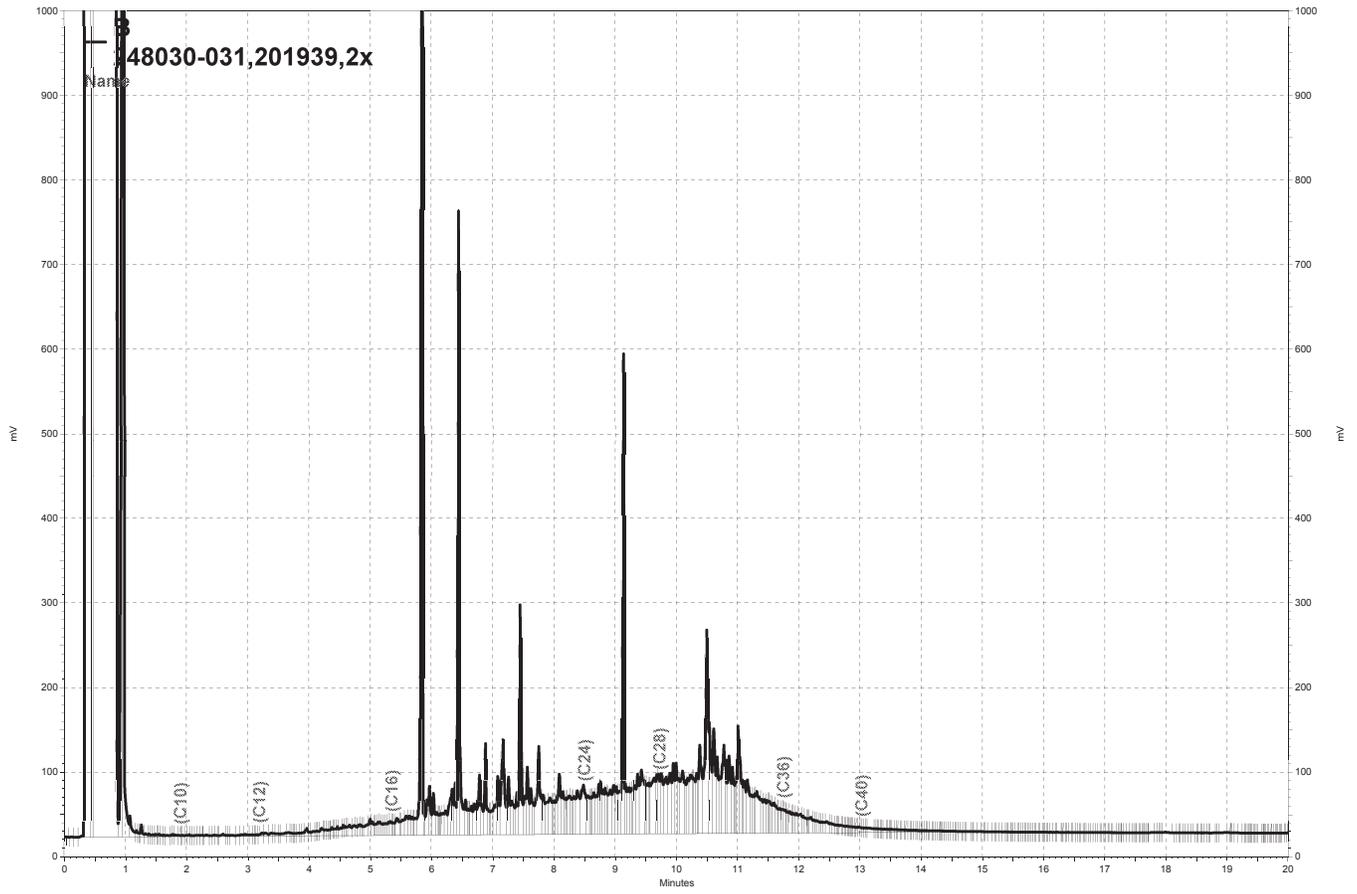
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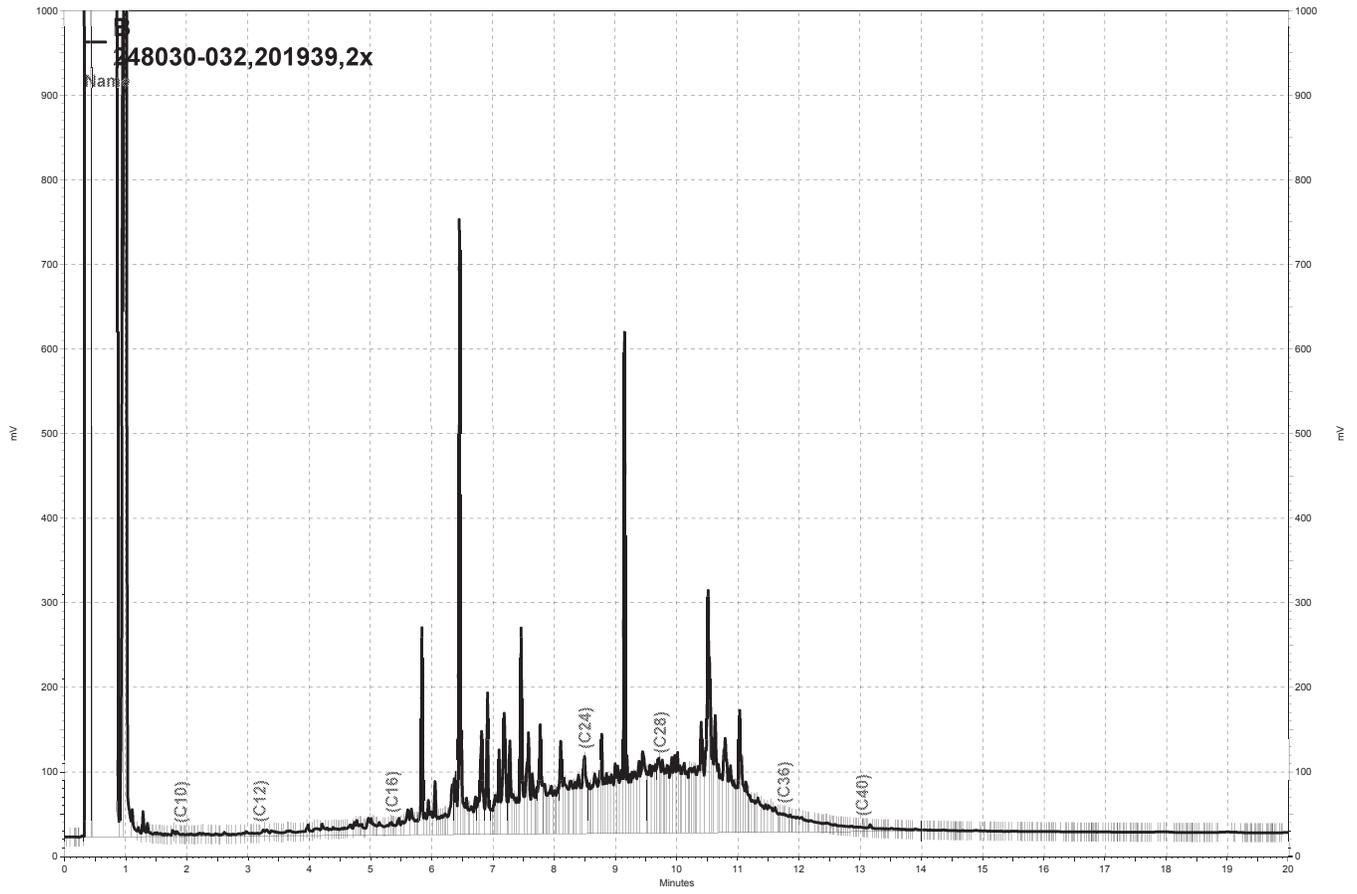
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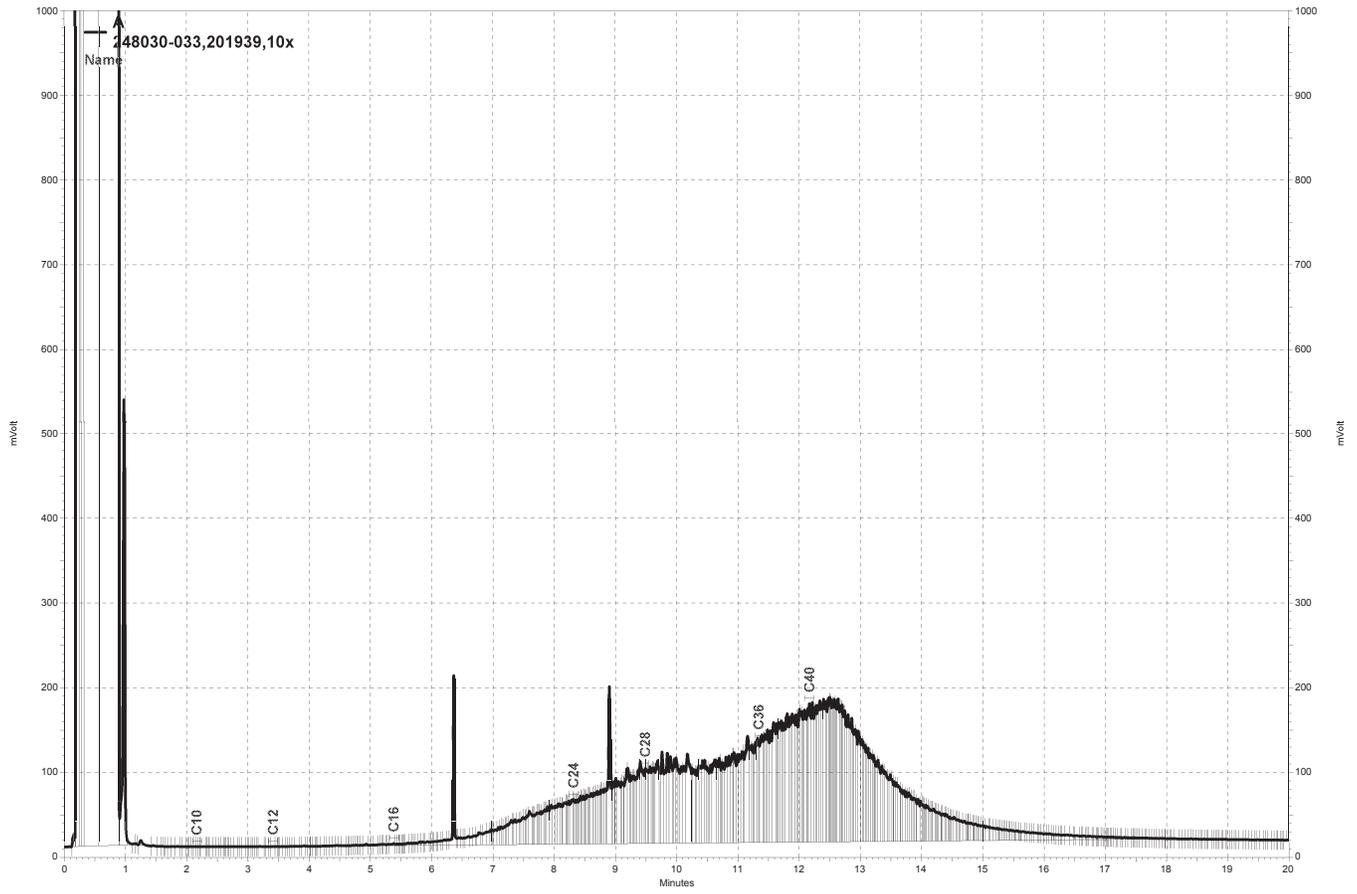
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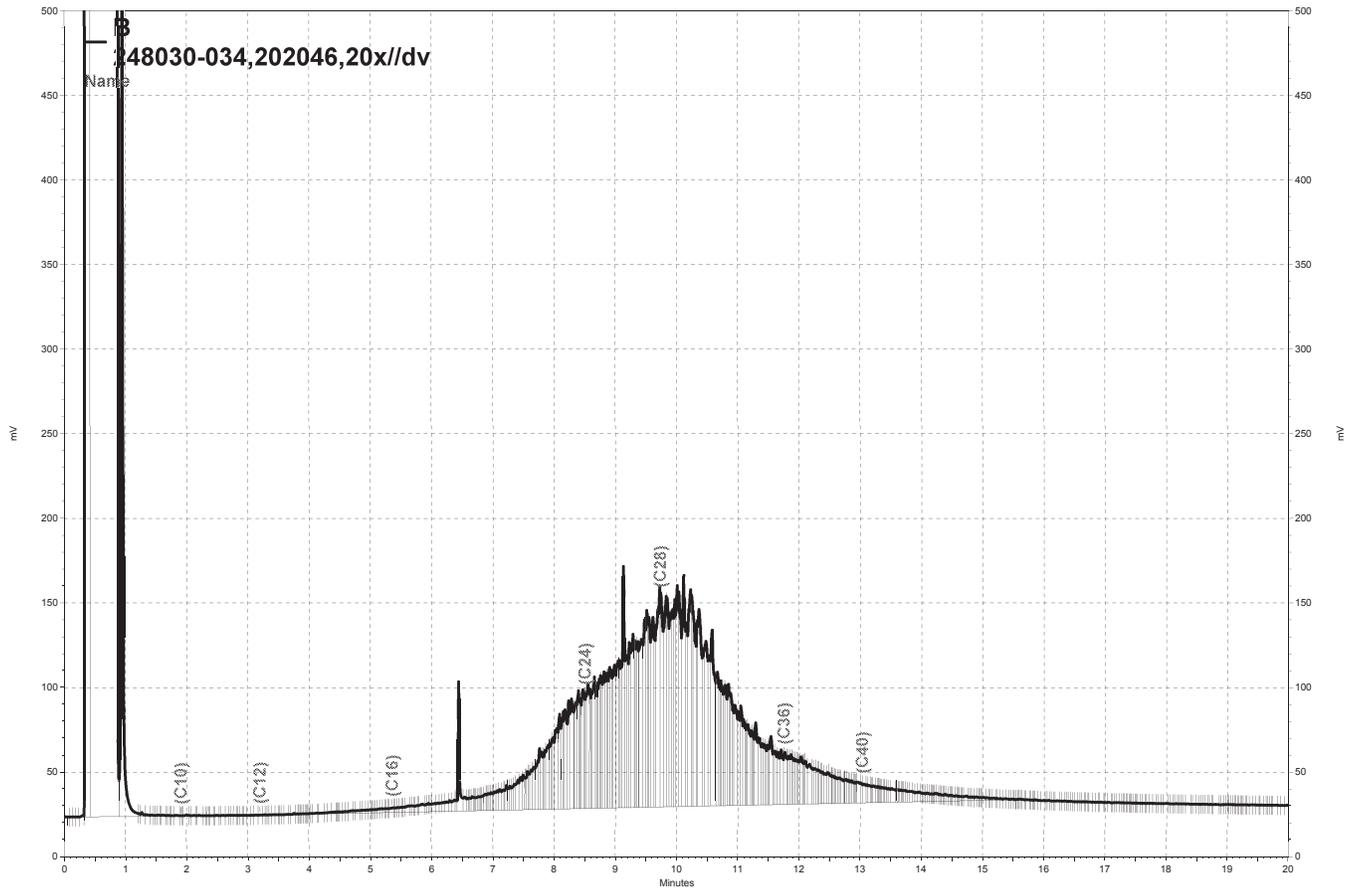
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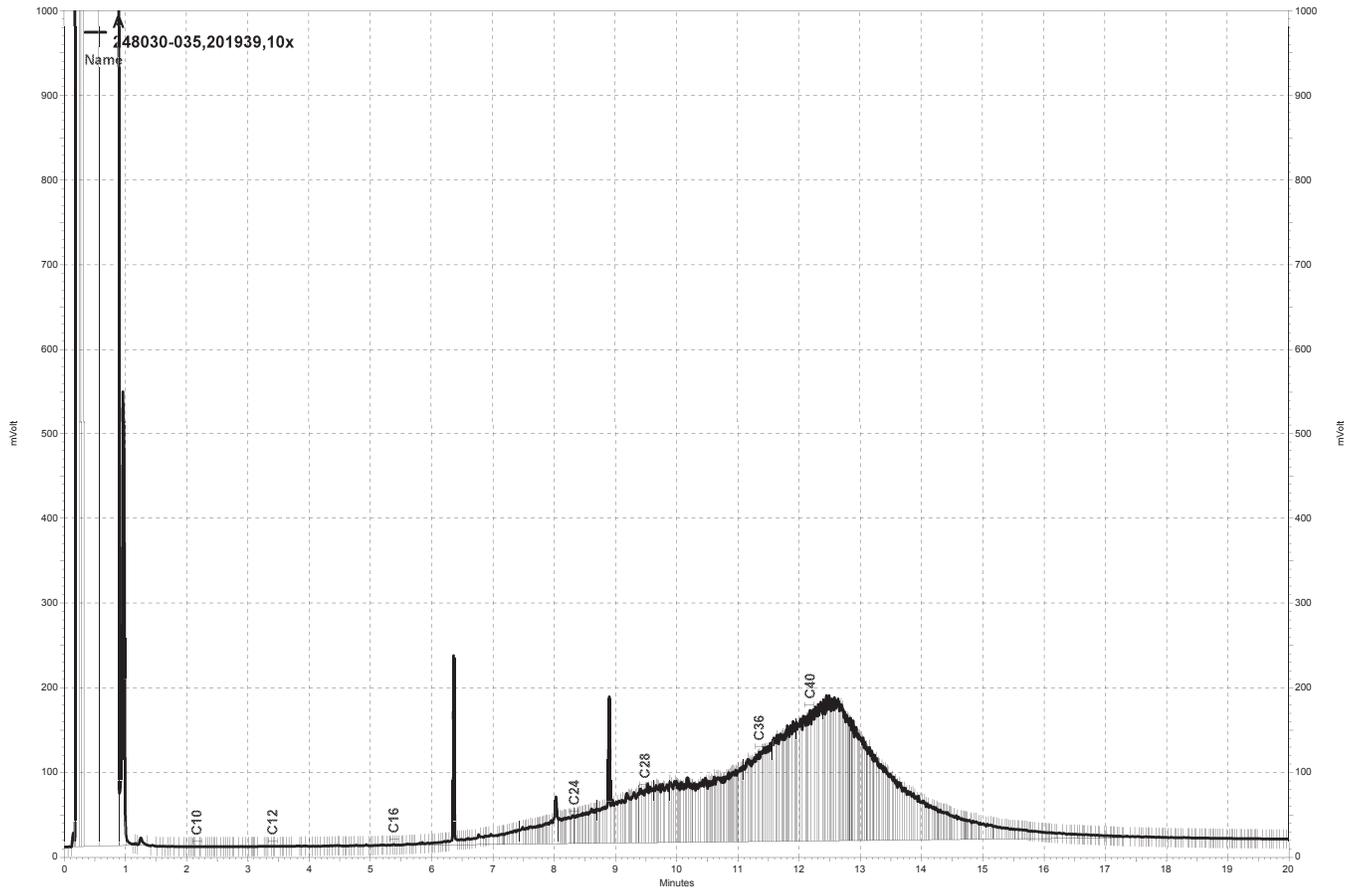
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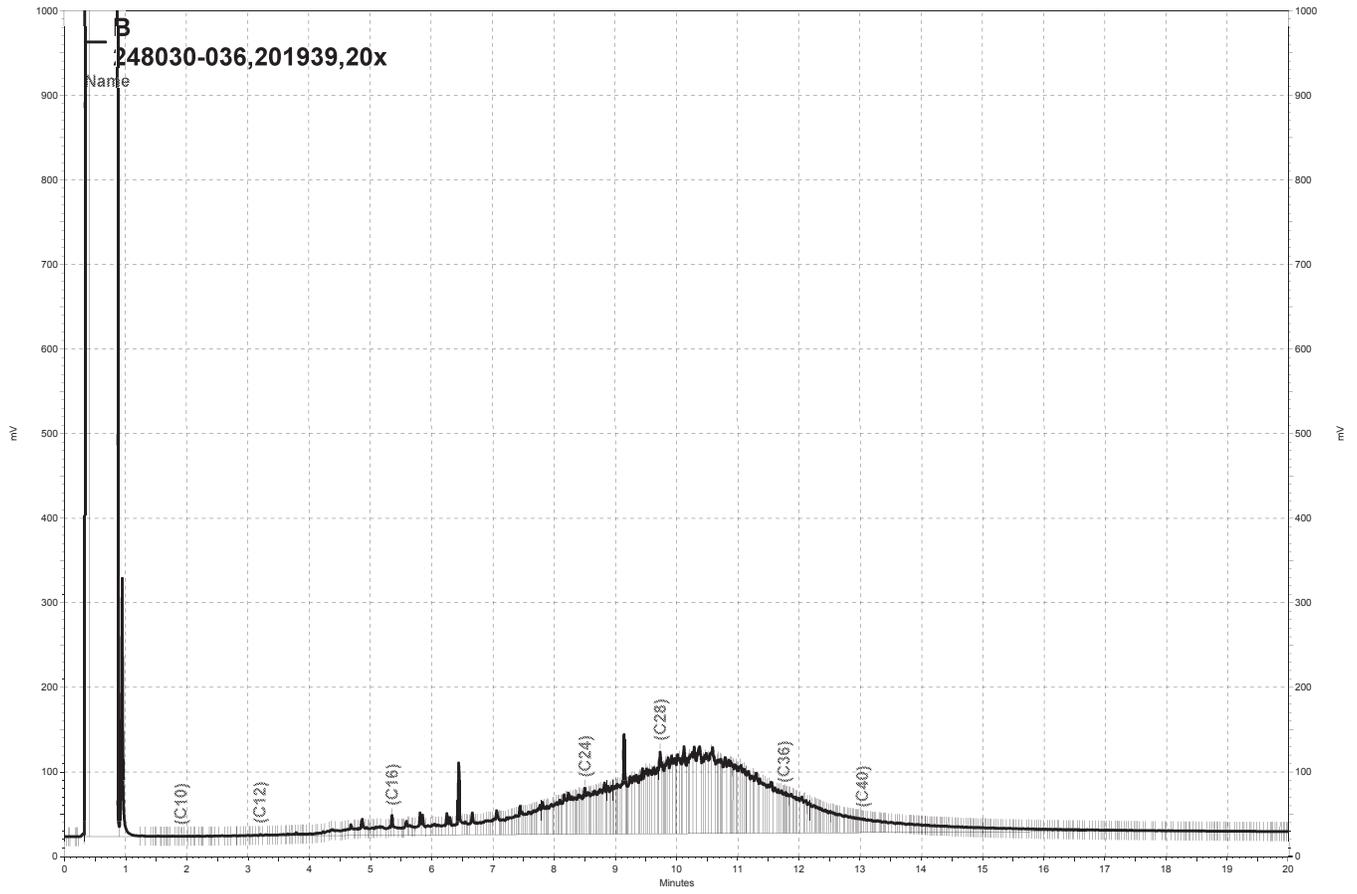
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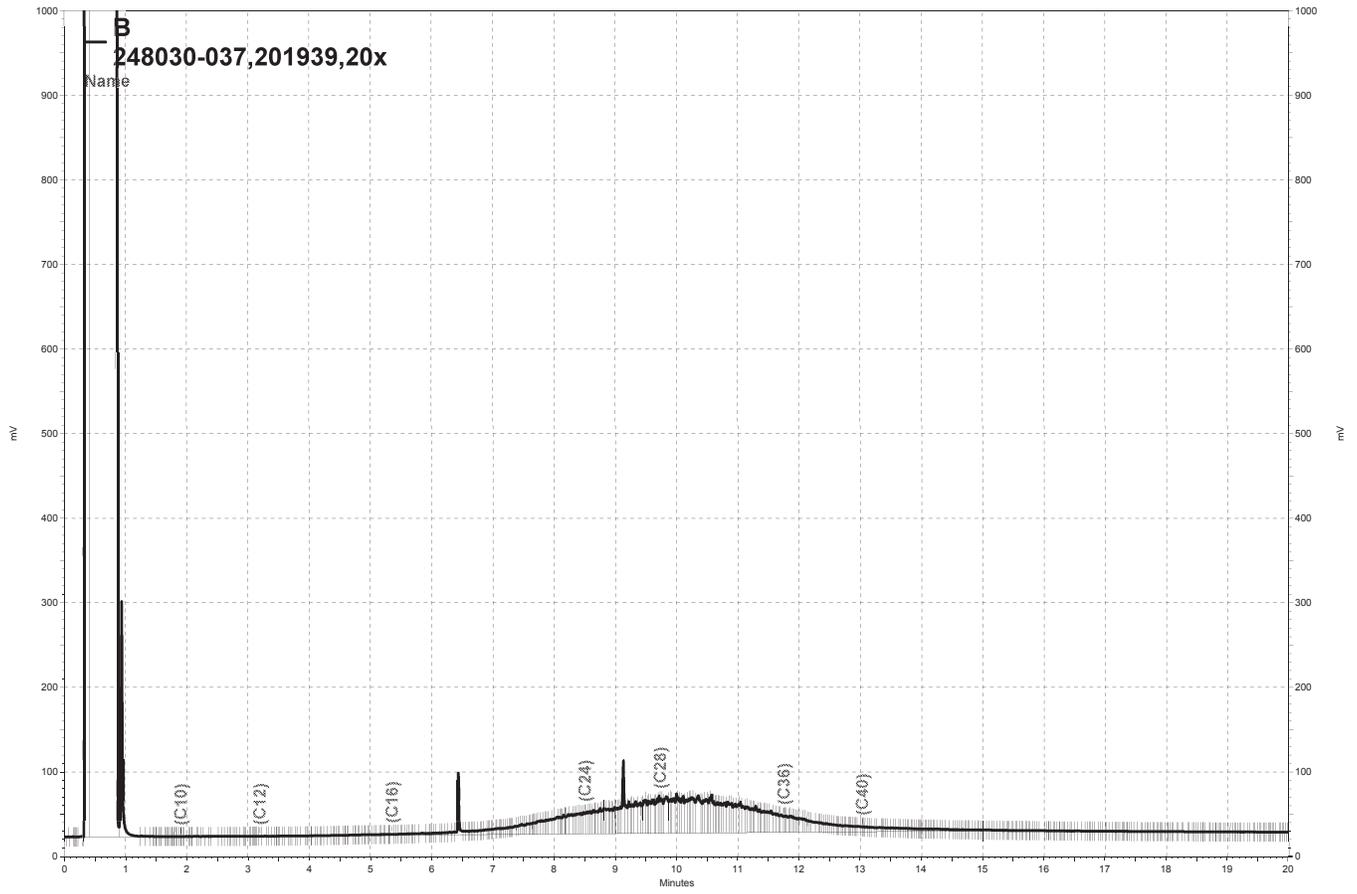
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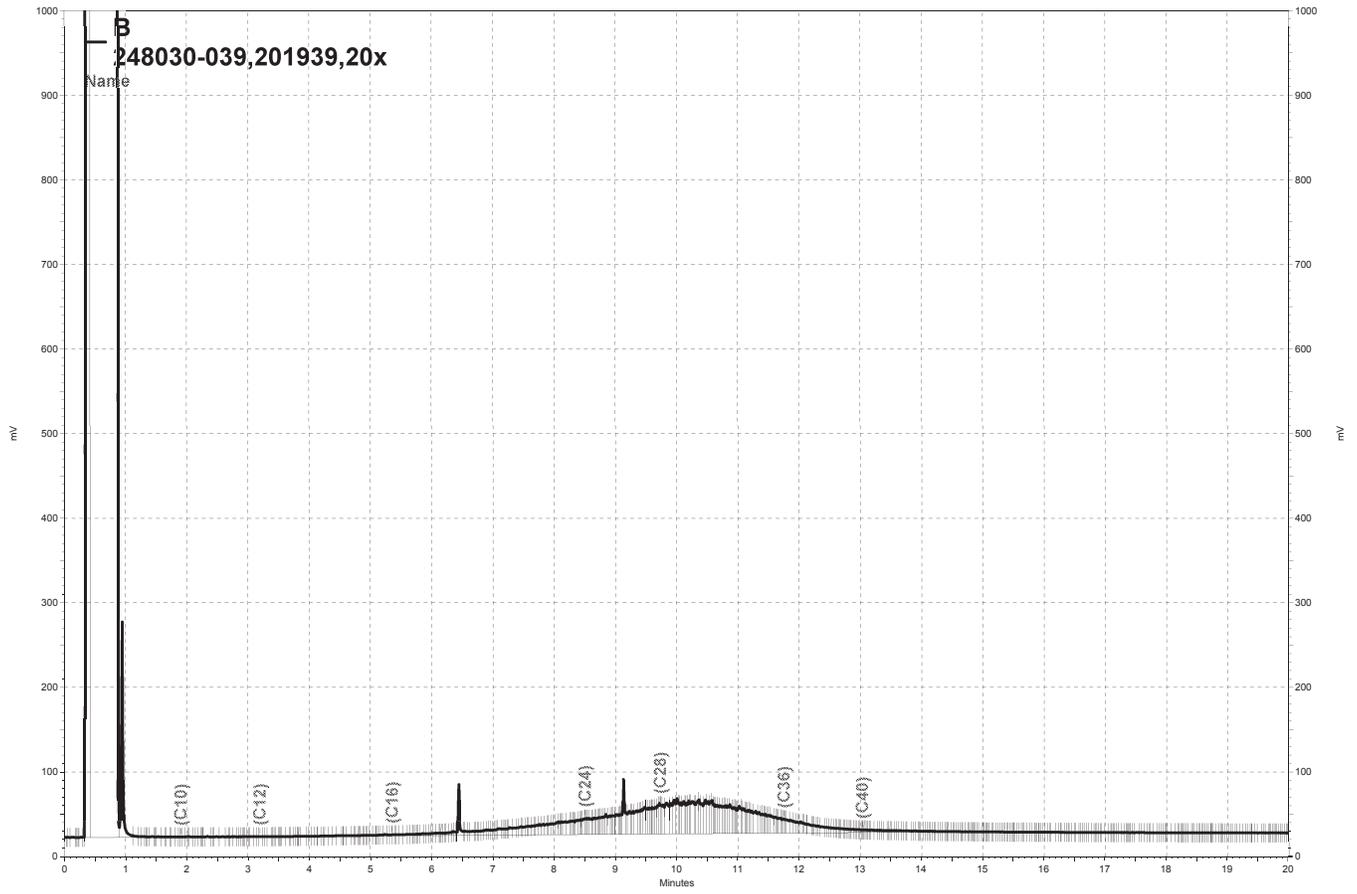
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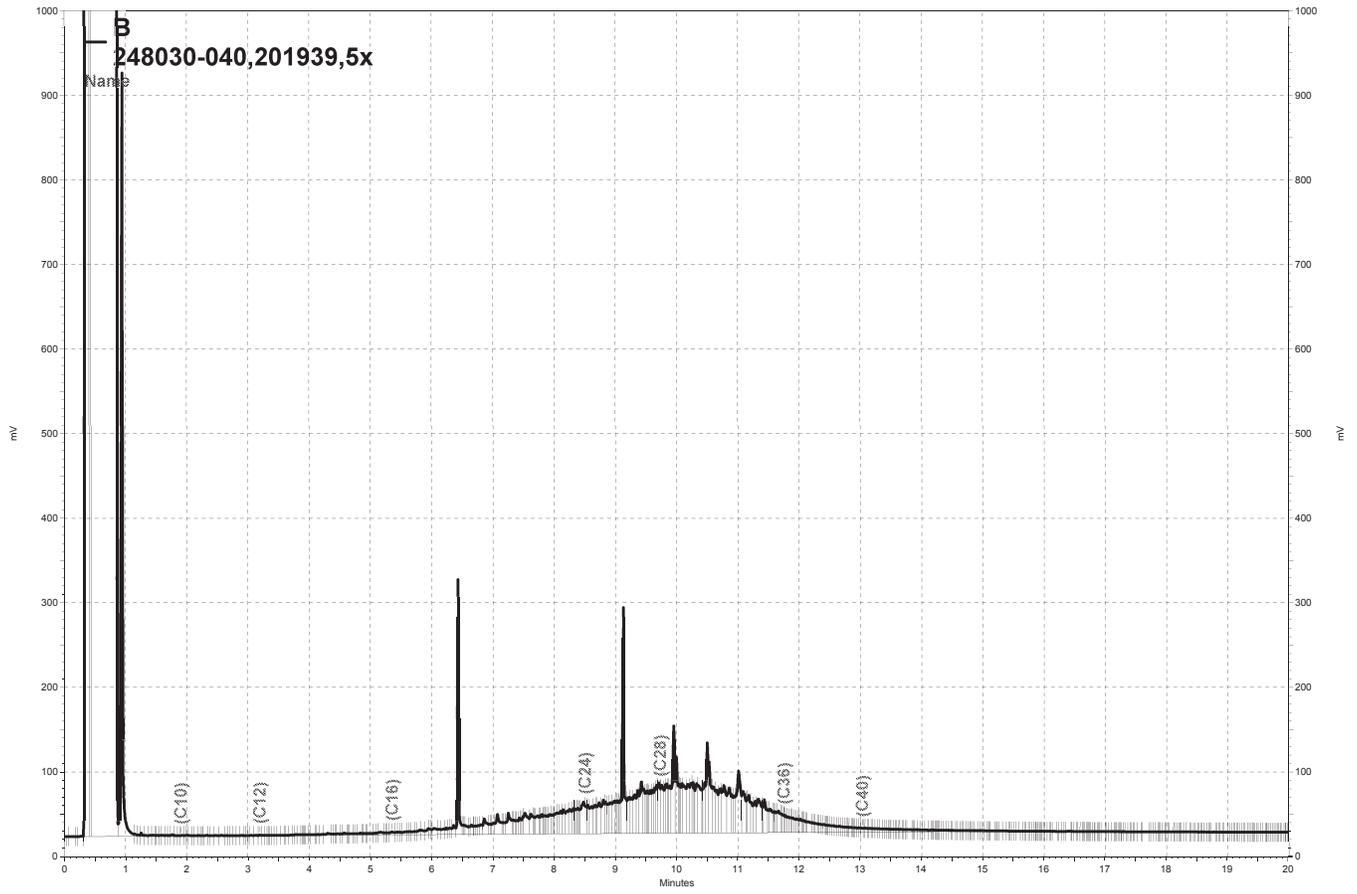
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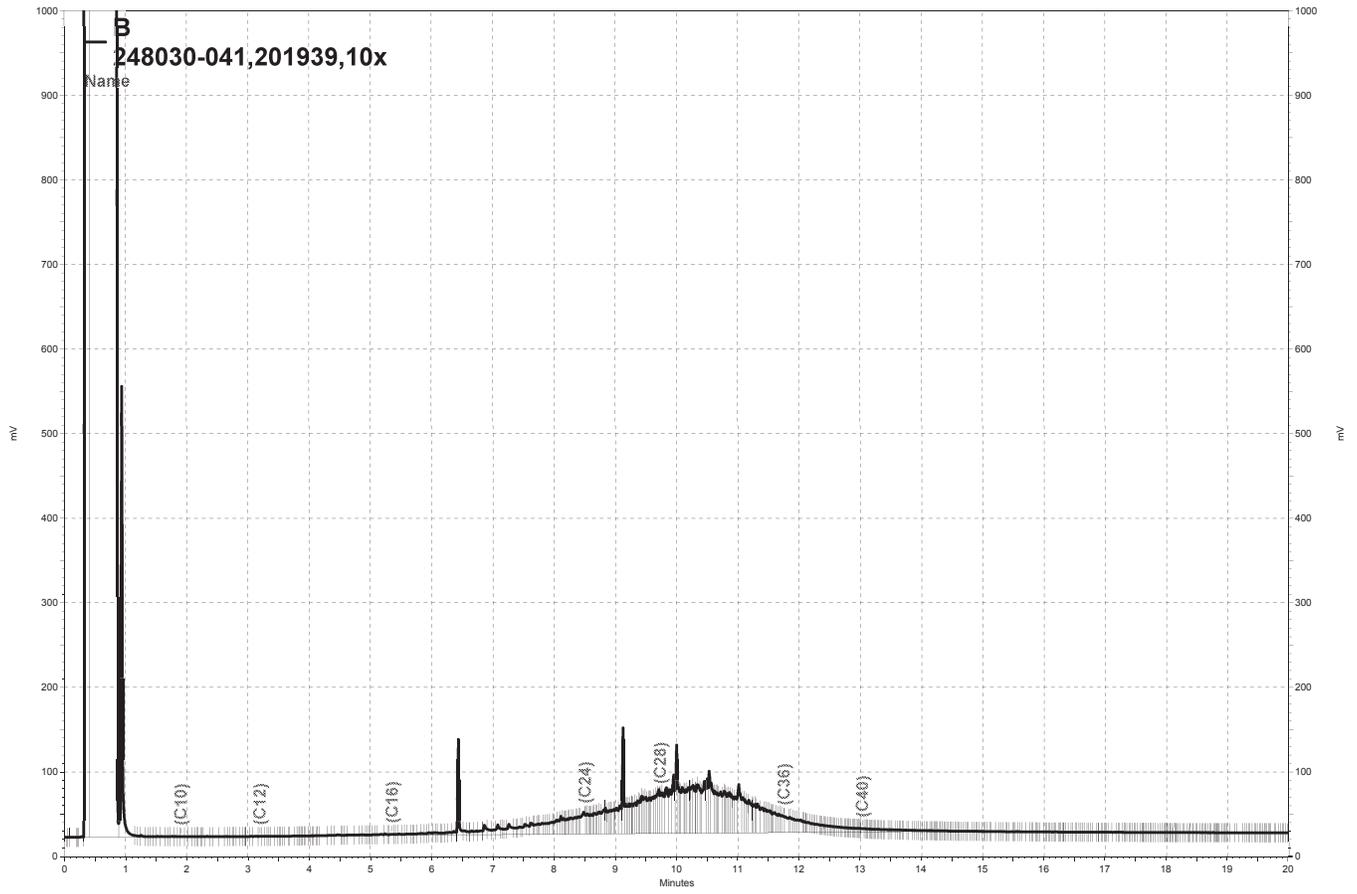
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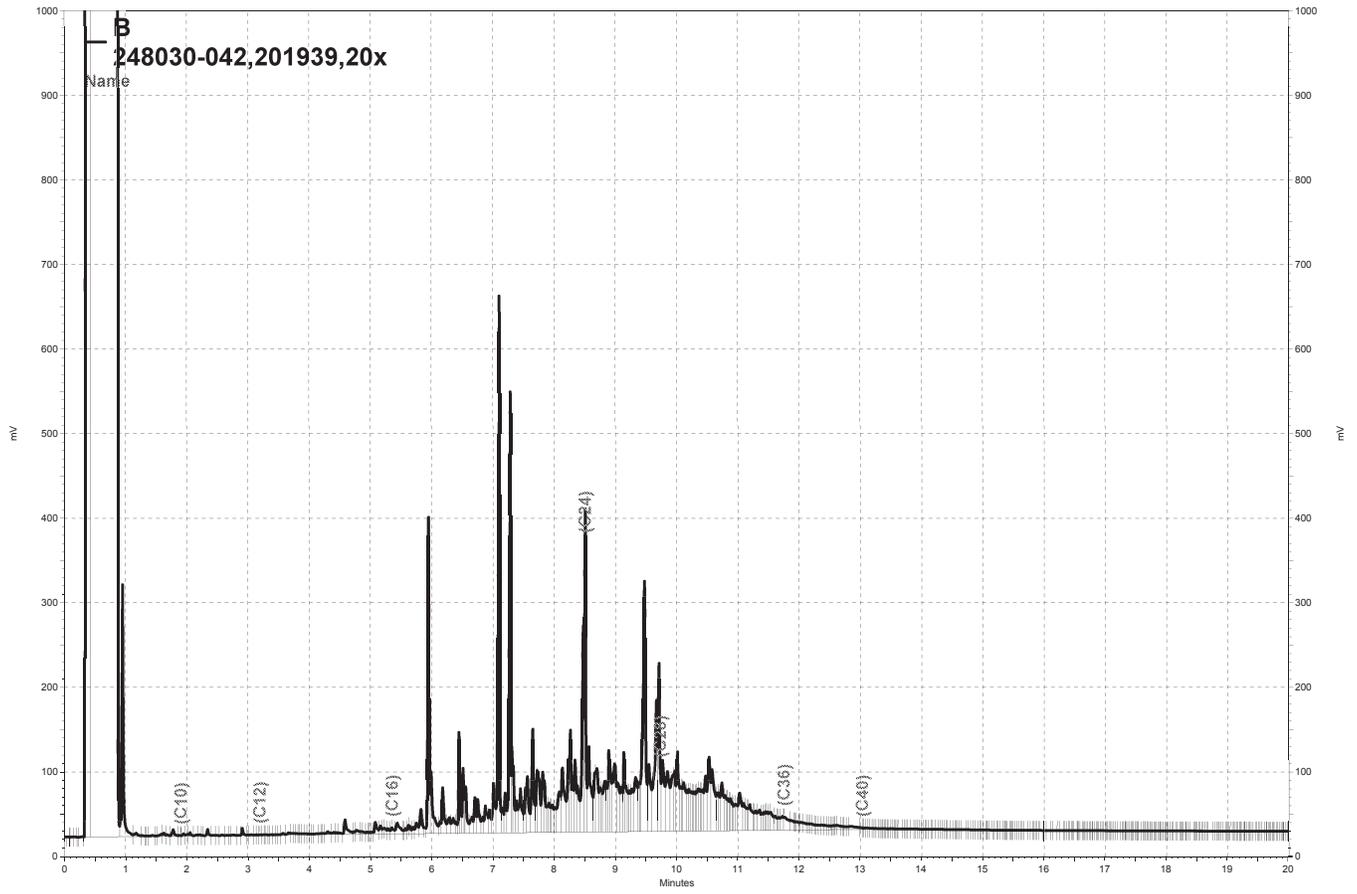
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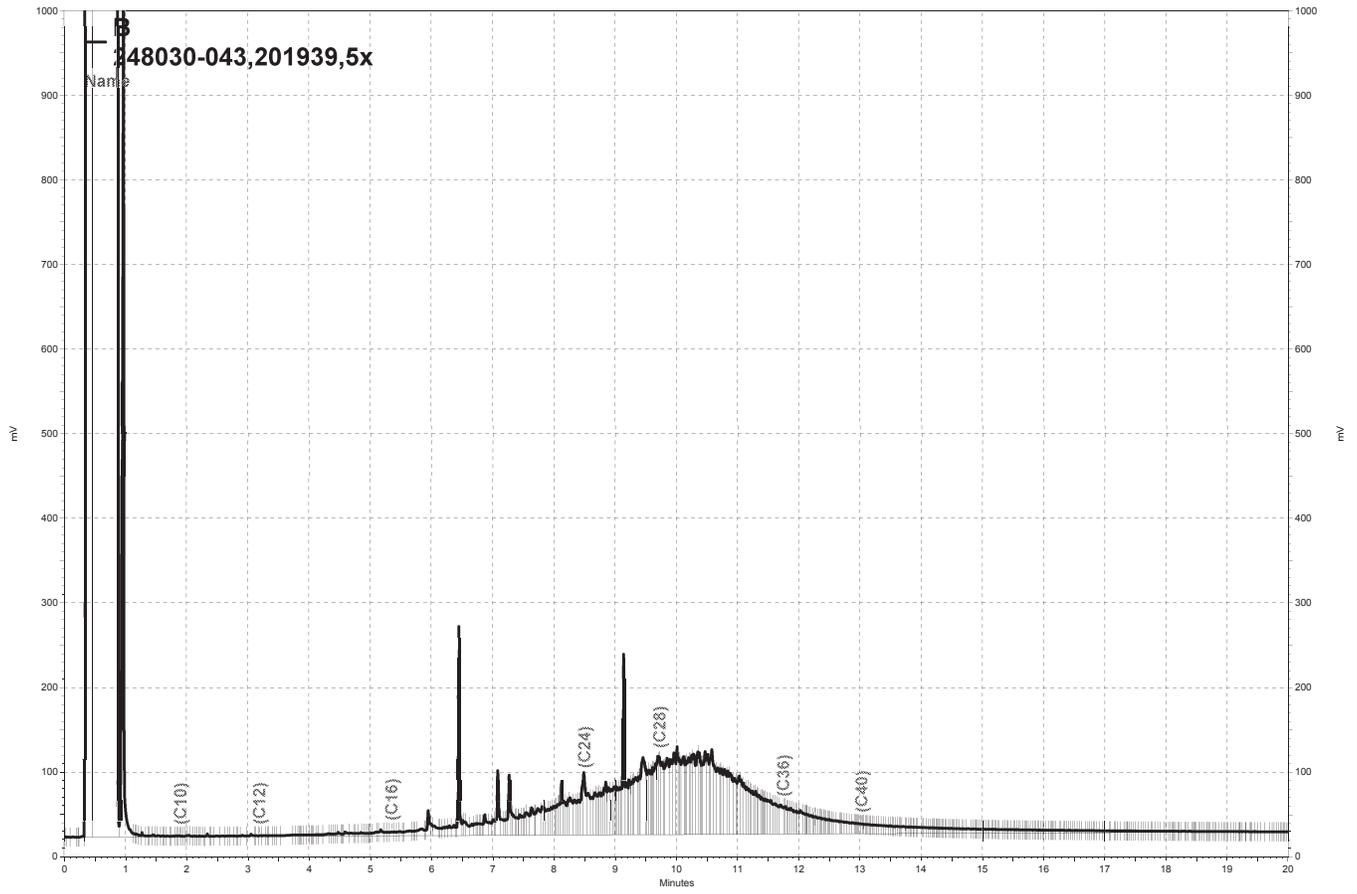
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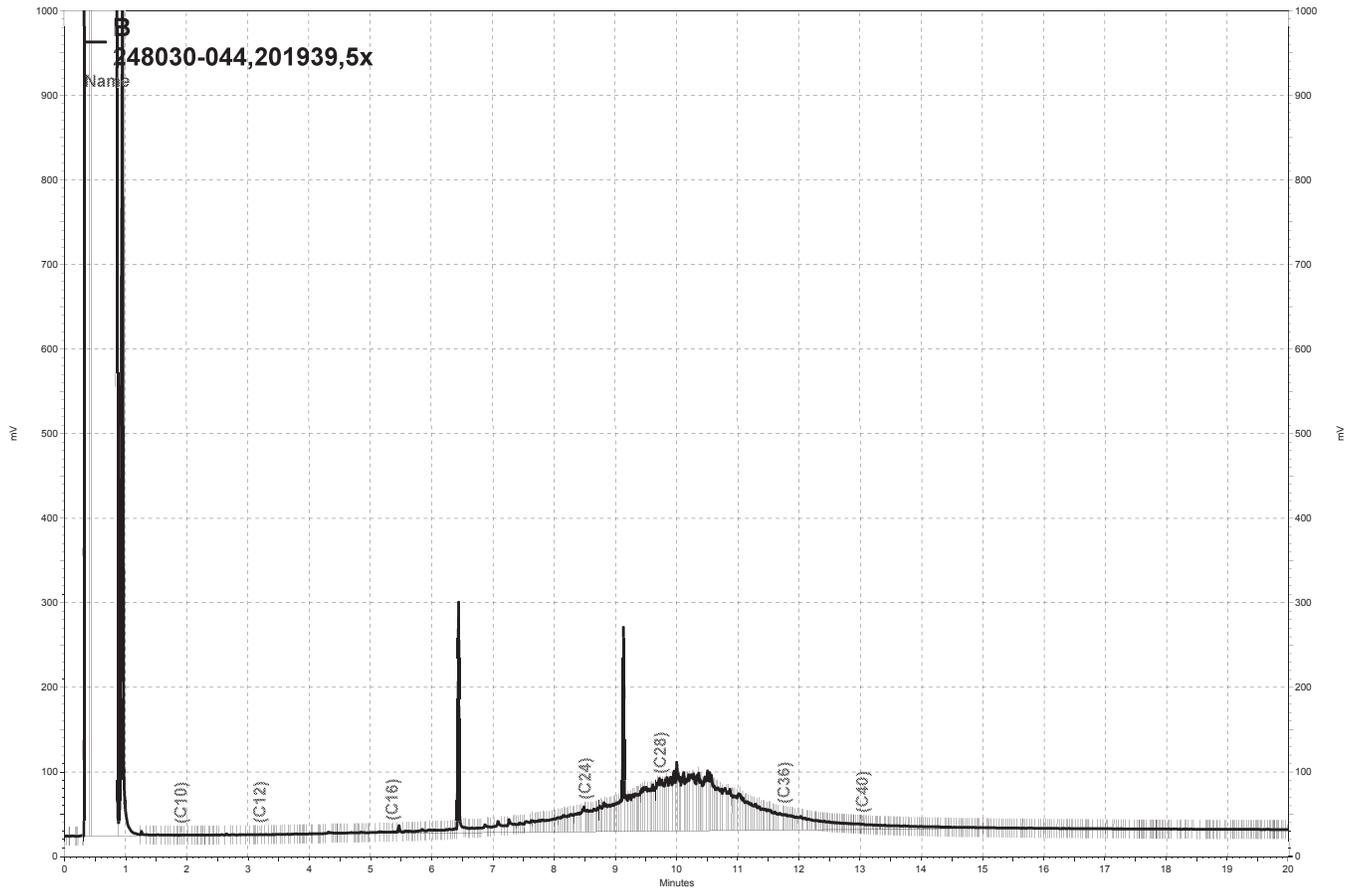
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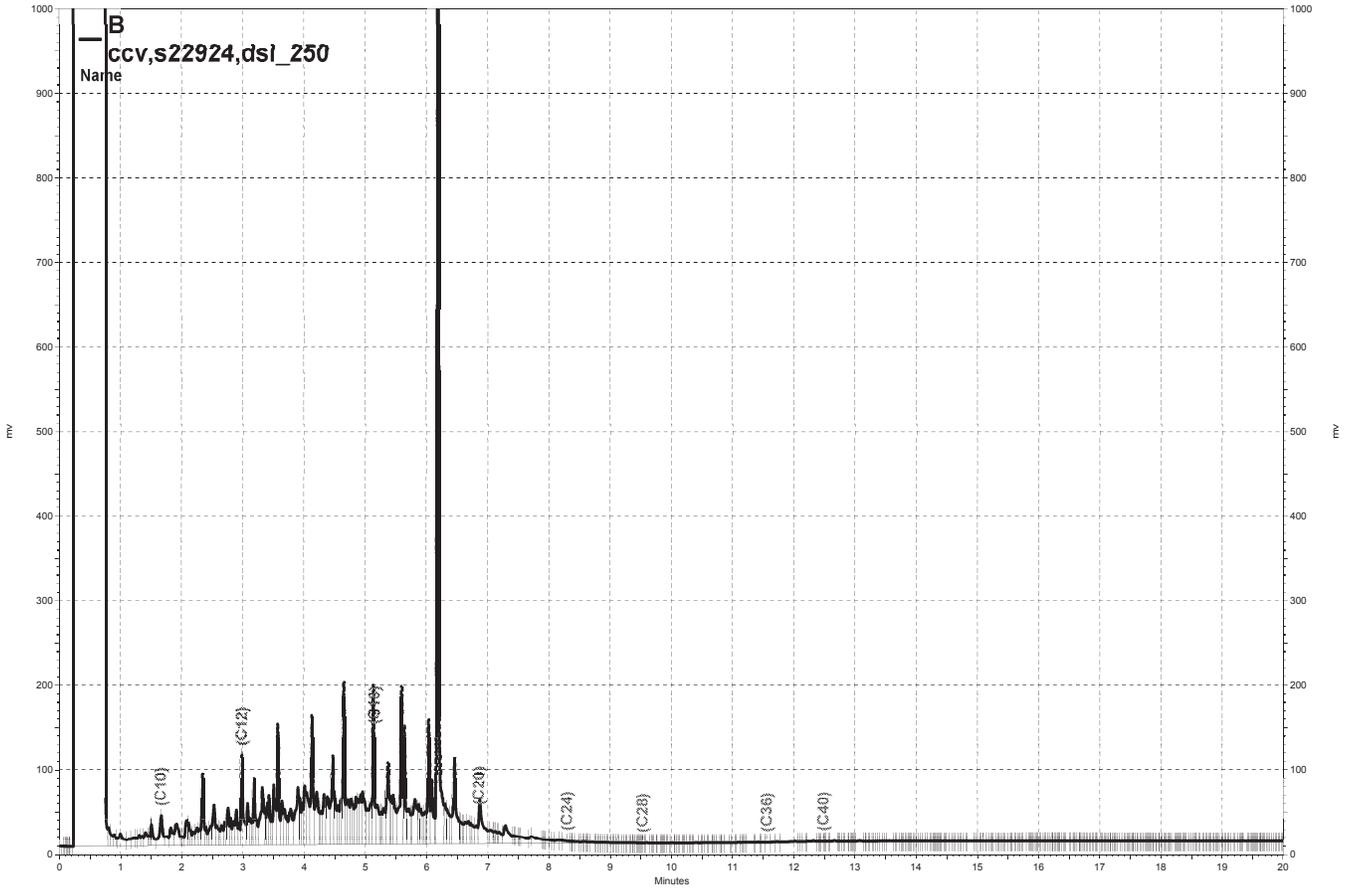
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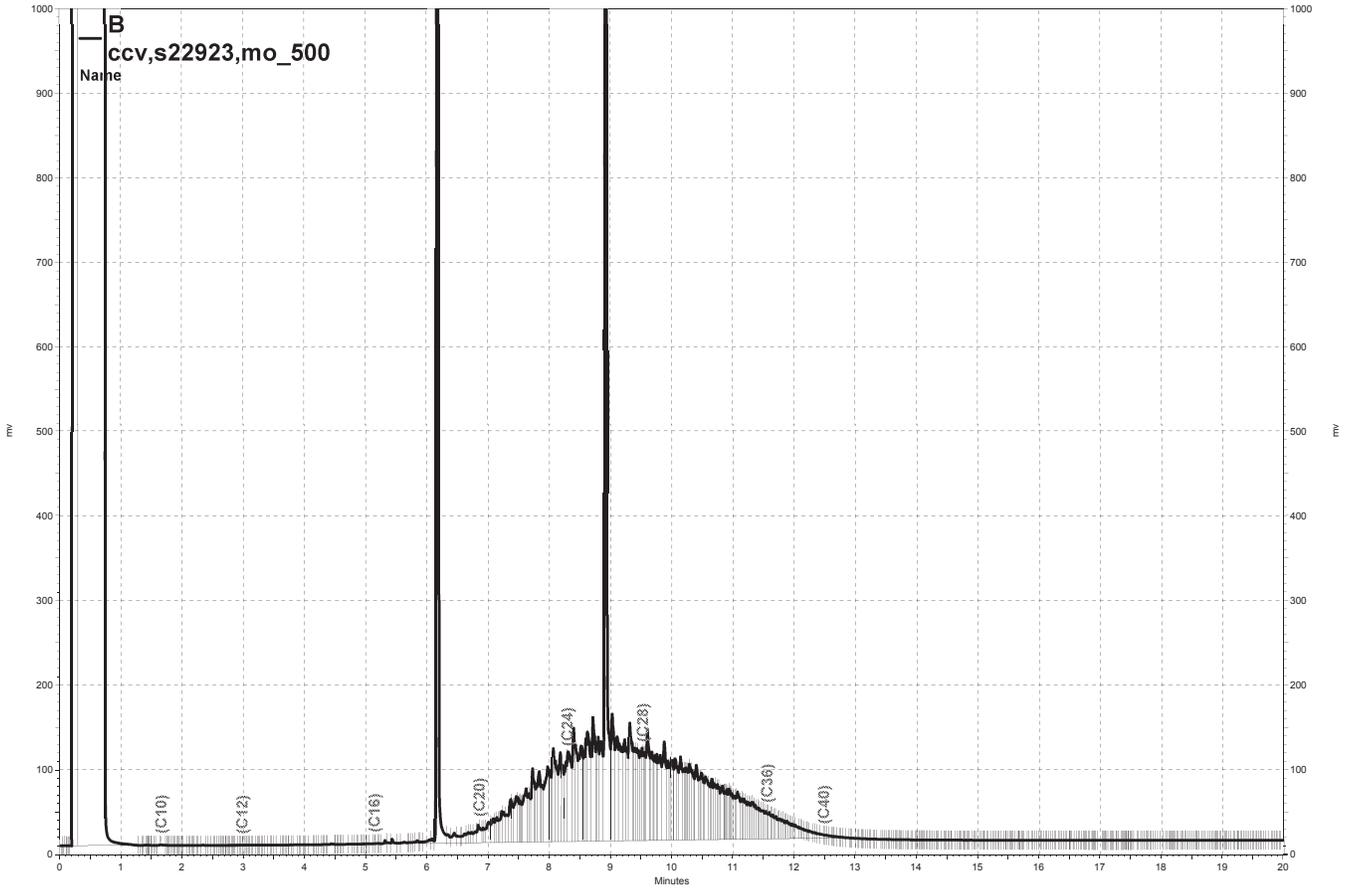
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**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Soil: EPA 8015B

Inst : GC14B  
 Calnum : 223242707001  
 Units : mg/L

Name : OTPHEX\_168  
 Date : 17-JUN-2013 15:53  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Std
L1	168_005	223242707005	HEX OTP_5	17-JUN-2013 15:53	S22417
L2	168_006	223242707006	HEX OTP_10	17-JUN-2013 16:22	S22418
L3	168_007	223242707007	HEX OTP_25	17-JUN-2013 16:51	S22419
L4	168_008	223242707008	HEX OTP_50	17-JUN-2013 17:19	S22420
L5	168_009	223242707009	HEX OTP_100	17-JUN-2013 17:48	S22421
L6	168_010	223242707010	HEX OTP_200	17-JUN-2013 18:16	S22422

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	%RSD	MnR^2	MxRSD	Flg
o-Terphenyl	B	34126	33364	32977	33049	32593	31712	AVRG		3.03E-5		32970	2		0.995	20	

Spiked Amounts / Drifts	Ch	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D	
o-Terphenyl	B	5.0000	10.000	25.000	50.000	100.00	200.00	4	1	0	0	100.00	-1	-4

JDG 06/18/13 [Hexacosane B]: Samples requiring Hexacosane will not be analyzed on this instrument.  
 JDG 06/18/13 : Corrected automatically drawn baseline in multiple levels.

Analyst: JDG Date: 06/18/13 Reviewer: EAH Date: 06/18/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Soil: EPA 8015B

Inst : GC14B  
 Calnum : 223242707002  
 Units : mg/L

Name : DSL\_168  
 Date : 17-JUN-2013 19:13  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
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L2	168_013	223242707013	DSL_100	17-JUN-2013 19:42	S22009
L3	168_014	223242707014	DSL_500	17-JUN-2013 20:10	S22010
L4	168_015	223242707015	DSL_1000	17-JUN-2013 20:39	S22011
L5	168_016	223242707016	DSL_5000	17-JUN-2013 21:07	S22007

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
Diesel C10-C24	B	38681	32029	30567	31028	30636	AVRG		3.07E-5		32588	11		0.995	20	

Spiked Amounts / Drifts	Ch	L1	L2	L3	L4	L5	%D	%D	%D	%D	%D
Diesel C10-C24	B	10.000	100.00	19	500.00	1000.0	-2	-6	-5	5000.0	-6

JDG 06/18/13 : Corrected automatically drawn baseline in DSL\_10 (168\_012).

Analyst: JDG Date: 06/18/13 Reviewer: EAH Date: 06/18/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B  
Calnum : 223242707002

Name : DSL\_168  
Cal Date : 17-JUN-2013

ICV 223242707018 (168\_018 17-JUN-2013) stds: S22427

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	B	500.0	453.7	mg/L	-9	15	

Analyst: JDG

Date: 06/18/13

Reviewer: EAH

Date: 06/18/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Soil: EPA 8015B

Inst : GC14B  
 Calnum : 223242707003  
 Units : mg/L

Name : MO\_168  
 Date : 18-JUN-2013 00:00  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	168_022	223242707022	MO_50	18-JUN-2013 00:00	S21419
L2	168_023	223242707023	MO_250	18-JUN-2013 00:28	S21418
L3	168_024	223242707024	MO_500	18-JUN-2013 00:57	S21417
L4	168_025	223242707025	MO_1000	18-JUN-2013 01:25	S21416
L5	168_026	223242707026	MO_2500	18-JUN-2013 01:54	S21415 (2X)
L6	168_027	223242707027	MO_5000	18-JUN-2013 02:23	S21415

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	%RSD	MnR^2	MxRSD	Flg
Motor Oil C24-C36	B	17765	18358	18613	18167	16775	16346	AVRG		5.66E-5		17671	5		0.995	20	

Spiked Amounts / Drifts	Ch	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D			
Motor Oil C24-C36	B	50.000	250.00	1	250.00	4	500.00	5	1000.0	3	2500.0	L5	-5	5000.0	L6	-7

EAH 06/18/13 : Corrected automatically drawn baseline in all levels.

Analyst: JDG Date: 06/18/13 Reviewer: EAH Date: 06/18/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Soil: EPA 8015B

Inst : GC15B  
 Calnum : 163115627001  
 Units : mg/L

Name : OTPHEX\_079  
 Date : 20-MAR-2013 13:31  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	079a004	163115627004	HEXOTP_5	20-MAR-2013 13:31	S21251
L2	079a005	163115627005	HEXOTP_10	20-MAR-2013 13:58	S21252
L3	079a006	163115627006	HEXOTP_25	20-MAR-2013 14:26	S21253
L4	079a007	163115627007	HEXOTP_50	20-MAR-2013 14:54	S21254
L5	079a008	163115627008	HEXOTP_100	20-MAR-2013 15:22	S21255
L6	079a009	163115627009	HEXOTP_200	20-MAR-2013 15:50	S21256

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
o-Terphenyl	56733	56252	56202	54053	56023	54329	AVRG		1.80E-5		55599	2		0.995	20	
Spiked Amounts / Drifts	L1	L2	L3	L4	L5	L6	L3	%D	L4	%D	L5	%D	L6	%D	L6	%D
o-Terphenyl	5.0000		2	10.000	1	25.000	1	50.000	-3	100.00	200.00	1				-2

Analyst: JDG

Date: 03/21/13

Reviewer: EAH

Date: 03/21/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Soil: EPA 8015B

Inst : GC15B  
 Calnum : 163115627002  
 Units : mg/L

Name : DSL\_079  
 Date : 20-MAR-2013 16:46  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	079a011	163115627011	DSL_10	20-MAR-2013 16:46	S21990
L2	079a012	163115627012	DSL_100	20-MAR-2013 17:14	S21991
L3	079a013	163115627013	DSL_500	20-MAR-2013 17:42	S21992
L4	079a014	163115627014	DSL_1000	20-MAR-2013 18:09	S21993
L5	079a015	163115627015	DSL_5000	20-MAR-2013 18:37	S21246

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
Diesel C10-C24	42050	48707	50538	53472	52593	AVRG		2.02E-5		49472	9		0.995	20	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D		
Diesel C10-C24	10.000	-15		100.00	-2	500.00	2	1000.0	8	5000.0	6

JDG 03/21/13 : Corrected automatically drawn baseline in multiple levels.

Analyst: SFL Date: 03/21/13 Reviewer: EAH Date: 03/21/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B  
Calnum : 163115627002

Name : DSL\_079  
Cal Date : 20-MAR-2013

ICV 163115627017 (079a017 20-MAR-2013) stds: S21688

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	477.9	mg/L	-4	15	

Analyst: JDG

Date: 03/21/13

Reviewer: EAH

Date: 03/21/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Soil: EPA 8015B

Inst : GC15B  
 Calnum : 163202056001  
 Units : mg/L

Name : MO\_140  
 Date : 20-MAY-2013 17:33  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	140b015	163202056015	MO_25	20-MAY-2013 17:33	S21419 (2X)
L2	140b016	163202056016	MO_50	20-MAY-2013 18:01	S21419
L3	140b017	163202056017	MO_250	20-MAY-2013 18:28	S21418
L4	140b018	163202056018	MO_500	20-MAY-2013 18:56	S21417
L5	140b019	163202056019	MO_1000	20-MAY-2013 19:23	S21416
L6	140b020	163202056020	MO_2500	20-MAY-2013 19:51	S21415 (2X)
L7	140b021	163202056021	MO_5000	20-MAY-2013 20:19	S21415

Analyte	L1	L2	L3	L4	L5	L6	L7	Type	a0	a1	a2	Avg	r <sup>2</sup> %RSD	MnR <sup>2</sup>	MxRSD	Flg
Motor Oil C24-C36	33963	35915	35125	36858	36003	31433	26229	AVRG		2.97E-5		33647	11	0.995	20	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D
Motor Oil C24-C36	25.000	1	50.000	7	250.00	4	500.00	10	1000.0	7	2500.0	-7	5000.0	-22

JDG 05/21/13 : Corrected automatically drawn baseline in multiple levels.

JDG: 05/21/13 SFL: 05/21/13 EAH: 05/21/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Soil: EPA 8015B

Inst : GC26A  
 Calnum : 863225247001  
 Units : mg/L

Name : OTPHEX\_156  
 Date : 05-JUN-2013 11:55  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	156a004	863225247004	HEXOTP_5	05-JUN-2013 11:55	S22417
L2	156a005	863225247005	HEXOTP_10	05-JUN-2013 12:23	S22418
L3	156a006	863225247006	HEXOTP_25	05-JUN-2013 12:51	S22419
L4	156a007	863225247007	HEXOTP_50	05-JUN-2013 13:18	S22420
L5	156a008	863225247008	HEXOTP_100	05-JUN-2013 13:46	S22421
L6	156a009	863225247009	HEXOTP_200	05-JUN-2013 14:13	S22422

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	%RSD	MnR^2	MxRSD	Flg
o-Terphenyl	60935	59896	59661	61106	61416	62116	AVRG		1.64E-5		60855	2		0.995	20	

Spiked Amounts / Drifts	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D				
o-Terphenyl	5.0000	10.000	25.000	50.000	100.00	200.00	-2	-2	0	0	100.00	1	200.00	2		

SFL 06/06/13 : Corrected automatically drawn baseline in HEXOTP\_25 (156a006).  
 SFL 06/06/13 : Separated from coeluting peak in HEXOTP\_50 (156a007).  
 SFL 06/06/13 : Separated from coeluting peak in HEXOTP\_100 (156a008).  
 SFL 06/06/13 : Separated from coeluting peak in HEXOTP\_200 (156a009).  
 SFL 06/06/13 : Samples that require HEXACOSANE will not be loaded on this instrument.

Analyst: SFL Date: 06/06/13 Reviewer: EAH Date: 06/06/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Soil: EPA 8015B

Inst : GC26A  
 Calnum : 863225247002  
 Units : mg/L

Name : DSL\_156  
 Date : 05-JUN-2013 15:08  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	156a011	863225247011	DSL_10	05-JUN-2013 15:08	S22008
L2	156a012	863225247012	DSL_100	05-JUN-2013 15:36	S22009
L3	156a013	863225247013	DSL_500	05-JUN-2013 16:04	S22010
L4	156a014	863225247014	DSL_1000	05-JUN-2013 16:31	S22011
L5	156a015	863225247015	DSL_5000	05-JUN-2013 16:59	S22007

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r <sup>2</sup> %RSD	MnR <sup>2</sup>	MxRSD	Flg
Diesel C10-C24	49646	51110	55047	55334	53093	AVRG		1.89E-5		52846	5	0.995	20	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	10.000	100.00	-3	500.00	4	1000.0	5	5000.0	0

SFL 06/06/13 : Corrected automatically drawn baseline in all levels.

Analyst: SFL Date: 06/06/13 Reviewer: EAH Date: 06/06/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC26A  
Calnum : 863225247002

Name : DSL\_156  
Cal Date : 05-JUN-2013

ICV 863225247017 (156a017 05-JUN-2013) stds: S22427

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	485.6	mg/L	-3	15	

Analyst: SFL

Date: 06/06/13

Reviewer: EAH

Date: 06/06/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GCSV Soil: EPA 8015B

Inst : GC26A  
 Calnum : 863225247003  
 Units : mg/L

Name : MO\_156  
 Date : 05-JUN-2013 19:16  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stdcs
L1	156a021	863225247021	MO_50	05-JUN-2013 19:43	S21419
L2	156a022	863225247022	MO_250	05-JUN-2013 20:11	S21418
L3	156a023	863225247023	MO_500	05-JUN-2013 20:39	S21417
L4	156a024	863225247024	MO_1000	05-JUN-2013 21:07	S21416
L5	156a025	863225247025	MO_2500	05-JUN-2013 21:34	S21415 (2X)
L6	156a026	863225247026	MO_5000	05-JUN-2013 22:02	S21415

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r <sup>2</sup> %RSD	MnR <sup>2</sup>	MxRSD	Flg
Motor Oil C24-C36	26080	33443	34107	32811	35776	37707	AVRG		3.00E-5		33321	12	0.995	20	

Spiked Amounts / Drifts	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D
Motor Oil C24-C36	50.000			250.00	0	500.00	2	1000.0	-2	2500.0	5000.0	13

SFL 06/06/13 : Corrected automatically drawn baseline in all levels.

Analyst: SFL Date: 06/06/13 Reviewer: EAH Date: 06/06/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 223333225039              File : 231\_039                      Time : 20-AUG-2013 08:54  
 Standards: S22925

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	34455	500.0	528.6	mg/L	6	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	30412	50.00	46.12	mg/L	-8	15	

JDG 08/20/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/20/13                      Reviewer: SFL                      Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223333225041              File : 231\_041                      Time : 20-AUG-2013 09:52  
 Standards: S22923

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	16918	500.0	478.7	mg/L	-4	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	39293	50.00	59.59	mg/L	19	15	c+

Analyst: JDG                      Date: 08/20/13                      Reviewer: SFL                      Date: 08/20/13

+ = high bias    c = CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 223333225048              File : 231\_048                      Time : 20-AUG-2013 13:13  
 Standards: S22924

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	34565	250.0	265.2	mg/L	6	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	30695	50.00	46.55	mg/L	-7	15	

JDG 08/20/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/20/13                      Reviewer: SFL                      Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223333225049              File : 231\_049                      Time : 20-AUG-2013 13:42  
 Standards: S22923

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	15328	500.0	433.7	mg/L	-13	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	37341	50.00	56.63	mg/L	13	15	

Analyst: JDG                      Date: 08/20/13                      Reviewer: SFL                      Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 223333225067              File : 231\_067                      Time : 20-AUG-2013 23:27  
 Standards: S22926

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	33700	1000	1034	mg/L	3	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	29595	50.00	44.88	mg/L	-10	15	

JDG 08/21/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/21/13                      Reviewer: SFL                      Date: 08/21/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223333225068              File : 231\_068                      Time : 20-AUG-2013 23:56  
 Standards: S22923

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	15473	500.0	437.8	mg/L	-12	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	37771	50.00	57.28	mg/L	15	15	

JDG 08/21/13 : Manually integrated fuel hump.

Analyst: JDG                      Date: 08/21/13                      Reviewer: SFL                      Date: 08/21/13



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223333225082              File : 231\_082                      Time : 21-AUG-2013 06:39  
 Standards: S22923

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	15555	500.0	440.1	mg/L	-12	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	37766	50.00	57.27	mg/L	15	15	

Analyst: JDG                      Date: 08/21/13                      Reviewer: EAH                      Date: 08/21/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223337426008              File : 234\_008                      Time : 22-AUG-2013 13:11  
 Standards: S23068

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	18056	500.0	510.9	mg/L	2	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	36997	50.00	56.11	mg/L	12	15	

SFL 08/22/13 : Separated from coeluting peak.

Analyst: SFL                      Date: 08/22/13                      Reviewer: EAH                      Date: 08/26/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 223337426009              File : 234\_009                      Time : 22-AUG-2013 13:40  
 Standards: S22926

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	33707	1000	1034	mg/L	3	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	39958	50.00	60.60	mg/L	21	15	c+

SFL 08/22/13 : Corrected automatically drawn baseline.

Analyst: SFL                      Date: 08/22/13                      Reviewer: EAH                      Date: 08/26/13

+=high bias    c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223337426023              File : 234\_023                      Time : 22-AUG-2013 22:43  
 Standards: S23068

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	17320	500.0	490.1	mg/L	-2	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	37627	50.00	57.06	mg/L	14	15	

Analyst: JDG                      Date: 08/23/13                      Reviewer: SFL                      Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 223337426024              File : 234\_024                      Time : 22-AUG-2013 23:12  
 Standards: S22925

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	33629	500.0	516.0	mg/L	3	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	37483	50.00	56.84	mg/L	14	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/23/13                      Reviewer: SFL                      Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223337426038              File : 234\_038                      Time : 23-AUG-2013 05:56  
 Standards: S23068

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	15227	500.0	430.8	mg/L	-14	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	33571	50.00	50.91	mg/L	2	15	

JDG 08/23/13 : Manually integrated fuel hump.

Analyst: JDG                      Date: 08/23/13                      Reviewer: SFL                      Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 223337426039              File : 234\_039                      Time : 23-AUG-2013 06:24  
 Standards: S22926

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	30890	1000	947.9	mg/L	-5	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	35086	50.00	53.21	mg/L	6	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/23/13                      Reviewer: SFL                      Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 223337426054              File : 234\_054                      Time : 23-AUG-2013 14:43  
 Standards: S22925

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	34157	500.0	524.1	mg/L	5	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	37768	50.00	57.28	mg/L	15	15	

JDG 08/23/13 : DSL\_500: S22925

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/23/13                      Reviewer: EAH                      Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223337426055              File : 234\_055                      Time : 23-AUG-2013 15:12  
 Standards: S23068

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	17247	500.0	488.0	mg/L	-2	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	38072	50.00	57.74	mg/L	15	15	

JDG 08/23/13 : MO\_500: S23068

Analyst: JDG                      Date: 08/23/13                      Reviewer: SFL                      Date: 08/24/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223337426068              File : 234\_068                      Time : 23-AUG-2013 23:41  
 Standards: S23068

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	16807	500.0	475.5	mg/L	-5	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	37638	50.00	57.08	mg/L	14	15	

SFL 08/24/13 : Corrected automatically drawn baseline.

Analyst: SFL                      Date: 08/24/13                      Reviewer: EAH                      Date: 08/26/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC14B                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 223337426069              File : 234\_069                      Time : 24-AUG-2013 00:10  
 Standards: S22926

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	33801	1000	1037	mg/L	4	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	39009	50.00	59.16	mg/L	18	15	c+

SFL 08/24/13 : Separated from coeluting peak.

Analyst: SFL                      Date: 08/24/13                      Reviewer: JDG                      Date: 08/26/13

+=high bias    c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B Run Name : DSL\_250 IDF : 1.0  
Seqnum : 163334533003 File : 232b003 Time : 20-AUG-2013 08:29  
Standards: S22924

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	163115627002	20-MAR-2013	49472	54745	250.0	276.6	mg/L	11	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	58000	50.00	52.16	mg/L	4	15	

JDG 08/20/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/20/13 Reviewer: SFL Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B Run Name : DSL\_500 IDF : 1.0  
 Seqnum : 163334533011 File : 232b011 Time : 20-AUG-2013 12:29  
 Standards: S22925

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	163115627002	20-MAR-2013	49472	56254	500.0	568.5	mg/L	14	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	61026	50.00	54.88	mg/L	10	15	

JDG 08/20/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/20/13 Reviewer: SFL Date: 08/20/13



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B Run Name : DSL\_1000 IDF : 1.0  
Seqnum : 163334533027 File : 232b027 Time : 20-AUG-2013 20:03  
Standards: S22926

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	163115627002	20-MAR-2013	49472	55370	1000	1119	mg/L	12	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	63218	50.00	56.85	mg/L	14	15	

JDG 08/21/13 : DSL\_1000:s22926

JDG 08/21/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/21/13 Reviewer: EAH Date: 08/21/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 163334533028              File : 232b028                      Time : 20-AUG-2013 20:31  
 Standards: S22923

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Motor Oil C24-C36	163202056001	20-MAY-2013	33647	38672	500.0	574.7	mg/L	15	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	67474	50.00	60.68	mg/L	21	15	c+

JDG 08/21/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/21/13                      Reviewer: EAH                      Date: 08/21/13

+=high bias    c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B Run Name : DSL\_250 IDF : 1.0  
Seqnum : 163334533043 File : 232b043 Time : 21-AUG-2013 02:33  
Standards: S22924

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	163115627002	20-MAR-2013	49472	56383	250.0	284.9	mg/L	14	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	60582	50.00	54.48	mg/L	9	15	

JDG 08/21/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/21/13 Reviewer: SFL Date: 08/26/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 163334533044              File : 232b044                      Time : 21-AUG-2013 03:01  
 Standards: S22923

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	163202056001	20-MAY-2013	33647	37008	500.0	550.0	mg/L	10	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	64009	50.00	57.56	mg/L	15	15	

JDG 08/21/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/21/13                      Reviewer: SFL                      Date: 08/26/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B Run Name : DSL\_250 IDF : 1.0  
Seqnum : 163335982003 File : 233b003 Time : 21-AUG-2013 08:38  
Standards: S22924

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	163115627002	20-MAR-2013	49472	51563	250.0	260.6	mg/L	4	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	61462	50.00	55.27	mg/L	11	15	

JDG 08/21/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/21/13 Reviewer: EAH Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B Run Name : MO\_500 IDF : 1.0  
Seqnum : 163335982004 File : 233b004 Time : 21-AUG-2013 09:06  
Standards: S22923

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	163202056001	20-MAY-2013	33647	36603	500.0	543.9	mg/L	9	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	63613	50.00	57.21	mg/L	14	15	

JDG 08/21/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/21/13 Reviewer: EAH Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 163335982019              File : 233b019                      Time : 21-AUG-2013 17:41  
 Standards: S22925

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	163115627002	20-MAR-2013	49472	58235	500.0	588.6	mg/L	18	15	c+ ***
o-Terphenyl	163115627001	20-MAR-2013	55599	66013	50.00	59.37	mg/L	19	15	c+

JDG 08/22/13 : CCV within 20%; OK to report.

JDG 08/22/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/22/13                      Reviewer: EAH                      Date: 08/23/13

+=high bias    c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 163335982020              File : 233b020                      Time : 21-AUG-2013 18:09  
 Standards: S23068

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	163202056001	20-MAY-2013	33647	37243	500.0	553.4	mg/L	11	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	64406	50.00	57.92	mg/L	16	15	c+

JDG 08/22/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/22/13                      Reviewer: EAH                      Date: 08/23/13

+=high bias    c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 163338854003              File : 235b003                      Time : 23-AUG-2013 08:30  
 Standards: S22924

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	163115627002	20-MAR-2013	49472	54186	250.0	273.8	mg/L	10	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	58514	50.00	52.62	mg/L	5	15	

JDG 08/23/13 : Manually integrated fuel hump.

Analyst: JDG                      Date: 08/23/13                      Reviewer: EAH                      Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC15B Run Name : DSL\_500 IDF : 1.0  
Seqnum : 163338854010 File : 235b010 Time : 23-AUG-2013 14:26  
Standards: S22925

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	163115627002	20-MAR-2013	49472	54494	500.0	550.8	mg/L	10	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	58216	50.00	52.35	mg/L	5	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/23/13 Reviewer: EAH Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC26A                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 863334586003              File : 232a003                      Time : 20-AUG-2013 09:22  
 Standards: S22923

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	863225247003	05-JUN-2013	33321	30707	500.0	460.8	mg/L	-8	15	
o-Terphenyl	863225247001	05-JUN-2013	60855	61473	50.00	50.51	mg/L	1	15	

SFL 08/20/13 : Corrected automatically drawn baseline.

Analyst: SFL                      Date: 08/20/13                      Reviewer: JDG                      Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC26A                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 863334586004              File : 232a004                      Time : 20-AUG-2013 09:50  
 Standards: S22924

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	863225247002	05-JUN-2013	52846	51075	250.0	241.6	mg/L	-3	15	
o-Terphenyl	863225247001	05-JUN-2013	60855	57108	50.00	46.92	mg/L	-6	15	

SFL 08/20/13 : Corrected automatically drawn baseline.

Analyst: SFL                      Date: 08/20/13                      Reviewer: JDG                      Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC26A Run Name : MO\_500 IDF : 1.0  
Seqnum : 863334586008.2 File : 232a008 Time : 20-AUG-2013 12:02  
Standards: S22923

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	863225247003	05-JUN-2013	33321	26829	500.0	402.6	mg/L	-19	15	c- ***
o-Terphenyl	863225247001	05-JUN-2013	60855	59479	50.00	48.87	mg/L	-2	15	

SFL 08/20/13 : Corrected automatically drawn baseline.

SFL 08/20/13 : CCV within 20%.

Analyst: SFL Date: 08/20/13 \* Reviewer: JDG Date: 08/20/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC26A                      Run Name : DSL\_1000                      IDF : 1.0  
 Seqnum : 863334586009              File : 232a009                      Time : 20-AUG-2013 12:30  
 Standards: S22926

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	863225247002	05-JUN-2013	52846	50790	1000	961.1	mg/L	-4	15	
o-Terphenyl	863225247001	05-JUN-2013	60855	60492	50.00	49.70	mg/L	-1	15	

SFL 08/20/13 : Corrected automatically drawn baseline.

Analyst: SFL                      Date: 08/20/13                      Reviewer: JDG                      Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC26A Run Name : DSL\_500 IDF : 1.0  
Seqnum : 863337423020 File : 234a020 Time : 22-AUG-2013 20:48  
Standards: S22925

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	863225247002	05-JUN-2013	52846	53014	500.0	501.6	mg/L	0	15	
o-Terphenyl	863225247001	05-JUN-2013	60855	61291	50.00	50.36	mg/L	1	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/23/13 Reviewer: EAH Date: 08/23/13



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC26A                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 863337423036              File : 234a036                      Time : 23-AUG-2013 04:14  
 Standards: S22924

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	863225247002	05-JUN-2013	52846	52595	250.0	248.8	mg/L	0	15	
o-Terphenyl	863225247001	05-JUN-2013	60855	59554	50.00	48.93	mg/L	-2	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/23/13                      Reviewer: EAH                      Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC26A                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 863337423037              File : 234a037                      Time : 23-AUG-2013 04:42  
 Standards: S23068

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	863225247003	05-JUN-2013	33321	33060	500.0	496.1	mg/L	-1	15	
o-Terphenyl	863225247001	05-JUN-2013	60855	60647	50.00	49.83	mg/L	0	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/23/13                      Reviewer: SFL                      Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC26A                      Run Name : DSL\_250                      IDF : 1.0  
 Seqnum : 863338978003              File : 235a003                      Time : 23-AUG-2013 10:34  
 Standards: S22924

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	863225247002	05-JUN-2013	52846	52146	250.0	246.7	mg/L	-1	15	
o-Terphenyl	863225247001	05-JUN-2013	60855	59349	50.00	48.76	mg/L	-2	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/23/13                      Reviewer: SFL                      Date: 08/26/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GCSV Soil  
EPA 8015B

Inst : GC26A                      Run Name : DSL\_500                      IDF : 1.0  
 Seqnum : 863338978008              File : 235a008                      Time : 23-AUG-2013 14:37  
 Standards: S22925

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	863225247002	05-JUN-2013	52846	53902	500.0	510.0	mg/L	2	15	
o-Terphenyl	863225247001	05-JUN-2013	60855	62421	50.00	51.29	mg/L	3	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG                      Date: 08/23/13                      Reviewer: SFL                      Date: 08/26/13

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163115627

Instrument : GC15B  
 Method : EPA 8015B

Begun : 03/20/13 11:42  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	079a001	X	IB			03/20/13 11:42	1.0	
002	079a002	X	IB			03/20/13 12:09	1.0	
003	079a003	IB	CALIB			03/20/13 13:03	1.0	
004	079a004	ICAL	HEXOTP_5			03/20/13 13:31	1.0	1
005	079a005	ICAL	HEXOTP_10			03/20/13 13:58	1.0	2
006	079a006	ICAL	HEXOTP_25			03/20/13 14:26	1.0	3
007	079a007	ICAL	HEXOTP_50			03/20/13 14:54	1.0	4
008	079a008	ICAL	HEXOTP_100			03/20/13 15:22	1.0	5
009	079a009	ICAL	HEXOTP_200			03/20/13 15:50	1.0	6
010	079a010	IB	CALIB			03/20/13 16:18	1.0	
011	079a011	ICAL	DSL_10			03/20/13 16:46	1.0	7
012	079a012	ICAL	DSL_100			03/20/13 17:14	1.0	8
013	079a013	ICAL	DSL_500			03/20/13 17:42	1.0	9
014	079a014	ICAL	DSL_1000			03/20/13 18:09	1.0	10
015	079a015	ICAL	DSL_5000			03/20/13 18:37	1.0	11
016	079a016	IB	CALIB			03/20/13 19:05	1.0	
017	079a017	ICV	DSL_500			03/20/13 19:33	1.0	12
018	079a018	X	ICV			03/20/13 20:01	1.0	12
019	079a019	IB	CALIB			03/20/13 20:28	1.0	
020	079a020	ICAL	MO_25			03/20/13 20:56	1.0	13
021	079a021	ICAL	MO_50			03/20/13 21:24	1.0	13
022	079a022	ICAL	MO_250			03/20/13 21:51	1.0	14
023	079a023	ICAL	MO_500			03/20/13 22:19	1.0	15
024	079a024	ICAL	MO_1000			03/20/13 22:47	1.0	16
025	079a025	ICAL	MO_2500			03/20/13 23:15	1.0	17
026	079a026	ICAL	MO_5000			03/20/13 23:43	1.0	17
027	079a027	IB	CALIB			03/21/13 00:10	1.0	
028	079a028	ICAL	JP5_10			03/21/13 00:38	1.0	18
029	079a029	ICAL	JP5_100			03/21/13 01:06	1.0	19
030	079a030	ICAL	JP5_500			03/21/13 01:33	1.0	20
031	079a031	ICAL	JP5_1500			03/21/13 02:01	1.0	21
032	079a032	ICAL	JP5_2500			03/21/13 02:29	1.0	22
033	079a033	ICAL	JP5_5000			03/21/13 02:56	1.0	23
034	079a034	IB	CALIB			03/21/13 03:24	1.0	
035	079a035	ICAL	BUNK_50			03/21/13 03:52	1.0	24
036	079a036	ICAL	BUNK_250			03/21/13 04:20	1.0	25
037	079a037	ICAL	BUNK_500			03/21/13 04:48	1.0	26
038	079a038	ICAL	BUNK_1250			03/21/13 05:15	1.0	27
039	079a039	ICAL	BUNK_2500			03/21/13 05:43	1.0	28
040	079a040	ICAL	BUNK_5000			03/21/13 06:11	1.0	29
041	079a041	IB	CALIB			03/21/13 06:39	1.0	
042	079a042	CMARKER	C8-C50			03/21/13 07:07	1.0	30
043	079a043	IB	CALIB			03/21/13 07:36	1.0	

JDG 03/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 43.

Standards used: 1=S21251 2=S21252 3=S21253 4=S21254 5=S21255 6=S21256 7=S21990 8=S21991 9=S21992 10=S21993 11=S21246  
 12=S21688 13=S21419 14=S21418 15=S21417 16=S21416 17=S21415 18=S21282 19=S21283 20=S21284 21=S21285 22=S21286  
 23=S21281 24=S21289 25=S21290 26=S21291 27=S21292 28=S21293 29=S21287 30=S21686

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163202056

Instrument : GC15B  
 Method : EPA 8015B

Begun : 05/20/13 07:36  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	140b001	X	IB			05/20/13 07:36	1.0	
002	140b002	X	CMARKER			05/20/13 08:05	1.0	1
003	140b003	CCV	DSL_500			05/20/13 08:32	1.0	2
004	140b004	CCV	MO_500			05/20/13 09:00	1.0	3
005	140b005	X	CMARKER			05/20/13 09:39	1.0	1
006	140b006	X	IB			05/20/13 13:34	1.0	
007	140b007	X	CMARKER			05/20/13 14:01	1.0	1
010	140b010	X	C8-C50			05/20/13 14:59	1.0	1
011	140b011	CCV	MO_500			05/20/13 15:27	1.0	3
012	140b012	CCV	DSL_500			05/20/13 15:54	1.0	2
013	140b013	CCV	MO_500			05/20/13 16:26	1.0	3
014	140b014	IB	CALIB			05/20/13 17:06	1.0	
015	140b015	ICAL	MO_25			05/20/13 17:33	1.0	4
016	140b016	ICAL	MO_50			05/20/13 18:01	1.0	4
017	140b017	ICAL	MO_250			05/20/13 18:28	1.0	5
018	140b018	ICAL	MO_500			05/20/13 18:56	1.0	6
019	140b019	ICAL	MO_1000			05/20/13 19:23	1.0	7
020	140b020	ICAL	MO_2500			05/20/13 19:51	1.0	8
021	140b021	ICAL	MO_5000			05/20/13 20:19	1.0	8
022	140b022	IB	CALIB			05/20/13 20:47	1.0	
023	140b023	CMARKER	C8-C50			05/20/13 21:14	1.0	1
024	140b024	IB	CALIB			05/20/13 21:42	1.0	

JDG 05/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 24.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163334533

Instrument : GC15B  
 Method : EPA 8015B

Begun : 08/20/13 07:33  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	232b001	X	IB				08/20/13 07:33	1.0	
002	232b002	X	CMARKER				08/20/13 08:01	1.0	1
003	232b003	CCV	DSL_250				08/20/13 08:29	1.0	2
004	232b004	CCV	MO_500				08/20/13 08:57	1.0	3
005	232b005	CCV	JP5_250				08/20/13 09:25	1.0	4
006	232b006	CCV	HYFL_500				08/20/13 09:53	1.0	5
007	232b007	BLANK	QC702698	S	Soil	201879	08/20/13 10:38	1.0	
008	232b008	LCS	QC702699	S	Soil	201879	08/20/13 11:05	1.0	
009	232b009	SAMPLE	248112-001	S	Soil	201879	08/20/13 11:33	1.0	
010	232b010	SAMPLE	248112-002	S	Soil	201879	08/20/13 12:01	1.0	
011	232b011	CCV	DSL_500				08/20/13 12:29	1.0	6
012	232b012	CCV	MO_500				08/20/13 12:56	1.0	3
013	232b013	CCV	JP5_250				08/20/13 13:24	1.0	4
014	232b014	CCV	HYFL_500				08/20/13 13:52	1.0	5
015	232b015	SAMPLE	248024-002	S	Soil	201879	08/20/13 14:31	1.0	
016	232b016	SAMPLE	248024-003	S	Soil	201879	08/20/13 14:59	1.0	
017	232b017	SAMPLE	248123-001		Soil	201879	08/20/13 15:27	1.0	2:BUNKC:12-40=7500
018	232b018	SAMPLE	248124-001		Soil	201879	08/20/13 15:55	20.0	
019	232b019	SAMPLE	248024-004	S	Soil	201879	08/20/13 16:22	20.0	6:BUNKC:12-40=18000
020	232b020	X	IB				08/20/13 16:50	1.0	
021	232b021	SAMPLE	248024-005	S	Soil	201879	08/20/13 17:18	20.0	2:BUNKC:12-40=8700
022	232b022	SAMPLE	248024-006	S	Soil	201879	08/20/13 17:46	20.0	2:BUNKC:12-40=12000
023	232b023	X	IB				08/20/13 18:13	1.0	
024	232b024	SAMPLE	248028-002		Soil	201879	08/20/13 18:41	1.0	
025	232b025	SAMPLE	248030-004		Soil	201879	08/20/13 19:08	1.0	
026	232b026	SAMPLE	248028-001		Soil	201879	08/20/13 19:36	2.0	5:BUNKC:12-40=20000
027	232b027	CCV	DSL_1000				08/20/13 20:03	1.0	7
028	232b028	CCV	MO_500				08/20/13 20:31	1.0	3
031	232b031	SAMPLE	248030-017		Soil	201914	08/20/13 20:59	1.0	
032	232b032	SAMPLE	248030-003		Soil	201879	08/20/13 21:27	1.0	
033	232b033	SAMPLE	248030-001		Soil	201879	08/20/13 21:54	20.0	
034	232b034	SAMPLE	248030-002		Soil	201879	08/20/13 22:22	20.0	
035	232b035	SAMPLE	248030-025		Soil	201914	08/20/13 22:50	10.0	8:BUNKC:12-40=39000
036	232b036	X	IB				08/20/13 23:18	1.0	
037	232b037	SAMPLE	247945-002	S	Water	201895	08/20/13 23:46	1.0	
038	232b038	SAMPLE	247945-003	S	Water	201895	08/21/13 00:14	1.0	
039	232b039	SAMPLE	247945-004	S	Water	201895	08/21/13 00:42	1.0	
040	232b040	SAMPLE	247945-005	S	Water	201895	08/21/13 01:10	1.0	
041	232b041	SAMPLE	247945-006	S	Water	201895	08/21/13 01:38	1.0	
042	232b042	X	CMARKER				08/21/13 02:05	1.0	1
043	232b043	CCV	DSL_250				08/21/13 02:33	1.0	2
044	232b044	CCV	MO_500				08/21/13 03:01	1.0	3

JDG 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 14.

JDG 08/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 15 through 44.

Standards used: 1=S22576 2=S22924 3=S22923 4=S22349 5=S22044 6=S22925 7=S22926

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163335982

Instrument : GC15B  
 Method : EPA 8015B

Begun : 08/21/13 07:42  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	233b001	X	IB				08/21/13 07:42	1.0	
002	233b002	X	CMARKER				08/21/13 08:10	1.0	1
003	233b003	CCV	DSL_250				08/21/13 08:38	1.0	2
004	233b004	CCV	MO_500				08/21/13 09:06	1.0	3
005	233b005	BLANK	QC702890		Soil	201939	08/21/13 11:11	1.0	
006	233b006	LCS	QC702891		Soil	201939	08/21/13 11:39	1.0	
007	233b007	SAMPLE	248030-028		Soil	201939	08/21/13 12:07	5.0	
008	233b008	MSS	248030-026		Soil	201939	08/21/13 12:35	10.0	
009	233b009	SAMPLE	248030-027		Soil	201939	08/21/13 13:03	20.0	
010	233b010	X	IB				08/21/13 13:31	1.0	
011	233b011	SAMPLE	248030-031		Soil	201939	08/21/13 13:59	2.0	
012	233b012	SAMPLE	248030-032		Soil	201939	08/21/13 14:27	2.0	
013	233b013	SAMPLE	248030-029		Soil	201939	08/21/13 14:54	20.0	
014	233b014	SAMPLE	248030-030		Soil	201939	08/21/13 15:22	20.0	
015	233b015	X	IB				08/21/13 15:50	1.0	
016	233b016	SAMPLE	248030-034		Soil	201939	08/21/13 16:17	2.0	1:BUNKC:12-40=5100
017	233b017	SAMPLE	248030-033		Soil	201939	08/21/13 16:45	10.0	
018	233b018	SAMPLE	248030-035		Soil	201939	08/21/13 17:13	10.0	
019	233b019	CCV	DSL_500				08/21/13 17:41	1.0	4
020	233b020	CCV	MO_500				08/21/13 18:09	1.0	5
021	233b021	SAMPLE	248030-042		Soil	201939	08/21/13 18:37	20.0	
022	233b022	SAMPLE	248030-043		Soil	201939	08/21/13 19:04	5.0	
023	233b023	SAMPLE	248030-044		Soil	201939	08/21/13 19:32	5.0	
024	233b024	X	IB				08/21/13 20:00	1.0	
025	233b025	SAMPLE	248030-025		Soil	201914	08/21/13 20:27	100.0	2:BUNKC:12-40=7000
026	233b026	SAMPLE	248030-036		Soil	201939	08/21/13 20:55	20.0	
027	233b027	SAMPLE	248030-037		Soil	201939	08/21/13 21:22	20.0	
028	233b028	X	IB				08/21/13 21:50	1.0	
029	233b029	SAMPLE	248030-039		Soil	201939	08/21/13 22:18	20.0	
030	233b030	SAMPLE	248030-040		Soil	201939	08/21/13 22:46	5.0	
031	233b031	SAMPLE	248030-041		Soil	201939	08/21/13 23:14	10.0	
032	233b032	X	IB				08/21/13 23:42	1.0	
033	233b033	SAMPLE	248039-005	S	Soil	201956	08/22/13 00:09	10.0	
034	233b034	X	CMARKER				08/22/13 00:37	1.0	1
035	233b035	CCV	MO_500				08/22/13 01:05	1.0	5
036	233b036	CCV	DSL_250				08/22/13 01:33	1.0	2

JDG 08/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 36.

Standards used: 1=S22576 2=S22924 3=S22923 4=S22925 5=S23068

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163338854

Instrument : GC15B  
 Method : EPA 8015B

Begun : 08/23/13 07:34  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	235b001	X	IB				08/23/13 07:34	1.0		
002	235b002	X	CMARKER				08/23/13 08:02	1.0	1	
003	235b003	CCV	DSL_250				08/23/13 08:30	1.0	2	
004	235b004	CCV	MO_500				08/23/13 08:58	1.0	3	
005	235b005	CCV	JP5_250				08/23/13 09:36	1.0	4	
006	235b006	LCS	QC703349	S	Soil	202046	08/23/13 12:07	1.0		
007	235b007	SAMPLE	248028-001		Soil	201879	08/23/13 12:35	20.0		
008	235b008	SAMPLE	248050-013		Soil	201970	08/23/13 13:30	1.0		
009	235b009	X	MO_500				08/23/13 13:57	1.0	3	
010	235b010	CCV	DSL_500				08/23/13 14:26	1.0	5	
011	235b011	CCV	MO_500				08/23/13 15:10	1.0	3	
012	235b012	CCV	MINOIL_500				08/23/13 16:48	1.0	6	
013	235b013	CCV	JP5_250				08/23/13 17:15	1.0	4	
014	235b014	CCV	JET_250				08/23/13 17:54	1.0	7	
015	235b015	BLANK	QC703281		Water	202028	08/23/13 18:21	1.0		
016	235b016	BLANK	QC703281	S	Water	202028	08/23/13 18:49	1.0		
017	235b017	LCS	QC703282		Water	202028	08/23/13 19:17	1.0		
018	235b018	LCS	QC703282	S	Water	202028	08/23/13 19:44	1.0		
019	235b019	SAMPLE	248195-001		Water	202028	08/23/13 20:12	1.0		
020	235b020	SAMPLE	248195-002		Water	202028	08/23/13 20:40	1.0		2:BUNKC:12-40=6300
021	235b021	SAMPLE	248195-003		Water	202028	08/23/13 21:07	1.0		
022	235b022	SAMPLE	248149-005		Soil	201972	08/23/13 21:35	3.0		
023	235b023	X	IB				08/23/13 22:03	1.0		
024	235b024	SAMPLE	248242-001	S	Water	202028	08/23/13 22:31	1.0		
025	235b025	SAMPLE	248240-001	S	Soil	202046	08/23/13 22:59	1.0		
026	235b026	SAMPLE	248240-002	S	Soil	202046	08/23/13 23:26	1.0		
027	235b027	SAMPLE	248240-003	S	Soil	202046	08/23/13 23:54	1.0		
028	235b028	X	IB				08/24/13 00:22	1.0		
029	235b029	SAMPLE	248240-004	S	Soil	202046	08/24/13 00:50	1.0		
030	235b030	SAMPLE	248240-005	S	Soil	202046	08/24/13 01:18	1.0		
031	235b031	CCV	DSL_1000				08/24/13 01:46	1.0	8	
032	235b032	CCV	MO_500				08/24/13 02:13	1.0	3	
033	235b033	CCV	MINOIL_500				08/24/13 02:41	1.0	6	
034	235b034	CCV	JP5_250				08/24/13 03:09	1.0	4	
035	235b035	CCV	JET_250				08/24/13 03:37	1.0	7	
036	235b036	CCV	MO_500				08/24/13 04:05	1.0	3	
037	235b037	CCV	DSL_1000				08/24/13 04:33	1.0	8	
038	235b038	CCV	MINOIL_500				08/24/13 05:01	1.0	6	
039	235b039	SAMPLE	248239-001	S	Soil	202046	08/24/13 05:29	1.0		
040	235b040	SAMPLE	248239-002	S	Soil	202046	08/24/13 05:56	1.0		
041	235b041	SAMPLE	248239-003	S	Soil	202046	08/24/13 06:24	1.0		
042	235b042	SAMPLE	248239-004	S	Soil	202046	08/24/13 06:52	1.0		11:BUNKC:12-40=78000
043	235b043	SAMPLE	248239-005	S	Soil	202046	08/24/13 07:20	1.0		
044	235b044	SAMPLE	248239-006	S	Soil	202046	08/24/13 07:48	1.0		
045	235b045	SAMPLE	248239-007	S	Soil	202046	08/24/13 08:16	1.0		
046	235b046	SAMPLE	248239-008	S	Soil	202046	08/24/13 08:43	1.0		
047	235b047	SAMPLE	248240-006	S	Soil	202046	08/24/13 09:11	1.0		
048	235b048	SAMPLE	248176-001	S	Soil	202046	08/24/13 09:39	1.0		
049	235b049	X	CMARKER				08/24/13 10:07	1.0	1	
050	235b050	CCV	DSL_250				08/24/13 10:35	1.0	2	
051	235b051	CCV	MO_500				08/24/13 11:03	1.0	3	
052	235b052	CCV	JP5_250				08/24/13 11:30	1.0	4	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163338854

Instrument : GC15B Begun : 08/23/13 07:34  
 Method : EPA 8015B SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
053	235b053	CCV	JET_250				08/24/13 12:02	1.0	7	
054	235b054	SAMPLE	248195-001		Water	202028	08/24/13 13:49	1.0		
055	235b055	SAMPLE	248146-004	S	Water	201986	08/24/13 14:16	1.0		
056	235b056	SAMPLE	248179-003	S	Water	201986	08/24/13 14:44	1.0		
057	235b057	SAMPLE	248038-002	S	Water	201985	08/24/13 15:12	1.0		
058	235b058	SAMPLE	248038-003	S	Water	201985	08/24/13 15:39	1.0		
059	235b059	SAMPLE	248038-004	S	Water	201985	08/24/13 16:07	1.0		
060	235b060	SAMPLE	248038-005	S	Water	201985	08/24/13 16:35	1.0		
061	235b061	SAMPLE	248250-001	S	Soil	202071	08/24/13 17:03	1.0		4:BUNKC:12-40=15000
062	235b062	SAMPLE	248250-002	S	Soil	202071	08/24/13 17:30	1.0		2:BUNKC:12-40=12000
063	235b063	SAMPLE	248239-004	S	Soil	202046	08/24/13 17:58	20.0		
064	235b064	X	DSL_500				08/24/13 18:26	1.0	5	
065	235b065	X	MO_500				08/24/13 18:53	1.0	3	
066	235b066	CCV	JP5_250				08/24/13 19:21	1.0	4	
067	235b067	CCV	JET_250				08/24/13 19:48	1.0	7	
068	235b068	CCV	DSL_500				08/24/13 20:16	1.0	5	
069	235b069	CCV	MO_500				08/24/13 20:43	1.0	3	
070	235b070	CCV	JP5_250				08/24/13 21:11	1.0	4	
071	235b071	CCV	JET_250				08/24/13 21:39	1.0	7	
072	235b072	SAMPLE	248191-001		Water	202028	08/24/13 22:07	1.0		
073	235b073	SAMPLE	248201-011		Water	202028	08/24/13 22:34	1.0		
074	235b074	SAMPLE	248201-026		Water	202028	08/24/13 23:02	1.0		
075	235b075	SAMPLE	248153-003	S	Water	202028	08/24/13 23:30	1.0		
076	235b076	SAMPLE	248153-004	S	Water	202028	08/24/13 23:58	1.0		
077	235b077	SAMPLE	248153-005	S	Water	202028	08/25/13 00:26	1.0		
078	235b078	SAMPLE	248188-002	S	Water	202028	08/25/13 00:54	1.0		
079	235b079	SAMPLE	248188-003	S	Water	202028	08/25/13 01:22	1.0		
080	235b080	SAMPLE	248188-004	S	Water	202028	08/25/13 01:50	1.0		
081	235b081	SAMPLE	248188-005	S	Water	202028	08/25/13 02:18	1.0		
082	235b082	X	CMARKER				08/25/13 02:45	1.0	1	
083	235b083	CCV	DSL_250				08/25/13 03:13	1.0	2	
084	235b084	CCV	MO_500				08/25/13 03:41	1.0	3	
085	235b085	CCV	DSL_250				08/25/13 04:09	1.0	2	
086	235b086	CCV	MO_500				08/25/13 04:37	1.0	3	

JDG 08/23/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 11.

SFL 08/24/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 12 through 52.

JDG 08/26/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 53 through 86.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 223242707

Instrument : GC14B  
 Method : EPA 8015B

Begun : 06/17/13 13:07  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	168_001	X	IB			06/17/13 13:07	1.0	
002	168_002	X	IB			06/17/13 13:35	1.0	
003	168_003	X	CMARKER			06/17/13 14:04	1.0	1
004	168_004	IB	CALIB			06/17/13 15:24	1.0	
005	168_005	ICAL	HEX OTP_5			06/17/13 15:53	1.0	2
006	168_006	ICAL	HEX OTP_10			06/17/13 16:22	1.0	3
007	168_007	ICAL	HEX OTP_25			06/17/13 16:51	1.0	4
008	168_008	ICAL	HEX OTP_50			06/17/13 17:19	1.0	5
009	168_009	ICAL	HEX OTP_100			06/17/13 17:48	1.0	6
010	168_010	ICAL	HEX OTP_200			06/17/13 18:16	1.0	7
011	168_011	IB	CALIB			06/17/13 18:45	1.0	
012	168_012	ICAL	DSL_10			06/17/13 19:13	1.0	8
013	168_013	ICAL	DSL_100			06/17/13 19:42	1.0	9
014	168_014	ICAL	DSL_500			06/17/13 20:10	1.0	10
015	168_015	ICAL	DSL_1000			06/17/13 20:39	1.0	11
016	168_016	ICAL	DSL_5000			06/17/13 21:07	1.0	12
017	168_017	IB	CALIB			06/17/13 21:36	1.0	
018	168_018	ICV	DSL_500			06/17/13 22:05	1.0	13
019	168_019	X	ICV			06/17/13 22:33	1.0	13
020	168_020	IB	CALIB			06/17/13 23:02	1.0	
021	168_021	ICAL	MO_25			06/17/13 23:31	1.0	14
022	168_022	ICAL	MO_50			06/18/13 00:00	1.0	14
023	168_023	ICAL	MO_250			06/18/13 00:28	1.0	15
024	168_024	ICAL	MO_500			06/18/13 00:57	1.0	16
025	168_025	ICAL	MO_1000			06/18/13 01:25	1.0	17
026	168_026	ICAL	MO_2500			06/18/13 01:54	1.0	18
027	168_027	ICAL	MO_5000			06/18/13 02:23	1.0	18
028	168_028	IB	CALIB			06/18/13 02:51	1.0	
029	168_029	ICAL	JETA_10			06/18/13 03:20	1.0	19
030	168_030	ICAL	JETA_100			06/18/13 03:49	1.0	20
031	168_031	ICAL	JETA_500			06/18/13 04:17	1.0	21
032	168_032	ICAL	JETA_1000			06/18/13 04:46	1.0	22
033	168_033	ICAL	JETA_2000			06/18/13 05:14	1.0	23
034	168_034	ICAL	JETA_3000			06/18/13 05:43	1.0	24
035	168_035	IB	CALIB			06/18/13 06:11	1.0	
036	168_036	CMARKER	C8-C50			06/18/13 06:40	1.0	1
037	168_037	IB	CALIB			06/18/13 07:08	1.0	

JDG 06/18/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 37.

Standards used: 1=S22576 2=S22417 3=S22418 4=S22419 5=S22420 6=S22421 7=S22422 8=S22008 9=S22009 10=S22010 11=S22011  
 12=S22007 13=S22427 14=S21419 15=S21418 16=S21417 17=S21416 18=S21415 19=S22220 20=S22221 21=S22222 22=S22223  
 23=S22224 24=S22225

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 223333225

Instrument : GC14B  
 Method : EPA 8015B

Begun : 08/19/13 09:45  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	231_001	X	IB				08/19/13 09:45	1.0		
002	231_002	X	CMARKER				08/19/13 10:13	1.0	1	
003	231_003	CCV	DSL_1000				08/19/13 10:42	1.0	2	
004	231_004	X	MO_500				08/19/13 11:11	1.0	3	
005	231_005	CCV	MO_500				08/19/13 13:00	1.0	3	
006	231_006	CCV	JP5_250				08/19/13 13:29	1.0	4	
007	231_007	BLANK	QC702552	S	Soil	201857	08/19/13 17:33	1.0		
008	231_008	LCS	QC702553	S	Soil	201857	08/19/13 18:01	1.0		
009	231_009	MSS	247980-001	S	Soil	201857	08/19/13 18:30	1.0		3:BUNKC:12-40=16000
010	231_010	MS	QC702554	S	Soil	201857	08/19/13 18:58	1.0		3:BUNKC:12-40=15000
011	231_011	MSD	QC702555	S	Soil	201857	08/19/13 19:27	1.0		3:BUNKC:12-40=13000
012	231_012	SAMPLE	247980-002	S	Soil	201857	08/19/13 19:55	10.0		8:BUNKC:12-40=25000
013	231_013	SAMPLE	247980-003	S	Soil	201857	08/19/13 20:24	10.0		4:BUNKC:12-40=16000
014	231_014	X	IB				08/19/13 20:53	1.0		
015	231_015	SAMPLE	247994-001	S	Soil	201857	08/19/13 21:22	1.0		
016	231_016	SAMPLE	247994-002	S	Soil	201857	08/19/13 21:50	1.0		
017	231_017	SAMPLE	247994-003	S	Soil	201857	08/19/13 22:19	1.0		
018	231_018	SAMPLE	247994-004	S	Soil	201857	08/19/13 22:48	1.0		
019	231_019	SAMPLE	247994-005	S	Soil	201857	08/19/13 23:17	1.0		
020	231_020	CCV	DSL_500				08/19/13 23:46	1.0	5	
021	231_021	CCV	MO_500				08/20/13 00:15	1.0	3	
022	231_022	CCV	JP5_250				08/20/13 00:44	1.0	4	
023	231_023	SAMPLE	247994-006	S	Soil	201857	08/20/13 01:13	1.0		
024	231_024	SAMPLE	247995-001	S	Soil	201857	08/20/13 01:41	1.0		
025	231_025	SAMPLE	247995-002	S	Soil	201857	08/20/13 02:10	1.0		
026	231_026	SAMPLE	247995-003	S	Soil	201857	08/20/13 02:39	1.0		
027	231_027	SAMPLE	247995-004	S	Soil	201857	08/20/13 03:08	1.0		
028	231_028	SAMPLE	247997-001	S	Soil	201857	08/20/13 03:37	1.0		
029	231_029	SAMPLE	247997-002	S	Soil	201857	08/20/13 04:06	1.0		2:BUNKC:10-40=6300
030	231_030	SAMPLE	247997-003	S	Soil	201857	08/20/13 04:35	10.0		
031	231_031	X	IB				08/20/13 05:03	1.0		
032	231_032	SAMPLE	247997-004	S	Soil	201857	08/20/13 05:32	1.0		
033	231_033	SAMPLE	247997-005	S	Soil	201857	08/20/13 06:01	1.0		
034	231_034	X	CMARKER				08/20/13 06:30	1.0	1	
035	231_035	CCV	DSL_1000				08/20/13 06:59	1.0	2	
036	231_036	CCV	JP5_250				08/20/13 07:27	1.0	4	
037	231_037	SAMPLE	247997-006	S	Soil	201857	08/20/13 07:56	1.0		
038	231_038	SAMPLE	247997-007	S	Soil	201857	08/20/13 08:25	1.0		
039	231_039	CCV	DSL_500				08/20/13 08:54	1.0	5	
040	231_040	CCV	JP5_250				08/20/13 09:23	1.0	4	
041	231_041	CCV	MO_500				08/20/13 09:52	1.0	3	
042	231_042	CCV	MINOIL_500				08/20/13 10:21	1.0	6	
043	231_043	BLANK	QC702698		Soil	201879	08/20/13 10:49	1.0		
044	231_044	SAMPLE	247997-008	S	Soil	201879	08/20/13 11:18	1.0		
045	231_045	SAMPLE	248132-001		Soil	201879	08/20/13 11:47	3.0		11:BUNKC:12-40=200000
046	231_046	SAMPLE	247980-002	S	Soil	201857	08/20/13 12:15	50.0		
047	231_047	SAMPLE	248132-001		Soil	201879	08/20/13 12:44	100.0		2:BUNKC:12-40=6700
048	231_048	CCV	DSL_250				08/20/13 13:13	1.0	7	
049	231_049	CCV	MO_500				08/20/13 13:42	1.0	3	
050	231_050	CCV	JP5_250				08/20/13 14:11	1.0	4	
051	231_051	CCV	MINOIL_500				08/20/13 14:40	1.0	6	
052	231_052	BLANK	QC702793		Soil	201914	08/20/13 16:17	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 223333225

Instrument : GC14B  
 Method : EPA 8015B

Begun : 08/19/13 09:45  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
053	231_053	LCS	QC702794		Soil	201914	08/20/13 16:45	1.0	
054	231_054	MSS	248030-018		Soil	201914	08/20/13 17:14	20.0	
055	231_055	MS	QC702795		Soil	201914	08/20/13 17:43	20.0	
056	231_056	MSD	QC702796		Soil	201914	08/20/13 18:12	20.0	
057	231_057	X	IB				08/20/13 18:40	1.0	
058	231_058	SAMPLE	248030-011		Soil	201914	08/20/13 19:09	5.0	
059	231_059	SAMPLE	248030-009		Soil	201914	08/20/13 19:37	5.0	
060	231_060	SAMPLE	248030-010		Soil	201914	08/20/13 20:06	5.0	
061	231_061	X	IB				08/20/13 20:34	1.0	
062	231_062	SAMPLE	248030-012		Soil	201914	08/20/13 21:03	1.0	
063	231_063	SAMPLE	248030-006		Soil	201914	08/20/13 21:31	1.0	
064	231_064	SAMPLE	248030-007		Soil	201914	08/20/13 22:00	1.0	
065	231_065	SAMPLE	248030-008		Soil	201914	08/20/13 22:29	1.0	
066	231_066	X	CMARKER				08/20/13 22:58	1.0	1
067	231_067	CCV	DSL_1000				08/20/13 23:27	1.0	2
068	231_068	CCV	MO_500				08/20/13 23:56	1.0	3
069	231_069	SAMPLE	248030-013		Soil	201914	08/21/13 00:24	5.0	
070	231_070	SAMPLE	248030-014		Soil	201914	08/21/13 00:53	5.0	
071	231_071	SAMPLE	248030-015		Soil	201914	08/21/13 01:22	5.0	
072	231_072	X	IB				08/21/13 01:51	1.0	
073	231_073	SAMPLE	248030-019		Soil	201914	08/21/13 02:19	10.0	
074	231_074	SAMPLE	248030-020		Soil	201914	08/21/13 02:48	10.0	
075	231_075	SAMPLE	248030-021		Soil	201914	08/21/13 03:17	10.0	
076	231_076	SAMPLE	248030-016		Soil	201914	08/21/13 03:46	5.0	
077	231_077	X	IB				08/21/13 04:15	1.0	
078	231_078	SAMPLE	248030-022		Soil	201914	08/21/13 04:43	10.0	
079	231_079	SAMPLE	248030-023		Soil	201914	08/21/13 05:12	5.0	
080	231_080	SAMPLE	248030-024		Soil	201914	08/21/13 05:41	5.0	
081	231_081	CCV	DSL_250				08/21/13 06:10	1.0	7
082	231_082	CCV	MO_500				08/21/13 06:39	1.0	3
083	231_083	SAMPLE	247831-001	S	Water	201604	08/21/13 07:07	1.0	
084	231_084	SAMPLE	247831-002	S	Water	201604	08/21/13 07:36	1.0	
085	231_085	SAMPLE	247831-003	S	Water	201604	08/21/13 08:05	1.0	
086	231_086	SAMPLE	247831-004	S	Water	201604	08/21/13 08:34	1.0	
087	231_087	SAMPLE	247831-005	S	Water	201604	08/21/13 09:03	1.0	
088	231_088	SAMPLE	247831-006	S	Water	201604	08/21/13 09:32	1.0	
089	231_089	X	CMARKER				08/21/13 10:01	1.0	1
090	231_090	SAMPLE	248028-001		Soil	201879	08/21/13 10:30	20.0	
091	231_091	CCV	DSL_500				08/21/13 10:59	1.0	5
092	231_092	CCV	MO_500				08/21/13 11:28	1.0	3
093	231_093	CCV	MO_500				08/21/13 12:00	1.0	8

JDG 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 36.

JDG 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 37 through 51.

JDG 08/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 52 through 86.

JDG 08/21/13 : I verified that the vials loaded on the instrument matched the



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 223337426

Instrument : GC14B  
 Method : EPA 8015B

Begun : 08/22/13 07:46  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	234_001	X	IB				08/22/13 07:46	1.0	
002	234_002	X	CMARKER				08/22/13 08:14	1.0	1
003	234_003	X	MO_500				08/22/13 08:43	1.0	2
004	234_004	X	DSL_1000				08/22/13 09:12	1.0	3
005	234_005	X	CMARKER				08/22/13 10:37	1.0	1
006	234_006	X	IB				08/22/13 12:13	1.0	
007	234_007	CMARKER	C8-C50				08/22/13 12:42	1.0	1
008	234_008	CCV	MO_500				08/22/13 13:11	1.0	2
009	234_009	CCV	DSL_1000				08/22/13 13:40	1.0	3
010	234_010	MSS	248030-026		Soil	201939	08/22/13 16:30	10.0	
011	234_011	SAMPLE	248030-028		Soil	201939	08/22/13 16:58	5.0	
012	234_012	SAMPLE	248030-027		Soil	201939	08/22/13 17:27	10.0	
013	234_013	X	IB				08/22/13 17:55	1.0	
014	234_014	SAMPLE	248030-029		Soil	201939	08/22/13 18:24	20.0	
015	234_015	SAMPLE	248030-030		Soil	201939	08/22/13 18:53	20.0	
016	234_016	SAMPLE	248030-031		Soil	201939	08/22/13 19:21	2.0	
017	234_017	X	IB				08/22/13 19:50	1.0	
018	234_018	SAMPLE	248030-036		Soil	201939	08/22/13 20:18	20.0	
019	234_019	SAMPLE	248030-037		Soil	201939	08/22/13 20:47	20.0	
020	234_020	SAMPLE	248030-032		Soil	201939	08/22/13 21:16	2.0	
021	234_021	X	IB				08/22/13 21:45	1.0	
022	234_022	SAMPLE	248030-039		Soil	201939	08/22/13 22:14	20.0	
023	234_023	CCV	MO_500				08/22/13 22:43	1.0	2
024	234_024	CCV	DSL_500				08/22/13 23:12	1.0	4
025	234_025	SAMPLE	248030-040		Soil	201939	08/22/13 23:41	5.0	
026	234_026	SAMPLE	248030-041		Soil	201939	08/23/13 00:09	10.0	
027	234_027	SAMPLE	248030-042		Soil	201939	08/23/13 00:38	20.0	
028	234_028	X	IB				08/23/13 01:07	1.0	
029	234_029	SAMPLE	248030-043		Soil	201939	08/23/13 01:36	5.0	
030	234_030	SAMPLE	248030-044		Soil	201939	08/23/13 02:05	5.0	
031	234_031	SAMPLE	248084-001		Soil	201970	08/23/13 02:34	20.0	
032	234_032	SAMPLE	248085-001		Miscell.	201972	08/23/13 03:03	3.0	1:BUNKC:12-40=5100
033	234_033	X	IB				08/23/13 03:32	1.0	
034	234_034	SAMPLE	248085-002		Miscell.	201972	08/23/13 04:01	1.0	
035	234_035	SAMPLE	248085-003		Miscell.	201972	08/23/13 04:29	1.0	
036	234_036	SAMPLE	248109-002		Soil	201970	08/23/13 04:58	1.0	
037	234_037	X	CMARKER				08/23/13 05:27	1.0	1
038	234_038	CCV	MO_500				08/23/13 05:56	1.0	2
039	234_039	CCV	DSL_1000				08/23/13 06:24	1.0	3
040	234_040	SAMPLE	248105-008	S	Water	201985	08/23/13 06:53	1.0	
041	234_041	SAMPLE	248105-009	S	Water	201985	08/23/13 07:22	1.0	
042	234_042	SAMPLE	248105-010	S	Water	201985	08/23/13 07:51	1.0	
043	234_043	SAMPLE	248105-011	S	Water	201985	08/23/13 08:20	1.0	
044	234_044	SAMPLE	248105-012	S	Water	201985	08/23/13 08:49	1.0	
045	234_045	SAMPLE	248105-013	S	Water	201985	08/23/13 09:18	1.0	
046	234_046	SAMPLE	248105-014	S	Water	201985	08/23/13 09:46	1.0	
047	234_047	CCV	MO_500				08/23/13 10:15	1.0	2
048	234_048	CCV	DSL_250				08/23/13 10:44	1.0	5
049	234_049	LCS	QC703094	S	Water	201985	08/23/13 12:13	1.0	
050	234_050	BLANK	QC703348	S	Soil	202046	08/23/13 12:41	1.0	
051	234_051	CCV	JP5_250				08/23/13 13:15	1.0	6
052	234_052	BLANK	QC703348	S	Soil	202046	08/23/13 13:46	1.0	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 223337426

Instrument : GC14B Begun : 08/22/13 07:46  
 Method : EPA 8015B SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
053	234_053	SAMPLE	248097-007	S	Soil	201972	08/23/13 14:14	1.0	
054	234_054	CCV	DSL_500				08/23/13 14:43	1.0	4
055	234_055	CCV	MO_500				08/23/13 15:12	1.0	2
056	234_056	CCV	JP5_250				08/23/13 15:41	1.0	6
057	234_057	BLANK	QC703348		Soil	202046	08/23/13 18:25	1.0	
058	234_058	SAMPLE	248122-001		Soil	201972	08/23/13 18:54	1.0	
059	234_059	SAMPLE	248150-001		Miscell.	201972	08/23/13 19:22	5.0	
060	234_060	SAMPLE	248150-002		Miscell.	201972	08/23/13 19:51	3.0	
061	234_061	SAMPLE	248151-001		Soil	201972	08/23/13 20:20	5.0	
062	234_062	SAMPLE	248030-034		Soil	202046	08/23/13 20:48	20.0	
063	234_063	X	IB				08/23/13 21:17	1.0	
064	234_064	SAMPLE	248152-007		Miscell.	201972	08/23/13 21:46	1.0	
065	234_065	SAMPLE	248152-008		Miscell.	201972	08/23/13 22:14	10.0	2:BUNKC:12-40=6500
066	234_066	SAMPLE	248151-002		Soil	201972	08/23/13 22:43	10.0	
067	234_067	X	CMARKER				08/23/13 23:12	1.0	1
068	234_068	CCV	MO_500				08/23/13 23:41	1.0	2
069	234_069	CCV	DSL_1000				08/24/13 00:10	1.0	3
070	234_070	X	CCV				08/24/13 00:38	1.0	2
071	234_071	X	CCV				08/24/13 01:07	1.0	3

JDG 08/23/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 49.

JDG 08/23/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 50 through 56.

SFL 08/24/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 57 through 71.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 863225247

Instrument : GC26A  
 Method : EPA 8015B

Begun : 06/05/13 10:07  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	156a001	X	IB			06/05/13 10:07	1.0	
002	156a002	X	CMARKER			06/05/13 10:34	1.0	1
003	156a003	IB	CALIB			06/05/13 11:28	1.0	
004	156a004	ICAL	HEXOTP_5			06/05/13 11:55	1.0	2
005	156a005	ICAL	HEXOTP_10			06/05/13 12:23	1.0	3
006	156a006	ICAL	HEXOTP_25			06/05/13 12:51	1.0	4
007	156a007	ICAL	HEXOTP_50			06/05/13 13:18	1.0	5
008	156a008	ICAL	HEXOTP_100			06/05/13 13:46	1.0	6
009	156a009	ICAL	HEXOTP_200			06/05/13 14:13	1.0	7
010	156a010	IB	CALIB			06/05/13 14:41	1.0	
011	156a011	ICAL	DSL_10			06/05/13 15:08	1.0	8
012	156a012	ICAL	DSL_100			06/05/13 15:36	1.0	9
013	156a013	ICAL	DSL_500			06/05/13 16:04	1.0	10
014	156a014	ICAL	DSL_1000			06/05/13 16:31	1.0	11
015	156a015	ICAL	DSL_5000			06/05/13 16:59	1.0	12
016	156a016	IB	CALIB			06/05/13 17:26	1.0	
017	156a017	ICV	DSL_500			06/05/13 17:54	1.0	13
018	156a018	X	ICV			06/05/13 18:22	1.0	13
019	156a019	IB	CALIB			06/05/13 18:49	1.0	
020	156a020	ICAL	MO_25			06/05/13 19:16	1.0	14
021	156a021	ICAL	MO_50			06/05/13 19:43	1.0	14
022	156a022	ICAL	MO_250			06/05/13 20:11	1.0	15
023	156a023	ICAL	MO_500			06/05/13 20:39	1.0	16
024	156a024	ICAL	MO_1000			06/05/13 21:07	1.0	17
025	156a025	ICAL	MO_2500			06/05/13 21:34	1.0	18
026	156a026	ICAL	MO_5000			06/05/13 22:02	1.0	18
027	156a027	IB	CALIB			06/05/13 22:30	1.0	
028	156a028	CMARKER	C8-C50			06/05/13 22:58	1.0	1
029	156a029	IB	CALIB			06/05/13 23:26	1.0	

SFL 06/06/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 29.

Standards used: 1=S21686 2=S22417 3=S22418 4=S22419 5=S22420 6=S22421 7=S22422 8=S22008 9=S22009 10=S22010 11=S22011  
 12=S22007 13=S22427 14=S21419 15=S21418 16=S21417 17=S21416 18=S21415

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 863334586

Instrument : GC26A  
 Method : EPA 8015B

Begun : 08/20/13 08:26  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	232a001	X	IB				08/20/13 08:26	1.0	
002	232a002	X	CMARKER				08/20/13 08:54	1.0	1
003	232a003	CCV	MO_500				08/20/13 09:22	1.0	2
004	232a004	CCV	DSL_250				08/20/13 09:50	1.0	3
005	232a005	MSS	248030-005		Soil	201879	08/20/13 10:39	1.0	
006	232a006	MS	QC702700		Soil	201879	08/20/13 11:07	1.0	
007	232a007	MSD	QC702701		Soil	201879	08/20/13 11:35	1.0	
008	232a008	CCV	MO_500				08/20/13 12:02	1.0	2
009	232a009	CCV	DSL_1000				08/20/13 12:30	1.0	4
010	232a010	CCV	JP5_250				08/20/13 13:10	1.0	5
011	232a011	CCV	MO_500				08/20/13 14:17	1.0	2
012	232a012	BLANK	QC702710	S	Water	201895	08/20/13 17:53	1.0	
013	232a013	LCS	QC702711	S	Water	201895	08/20/13 18:21	1.0	
014	232a014	MSS	248102-001	S	Water	201895	08/20/13 18:48	1.0	
015	232a015	MS	QC702712	S	Water	201895	08/20/13 19:16	1.0	
016	232a016	MSD	QC702713	S	Water	201895	08/20/13 19:43	1.0	
017	232a017	SAMPLE	248102-002	S	Water	201895	08/20/13 20:11	1.0	
018	232a018	SAMPLE	248102-003	S	Water	201895	08/20/13 20:39	1.0	
019	232a019	SAMPLE	248102-004	S	Water	201895	08/20/13 21:06	1.0	
020	232a020	SAMPLE	248102-005	S	Water	201895	08/20/13 21:34	1.0	
021	232a021	SAMPLE	248043-001	S	Water	201895	08/20/13 22:02	1.0	
022	232a022	SAMPLE	248043-002	S	Water	201895	08/20/13 22:30	1.0	
023	232a023	SAMPLE	248043-003	S	Water	201895	08/20/13 22:58	1.0	
024	232a024	X	CMARKER				08/20/13 23:26	1.0	1
025	232a025	CCV	DSL_250				08/20/13 23:54	1.0	3
026	232a026	CCV	MO_500				08/21/13 00:22	1.0	2
027	232a027	CCV	JP5_250				08/21/13 00:50	1.0	5
028	232a028	SAMPLE	248040-001	S	Water	201895	08/21/13 01:18	1.0	
029	232a029	SAMPLE	248040-002	S	Water	201895	08/21/13 01:45	1.0	
030	232a030	SAMPLE	248041-001	S	Water	201895	08/21/13 02:13	1.0	
031	232a031	SAMPLE	248042-001	S	Water	201895	08/21/13 02:41	1.0	
032	232a032	SAMPLE	248044-001	S	Water	201895	08/21/13 03:09	1.0	
033	232a033	SAMPLE	248044-002	S	Water	201895	08/21/13 03:36	1.0	
034	232a034	SAMPLE	248044-003	S	Water	201895	08/21/13 04:04	1.0	
035	232a035	CCV	DSL_1000				08/21/13 04:32	1.0	4
036	232a036	CCV	JP5_250				08/21/13 05:00	1.0	5

SFL 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 11.

SFL 08/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 12 through 36.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 863337423

Instrument : GC26A  
 Method : EPA 8015B

Begun : 08/22/13 07:43  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	234a001	X	IB				08/22/13 07:43	1.0	
002	234a002	X	CMARKER				08/22/13 08:11	1.0	1
003	234a003	CCV	DSL_250				08/22/13 08:39	1.0	2
004	234a004	CCV	MO_500				08/22/13 09:07	1.0	3
005	234a005	CCV	MO_500				08/22/13 09:35	1.0	3
006	234a006	X	IB				08/22/13 11:50	1.0	
007	234a007	CMARKER	C8-C50				08/22/13 12:17	1.0	1
008	234a008	CCV	MO_500				08/22/13 12:45	1.0	3
009	234a009	CCV	DSL_250				08/22/13 13:13	1.0	2
010	234a010	SAMPLE	248091-003		Water	201935	08/22/13 16:11	1.0	
011	234a011	SAMPLE	247982-002	S	Water	201935	08/22/13 16:39	1.0	
012	234a012	SAMPLE	247982-003	S	Water	201935	08/22/13 17:07	1.0	
013	234a013	SAMPLE	247982-004	S	Water	201935	08/22/13 17:34	1.0	
014	234a014	SAMPLE	247982-005	S	Water	201935	08/22/13 18:02	1.0	
015	234a015	SAMPLE	248105-001	S	Water	201935	08/22/13 18:30	1.0	
016	234a016	SAMPLE	248105-002	S	Water	201935	08/22/13 18:57	1.0	
017	234a017	SAMPLE	248105-003	S	Water	201935	08/22/13 19:25	1.0	
018	234a018	SAMPLE	248105-004	S	Water	201935	08/22/13 19:52	1.0	
019	234a019	SAMPLE	248105-005	S	Water	201935	08/22/13 20:20	1.0	
020	234a020	CCV	DSL_500				08/22/13 20:48	1.0	4
021	234a021	CCV	MO_500				08/22/13 21:16	1.0	3
022	234a022	LCS	QC702891		Soil	201939	08/22/13 21:44	1.0	
023	234a023	SAMPLE	248039-005	S	Soil	201956	08/22/13 22:12	10.0	
024	234a024	SAMPLE	248030-025		Soil	201914	08/22/13 22:40	100.0	
025	234a025	X	IB				08/22/13 23:08	1.0	
026	234a026	SAMPLE	248030-033		Soil	201939	08/22/13 23:36	10.0	
027	234a027	SAMPLE	248030-035		Soil	201939	08/23/13 00:04	10.0	
028	234a028	X	IB				08/23/13 00:32	1.0	
029	234a029	SAMPLE	247831-001	S	Water	201604	08/23/13 01:00	1.0	
030	234a030	SAMPLE	247831-002	S	Water	201604	08/23/13 01:27	1.0	
031	234a031	SAMPLE	247831-003	S	Water	201604	08/23/13 01:55	1.0	
032	234a032	SAMPLE	247831-004	S	Water	201604	08/23/13 02:23	1.0	
033	234a033	SAMPLE	247831-005	S	Water	201604	08/23/13 02:51	1.0	
034	234a034	SAMPLE	247831-006	S	Water	201604	08/23/13 03:19	1.0	
035	234a035	X	CMARKER				08/23/13 03:46	1.0	1
036	234a036	CCV	DSL_250				08/23/13 04:14	1.0	2
037	234a037	CCV	MO_500				08/23/13 04:42	1.0	3
038	234a038	SAMPLE	248105-015	S	Water	201985	08/23/13 05:10	1.0	
039	234a039	SAMPLE	248105-016	S	Water	201985	08/23/13 05:37	1.0	
040	234a040	SAMPLE	248105-017	S	Water	201985	08/23/13 06:05	1.0	
041	234a041	SAMPLE	248105-018	S	Water	201985	08/23/13 06:33	1.0	
042	234a042	SAMPLE	248105-019	S	Water	201985	08/23/13 07:01	1.0	
043	234a043	SAMPLE	248105-020	S	Water	201985	08/23/13 07:29	1.0	
044	234a044	SAMPLE	248105-021	S	Water	201985	08/23/13 07:57	1.0	
045	234a045	CCV	DSL_1000				08/23/13 08:25	1.0	5
046	234a046	CCV	MO_500				08/23/13 08:53	1.0	3

JDG 08/23/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 46.

Standards used: 1=S22576 2=S22924 3=S23068 4=S22925 5=S22926

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 863338978

Instrument : GC26A  
 Method : EPA 8015B

Begun : 08/23/13 09:38  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	235a001	X	IB				08/23/13 09:38	1.0	
002	235a002	X	CMARKER				08/23/13 10:06	1.0	1
003	235a003	CCV	DSL_250				08/23/13 10:34	1.0	2
004	235a004	CCV	MO_500				08/23/13 11:02	1.0	3
005	235a005	MSS	248260-001		Soil	202046	08/23/13 13:00	1.0	
006	235a006	MS	QC703350		Soil	202046	08/23/13 13:42	1.0	
007	235a007	MSD	QC703351		Soil	202046	08/23/13 14:09	1.0	
008	235a008	CCV	DSL_500				08/23/13 14:37	1.0	4
009	235a009	CCV	MO_500				08/23/13 15:04	1.0	3
010	235a010	MSS	248153-002	S	Water	202028	08/23/13 18:10	1.0	
011	235a011	MS	QC703283	S	Water	202028	08/23/13 18:37	1.0	
012	235a012	MSD	QC703284	S	Water	202028	08/23/13 19:05	1.0	
013	235a013	SAMPLE	248091-001	S	Water	202028	08/23/13 19:32	1.0	
014	235a014	SAMPLE	248091-002	S	Water	202028	08/23/13 20:00	1.0	
015	235a015	SAMPLE	248091-001		Water	202028	08/23/13 20:27	1.0	
016	235a016	SAMPLE	248091-002		Water	202028	08/23/13 20:55	1.0	
017	235a017	SAMPLE	248146-001	S	Water	201986	08/23/13 21:23	1.0	
018	235a018	SAMPLE	248176-003	S	Soil	202046	08/23/13 21:51	1.0	
019	235a019	SAMPLE	248176-002	S	Soil	202046	08/23/13 22:19	1.0	
020	235a020	X	DSL_1000				08/23/13 22:46	1.0	5
021	235a021	CCV	MO_500				08/23/13 23:14	1.0	3
022	235a022	CCV	DSL_1000				08/23/13 23:42	1.0	5
023	235a023	CCV	MO_500				08/24/13 00:10	1.0	3
024	235a024	BLANK	QC703097	S	Water	201986	08/24/13 00:38	1.0	
025	235a025	BS	QC703098	S	Water	201986	08/24/13 01:06	1.0	
026	235a026	BSD	QC703099	S	Water	201986	08/24/13 01:34	1.0	
027	235a027	SAMPLE	248146-002	S	Water	201986	08/24/13 02:02	1.0	
028	235a028	SAMPLE	248146-003	S	Water	201986	08/24/13 02:30	1.0	
029	235a029	SAMPLE	248146-004	S	Water	201986	08/24/13 02:58	1.0	
030	235a030	SAMPLE	248160-008	S	Water	201986	08/24/13 03:25	1.0	
031	235a031	SAMPLE	248160-011	S	Water	201986	08/24/13 03:53	1.0	
032	235a032	SAMPLE	248160-016	S	Water	201986	08/24/13 04:21	1.0	
033	235a033	SAMPLE	248160-017	S	Water	201986	08/24/13 04:49	1.0	
034	235a034	SAMPLE	248160-018	S	Water	201986	08/24/13 05:17	1.0	
035	235a035	SAMPLE	248160-019	S	Water	201986	08/24/13 05:45	1.0	
036	235a036	SAMPLE	248160-020	S	Water	201986	08/24/13 06:13	1.0	
037	235a037	CCV	DSL_250				08/24/13 06:40	1.0	2
038	235a038	CCV	MO_500				08/24/13 07:09	1.0	3
039	235a039	X	CCV				08/24/13 07:37	1.0	2
040	235a040	X	CCV				08/24/13 08:04	1.0	3
041	235a041	SAMPLE	248160-021	S	Water	201986	08/24/13 08:32	1.0	
042	235a042	SAMPLE	248160-022	S	Water	201986	08/24/13 09:00	1.0	
043	235a043	SAMPLE	248160-023	S	Water	201986	08/24/13 09:28	1.0	
044	235a044	SAMPLE	248179-001	S	Water	201986	08/24/13 09:56	1.0	
045	235a045	SAMPLE	248179-002	S	Water	201986	08/24/13 10:24	1.0	
046	235a046	SAMPLE	248179-003	S	Water	201986	08/24/13 10:52	1.0	
047	235a047	SAMPLE	248092-002	S	Water	201986	08/24/13 11:19	1.0	
048	235a048	SAMPLE	248092-003	S	Water	201986	08/24/13 11:47	1.0	
049	235a049	SAMPLE	248092-004	S	Water	201986	08/24/13 12:15	1.0	
050	235a050	X	CMARKER				08/24/13 12:42	1.0	1
051	235a051	CCV	DSL_500				08/24/13 13:10	1.0	4
052	235a052	CCV	MO_500				08/24/13 13:38	1.0	3



SAMPLE PREPARATION SUMMARY

Batch # : 201879  
 Started By : CPK  
 Method : 3550B  
 Spike #1 ID : S23042

Prep Date : 19-AUG-2013 19:00  
 Spike #2 ID : S22987

Analysis : TEH  
 Finished By : CPK  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
247997-008		Soil	50.24	5	1	0.09952		1			3630C	TEH	
248024-002		Soil	49.64	5	1	0.1007		1			3630C	TEHM	
248024-003		Soil	49.88	5	1	0.1002		1			3630C	TEHM	
248024-004		Soil	50.21	5	1	0.09958		1			3630C	TEHM	
248024-005		Soil	49.7	5	1	0.1006		1			3630C	TEHM	
248024-006		Soil	49.93	5	1	0.1001		1			3630C	TEHM	
248028-001		Soil	49.68	5	1	0.1006		1				TEHM	
248028-002		Soil	49.77	5	1	0.1005		1				TEHM	
248030-001		Soil	49.82	5	1	0.1004		1				TEHM	
248030-002		Soil	50.02	5	1	0.09996		1				TEHM	
248030-003		Soil	49.76	5	1	0.1005		1				TEHM	
248030-004		Soil	49.82	5	1	0.1004		1				TEHM	
248030-005		Soil	49.81	5	1	0.1004		1				TEHM	
248112-001		Soil	50.23	5	1	0.09954		1			3630C	TEHM	
248112-002		Soil	49.88	5	1	0.1002		1			3630C	TEHM	
248123-001		Soil	50.47	5	1	0.09907		1				TEHM	
248124-001		Soil	50.19	10	1	0.1992		1				TEHM	
248132-001		Soil	49.96	5	1	0.1001		1				TEH	
QC702698	BLANK	Soil	50.36	5	1	0.09929		1			3630C		
QC702699	LCS	Soil	49.89	5	1	0.1002		1	1		3630C		
QC702700	MS	Soil	50.22	5	1	0.09956		1	1				
QC702701	MSD	Soil	49.58	5	1	0.1008		1	1				

Analyst: SFL

Date: 08/20/13

Reviewer: JDG

Date: 08/20/13

TITLE Soil Aliquot

PROJECT

DATE

Continued from page

Sample ID	Weight (g)	Analysis	Batch #	Comments		
248024-w2 D	49.64	TEH/M	201079	Rocky sample		
-w3 C	49.88					
-w4 D	50.21					
-w5 ↓	49.70					
-w6 ↓	49.93					
248028-w1 B	49.68					
↓ -w2 ↓	49.77					
248030-w1 A	49.82					
↓ -w2 I	50.02					
-w3 G	49.76					
-w4 B	49.82					
↓ -w5 A	49.81					MSS
248112-w1 B	50.23					
↓ -w2 ↓	49.88					
248124-w1 B	50.19					
MB	50.76					EMULIB
LCS	49.89					↓
MS	50.22					248030-w5
MSD	<del>49.84</del> 49.58					↓ 8/19/13 CAP
247997-008 F	50.24			TEH/M	201079	
248123-001 B	50.47	↓	↓			
248132-w1 A	49.96	↓				
248070-030 E	29.61	PCB				
248123-001 B	29.71	↓		MSS		
MB	29.72			EMULIB		
LCS	29.90			↓		
MS	29.79			248123-001		
MSD	29.90			↓		
				CAP 8/19/13		

Continued to page

SIGNATURE

DATE

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION



TEH (8015) Soil Prep Log

Curtis & Tompkins, Ltd.

BK 3464

Page 25

LIMS Batch No: 201879  
 LIMS Analysis: TEH/M  
 Date Extracted: 8/19/13

Extraction Method:  
 Shaker Table  
 EPA 3550 Sonication  
 \_\_\_\_\_

Cleanup Method (if necessary):  
 EPA 3630 Silica Gel

Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Cleanup (x if needed)	Comments
247997	F	50.24	5.0	X	
248024	D	49.64	5.0		
↓ -03	C	49.88	5.0		
↓ -04	D	50.21	5.0		
5 ↓ -05	↓	49.70	5.0		
↓ -06	↓	49.93	5.0		
248028	B	49.68	5.0		
↓ -02	↓	49.77	5.0		
248030	A	49.82	5.0		
10 ↓ -02	F	50.02	5.0		
↓ -03	G	49.76	5.0		
↓ -04	B	49.82	5.0		
↓ -05	A	49.81	5.0		
248112	B	50.23	5.0	X	
15 ↓ -02	↓	49.88	5.0		
248123	B	49.71	5.0		
248124	B	50.19	5.0	10.0	~50mL fine sediment in receiver
248132	A	49.96	5.0		
20 MB QC 302698	NA	50.36	5.0	X	
LCS	99	49.89	5.0		
MSB	00	50.22	5.0		
MSD	01	49.58	5.0		
			5.0		
			5.0		
			5.0		

Baked, solvent-rinsed granular Na2SO4 weighed out for QC samples

Samples were dried with CH2Cl2-rinsed powdered Na2SO4

1.0 mL of Surrogate solution was added to all samples

1.0 mL of Spike solution was added to all spikes

1:1 CH2Cl2 (lot# EM53123): Acetone (lot# EM52216) was added to all

Solvent added at (time)

Sonicated 3 times w/ ≥100mL  placed on Shaker Table at:

taken off Shaker Table at:

Extracts filtered through baked, rinsed powdered Na2SO4

Concentrated to final volume at temperature (degrees C)

Relinquished to TEH Department

Mfg & Lot # / LIMS # / Time Date/Initials

EMVLIIB	CPK 8/19/13
↓	
S230420	
S227130 - S229878	
✓ m 8/20/13	
19:00	
✓	
NA	
EM08620504	
100°	
✓	

  
 Extraction Chemist / Date 8/19/13

Continued from page \_\_\_\_\_  
 Continued on page \_\_\_\_\_

  
 Reviewed by / Date 8/20/13

SAMPLE PREPARATION SUMMARY

Batch # : 201914  
 Started By : MB3  
 Method : 3550B  
 Spike #1 ID : S23042

Prep Date : 20-AUG-2013 11:45  
 Spike #2 ID : S22987

Analysis : TEHM  
 Finished By : MB3  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-006		Soil	49.56	5	1	0.1009		1				TEHM	
248030-007		Soil	50.39	5	1	0.09923		1				TEHM	
248030-008		Soil	50.12	5	1	0.09976		1				TEHM	
248030-009		Soil	49.69	5	1	0.1006		1				TEHM	
248030-010		Soil	50.24	5	1	0.09952		1				TEHM	
248030-011		Soil	50.11	5	1	0.09978		1				TEHM	
248030-012		Soil	49.7	5	1	0.1006		1				TEHM	
248030-013		Soil	49.92	5	1	0.1002		1				TEHM	
248030-014		Soil	49.64	5	1	0.1007		1				TEHM	
248030-015		Soil	49.9	5	1	0.1002		1				TEHM	
248030-016		Soil	49.9	5	1	0.1002		1				TEHM	
248030-017		Soil	49.86	5	1	0.1003		1				TEHM	
248030-018		Soil	50.17	5	1	0.09966		1				TEHM	mss
248030-019		Soil	49.81	5	1	0.1004		1				TEHM	
248030-020		Soil	50.18	5	1	0.09964		1				TEHM	
248030-021		Soil	49.88	5	1	0.1002		1				TEHM	
248030-022		Soil	49.7	5	1	0.1006		1				TEHM	
248030-023		Soil	49.74	5	1	0.1005		1				TEHM	
248030-024		Soil	50.43	5	1	0.09915		1				TEHM	
248030-025		Soil	50.25	5	1	0.0995		1				TEHM	
QC702793	BLANK	Soil	49.9	5	1	0.1002		1				TEHM	
QC702794	LCS	Soil	50.07	5	1	0.09986		1	1			TEHM	
QC702795	MS	Soil	50.43	5	1	0.09915		1	1			TEHM	
QC702796	MSD	Soil	49.79	5	1	0.1004		1	1			TEHM	

Analyst: JDG

Date: 08/23/13

Reviewer: EAH

Date: 08/23/13

LIMS Batch No: 201914  
 LIMS Analysis: TEHM  
 Date Extracted: 8/20/13

Extraction Method:  
 Shaker Table  
 EPA 3550 Sonication  
 \_\_\_\_\_

Cleanup Method (if necessary):  
 EPA 3630 Silica Gel

LIMS I  
 LIMS  
 Date E

Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Cleanup (x if needed)	* Comments
248030-006	D	49.56	5.0	<input type="checkbox"/>	
	007	50.39	5.0	<input type="checkbox"/>	
	008	50.12	5.0	<input type="checkbox"/>	
	009	49.69	5.0	<input type="checkbox"/>	
5	010	50.24	5.0	<input type="checkbox"/>	
	011	50.4	5.0	<input type="checkbox"/>	
	012	49.70	5.0	<input type="checkbox"/>	
	013	49.92	5.0	<input type="checkbox"/>	
10	014	49.64	5.0	<input type="checkbox"/>	
	015	49.90	5.0	<input type="checkbox"/>	
	016	49.90	5.0	<input type="checkbox"/>	
	017	49.86	5.0	<input type="checkbox"/>	
	018	50.17	5.0	<input type="checkbox"/>	MSS
	019	49.81	5.0	<input type="checkbox"/>	
15	020	50.18	5.0	<input type="checkbox"/>	
	021	49.88	5.0	<input type="checkbox"/>	
	022	49.70	5.0	<input type="checkbox"/>	
	023	49.74	5.0	<input type="checkbox"/>	
	024	50.43	5.0	<input type="checkbox"/>	
20	025	50.25	5.0	<input type="checkbox"/>	
MB	QC702793	49.90	5.0	<input type="checkbox"/>	
LCS	4	50.07	5.0	<input type="checkbox"/>	
MS	5	50.43	5.0	<input type="checkbox"/>	
MSD	6	49.79	5.0	<input type="checkbox"/>	
			5.0	<input type="checkbox"/>	

S  
 5  
 10  
 15  
 20

10K 8/23/13

Baked, solvent-rinsed granular Na<sub>2</sub>SO<sub>4</sub> weighed out for QC samples  
 Samples were dried with CH<sub>2</sub>Cl<sub>2</sub>-rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 1.0 mL of Surrogate solution was added to all samples  
 1.0 mL of Spike solution was added to all spikes  
 1:1 CH<sub>2</sub>Cl<sub>2</sub> (lot# EM53123):Acetone(lot# EM52216) was added to all  
 Solvent added at (time)  
 Sonicated 3 times w/ ≥100mL  placed on Shaker Table at:  
 taken off Shaker Table at:  
 Extracts filtered through baked, rinsed <sup>granular</sup> powdered Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C)  
 Relinquished to TEH Department

Mfg & Lot # / LIMS # / Time	Date/Initials
EMVLIIB	MB 8/20/13
↓	
S23042B	
S22987E	
↓	
1145	
↓	
N/A	
EMVLIIB	
100	
↓	

1:1 C

*Atchafalque*  
 Extraction Chemist / Date  
 8/20/13

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*[Signature]*  
 Reviewed by / Date  
 8/23/13

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Sample ID	Weight		Analyses	Bakch#	Comments
248030-006	49.56	D	TEHM	(201914)	
007	50.39	↓			
008	50.12	↓			
009	49.69	A			
010	50.24	B			
011	50.11	F			
012	49.70	↓			
013	49.97	B			
014	49.69	H			
015	49.90	↓			
016	49.00	B			
017	49.86	E			
018	50.17	H			MSS
019	49.81	B			
020	50.18	↓			
021	49.88	E			
022	49.70	A			
023	49.74	↓			
024	50.43	↓			
025	50.25	B			
	49.90				EMVLIB
	50.07				↓
	50.43	H			248030-dBH
	49.79	↓			↓
↓ MB CS MS MSD			↓	MB3	8/20/13

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DATE

PROPRIETARY INFORMATION

SAMPLE PREPARATION SUMMARY

Batch # : 201939  
 Started By : JR1  
 Method : 3550B  
 Spike #1 ID : S23042

Prep Date : 20-AUG-2013 14:50  
 Spike #2 ID : S22987

Analysis : TEHM  
 Finished By : JR1  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-026		Soil	49.79	5	1	0.1004		1				TEHM	MSS
248030-027		Soil	49.71	5	1	0.1006		1				TEHM	
248030-028		Soil	49.76	5	1	0.1005		1				TEHM	
248030-029		Soil	50.38	5	1	0.09925		1				TEHM	
248030-030		Soil	50.2	5	1	0.0996		1				TEHM	
248030-031		Soil	50.02	5	1	0.09996		1				TEHM	
248030-032		Soil	50.42	5	1	0.09917		1				TEHM	
248030-033		Soil	49.71	5	1	0.1006		1				TEHM	
248030-034		Soil	50.09	5	1	0.09982		1				(rebatched) TEHM	HEAVY SEDIMENT; APPROX 1-2 MLS
248030-035		Soil	50.42	5	1	0.09917		1				TEHM	
248030-036		Soil	50	5	1	0.1000		1				TEHM	
248030-037		Soil	50.15	5	1	0.0997		1				TEHM	
248030-039		Soil	49.57	5	1	0.1009		1				TEHM	
248030-040		Soil	49.55	5	1	0.1009		1				TEHM	
248030-041		Soil	50.36	5	1	0.09929		1				TEHM	
248030-042		Soil	50.07	5	1	0.09986		1				TEHM	
248030-043		Soil	49.67	5	1	0.1007		1				TEHM	
248030-044		Soil	49.6	5	1	0.1008		1				TEHM	
QC702890	BLANK	Soil	49.74	5	1	0.1005		1				TEHM	
QC702891	LCS	Soil	50.36	5	1	0.09929		1	1			TEHM	
QC702892	MS	Soil	50.27	5	1	0.09946		1	1			TEHM	
QC702893	MSD	Soil	49.59	5	1	0.1008		1	1			TEHM	

JDG 08/23/13 : Matrix spikes QC702892, QC702893 (batch 201939) were not reported because the parent sample required a dilution that would have diluted out the spikes.

Analyst: JDG

Date: 08/23/13

Reviewer: EAH

Date: 08/23/13

LIMS Batch No: 201939  
 LIMS Analysis: TEH/M  
 Date Extracted: 8/20/13

Extraction Method:

- Shaker Table  
 EPA 3550 Sonication

Cleanup Method (if necessary):

- EPA 3630 Silica Gel

Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Cleanup (x if needed)	Comments
248030-026	B	49.79	5.0		MS
27	↓	49.71	5.0		
28	A	49.76	5.0		
29	B	50.38	5.0		
30	↓	50.20	5.0		
31	↓	50.02	5.0		
32	↓	50.42	5.0		
33	A	49.71	5.0		
34	D	50.09	5.0		Heavy Sediment, approx. 1-2ml
35	↓	50.42	5.0		
36	↓	50.00	5.0		
37	A	50.15	5.0		
38	D	49.57	5.0		
40	A	49.55	5.0		
41	B	50.36	5.0		
42	A	50.07	5.0		
43	D	49.67	5.0		
44	A	49.60	5.0		
MB 2702890	NA	49.74	5.0		
MS	1	50.36	5.0		
MS	2	50.27	5.0		
MSD	3	49.59	5.0		
			5.0		
			5.0		
			5.0		

OK 8/23/13

Baked, solvent-rinsed granular Na<sub>2</sub>SO<sub>4</sub> weighed out for QC samples  
 Samples were dried with CH<sub>2</sub>Cl<sub>2</sub>-rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 1.0 mL of Surrogate solution was added to all samples  
 1.0 mL of Spike solution was added to all spikes  
 1:1 CH<sub>2</sub>Cl<sub>2</sub> (lot# EM53123):Acetone (lot# EM52710) was added to all

Solvent added at (time) 1450  
 Sonicated 3 times w/ ≥100mL  placed on Shaker Table at:  
 taken off Shaker Table at: NA  
 Extracts filtered through baked, rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C) 100°C  
 Relinquished to TEH Department

Mfg & Lot # / LIMS # / Time	Date/Initials
EMV1107	TEH 8/20/13
↓	
523042B	
572987C	
↓	
1450	
↓	
NA	
EMV1107	
100°C	
↓	

[Signature] 8/20/13  
 Extraction Chemist / Date

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[Signature] 8/23/13  
 Reviewed by / Date

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Sample ID	Weight(g)	Analysis	Batch#	Comments
248030-026 B	49.79	TEHM		MSS
27 ↓	49.71			
28 A	49.76			
29 B	50.38			
30 ↓	50.20			
31 ↓	50.02			
32 ↓	50.42			
33 A	49.71			
34 D	50.09			
35 ↓	50.42			
36 ↓	50.00			
37 A	50.15			
39 D	49.57			
40 A	49.55			
41 B	50.36			
42 A	50.07			
43 D	49.67			
MB	NA 49.74			
LCS	↓ 50.36			
MS	B 50.27			
MSD	↓ 49.59			
248030-044 A	49.60			

EMVI 116  
 ↓  
 248030-026B  
 ↓  
 J218/10/13

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DATE

PROPRIETARY INFORMATION

SAMPLE PREPARATION SUMMARY

Batch # : 202046  
 Started By : JR1  
 Method : 3550B  
 Spike #1 ID : S23042

Prep Date : 22-AUG-2013 17:30  
 Spike #2 ID : S22987

Analysis : TEH  
 Finished By : JR1  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-034		Soil	49.85	5	1	0.1003		1				TEHM	
248176-001		Soil	49.88	5	1	0.1002		1			3630C	TEHM	
248176-002		Soil	49.7	5	1	0.1006		1			3630C	TEHM	
248176-003		Soil	50.34	5	1	0.09932		1			3630C	TEHM	
248239-001		Soil	49.53	5	1	0.1009		1			3630C	TEHM	
248239-002		Soil	49.88	5	1	0.1002		1			3630C	TEHM	
248239-003		Soil	49.69	5	1	0.1006		1			3630C	TEHM	
248239-004		Soil	50.04	5	1	0.09992		1			3630C	TEHM	
248239-005		Soil	49.56	5	1	0.1009		1			3630C	TEHM	
248239-006		Soil	50.48	5	1	0.09905		1			3630C	TEHM	
248239-007		Soil	49.98	5	1	0.1000		1			3630C	TEHM	
248239-008		Soil	50.12	5	1	0.09976		1			3630C	TEHM	
248240-001		Soil	49.89	5	1	0.1002		1			3630C	TEHM	
248240-002		Soil	49.98	5	1	0.1000		1			3630C	TEHM	
248240-003		Soil	50.13	5	1	0.09974		1			3630C	TEHM	
248240-004		Soil	50.06	5	1	0.09988		1			3630C	TEHM	
248240-005		Soil	49.68	5	1	0.1006		1			3630C	TEHM	
248240-006		Soil	50.3	5	1	0.0994		1			3630C	TEHM	
248260-001		Soil	50.37	5	1	0.09927		1				TEHM	mss
QC703348	BLANK	Soil	49.62	5	1	0.1008		1			3630C		
QC703349	LCS	Soil	49.7	5	1	0.1006		1	1		3630C		
QC703350	MS	Soil	50.46	5	1	0.09909		1	1				
QC703351	MSD	Soil	50.18	5	1	0.09964		1	1				

Analyst: JDG

Date: 08/26/13

Reviewer: SFL

Date: 08/26/13

TEH (8015) Soil Prep Log

Curtis & Tompkins, Ltd.

BK 3464

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Extraction Method:

LIMS Batch No: 202046  
 LIMS Analysis TEH/M  
 Date Extracted: 8/22/13

- Shaker Table  
 EPA 3550 Sonication  
 \_\_\_\_\_

Cleanup Method (if necessary):  
 EPA 3630 Silica Gel

Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Cleanup (x if needed)	Comments
248030-034	D	49.85	5.0 <input type="checkbox"/>		
248176-001	A	49.88	5.0 <input type="checkbox"/>	X	
↓ 2	↓	49.70	5.0 <input type="checkbox"/>		
↓ 3	↓	50.34	5.0 <input type="checkbox"/>		
5 248239-001		49.53	5.0 <input type="checkbox"/>		
↓ 2	↓	49.88	5.0 <input type="checkbox"/>		
↓ 3	↓	49.69	5.0 <input type="checkbox"/>		
↓ 4	↓	50.04	5.0 <input type="checkbox"/>		
↓ 5	↓	49.56	5.0 <input type="checkbox"/>		
10 ↓ 6	↓	50.48	5.0 <input type="checkbox"/>		
↓ 7	↓	49.98	5.0 <input type="checkbox"/>		
↓ 8	↓	50.12	5.0 <input type="checkbox"/>		
248240-001	F	49.89	5.0 <input type="checkbox"/>		
↓ 2	↓	49.98	5.0 <input type="checkbox"/>		
15 ↓ 3	↓	50.13	5.0 <input type="checkbox"/>		
↓ 4	↓	50.06	5.0 <input type="checkbox"/>		
↓ 5	↓	49.68	5.0 <input type="checkbox"/>		
↓ 6	↓	50.30	5.0 <input type="checkbox"/>		
248260-001	B	50.37	5.0 <input type="checkbox"/>		MSD
20 MB QC 703348	NA	49.62	5.0 <input type="checkbox"/>	X	
LS	49	49.70	5.0 <input type="checkbox"/>		
MS	50	50.46	5.0 <input type="checkbox"/>		
MSD	51	50.18	5.0 <input type="checkbox"/>		
			5.0 <input type="checkbox"/>		
			5.0 <input type="checkbox"/>		

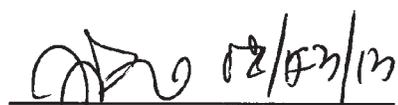
20 08/23/13

Baked, solvent-rinsed granular Na<sub>2</sub>SO<sub>4</sub> weighed out for QC samples  
 Samples were dried with CH<sub>2</sub>Cl<sub>2</sub>-rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 10 mL of Surrogate solution was added to all samples  
 10 mL of Spike solution was added to all spikes  
 1:1 CH<sub>2</sub>Cl<sub>2</sub> (lot# EM53123):Acetone (lot# EM5226) was added to all  
 Solvent added at (time) \_\_\_\_\_  
 Sonicated 3 times w/ ≥100mL  placed on Shaker Table at:  
 taken off Shaker Table at: \_\_\_\_\_  
 Extracts filtered through baked, rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C) \_\_\_\_\_  
 Relinquished to TEH Department

Mfg & Lot # / LIMS # / Time	Date/Initials
EMVLIIB	21 8/22/13
523042B	
572987B	
1730	
NA	
EMVLIIB	
100°C	

  
 Extraction Chemist / Date

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Sample ID	Weight (g)	Analysis	Batch #	Comments
248030-0310	49.85 /	TEHM	202046	
248176-001 A	49.88 /			
2	49.70 /			
3	50.34 /			
248239-001 A	49.53 /			
2	49.88 /			
3	49.69 /			
4	50.04 /			
5	49.56 /			
6	50.48 /			
7	49.98 /			
8	50.12 /			
248240-001 F	49.89 /			
2	49.98 /			
3	50.13 /			
4	50.06 /			
5	49.69 /			
6	50.30 /			
248260-001 B	50.37 /			
MR	49.62 /			
LS	49.70 /			
MS	50.46 /			
MSD	50.18 /			
248291-001 A	29.98	PIP		
2	29.71			
3	29.91			
4	30.12			
5	30.17			
6	29.86			

MS, wet rocks  
EMULIB

248260-001R; wet rocks

PI 2/2/13

PI 2/2/13

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PROPRIETARY INFORMATI

Laboratory Job Number 248030

ANALYTICAL REPORT

Volatile Organics by GC/MS

Matrix: Water

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5030B
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-40	Batch#:	201807
Lab ID:	248030-038	Sampled:	08/15/13
Matrix:	Water	Received:	08/15/13
Units:	ug/L	Analyzed:	08/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Acrolein	ND	10
Acrylonitrile	ND	10
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	77-134
1,2-Dichloroethane-d4	105	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5030B
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	201807
Units:	ug/L	Analyzed:	08/16/13
Diln Fac:	1.000		

Type: BS Lab ID: QC702331

Analyte	Spiked	Result	%REC	Limits
Acrolein		NA		
Acrylonitrile		NA		
Chloromethane	10.00	10.59	106	48-135
Vinyl Chloride	10.00	10.54	105	63-145
Bromomethane	10.00	9.393	94	39-169
Chloroethane	10.00	9.678	97	58-145
1,1-Dichloroethene	12.50	12.85	103	61-137
Methylene Chloride	12.50	14.09	113	66-133
trans-1,2-Dichloroethene	12.50	13.31	106	73-134
1,1-Dichloroethane	12.50	12.01	96	65-133
Chloroform	12.50	12.49	100	73-130
1,1,1-Trichloroethane	12.50	12.24	98	76-141
Carbon Tetrachloride	12.50	12.48	100	74-153
1,2-Dichloroethane	12.50	13.38	107	73-136
Benzene	12.50	13.10	105	78-125
Trichloroethene	12.50	13.07	105	77-122
1,2-Dichloropropane	12.50	12.73	102	69-121
Bromodichloromethane	12.50	12.84	103	76-124
2-Chloroethylvinylether	12.50	0.4009	3	1-120
cis-1,3-Dichloropropene	12.50	14.49	116	80-131
Toluene	12.50	12.88	103	79-123
trans-1,3-Dichloropropene	12.50	11.63	93	71-120
1,1,2-Trichloroethane	12.50	11.23	90	76-120
Tetrachloroethene	12.50	12.56	100	78-139
Dibromochloromethane	12.50	12.06	96	78-125
Chlorobenzene	12.50	13.43	107	80-120
Ethylbenzene	12.50	13.23	106	80-126
Bromoform	12.50	11.60	93	72-140
1,1,2,2-Tetrachloroethane	12.50	12.50	100	69-134

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-134
1,2-Dichloroethane-d4	98	72-140
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-120

NA= Not Analyzed  
 RPD= Relative Percent Difference  
 Page 1 of 2

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5030B
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	201807
Units:	ug/L	Analyzed:	08/16/13
Diln Fac:	1.000		

Type: BSD Lab ID: QC702332

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Acrolein		NA				
Acrylonitrile		NA				
Chloromethane	10.00	9.462	95	48-135	11	25
Vinyl Chloride	10.00	10.15	102	63-145	4	24
Bromomethane	10.00	9.752	98	39-169	4	29
Chloroethane	10.00	8.942	89	58-145	8	30
1,1-Dichloroethene	12.50	12.44	99	61-137	3	24
Methylene Chloride	12.50	14.08	113	66-133	0	22
trans-1,2-Dichloroethene	12.50	12.73	102	73-134	4	22
1,1-Dichloroethane	12.50	11.21	90	65-133	7	20
Chloroform	12.50	11.66	93	73-130	7	20
1,1,1-Trichloroethane	12.50	11.84	95	76-141	3	20
Carbon Tetrachloride	12.50	11.65	93	74-153	7	21
1,2-Dichloroethane	12.50	12.55	100	73-136	6	20
Benzene	12.50	12.51	100	78-125	5	20
Trichloroethene	12.50	12.24	98	77-122	7	20
1,2-Dichloropropane	12.50	12.70	102	69-121	0	20
Bromodichloromethane	12.50	12.31	99	76-124	4	20
2-Chloroethylvinylether	12.50	0.3630	3	1-120	10	63
cis-1,3-Dichloropropene	12.50	13.93	111	80-131	4	20
Toluene	12.50	12.28	98	79-123	5	20
trans-1,3-Dichloropropene	12.50	11.51	92	71-120	1	20
1,1,2-Trichloroethane	12.50	11.30	90	76-120	1	20
Tetrachloroethene	12.50	12.04	96	78-139	4	20
Dibromochloromethane	12.50	11.92	95	78-125	1	20
Chlorobenzene	12.50	12.87	103	80-120	4	20
Ethylbenzene	12.50	12.48	100	80-126	6	20
Bromoform	12.50	11.41	91	72-140	2	20
1,1,2,2-Tetrachloroethane	12.50	12.62	101	69-134	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	99	77-134
1,2-Dichloroethane-d4	97	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	97	80-120

NA= Not Analyzed  
 RPD= Relative Percent Difference  
 Page 2 of 2

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5030B
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC702333	Batch#:	201807
Matrix:	Water	Analyzed:	08/16/13
Units:	ug/L		

Analyte	Result	RL
Acrolein	ND	10
Acrylonitrile	ND	10
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
Bromoform	ND	1.0
1,1,2,2-Tetrachloroethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-134
1,2-Dichloroethane-d4	101	72-140
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected

RL= Reporting Limit

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS BFB TUNE FOR 248030 MSVOA Water  
EPA 8260B

Inst : MSVOA06                      Run Name : BFB                      IDF : 1.0  
Seqnum : 453320921001              File : fha01                      Time : 10-AUG-2013 20:41

Standards: S22624

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	98981	25.46	
75	30% - 60% of mass 95	204842	52.68	
95		388842	100.00	
96	5% - 9% of mass 95	26109	6.71	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	271573	69.84	
175	5% - 9% of mass 174	13720	5.05	
176	> 95% and < 101% of mass 174	261120	96.15	
177	5% - 9% of mass 176	17812	6.82	

Analyst: DAR                      Date: 08/12/13                      Reviewer: SJD                      Date: 08/15/13

CURTIS & TOMPKINS BFB TUNE FOR 248030 MSVOA Water  
EPA 8260B

Inst : MSVOA06                      Run Name : BFB                      IDF : 1.0  
Seqnum : 453326247001              File : fhe01                      Time : 14-AUG-2013 13:27

Standards: S22624

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	91376	25.41	
75	30% - 60% of mass 95	190606	53.01	
95		359540	100.00	
96	5% - 9% of mass 95	23812	6.62	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	251200	69.87	
175	5% - 9% of mass 174	20970	8.35	
176	> 95% and < 101% of mass 174	239125	95.19	
177	5% - 9% of mass 176	15595	6.52	

Analyst: DAR                      Date: 08/14/13                      Reviewer: SJD                      Date: 08/15/13

CURTIS & TOMPKINS BFB TUNE FOR 248030 MSVOA Water  
EPA 8260B

Inst : MSVOA06                      Run Name : BFB                      IDF : 1.0  
Seqnum : 453329131002              File : fhg02                      Time : 16-AUG-2013 13:59

Standards: S22624

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	58725	24.12	
75	30% - 60% of mass 95	123653	50.78	
95		243520	100.00	
96	5% - 9% of mass 95	16603	6.82	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	177514	72.90	
175	5% - 9% of mass 174	14698	8.28	
176	> 95% and < 101% of mass 174	168682	95.02	
177	5% - 9% of mass 176	11278	6.69	

Analyst: DAR                      Date: 08/16/13                      Reviewer: BO                      Date: 08/19/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 MSVOA Water: EPA 8260B

Inst : MSVOA06 Name : 826G0X6W  
 Calnum : 453320921002 Date : 10-AUG-2013 22:49 Type : WATER  
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	fha05	453320921005	10-AUG-2013 22:49	S23013 (2000000X), S21953 (4000000X), S22920 (2000000X), S21857 (2000000X), S22914 (5000X)
L2	fha06	453320921006	10-AUG-2013 23:22	S23013 (1000000X), S21953 (2000000X), S22920 (1000000X), S21857 (1000000X), S22914 (5000X)
L3	fha07	453320921007	10-AUG-2013 23:54	S23013 (500000X), S21953 (1000000X), S22920 (500000X), S21857 (500000X), S22914 (5000X)
L4	fha08	453320921008	11-AUG-2013 00:27	S23013 (250000X), S21635 (500000X), S22920 (250000X), S21857 (250000X), S22914 (5000X)
L5	fha09	453320921009	11-AUG-2013 01:00	S23013 (100000X), S21953 (200000X), S22920 (100000X), S21857 (100000X), S22914 (5000X)
L6	fha10	453320921010	11-AUG-2013 01:33	S23013 (50000X), S21953 (100000X), S22920 (50000X), S21857 (50000X), S22914 (5000X)
L7	fha11	453320921011	11-AUG-2013 02:07	S23013 (250000X), S21953 (500000X), S22920 (250000X), S21857 (250000X), S22914 (5000X)
L8	fha12	453320921012	11-AUG-2013 02:40	S23013 (10000X), S21953 (20000X), S22920 (10000X), S21857 (10000X), S22914 (5000X)
L9	fha13	453320921013	11-AUG-2013 03:14	S23013 (6667X), S21953 (13330X), S22920 (6667X), S21857 (6667X), S22914 (5000X)
L10	fha14	453320921014	11-AUG-2013 03:47	S23013 (5000X), S21953 (10000X), S22920 (5000X), S21857 (5000X), S22914 (5000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min %RSD	Min r^2	Flg
Chloromethane		2.0018m	1.9634m	1.7359m	1.4701	1.7307	1.5797m	1.6442	1.6763	1.6341	AVRG	0.58304			1.7151	10	15	0.10	0.99	
Vinyl Chloride		1.4927m	1.4829	1.4590	1.3387	1.3606	1.1916	1.3296	1.2961	1.2874	AVRG	0.73536			1.3599	7	15	0.05	0.99	
Bromomethane		0.6798m	0.7590m	0.7108m	0.6514m	0.7854	0.7135	0.7025	0.7332	0.7768	AVRG	1.38199			0.7236	6	15	0.05	0.99	
Chloroethane			1.0813	0.8832m	0.7686	0.9043	0.7647	0.7995	0.8100	0.8102	AVRG	1.17273			0.8527	12	15	0.05	0.99	
1,1-Dichloroethene		0.6718	0.8079	0.6637	0.6947	0.7453	0.6171	0.7069	0.7143	0.7036	AVRG	1.42287			0.7028	8	15	0.05	0.99	
Methylene Chloride		0.8213	0.9234	0.9520	0.9109	0.9540	0.8598	0.8898	0.9097	0.8823	AVRG	1.11067			0.9004	5	15	0.05	0.99	
trans-1,2-Dichloroethene		0.9115	0.8991	0.8311	0.8009	0.8323	0.7435	0.7763	0.7884	0.7861	AVRG	1.22132			0.8188	7	15	0.05	0.99	
1,1-Dichloroethane		1.8257	2.0193	1.8167	1.8645	1.9299	1.7869	1.8424	1.8075	1.8032	AVRG	0.53905			1.8551	4	15	0.10	0.99	
Chloroform		1.8236	1.9838	1.7381	1.6735	1.8205	1.6314	1.7106	1.6721	1.6558	AVRG	0.57290			1.7455	6	15	0.05	0.99	
1,1,1-Trichloroethane		1.3578	1.4161	1.3062	1.3660	1.4121	1.2226	1.3254	1.2941	1.2869	AVRG	0.75081			1.3319	5	15	0.05	0.99	
Carbon Tetrachloride		0.4891	0.5369	0.4814	0.5294	0.5624	0.4713	0.5274	0.5358	0.5266	AVRG	1.93123			0.5178	6	15	0.05	0.99	
1,2-Dichloroethane		0.7564	0.7557	0.7034	0.6612	0.7223	0.7105	0.6995	0.6783	0.6662	AVRG	1.41656			0.7059	5	15	0.05	0.99	
Benzene		1.5580	1.6822	1.5008	1.5355	1.6743	1.5742	1.6540	1.6048	1.6404	AVRG	0.62395			1.6027	4	15	0.05	0.99	
Trichloroethene		0.4356	0.4467	0.3780	0.4097	0.4303	0.4031	0.4389	0.4431	0.4532	AVRG	2.34469			0.4265	6	15	0.05	0.99	
1,2-Dichloropropane		0.4586	0.4702	0.4860	0.4685	0.4897	0.4773	0.4901	0.4832	0.4844	AVRG	2.08914			0.4787	2	15	0.05	0.99	
Bromodichloromethane		0.6382	0.6742	0.6084	0.5916	0.6480	0.6176	0.6365	0.6343	0.6416	AVRG	1.58162			0.6323	4	15	0.05	0.99	
cis-1,3-Dichloropropene		0.6203	0.7003	0.5996	0.6283	0.6784	0.6543	0.7142	0.6998	0.6972	AVRG	1.50191			0.6658	6	15	0.05	0.99	
Toluene		1.0029	0.9867	0.8995	0.9588	0.9410	0.8897	0.9839	0.9847	1.0002	AVRG	1.04077			0.9608	4	15	0.05	0.99	
trans-1,3-Dichloropropene		0.6380	0.7054	0.6309	0.6615	0.7116	0.7100	0.7733	0.7339	0.7719	AVRG	1.42032			0.7041	7	15	0.05	0.99	
1,1,2-Trichloroethane		0.2326	0.2383	0.2085	0.2238	0.2214	0.2171	0.2460	0.2418	0.2434	AVRG	4.34196			0.2303	6	15	0.05	0.99	
Tetrachloroethene		0.3000	0.3710	0.3048	0.3430	0.3480	0.3034	0.3768	0.3824	0.3994	AVRG	2.87645			0.3477	11	15	0.05	0.99	
Dibromochloromethane		0.3577	0.3870	0.3948	0.4173	0.4472	0.4301	0.4935	0.4778	0.4979	AVRG	2.30578			0.4337	11	15	0.05	0.99	
Chlorobenzene		0.9839	1.0205	0.9137	0.8954	0.9617	0.8864	0.9692	0.9345	0.9848	AVRG	1.05262			0.9500	5	15	0.30	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Type	a0	a1	a2	Avg	r^2	Max	Min	r^2	Min	Flg
	%D	%D		%D	%D	%D	%D	%RSD	%RSD	RF	r^2	RF	Flg								
Ethylbenzene	1.8512	1.8716	1.7487	1.7927	1.8862	1.6672	1.8930	1.8273	1.8884	AVRG		0.54790			1.8251	4	15	0.05	0.99		
Bromoform	0.2572	0.2465	0.2720	0.2683	0.2930	0.2855	0.3321	0.3329	0.3469	AVRG		3.41639			0.2927	12	15	0.10	0.99		
1,1,2,2-Tetrachloroethane	1.0454	1.0307	0.9875	1.0335	1.0041	0.9834	1.0710	1.0207	0.9878	AVRG		0.98209			1.0182	3	15	0.30	0.99		
2-Chloroethylvinylether	0.3579	0.3498	0.3180	0.3348	0.3618	0.3593	0.3894	0.3787	0.3751	AVRG		2.79081			0.3583	6	15	0.05	0.99		
Dibromofluoromethane	0.8983	0.9118	0.9467	0.9038	0.9466	0.9343	0.8974	0.9091	0.8817	AVRG		1.08779			0.9193	3	15	0.05	0.99		
1,2-Dichloroethane-d4	0.5801	0.5904	0.5950	0.5551	0.5897	0.5829	0.5474	0.5331	0.5268	AVRG		1.76047			0.5680	4	15	0.05	0.99		
Toluene-d8	1.3445	1.2907	1.3239	1.3180	1.2977	1.3045	1.3108	1.2813	1.3297	AVRG		0.76101			1.3141	2	15	0.05	0.99		
Bromofluorobenzene	1.1272	1.0999	1.1367	1.1053	1.1097	1.0620	1.0620	1.0286	1.0604	AVRG		0.91681			1.0907	3	15	0.05	0.99		

Spiked Amounts / Drifts	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	%D	L7	%D	L8	%D	L9	%D	L10	%D	
Chloromethane		0.5000	17	1.0000	14	2.0000	1	5.0000	-14	10.000	1	20.000	-8	50.000	-4	75.000	-2	100.00	-5	
Vinyl Chloride		0.5000	10	1.0000	9	2.0000	7	5.0000	-2	10.000	0	20.000	-12	50.000	-2	75.000	-5	100.00	-5	
Bromomethane		0.5000	-6	1.0000	5	2.0000	-2	5.0000	-10	10.000	9	20.000	-1	50.000	-3	75.000	1	100.00	7	
Chloroethane				1.0000	27	2.0000	4	5.0000	-10	10.000	6	20.000	-10	50.000	-6	75.000	-5	100.00	-5	
1,1-Dichloroethene		0.5000	-4	1.0000	15	2.0000	-6	5.0000	-1	10.000	6	20.000	-12	50.000	1	75.000	2	100.00	0	
Methylene Chloride		0.5000	-9	1.0000	3	2.0000	6	5.0000	1	10.000	6	20.000	-5	50.000	-1	75.000	1	100.00	-2	
trans-1,2-Dichloroethene		0.5000	11	1.0000	10	2.0000	2	5.0000	-2	10.000	2	20.000	-9	50.000	-5	75.000	-4	100.00	-4	
1,1-Dichloroethane		0.5000	-2	1.0000	9	2.0000	-2	5.0000	1	10.000	4	20.000	-4	50.000	-1	75.000	-3	100.00	-3	
Chloroform		0.5000	4	1.0000	14	2.0000	0	5.0000	-4	10.000	4	20.000	-7	50.000	-2	75.000	-4	100.00	-5	
1,1,1-Trichloroethane		0.5000	2	1.0000	6	2.0000	-2	5.0000	3	10.000	6	20.000	-8	50.000	0	75.000	-3	100.00	-3	
Carbon Tetrachloride		0.5000	-6	1.0000	4	2.0000	-7	5.0000	2	10.000	9	20.000	-9	50.000	2	75.000	3	100.00	2	
1,2-Dichloroethane		0.5000	7	1.0000	7	2.0000	0	5.0000	-6	10.000	2	20.000	1	50.000	-1	75.000	-4	100.00	-6	
Benzene		0.5000	-3	1.0000	5	2.0000	-6	5.0000	-4	10.000	4	20.000	-2	50.000	3	75.000	0	100.00	2	
Trichloroethene		0.5000	2	1.0000	5	2.0000	-11	5.0000	-4	10.000	1	20.000	-5	50.000	3	75.000	4	100.00	6	
1,2-Dichloropropane		0.5000	-4	1.0000	-2	2.0000	2	5.0000	-2	10.000	2	20.000	0	50.000	2	75.000	1	100.00	1	
Bromodichloromethane		0.5000	1	1.0000	7	2.0000	-4	5.0000	-6	10.000	2	20.000	-2	50.000	1	75.000	0	100.00	1	
cis-1,3-Dichloropropene		0.5000	-7	1.0000	5	2.0000	-10	5.0000	-6	10.000	2	20.000	-2	50.000	7	75.000	5	100.00	5	
Toluene		0.5000	4	1.0000	3	2.0000	-6	5.0000	0	10.000	-2	20.000	-7	50.000	2	75.000	2	100.00	4	
trans-1,3-Dichloropropene		0.5000	-9	1.0000	0	2.0000	-10	5.0000	-6	10.000	1	20.000	1	50.000	10	75.000	4	100.00	10	
1,1,2-Trichloroethane		0.5000	1	1.0000	3	2.0000	-9	5.0000	-3	10.000	-4	20.000	-6	50.000	7	75.000	5	100.00	6	
Tetrachloroethene		0.5000	-14	1.0000	7	2.0000	-12	5.0000	-1	10.000	0	20.000	-13	50.000	8	75.000	10	100.00	15	
Dibromochloromethane		0.5000	-18	1.0000	-11	2.0000	-9	5.0000	-4	10.000	3	20.000	-1	50.000	14	75.000	10	100.00	15	
Chlorobenzene		0.5000	4	1.0000	7	2.0000	-4	5.0000	-6	10.000	1	20.000	-7	50.000	2	75.000	-2	100.00	4	
Ethylbenzene		0.5000	1	1.0000	3	2.0000	-4	5.0000	-2	10.000	3	20.000	-9	50.000	4	75.000	0	100.00	3	
Bromoform		0.5000	-12	1.0000	-16	2.0000	-7	5.0000	-8	10.000	0	20.000	-2	50.000	13	75.000	14	100.00	19	
1,1,2,2-Tetrachloroethane		0.5000	3	1.0000	1	2.0000	-3	5.0000	2	10.000	-1	20.000	-3	50.000	5	75.000	0	100.00	-3	
2-Chloroethylvinylether		0.5000	0	1.0000	-2	2.0000	-11	5.0000	-7	10.000	1	20.000	0	50.000	9	75.000	6	100.00	5	
Dibromofluoromethane	50.000	-2	50.000	-1	50.000	3	50.000	5	50.000	-2	50.000	3	50.000	2	50.000	-2	50.000	-1	50.000	-4
1,2-Dichloroethane-d4	50.000	2	50.000	4	50.000	5	50.000	2	50.000	-2	50.000	4	50.000	3	50.000	-4	50.000	-6	50.000	-7
Toluene-d8	50.000	2	50.000	-2	50.000	1	50.000	0	50.000	2	50.000	-1	50.000	-1	50.000	0	50.000	-2	50.000	1
Bromofluorobenzene	50.000	3	50.000	1	50.000	4	50.000	1	50.000	2	50.000	2	50.000	-3	50.000	-3	50.000	-6	50.000	-3

DAR 08/12/13 [Freon 12]: Combined split peak in multiple levels.  
DAR 08/12/13 [Chloromethane]: Combined split peak in multiple levels.  
DAR 08/12/13 [Bromomethane]: Combined split peak in multiple levels.  
DAR 08/12/13 [Vinyl Chloride]: Combined split peak in 0.5PPB (fha06).  
DAR 08/12/13 [Chloroethane]: Combined split peak in 2PPB (fha08).  
DAR 08/12/13 [Methyl tert-Amyl Ether (TAME)]: Combined split peak in 0.5PPB (fha06).  
DAR 08/12/13 [Vinyl Acetate]: Corrected automatically drawn baseline in multiple levels.  
DAR 08/12/13 [Ethanol]: Combined split peak in multiple levels.  
DAR 08/12/13 [Isopropanol]: Combined split peak in multiple levels.  
DAR 08/14/13 [Isopropanol]: This calibration is not good for Isopropanol  
DAR 08/14/13 [Ethanol]: ICV out low -38% for Ethanol

Analyst: DAR Date: 08/14/13 Reviewer: SJD Date: 08/15/13

m>manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor



CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 MSVOA Water: EPA 8260B

Inst : MSVOA06 Name : ACRLACRNMS6 Type : WATER  
 Calnum : 453329131001 Date : 16-AUG-2013 16:05  
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	fhg06	453329131006	A/A 16-AUG-2013 16:05	S22949 (50000X), S22914 (5000X)

Analyte	L1	Type	a0	a1	a2	Avg	r <sup>2</sup> %RSD	Max %RSD	Min RF	Min r <sup>2</sup>	Flg
Acrolein	0.0854m	AVRG		11.7107		0.0854	0	15	0.005	0.99	
Acrylonitrile	0.4556m	AVRG		2.19488		0.4556	0	15	0.005	0.99	

Spiked Amounts / Drifts		L1	%D
Acrolein		10.000	0
Acrylonitrile		10.000	0

KKM 08/19/13 [Acrolein]: Corrected fronting or tailing peak integrationA (fhg06).

KKM 08/19/13 [Acrylonitrile]: Corrected fronting or tailing peak integrationA (fhg06).

Analyst: KKM Date: 08/19/13 Reviewer: SJD Date: 08/19/13

m>manual integration  
 Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor  
 Page 1 of 1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 MSVOA Water  
EPA 8260B

Inst : MSVOA06  
Calnum : 453329131001

Name : ACRLACRNMS6  
Cal Date : 16-AUG-2013

Type : WATER

**NO ICVs ANALYZED**

Analyte	Spiked	Quant	Units	%D	Max	Flags
Acrolein						
Acrylonitrile						



## Logbooks & Sequences

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 453329131

Date : 08/16/13  
 Sequence : MSVOA06 fhg

Reference : fha12  
 Analyzed : 08/11/13 02:40

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	509102	12.46	1018784	13.81	907181	18.38	499266	21.10
		LOWER LIMIT	254551	11.96	509392	13.31	453591	17.88	249633	20.60
		UPPER LIMIT	1018204	12.96	2037568	14.31	1814362	18.88	998532	21.60
003	CCV		644041	12.49	1251257	13.82	1231518	18.38	656491	21.10
004	BS	QC702331	629865	12.49	1208794	13.82	1169307	18.39	655633	21.10
005	BSD	QC702332	628573	12.49	1224713	13.82	1184667	18.39	649118	21.11
007	BLANK	QC702333	605629	12.48	1160894	13.82	1138200	18.39	620826	21.11
008	SAMPLE	248036-001	606956	12.48	1155680	13.82	1153614	18.39	620014	21.11
009	SAMPLE	248036-002	613338	12.49	1176611	13.83	1163309	18.39	633443	21.10
010	SAMPLE	247926-006	609313	12.49	1163065	13.83	1173711	18.39	634452	21.10
011	SAMPLE	247848-022	599595	12.48	1191933	13.82	1156784	18.39	623754	21.11
012	SAMPLE	248030-038	564588	12.49	1084791	13.82	1095973	18.39	591957	21.11
013	SAMPLE	248036-004	650763	12.49	1276041	13.82	1285224	18.39	711681	21.11
014	SAMPLE	248036-005	676168	12.47	1280162	13.81	1245278	18.38	684333	21.10
015	SAMPLE	248036-003	581638	12.48	1127998	13.82	1083238	18.39	587394	21.11

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 453329131

Date : 08/16/13  
 Sequence : MSVOA06 fhg

Reference : fhg06  
 Analyzed : 08/16/13 16:05

#	Type	Sample ID	PFLBZ	RT
		ICAL STD	617563	12.49
		LOWER LIMIT	308782	11.99
		UPPER LIMIT	1235126	12.99
007	BLANK	QC702333	605629	12.48
012	SAMPLE	248030-038	564588	12.49





CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 453329131

Instrument : MSVOA06 Begun : 08/16/13 13:31  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	fhg01	X	IB			08/16/13 13:31	1.0	1	
002	fhg02	TUN	BFB			08/16/13 13:59	1.0	2	
003	fhg03	CCV				08/16/13 14:28	1.0	3 4 5 6 1	
004	fhg04	BS	QC702331	Water	201807	08/16/13 15:00	1.0	7 8 9 10 1	
005	fhg05	BSD	QC702332	Water	201807	08/16/13 15:33	1.0	7 8 9 10 1	
006	fhg06	ICAL	A/A			08/16/13 16:05	1.0	11 1	
007	fhg07	BLANK	QC702333	Water	201807	08/16/13 16:37	1.0	1	
008	fhg08	SAMPLE	248036-001	Water	201807	08/16/13 17:10	1.0	1	
009	fhg09	SAMPLE	248036-002	Water	201807	08/16/13 17:42	1.0	1	
010	fhg10	SAMPLE	247926-006	Water	201807	08/16/13 18:14	1.0	1	
011	fhg11	SAMPLE	247848-022	Water	201807	08/16/13 18:46	1.0	1	
012	fhg12	SAMPLE	248030-038	Water	201807	08/16/13 19:19	1.0	1	pH > 2
013	fhg13	SAMPLE	248036-004	Water	201807	08/16/13 19:51	1.0	1	pH > 2, 1:MEK=190
014	fhg14	SAMPLE	248036-005	Water	201807	08/16/13 20:24	1.0	1	1:MEK=250
015	fhg15	SAMPLE	248036-003	Water	201807	08/16/13 20:57	83.33	1	

DAR 08/16/13 : Matrix spikes were not performed for this analysis in batch 201807 due to insufficient sample amount.

KKM 08/19/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 15.

KKM 08/19/13 : Matrix spikes were not performed for this analysis in batch 201807 due to insufficient sample amount.

Analyst: KKM Date: 08/19/13 Reviewer: SJD Date: 08/19/13

Standards used: 1=S22914 2=S22624 3=S21953 4=S23013 5=S22920 6=S21857 7=S22975 8=S22927 9=S23020 10=S22435 11=S22949

**MSVOA WATER Prepsheet**

Curtis & Tompkins, Ltd.

Date:

Batch #: 201507

Sample ID	Vial	pH <2	pH >2)	(if HS?)	Dil'n flask	MS#	RR	DF	Comments	20% ccv ?	hold	due	init date
1	217-8465	✓	✓			6		1x	PF <del>check</del> <del>entry</del>				PK
2	248030-39	✓	5					1x	Use unpreserved, A/A vial F				
3	248036-1	✓						1x					
4	-2	✓						1x					
5	-3	✓			5			83.3x					
6	-4	✓	2.5					1x					
7	-5	✓						1x					
8	2470126-6	✓						1x	TR				
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

Laboratory Job Number 248030

ANALYTICAL REPORT

Volatile Organics by GC/MS

Matrix: Soil

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-08A	Batch#:	201795
Lab ID:	248030-002	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/16/13
Diln Fac:	0.7587		

Moisture: 5%

Analyte	Result	RL
Freon 12	ND	8.0
Chloromethane	ND	8.0
Vinyl Chloride	ND	8.0
Bromomethane	ND	8.0
Chloroethane	ND	8.0
Trichlorofluoromethane	ND	4.0
Acetone	ND	16
Freon 113	ND	4.0
1,1-Dichloroethene	ND	4.0
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.0
MTBE	ND	4.0
trans-1,2-Dichloroethene	ND	4.0
Vinyl Acetate	ND	40
1,1-Dichloroethane	ND	4.0
2-Butanone	ND	8.0
cis-1,2-Dichloroethene	ND	4.0
2,2-Dichloropropane	ND	4.0
Chloroform	ND	4.0
Bromochloromethane	ND	4.0
1,1,1-Trichloroethane	ND	4.0
1,1-Dichloropropene	ND	4.0
Carbon Tetrachloride	ND	4.0
1,2-Dichloroethane	ND	4.0
Benzene	ND	4.0
Trichloroethene	ND	4.0
1,2-Dichloropropane	ND	4.0
Bromodichloromethane	ND	4.0
Dibromomethane	ND	4.0
4-Methyl-2-Pentanone	ND	8.0
cis-1,3-Dichloropropene	ND	4.0
Toluene	ND	4.0
trans-1,3-Dichloropropene	ND	4.0
1,1,2-Trichloroethane	ND	4.0
2-Hexanone	ND	8.0
1,3-Dichloropropane	ND	4.0
Tetrachloroethene	ND	4.0
Dibromochloromethane	ND	4.0
1,2-Dibromoethane	ND	4.0
Chlorobenzene	ND	4.0
1,1,1,2-Tetrachloroethane	ND	4.0
Ethylbenzene	ND	4.0
m,p-Xylenes	ND	4.0
o-Xylene	ND	4.0
Styrene	ND	4.0
Bromoform	ND	4.0
Isopropylbenzene	ND	4.0
1,1,2,2-Tetrachloroethane	ND	4.0
1,2,3-Trichloropropane	ND	4.0
Propylbenzene	ND	4.0
Bromobenzene	ND	4.0

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-08A	Batch#:	201795
Lab ID:	248030-002	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/16/13
Diln Fac:	0.7587		

Analyte	Result	RL
1,3,5-Trimethylbenzene	ND	4.0
2-Chlorotoluene	ND	4.0
4-Chlorotoluene	ND	4.0
tert-Butylbenzene	ND	4.0
1,2,4-Trimethylbenzene	ND	4.0
sec-Butylbenzene	ND	4.0
para-Isopropyl Toluene	ND	4.0
1,3-Dichlorobenzene	ND	4.0
1,4-Dichlorobenzene	ND	4.0
n-Butylbenzene	ND	4.0
1,2-Dichlorobenzene	ND	4.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	4.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	4.0

Surrogate	%REC	Limits
Dibromofluoromethane	117	80-124
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	101	80-120
Bromofluorobenzene	97	79-127

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-08B	Batch#:	201795
Lab ID:	248030-003	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/16/13
Diln Fac:	0.7645		

Moisture: 13%

Analyte	Result	RL
Freon 12	ND	8.8
Chloromethane	ND	8.8
Vinyl Chloride	ND	8.8
Bromomethane	ND	8.8
Chloroethane	ND	8.8
Trichlorofluoromethane	ND	4.4
Acetone	ND	18
Freon 113	ND	4.4
1,1-Dichloroethene	ND	4.4
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.4
MTBE	ND	4.4
trans-1,2-Dichloroethene	ND	4.4
Vinyl Acetate	ND	44
1,1-Dichloroethane	ND	4.4
2-Butanone	ND	8.8
cis-1,2-Dichloroethene	ND	4.4
2,2-Dichloropropane	ND	4.4
Chloroform	ND	4.4
Bromochloromethane	ND	4.4
1,1,1-Trichloroethane	ND	4.4
1,1-Dichloropropene	ND	4.4
Carbon Tetrachloride	ND	4.4
1,2-Dichloroethane	ND	4.4
Benzene	ND	4.4
Trichloroethene	ND	4.4
1,2-Dichloropropane	ND	4.4
Bromodichloromethane	ND	4.4
Dibromomethane	ND	4.4
4-Methyl-2-Pentanone	ND	8.8
cis-1,3-Dichloropropene	ND	4.4
Toluene	ND	4.4
trans-1,3-Dichloropropene	ND	4.4
1,1,2-Trichloroethane	ND	4.4
2-Hexanone	ND	8.8
1,3-Dichloropropane	ND	4.4
Tetrachloroethene	ND	4.4
Dibromochloromethane	ND	4.4
1,2-Dibromoethane	ND	4.4
Chlorobenzene	ND	4.4
1,1,1,2-Tetrachloroethane	ND	4.4
Ethylbenzene	ND	4.4
m,p-Xylenes	ND	4.4
o-Xylene	ND	4.4
Styrene	ND	4.4
Bromoform	ND	4.4
Isopropylbenzene	ND	4.4
1,1,2,2-Tetrachloroethane	ND	4.4
1,2,3-Trichloropropane	ND	4.4
Propylbenzene	ND	4.4

\*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-08B	Batch#:	201795
Lab ID:	248030-003	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/16/13
Diln Fac:	0.7645		

Analyte	Result	RL
Bromobenzene	ND	4.4
1,3,5-Trimethylbenzene	ND	4.4
2-Chlorotoluene	ND	4.4
4-Chlorotoluene	ND	4.4
tert-Butylbenzene	ND	4.4
1,2,4-Trimethylbenzene	ND	4.4
sec-Butylbenzene	ND	4.4
para-Isopropyl Toluene	ND	4.4
1,3-Dichlorobenzene	ND	4.4
1,4-Dichlorobenzene	ND	4.4
n-Butylbenzene	ND	4.4
1,2-Dichlorobenzene	ND	4.4
1,2-Dibromo-3-Chloropropane	ND	4.4
1,2,4-Trichlorobenzene	ND	4.4
Hexachlorobutadiene	ND	4.4
Naphthalene	ND	4.4
1,2,3-Trichlorobenzene	ND	4.4

Surrogate	%REC	Limits
Dibromofluoromethane	112	80-124
1,2-Dichloroethane-d4	116	80-137
Toluene-d8	123 *	80-120
Bromofluorobenzene	94	79-127

\*= Value outside of QC limits; see narrative  
 ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-10A	Batch#:	201795
Lab ID:	248030-011	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/16/13
Diln Fac:	0.7576		

Moisture: 8%

Analyte	Result	RL
Freon 12	ND	8.2
Chloromethane	ND	8.2
Vinyl Chloride	ND	8.2
Bromomethane	ND	8.2
Chloroethane	ND	8.2
Trichlorofluoromethane	ND	4.1
Acetone	ND	16
Freon 113	ND	4.1
1,1-Dichloroethene	ND	4.1
Methylene Chloride	ND	16
Carbon Disulfide	ND	4.1
MTBE	ND	4.1
trans-1,2-Dichloroethene	ND	4.1
Vinyl Acetate	ND	41
1,1-Dichloroethane	ND	4.1
2-Butanone	ND	8.2
cis-1,2-Dichloroethene	ND	4.1
2,2-Dichloropropane	ND	4.1
Chloroform	ND	4.1
Bromochloromethane	ND	4.1
1,1,1-Trichloroethane	ND	4.1
1,1-Dichloropropene	ND	4.1
Carbon Tetrachloride	ND	4.1
1,2-Dichloroethane	ND	4.1
Benzene	ND	4.1
Trichloroethene	ND	4.1
1,2-Dichloropropane	ND	4.1
Bromodichloromethane	ND	4.1
Dibromomethane	ND	4.1
4-Methyl-2-Pentanone	ND	8.2
cis-1,3-Dichloropropene	ND	4.1
Toluene	ND	4.1
trans-1,3-Dichloropropene	ND	4.1
1,1,2-Trichloroethane	ND	4.1
2-Hexanone	ND	8.2
1,3-Dichloropropane	ND	4.1
Tetrachloroethene	ND	4.1
Dibromochloromethane	ND	4.1
1,2-Dibromoethane	ND	4.1
Chlorobenzene	ND	4.1
1,1,1,2-Tetrachloroethane	ND	4.1
Ethylbenzene	ND	4.1
m,p-Xylenes	ND	4.1
o-Xylene	ND	4.1
Styrene	ND	4.1
Bromoform	ND	4.1
Isopropylbenzene	ND	4.1
1,1,2,2-Tetrachloroethane	ND	4.1
1,2,3-Trichloropropane	ND	4.1
Propylbenzene	ND	4.1

\*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-10A	Batch#:	201795
Lab ID:	248030-011	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/16/13
Diln Fac:	0.7576		

Analyte	Result	RL
Bromobenzene	ND	4.1
1,3,5-Trimethylbenzene	ND	4.1
2-Chlorotoluene	ND	4.1
4-Chlorotoluene	ND	4.1
tert-Butylbenzene	ND	4.1
1,2,4-Trimethylbenzene	ND	4.1
sec-Butylbenzene	ND	4.1
para-Isopropyl Toluene	ND	4.1
1,3-Dichlorobenzene	ND	4.1
1,4-Dichlorobenzene	ND	4.1
n-Butylbenzene	ND	4.1
1,2-Dichlorobenzene	ND	4.1
1,2-Dibromo-3-Chloropropane	ND	4.1
1,2,4-Trichlorobenzene	ND	4.1
Hexachlorobutadiene	ND	4.1
Naphthalene	ND	4.1
1,2,3-Trichlorobenzene	ND	4.1

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-124
1,2-Dichloroethane-d4	115	80-137
Toluene-d8	128 *	80-120
Bromofluorobenzene	93	79-127

\*= Value outside of QC limits; see narrative  
 ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-10B	Batch#:	201795
Lab ID:	248030-012	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/16/13
Diln Fac:	0.7669		

Moisture: 14%

Analyte	Result	RL
Freon 12	ND	8.9
Chloromethane	ND	8.9
Vinyl Chloride	ND	8.9
Bromomethane	ND	8.9
Chloroethane	ND	8.9
Trichlorofluoromethane	ND	4.5
Acetone	ND	18
Freon 113	ND	4.5
1,1-Dichloroethene	ND	4.5
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.5
MTBE	ND	4.5
trans-1,2-Dichloroethene	ND	4.5
Vinyl Acetate	ND	45
1,1-Dichloroethane	ND	4.5
2-Butanone	ND	8.9
cis-1,2-Dichloroethene	ND	4.5
2,2-Dichloropropane	ND	4.5
Chloroform	ND	4.5
Bromochloromethane	ND	4.5
1,1,1-Trichloroethane	ND	4.5
1,1-Dichloropropene	ND	4.5
Carbon Tetrachloride	ND	4.5
1,2-Dichloroethane	ND	4.5
Benzene	ND	4.5
Trichloroethene	ND	4.5
1,2-Dichloropropane	ND	4.5
Bromodichloromethane	ND	4.5
Dibromomethane	ND	4.5
4-Methyl-2-Pentanone	ND	8.9
cis-1,3-Dichloropropene	ND	4.5
Toluene	ND	4.5
trans-1,3-Dichloropropene	ND	4.5
1,1,2-Trichloroethane	ND	4.5
2-Hexanone	ND	8.9
1,3-Dichloropropane	ND	4.5
Tetrachloroethene	ND	4.5
Dibromochloromethane	ND	4.5
1,2-Dibromoethane	ND	4.5
Chlorobenzene	ND	4.5
1,1,1,2-Tetrachloroethane	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
Styrene	ND	4.5
Bromoform	ND	4.5
Isopropylbenzene	ND	4.5
1,1,2,2-Tetrachloroethane	ND	4.5
1,2,3-Trichloropropane	ND	4.5
Propylbenzene	ND	4.5
Bromobenzene	ND	4.5

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-10B	Batch#:	201795
Lab ID:	248030-012	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/16/13
Diln Fac:	0.7669		

Analyte	Result	RL
1,3,5-Trimethylbenzene	ND	4.5
2-Chlorotoluene	ND	4.5
4-Chlorotoluene	ND	4.5
tert-Butylbenzene	ND	4.5
1,2,4-Trimethylbenzene	ND	4.5
sec-Butylbenzene	ND	4.5
para-Isopropyl Toluene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
n-Butylbenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5
1,2-Dibromo-3-Chloropropane	ND	4.5
1,2,4-Trichlorobenzene	ND	4.5
Hexachlorobutadiene	ND	4.5
Naphthalene	ND	4.5
1,2,3-Trichlorobenzene	ND	4.5

Surrogate	%REC	Limits
Dibromofluoromethane	123	80-124
1,2-Dichloroethane-d4	104	80-137
Toluene-d8	102	80-120
Bromofluorobenzene	95	79-127

ND= Not Detected  
 RL= Reporting Limit

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-14A	Basis:	dry
Lab ID:	248030-014	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	ug/Kg		

Moisture: 9%

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed
Freon 12	ND	11	0.9901	201795	KKM	08/16/13
Chloromethane	ND	11	0.9901	201795	KKM	08/16/13
Vinyl Chloride	ND	11	0.9901	201795	KKM	08/16/13
Bromomethane	ND	11	0.9901	201795	KKM	08/16/13
Chloroethane	ND	11	0.9901	201795	KKM	08/16/13
Trichlorofluoromethane	ND	5.4	0.9901	201795	KKM	08/16/13
Acetone	ND	1,200	53.54	201925	TEW	08/20/13
Freon 113	ND	5.4	0.9901	201795	KKM	08/16/13
1,1-Dichloroethene	ND	5.4	0.9901	201795	KKM	08/16/13
Methylene Chloride	ND	22	0.9901	201795	KKM	08/16/13
Carbon Disulfide	7.2	5.4	0.9901	201795	KKM	08/16/13
MTBE	ND	5.4	0.9901	201795	KKM	08/16/13
trans-1,2-Dichloroethene	ND	5.4	0.9901	201795	KKM	08/16/13
Vinyl Acetate	ND	54	0.9901	201795	KKM	08/16/13
1,1-Dichloroethane	ND	5.4	0.9901	201795	KKM	08/16/13
2-Butanone	41	11	0.9901	201795	KKM	08/16/13
cis-1,2-Dichloroethene	ND	5.4	0.9901	201795	KKM	08/16/13
2,2-Dichloropropane	ND	5.4	0.9901	201795	KKM	08/16/13
Chloroform	ND	5.4	0.9901	201795	KKM	08/16/13
Bromochloromethane	ND	5.4	0.9901	201795	KKM	08/16/13
1,1,1-Trichloroethane	ND	5.4	0.9901	201795	KKM	08/16/13
1,1-Dichloropropene	ND	5.4	0.9901	201795	KKM	08/16/13
Carbon Tetrachloride	ND	5.4	0.9901	201795	KKM	08/16/13
1,2-Dichloroethane	ND	5.4	0.9901	201795	KKM	08/16/13
Benzene	ND	5.4	0.9901	201795	KKM	08/16/13
Trichloroethene	ND	5.4	0.9901	201795	KKM	08/16/13
1,2-Dichloropropane	ND	5.4	0.9901	201795	KKM	08/16/13
Bromodichloromethane	ND	5.4	0.9901	201795	KKM	08/16/13
Dibromomethane	ND	5.4	0.9901	201795	KKM	08/16/13
4-Methyl-2-Pentanone	ND	11	0.9901	201795	KKM	08/16/13
cis-1,3-Dichloropropene	ND	5.4	0.9901	201795	KKM	08/16/13
Toluene	ND	5.4	0.9901	201795	KKM	08/16/13
trans-1,3-Dichloropropene	ND	5.4	0.9901	201795	KKM	08/16/13
1,1,2-Trichloroethane	ND	5.4	0.9901	201795	KKM	08/16/13
2-Hexanone	ND	11	0.9901	201795	KKM	08/16/13
1,3-Dichloropropane	ND	5.4	0.9901	201795	KKM	08/16/13
Tetrachloroethene	ND	5.4	0.9901	201795	KKM	08/16/13
Dibromochloromethane	ND	5.4	0.9901	201795	KKM	08/16/13
1,2-Dibromoethane	ND	5.4	0.9901	201795	KKM	08/16/13
Chlorobenzene	ND	5.4	0.9901	201795	KKM	08/16/13
1,1,1,2-Tetrachloroethane	ND	5.4	0.9901	201795	KKM	08/16/13
Ethylbenzene	ND	5.4	0.9901	201795	KKM	08/16/13
m,p-Xylenes	ND	5.4	0.9901	201795	KKM	08/16/13
o-Xylene	ND	5.4	0.9901	201795	KKM	08/16/13
Styrene	ND	5.4	0.9901	201795	KKM	08/16/13
Bromoform	ND	5.4	0.9901	201795	KKM	08/16/13
Isopropylbenzene	ND	5.4	0.9901	201795	KKM	08/16/13
1,1,2,2-Tetrachloroethane	ND	5.4	0.9901	201795	KKM	08/16/13
1,2,3-Trichloropropane	ND	5.4	0.9901	201795	KKM	08/16/13
Propylbenzene	ND	5.4	0.9901	201795	KKM	08/16/13
Bromobenzene	ND	5.4	0.9901	201795	KKM	08/16/13
1,3,5-Trimethylbenzene	ND	5.4	0.9901	201795	KKM	08/16/13

\*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-14A	Basis:	dry
Lab ID:	248030-014	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed
2-Chlorotoluene	ND	5.4	0.9901	201795	KKM	08/16/13
4-Chlorotoluene	ND	5.4	0.9901	201795	KKM	08/16/13
tert-Butylbenzene	ND	5.4	0.9901	201795	KKM	08/16/13
1,2,4-Trimethylbenzene	5.5	5.4	0.9901	201795	KKM	08/16/13
sec-Butylbenzene	ND	5.4	0.9901	201795	KKM	08/16/13
para-Isopropyl Toluene	23	5.4	0.9901	201795	KKM	08/16/13
1,3-Dichlorobenzene	ND	5.4	0.9901	201795	KKM	08/16/13
1,4-Dichlorobenzene	ND	5.4	0.9901	201795	KKM	08/16/13
n-Butylbenzene	ND	5.4	0.9901	201795	KKM	08/16/13
1,2-Dichlorobenzene	ND	5.4	0.9901	201795	KKM	08/16/13
1,2-Dibromo-3-Chloropropane	ND	5.4	0.9901	201795	KKM	08/16/13
1,2,4-Trichlorobenzene	ND	5.4	0.9901	201795	KKM	08/16/13
Hexachlorobutadiene	ND	5.4	0.9901	201795	KKM	08/16/13
Naphthalene	170	5.4	0.9901	201795	KKM	08/16/13
1,2,3-Trichlorobenzene	ND	5.4	0.9901	201795	KKM	08/16/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Chemist	Analyzed
Dibromofluoromethane	123	80-124	0.9901	201795	KKM	08/16/13
1,2-Dichloroethane-d4	105	80-137	0.9901	201795	KKM	08/16/13
Toluene-d8	116	80-120	0.9901	201795	KKM	08/16/13
Bromofluorobenzene	136 *	79-127	0.9901	201795	KKM	08/16/13

\*= Value outside of QC limits; see narrative  
 ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-14B	Basis:	dry
Lab ID:	248030-015	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	ug/Kg		

Moisture: 15%

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed
Freon 12	ND	11	0.9524	201795	TEW	08/16/13
Chloromethane	ND	11	0.9524	201795	TEW	08/16/13
Vinyl Chloride	ND	11	0.9524	201795	TEW	08/16/13
Bromomethane	ND	11	0.9524	201795	TEW	08/16/13
Chloroethane	ND	11	0.9524	201795	TEW	08/16/13
Trichlorofluoromethane	ND	5.6	0.9524	201795	TEW	08/16/13
Acetone	100	18	0.7716	201901	MJB	08/20/13
Freon 113	ND	5.6	0.9524	201795	TEW	08/16/13
1,1-Dichloroethene	ND	5.6	0.9524	201795	TEW	08/16/13
Methylene Chloride	ND	22	0.9524	201795	TEW	08/16/13
Carbon Disulfide	ND	5.6	0.9524	201795	TEW	08/16/13
MTBE	ND	5.6	0.9524	201795	TEW	08/16/13
trans-1,2-Dichloroethene	ND	5.6	0.9524	201795	TEW	08/16/13
Vinyl Acetate	ND	56	0.9524	201795	TEW	08/16/13
1,1-Dichloroethane	ND	5.6	0.9524	201795	TEW	08/16/13
2-Butanone	40	11	0.9524	201795	TEW	08/16/13
cis-1,2-Dichloroethene	ND	5.6	0.9524	201795	TEW	08/16/13
2,2-Dichloropropane	ND	5.6	0.9524	201795	TEW	08/16/13
Chloroform	ND	5.6	0.9524	201795	TEW	08/16/13
Bromochloromethane	ND	5.6	0.9524	201795	TEW	08/16/13
1,1,1-Trichloroethane	ND	5.6	0.9524	201795	TEW	08/16/13
1,1-Dichloropropene	ND	5.6	0.9524	201795	TEW	08/16/13
Carbon Tetrachloride	ND	5.6	0.9524	201795	TEW	08/16/13
1,2-Dichloroethane	ND	5.6	0.9524	201795	TEW	08/16/13
Benzene	ND	5.6	0.9524	201795	TEW	08/16/13
Trichloroethene	ND	5.6	0.9524	201795	TEW	08/16/13
1,2-Dichloropropane	ND	5.6	0.9524	201795	TEW	08/16/13
Bromodichloromethane	ND	5.6	0.9524	201795	TEW	08/16/13
Dibromomethane	ND	5.6	0.9524	201795	TEW	08/16/13
4-Methyl-2-Pentanone	ND	11	0.9524	201795	TEW	08/16/13
cis-1,3-Dichloropropene	ND	5.6	0.9524	201795	TEW	08/16/13
Toluene	ND	5.6	0.9524	201795	TEW	08/16/13
trans-1,3-Dichloropropene	ND	5.6	0.9524	201795	TEW	08/16/13
1,1,2-Trichloroethane	ND	5.6	0.9524	201795	TEW	08/16/13
2-Hexanone	ND	11	0.9524	201795	TEW	08/16/13
1,3-Dichloropropane	ND	5.6	0.9524	201795	TEW	08/16/13

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-14B	Basis:	dry
Lab ID:	248030-015	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed
Tetrachloroethene	ND	5.6	0.9524	201795	TEW	08/16/13
Dibromochloromethane	ND	5.6	0.9524	201795	TEW	08/16/13
1,2-Dibromoethane	ND	5.6	0.9524	201795	TEW	08/16/13
Chlorobenzene	ND	5.6	0.9524	201795	TEW	08/16/13
1,1,1,2-Tetrachloroethane	ND	5.6	0.9524	201795	TEW	08/16/13
Ethylbenzene	ND	5.6	0.9524	201795	TEW	08/16/13
m,p-Xylenes	ND	5.6	0.9524	201795	TEW	08/16/13
o-Xylene	ND	5.6	0.9524	201795	TEW	08/16/13
Styrene	ND	5.6	0.9524	201795	TEW	08/16/13
Bromoform	ND	5.6	0.9524	201795	TEW	08/16/13
Isopropylbenzene	ND	5.6	0.9524	201795	TEW	08/16/13
1,1,2,2-Tetrachloroethane	ND	5.6	0.9524	201795	TEW	08/16/13
1,2,3-Trichloropropane	ND	5.6	0.9524	201795	TEW	08/16/13
Propylbenzene	ND	5.6	0.9524	201795	TEW	08/16/13
Bromobenzene	ND	5.6	0.9524	201795	TEW	08/16/13
1,3,5-Trimethylbenzene	ND	5.6	0.9524	201795	TEW	08/16/13
2-Chlorotoluene	ND	5.6	0.9524	201795	TEW	08/16/13
4-Chlorotoluene	ND	5.6	0.9524	201795	TEW	08/16/13
tert-Butylbenzene	ND	5.6	0.9524	201795	TEW	08/16/13
1,2,4-Trimethylbenzene	ND	5.6	0.9524	201795	TEW	08/16/13
sec-Butylbenzene	ND	5.6	0.9524	201795	TEW	08/16/13
para-Isopropyl Toluene	19	5.6	0.9524	201795	TEW	08/16/13
1,3-Dichlorobenzene	ND	5.6	0.9524	201795	TEW	08/16/13
1,4-Dichlorobenzene	ND	5.6	0.9524	201795	TEW	08/16/13
n-Butylbenzene	ND	5.6	0.9524	201795	TEW	08/16/13
1,2-Dichlorobenzene	ND	5.6	0.9524	201795	TEW	08/16/13
1,2-Dibromo-3-Chloropropane	ND	5.6	0.9524	201795	TEW	08/16/13
1,2,4-Trichlorobenzene	ND	5.6	0.9524	201795	TEW	08/16/13
Hexachlorobutadiene	ND	5.6	0.9524	201795	TEW	08/16/13
Naphthalene	140	5.6	0.9524	201795	TEW	08/16/13
1,2,3-Trichlorobenzene	ND	5.6	0.9524	201795	TEW	08/16/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Chemist	Analyzed
Dibromofluoromethane	98	80-124	0.9524	201795	TEW	08/16/13
1,2-Dichloroethane-d4	96	80-137	0.9524	201795	TEW	08/16/13
Toluene-d8	118	80-120	0.9524	201795	TEW	08/16/13
Bromofluorobenzene	120	79-127	0.9524	201795	TEW	08/16/13

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-29A	Batch#:	201795
Lab ID:	248030-036	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/16/13
Diln Fac:	0.9328		

Moisture: 6%

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0

ND= Not Detected  
 RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	IA-29A	Batch#:	201795
Lab ID:	248030-036	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/16/13
Diln Fac:	0.9328		

Analyte	Result	RL
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-124
1,2-Dichloroethane-d4	93	80-137
Toluene-d8	105	80-120
Bromofluorobenzene	111	79-127

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC702261	Batch#:	201795
Matrix:	Soil	Chemist:	TEW
Units:	ug/Kg	Analyzed:	08/16/13

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	25.76	103	67-132
Benzene	25.00	27.73	111	77-126
Trichloroethene	25.00	23.00	92	76-127
Toluene	25.00	23.32	93	76-124
Chlorobenzene	25.00	28.68	115	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-124
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	93	79-127

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC702262	Batch#:	201795
Matrix:	Soil	Chemist:	TEW
Units:	ug/Kg	Analyzed:	08/16/13

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0

\*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC702262	Batch#:	201795
Matrix:	Soil	Chemist:	TEW
Units:	ug/Kg	Analyzed:	08/16/13

Analyte	Result	RL
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-124
1,2-Dichloroethane-d4	104	80-137
Toluene-d8	126 *	80-120
Bromofluorobenzene	93	79-127

\*= Value outside of QC limits; see narrative  
 ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5030B
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	201795
MSS Lab ID:	248039-005	Chemist:	TEW
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	as received	Analyzed:	08/16/13

Type: MS Diln Fac: 0.9398  
 Lab ID: QC702299

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.8898	46.99	43.16	92	52-132
Benzene	<0.8544	46.99	39.91	85	54-121
Trichloroethene	<0.7909	46.99	31.16	66	46-138
Toluene	<0.6736	46.99	32.99	70	47-120
Chlorobenzene	<0.6497	46.99	29.88	64	41-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-124
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	111	80-120
Bromofluorobenzene	92	79-127

Type: MSD Diln Fac: 0.9560  
 Lab ID: QC702300

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	47.80	53.44	112	52-132	20	46
Benzene	47.80	42.71	89	54-121	5	43
Trichloroethene	47.80	34.83	73	46-138	9	50
Toluene	47.80	32.62	68	47-120	3	53
Chlorobenzene	47.80	33.85	71	41-120	11	50

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-124
1,2-Dichloroethane-d4	103	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	93	79-127

RPD= Relative Percent Difference

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	201901
Units:	ug/Kg	Chemist:	MJB
Diln Fac:	1.000	Analyzed:	08/20/13

Type: BS Lab ID: QC702742

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.36	93	67-132
Benzene	25.00	23.80	95	77-126
Trichloroethene	25.00	24.46	98	76-127
Toluene	25.00	22.22	89	76-124
Chlorobenzene	25.00	26.05	104	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-124
1,2-Dichloroethane-d4	113	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	86	79-127

Type: BSD Lab ID: QC702743

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	20.73	83	67-132	12	27
Benzene	25.00	22.06	88	77-126	8	20
Trichloroethene	25.00	21.85	87	76-127	11	22
Toluene	25.00	20.32	81	76-124	9	26
Chlorobenzene	25.00	23.29	93	76-120	11	21

Surrogate	%REC	Limits
Dibromofluoromethane	88	80-124
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	94	80-120
Bromofluorobenzene	88	79-127

RPD= Relative Percent Difference

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC702744	Batch#:	201901
Matrix:	Soil	Chemist:	MJB
Units:	ug/Kg	Analyzed:	08/20/13

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC702744	Batch#:	201901
Matrix:	Soil	Chemist:	MJB
Units:	ug/Kg	Analyzed:	08/20/13

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-124
1,2-Dichloroethane-d4	115	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	91	79-127

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC702827	Batch#:	201925
Matrix:	Soil	Chemist:	TEW
Units:	ug/Kg	Analyzed:	08/20/13

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0

\*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC702827	Batch#:	201925
Matrix:	Soil	Chemist:	TEW
Units:	ug/Kg	Analyzed:	08/20/13

Analyte	Result	RL
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-124
1,2-Dichloroethane-d4	115	80-137
Toluene-d8	130 *	80-120
Bromofluorobenzene	100	79-127

\*= Value outside of QC limits; see narrative  
 ND= Not Detected  
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 5035
Project#:	20074.063.095.1340	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	201925
Units:	ug/Kg	Chemist:	TEW
Diln Fac:	1.000	Analyzed:	08/20/13

Type: BS Lab ID: QC702828

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	22.53	113	67-132
Benzene	20.00	22.22	111	77-126
Trichloroethene	20.00	19.26	96	76-127
Toluene	20.00	23.27	116	76-124
Chlorobenzene	20.00	23.87	119	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-124
1,2-Dichloroethane-d4	112	80-137
Toluene-d8	121 *	80-120
Bromofluorobenzene	94	79-127

Type: BSD Lab ID: QC702829

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	20.94	105	67-132	7	27
Benzene	20.00	22.70	114	77-126	2	20
Trichloroethene	20.00	20.55	103	76-127	7	22
Toluene	20.00	18.54	93	76-124	23	26
Chlorobenzene	20.00	23.40	117	76-120	2	21

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-124
1,2-Dichloroethane-d4	119	80-137
Toluene-d8	114	80-120
Bromofluorobenzene	90	79-127

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS BFB TUNE FOR 248030 MSVOA Soil  
EPA 8260B

Inst : MSVOA04                      Run Name : BFB                      IDF : 1.0  
Seqnum : 433257006003              File : dfr03                      Time : 27-JUN-2013 12:35

Standards: S22624

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	44258	23.26	
75	30% - 60% of mass 95	86821	45.62	
95		190314	100.00	
96	5% - 9% of mass 95	12756	6.70	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	121749	63.97	
175	5% - 9% of mass 174	9231	7.58	
176	> 95% and < 101% of mass 174	120336	98.84	
177	5% - 9% of mass 176	7658	6.36	

Analyst:   MJB                        Date:   06/28/13                        Reviewer:   LW                        Date:   06/28/13

CURTIS & TOMPKINS BFB TUNE FOR 248030 MSVOA Soil  
EPA 8260B

Inst : MSVOA04                      Run Name : BFB                      IDF : 1.0  
Seqnum : 433334518004              File : dhk04                      Time : 20-AUG-2013 11:32

Standards: S22624

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	33618	21.87	
75	30% - 60% of mass 95	71557	46.56	
95		153685	100.00	
96	5% - 9% of mass 95	10241	6.66	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	117085	76.19	
175	5% - 9% of mass 174	8348	7.13	
176	> 95% and < 101% of mass 174	114261	97.59	
177	5% - 9% of mass 176	7324	6.41	

Analyst: BO                      Date: 08/21/13                      Reviewer: MJB                      Date: 08/21/13

CURTIS & TOMPKINS BFB TUNE FOR 248030 MSVOA Soil  
EPA 8260B

Inst : MSVOA05 Run Name : BFB IDF : 1.0  
Seqnum : 443223853006 File : ef406 Time : 04-JUN-2013 12:52

Standards: S21369

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	7386	23.65	
75	30% - 60% of mass 95	18408	58.94	
95		31232	100.00	
96	5% - 9% of mass 95	2084	6.67	
173	< 2% of mass 174	120	0.47	
174	> 50% and < 100% of mass 95	25415	81.37	
175	5% - 9% of mass 174	1761	6.93	
176	> 95% and < 101% of mass 174	24597	96.78	
177	5% - 9% of mass 176	1821	7.40	

Analyst: TEW Date: 06/05/13 Reviewer: LW Date: 06/06/13

CURTIS & TOMPKINS BFB TUNE FOR 248030 MSVOA Soil  
EPA 8260B

Inst : MSVOA05                      Run Name : BFB                      IDF : 1.0  
Seqnum : 443225232003              File : ef503                      Time : 05-JUN-2013 10:50

Standards: S21369

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	7815	23.41	
75	30% - 60% of mass 95	18636	55.83	
95		33381	100.00	
96	5% - 9% of mass 95	2327	6.97	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	28232	84.58	
175	5% - 9% of mass 174	1450	5.14	
176	> 95% and < 101% of mass 174	27608	97.79	
177	5% - 9% of mass 176	1830	6.63	

Analyst: TEW                      Date: 06/05/13                      Reviewer: LW                      Date: 06/06/13

CURTIS & TOMPKINS BFB TUNE FOR 248030 MSVOA Soil  
EPA 8260B

Inst : MSVOA05                      Run Name : BFB                      IDF : 1.0  
Seqnum : 443328860006              File : ehg06                      Time : 16-AUG-2013 10:44

Standards: S22624

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	2171	24.22	
75	30% - 60% of mass 95	5314	59.29	
95		8963	100.00	
96	5% - 9% of mass 95	513	5.72	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	8291	92.50	
175	5% - 9% of mass 174	672	8.11	
176	> 95% and < 101% of mass 174	8018	96.71	
177	5% - 9% of mass 176	511	6.37	

Analyst: TEW                      Date: 08/18/13                      Reviewer: BO                      Date: 08/19/13

CURTIS & TOMPKINS BFB TUNE FOR 248030 MSVOA Soil  
EPA 8260B

Inst : MSVOA05 Run Name : BFB IDF : 1.0  
Seqnum : 443334805003 File : ehk03 Time : 20-AUG-2013 12:55

Standards: S22624

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	3840	24.49	
75	30% - 60% of mass 95	9111	58.11	
95		15680	100.00	
96	5% - 9% of mass 95	1143	7.29	
173	< 2% of mass 174	97	0.68	
174	> 50% and < 100% of mass 95	14170	90.37	
175	5% - 9% of mass 174	1199	8.46	
176	> 95% and < 101% of mass 174	14097	99.48	
177	5% - 9% of mass 176	819	5.81	

Analyst: TEW Date: 08/21/13 Reviewer: BO Date: 08/21/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 MSVOA Soil: EPA 8260B

Inst : MSVOA04 Name : 826GOX4S Type : SOIL  
 Calnum : 433257006002 Date : 27-JUN-2013 14:15  
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	dfr06	433257006006	27-JUN-2013 14:15	S22575 (200000X), S22549 (200000X), S21483 (200000X), S22539 (50000X)
L2	dfr07	433257006007	27-JUN-2013 14:48	S22539 (5000X), S22575 (100000X), S22549 (100000X), S21483 (100000X)
L3	dfr08	433257006008	27-JUN-2013 15:22	S22539 (5000X), S22575 (50000X), S22549 (50000X), S21483 (50000X)
L4	dfr09	433257006009	27-JUN-2013 15:56	S22539 (5000X), S22575 (250000X), S22549 (250000X), S21483 (250000X)
L5	dfr10	433257006010	27-JUN-2013 16:29	S22539 (5000X), S22575 (100000X), S22549 (100000X), S21483 (100000X)
L6	dfr11	433257006011	27-JUN-2013 17:03	S22539 (5000X), S22575 (8333X), S22549 (8333X), S21483 (8333X)
L7	dfr12	433257006012	27-JUN-2013 17:36	S22539 (5000X), S22575 (6667X), S22549 (6667X), S21483 (6667X)
L8	dfr13	433257006013	27-JUN-2013 18:10	S22539 (5000X), S22575 (5000X), S22549 (5000X), S21483 (5000X)
L9	dfr14	433257006014	27-JUN-2013 18:44	S22539 (5000X), S22575 (25000X), S22549 (25000X), S21483 (25000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12	1.9621m	1.5791m	1.8964m	1.6947m	1.8975m	1.9458m	1.9980m	1.8741m	1.6199	AVRG	0.54653	0.54653		1.8297	9	15	0.05	0.99	
Chloromethane	1.8985m	1.4855m	1.6212m	1.4779m	1.5294m	1.5265m	1.5184m	1.4598m	1.3220m	AVRG	0.65032	0.65032		1.5377	10	15	0.10	0.99	
Vinyl Chloride	1.3165	0.9317	1.0714	0.9621	1.0110	1.0819	1.0219	1.0130	0.8837	AVRG	0.96847	0.96847		1.0326	12	15	0.05	0.99	
Bromomethane	0.8873m	0.7543m	0.7636	0.6821m	0.7040	0.6266m	0.6369m	0.5936m	0.5349m	AVRG	1.45557	1.45557		0.6870	15	15	0.05	0.99	
Chloroethane	0.5978	0.4340	0.4843	0.4451	0.4402	0.4566	0.4554	0.4354	0.3781	AVRG	2.18089	2.18089		0.4585	13	15	0.05	0.99	
Trichlorofluoromethane	1.1643	0.9927	1.1498	1.0228	1.1583	1.1865	1.1694	1.1178	1.0215	AVRG	0.90151	0.90151		1.1092	7	15	0.05	0.99	
Acetone			0.3545m	0.2849m	0.3798	0.2995	0.2927	0.2808	0.2393	QUAD	2.84020	2.29456	0.038362	0.3045	0.994	15	0.05	0.99	
Freon 113	0.5634	0.4542	0.6012	0.5768	0.5866	0.6132	0.5568	0.4909	0.5058	AVRG	1.81857	1.81857		0.5499	10	15	0.05	0.99	
1,1-Dichloroethane	0.6251	0.5019	0.5500	0.4984	0.5230	0.5399	0.5073	0.4336	0.4376	AVRG	1.94940	1.94940		0.5130	11	15	0.05	0.99	
Methylene Chloride	1.3441	1.1920	1.3742	1.2932	1.3427	1.2937	1.2118	1.0774	1.0003	AVRG	0.80867	0.80867		1.2366	10	15	0.05	0.99	
Carbon Disulfide	2.5937	3.1208	3.4002	3.2514	3.5853	3.4730	3.2343	2.8666	2.6733	AVRG	0.31916	0.31916		3.1332	11	15	0.05	0.99	
MTBE		1.6560	2.0650	1.9593	2.2603	2.4180	2.1694	1.9567	2.0051	AVRG	0.48515	0.48515		2.0612	11	15	0.05	0.99	
trans-1,2-Dichloroethene	1.0847	0.9717	1.0234	0.9175	0.9992	0.9773	0.9524	0.7660	0.7805	AVRG	1.06224	1.06224		0.9414	11	15	0.05	0.99	
Vinyl Acetate		0.9673	1.3477m	1.1940	1.8027	1.8119	1.7120			LINR	3.65860	0.53608		1.4726	0.993	15	0.05	0.99	
1,1-Dichloroethane	2.2038	2.0883	2.2790	2.0891	2.2203	2.1805	2.0253	1.7183	1.7455	AVRG	0.48518	0.48518		2.0611	10	15	0.10	0.99	
2-Butanone	0.4944	0.5221	0.6073	0.5385	0.6212	0.6470	0.6171	0.5468	0.5931	AVRG	1.73495	1.73495		0.5764	9	15	0.05	0.99	
2,2-Dichloropropane	0.7636	0.7302	0.8794	0.8356	0.9990	1.0128	0.9586	0.8331	0.8877	AVRG	1.13925	1.13925		0.8778	11	15	0.05	0.99	
cis-1,2-Dichloroethene	1.1129	1.0970	1.1715	1.0666	1.1763	1.1578	1.0646	0.9532	0.9322	AVRG	0.92479	0.92479		1.0813	8	15	0.05	0.99	
Chloroform	1.9844	1.8992	2.0660	1.9258	2.0763	1.9927	1.8388	1.6322	1.5928	AVRG	0.52916	0.52916		1.8898	9	15	0.05	0.99	
Bromochloromethane	0.5915	0.5524	0.6438	0.5533	0.5934	0.5668	0.5583	0.4713	0.4514	AVRG	1.80644	1.80644		0.5536	11	15	0.05	0.99	
1,1,1-Trichloroethane	1.2455	1.1518	1.3479	1.2369	1.3561	1.3490	1.2687	1.0983	1.1125	AVRG	0.80595	0.80595		1.2408	8	15	0.05	0.99	
1,1-Dichloropropene	0.4996	0.5136	0.6020	0.5712	0.6467	0.6499	0.5984	0.5261	0.4804	AVRG	1.76892	1.76892		0.5653	11	15	0.05	0.99	
Carbon Tetrachloride		0.3878	0.4978	0.4621	0.5174	0.5190	0.4999	0.4285	0.4099	AVRG	2.14910	2.14910		0.4653	11	15	0.05	0.99	
1,2-Dichloroethane	0.7526	0.7417	0.9167	0.7607	0.8067	0.8062	0.7726	0.6423	0.6097	AVRG	1.32173	1.32173		0.7566	12	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Benzene	1.6728	1.5892	1.9006	1.6845	1.8059	1.8440	1.7749	1.5027	1.3324	AVRG	0.59575	0.59575		1.6786	11	15	0.05	0.99	
Trichloroethene	0.4387	0.4269	0.4983	0.4532	0.5070	0.5356	0.4829	0.4176	0.4039	AVRG	2.16135	2.16135		0.4627	10	15	0.05	0.99	
1,2-Dichloropropane	0.4760	0.5324	0.6218	0.5461	0.6141	0.6322	0.5577	0.4903	0.4607	AVRG	1.82511	1.82511		0.5479	12	15	0.05	0.99	
Bromodichloromethane	0.6261	0.6261	0.7800	0.6832	0.7830	0.8025	0.7396	0.6383	0.6117	AVRG	1.41232	1.41232		0.7081	11	15	0.05	0.99	
Dibromomethane	0.4088	0.3987	0.4979	0.4220	0.4353	0.4481	0.4137	0.3569	0.3350	AVRG	2.42168	2.42168		0.4129	12	15	0.05	0.99	
4-Methyl-2-Pentanone	0.4447	0.4663	0.6011	0.5289	0.5746	0.6366	0.5564	0.5062	0.5107	AVRG	1.86505	1.86505		0.5362	12	15	0.05	0.99	
cis-1,3-Dichloropropene	0.5215	0.5215	0.6764	0.5882	0.7571	0.7685	0.7203	0.6316	0.6073	AVRG	1.51780	1.51780		0.6588	13	15	0.05	0.99	
Toluene	1.1626	1.0865	1.2438	1.1147	1.0956	1.1847	1.0737	0.9189	0.9063	AVRG	0.91962	0.91962		1.0874	10	15	0.05	0.99	
trans-1,3-Dichloropropene	0.5485	0.5485	0.7149	0.6624	0.7829	0.8307	0.7902	0.6948	0.7099	AVRG	1.39512	1.39512		0.7168	12	15	0.05	0.99	
1,1,2-Trichloroethane	0.2497	0.2580	0.3180	0.2884	0.3179	0.3277	0.2994	0.2656	0.2639	AVRG	3.47673	3.47673		0.2876	10	15	0.05	0.99	
2-Hexanone	0.4327	0.4327	0.5497	0.4569	0.5092	0.5298	0.4745	0.4408	0.4361	AVRG	2.08889	2.08889		0.4787	9	15	0.05	0.99	
1,3-Dichloropropane	0.7391	0.7543	0.9174	0.8030	0.8913	0.9213	0.8552	0.7624	0.7383	AVRG	1.21912	1.21912		0.8203	9	15	0.05	0.99	
Tetrachloroethene	0.4412	0.4003	0.4605	0.4170	0.4541	0.4493	0.4132	0.3562	0.3533	AVRG	2.40311	2.40311		0.4161	10	15	0.05	0.99	
Dibromochloromethane	0.4820	0.4820	0.5822	0.5414	0.6234	0.6471	0.6184	0.5566	0.5586	AVRG	1.73546	1.73546		0.5762	9	15	0.05	0.99	
1,2-Dibromoethane	0.4967	0.5058	0.5846	0.5279	0.5425	0.5591	0.5314	0.4555	0.4554	AVRG	1.93168	1.93168		0.5177	8	15	0.05	0.99	
Chlorobenzene	1.2372	1.2722	1.3570	1.1855	1.2963	1.3203	1.1972	1.0508	0.9668	AVRG	0.82696	0.82696		1.2092	11	15	0.30	0.99	
1,1,1,2-Tetrachloroethane	0.3739	0.4252	0.4504	0.3882	0.4613	0.4792	0.4512	0.3762	0.3949	AVRG	2.36804	2.36804		0.4223	9	15	0.05	0.99	
Ethylbenzene	2.1939	2.2168	2.4084	2.0966	2.2098	2.2490	2.0337	1.7364	1.6132	AVRG	0.47980	0.47980		2.0842	12	15	0.05	0.99	
m,p-Xylenes	0.8136	0.8020	0.8992	0.8060	0.8116	0.7819	0.7092	0.6301	0.5635	AVRG	1.32022	1.32022		0.7575	14	15	0.05	0.99	
o-Xylene	0.8020	0.8596	0.8820	0.8074	0.8445	0.7911	0.7365	0.6576	0.6090	AVRG	1.28761	1.28761		0.7766	12	15	0.05	0.99	
Styrene	1.4228	1.4985	1.5924	1.4039	1.4913	1.4411	1.3068	1.1781	1.0939	AVRG	0.72412	0.72412		1.3810	12	15	0.05	0.99	
Bromoform	0.3091	0.3091	0.3759	0.3470	0.4059	0.4064	0.3941	0.3412	0.3660	AVRG	2.71602	2.71602		0.3682	9	15	0.10	0.99	
Isopropylbenzene	3.4613	3.3725	3.9067	3.6893	3.8958	4.1079	3.6740	3.2148	3.0835	AVRG	0.27773	0.27773		3.6006	10	15	0.05	0.99	
1,1,2,2-Tetrachloroethane	1.2398	1.2402	1.4132	1.2298	1.4543	1.4796	1.3534	1.1689	1.2312	AVRG	0.76204	0.76204		1.3123	9	15	0.30	0.99	
1,2,3-Trichloropropane	0.9859	0.9859	1.1597	1.0049	1.1163	1.1742	1.0678	0.9568	0.9644	AVRG	0.94900	0.94900		1.0537	8	15	0.05	0.99	
Propylbenzene	5.4076	5.0070	5.9722	5.2595	5.6038	5.5999	4.8760	4.1990	4.0370	AVRG	0.19581	0.19581		5.1069	13	15	0.05	0.99	
Bromobenzene	1.0048	1.1020	1.1043	1.0203	1.0996	1.1144	1.0218	0.8475	0.8873	AVRG	0.97805	0.97805		1.0224	10	15	0.05	0.99	
1,3,5-Trimethylbenzene	3.6236	3.2839	3.8480	3.5529	3.5299	3.6049	3.2650	2.8300	2.7372	AVRG	0.29727	0.29727		3.3640	11	15	0.05	0.99	
2-Chlorotoluene	3.3206	3.3316m	3.5989m	3.1681m	3.3775m	3.3142m	3.1500m	2.7711m	2.6161m	AVRG	0.31416	0.31416		3.1831	10	15	0.05	0.99	
4-Chlorotoluene	3.5942	3.4691	3.7200	3.4465	3.6316	3.5216	3.0733	2.6652	2.6404	AVRG	0.30240	0.30240		3.3069	12	15	0.05	0.99	
tert-Butylbenzene	2.4459	2.0814	2.6960	2.4639	2.6507	2.6267	2.4451	2.0105	2.0746	AVRG	0.41871	0.41871		2.3883	11	15	0.05	0.99	
1,2,4-Trimethylbenzene	3.8583	3.7129	3.9970	3.5849	3.7634	3.8269	3.3651	2.9088	2.7573	AVRG	0.28324	0.28324		3.5305	12	15	0.05	0.99	
sec-Butylbenzene	4.3023	3.8522	4.5521	4.2141	4.5392	4.6162	4.3857	3.5565	3.5806	AVRG	0.23937	0.23937		4.1777	10	15	0.05	0.99	
para-Isopropyl Toluene	3.5220	3.0400	3.6176	3.3699	3.4730	3.4861	3.1190	2.8364	2.7048	AVRG	0.30855	0.30855		3.2410	10	15	0.05	0.99	
1,3-Dichlorobenzene	2.0617	1.9733	2.0352	1.9017	1.9694	1.8974	1.7355	1.5623	1.4606	AVRG	0.54226	0.54226		1.8441	12	15	0.05	0.99	
1,4-Dichlorobenzene	2.1254	2.1508	2.1669	1.9021	2.0002	1.9586	1.8469	1.5625	1.5090	AVRG	0.52258	0.52258		1.9136	13	15	0.05	0.99	
n-Butylbenzene	4.3204	3.7070	4.5560	4.2266	4.1990	4.2033	3.8885	3.2378	2.9678	AVRG	0.25491	0.25491		3.9229	13	15	0.05	0.99	
1,2-Dichlorobenzene	2.0015	2.0856	2.1069	1.8355	1.9557	1.9259	1.7221	1.5355	1.4377	AVRG	0.54196	0.54196		1.8452	13	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane	0.3266	0.2574	0.2821	0.2629	0.2855	0.2707	0.2613	0.2242	0.2448	AVRG	3.72605	3.72605		0.2684	11	15	0.05	0.99	
1,2,4-Trichlorobenzene	1.7482	1.6048	1.5858	1.4430	1.5219	1.4872	1.4318	1.2238	1.1553	AVRG	0.68173	0.68173		1.4669	13	15	0.05	0.99	
Hexachlorobutadiene	0.6545	0.5586	0.6991	0.6294	0.6641	0.7038	0.6728	0.5580	0.5702	AVRG	1.57610	1.57610		0.6345	9	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	FLg
															%RSD	%RSD	RF	r^2	
Naphthalene	4.6651	3.8390	4.0551	3.7293	3.9871	3.9494	3.6149	3.1744	2.9949	AVRG		0.26463		3.7788	13	15	0.05	0.99	
1,2,3-Trichlorobenzene	1.8732	1.6116	1.5922	1.4496	1.5713	1.4781	1.4117	1.1704	1.1465	AVRG		0.67646		1.4783	15	15	0.05	0.99	
Dibromofluoromethane	0.9409	0.9043	0.9209	0.9482	0.9203	0.9084	0.9263	0.9371	0.9559	AVRG		1.07626		0.9291	2	15	0.05	0.99	
1,2-Dichloroethane-d4	0.4823	0.4757	0.5128	0.4986	0.4638	0.4625	0.4884	0.4761	0.4284	AVRG		2.09860		0.4765	5	15	0.05	0.99	
Trifluorotoluene	0.4165	0.4128	0.4866	0.4290	0.4938	0.5061	0.4483	0.3833	0.3873	AVRG		2.27058		0.4404	10	15	0.05	0.99	
Toluene-d8	1.2866	1.3310	1.3440	1.3412	1.2661	1.3055	1.3206	1.3264	1.3380	AVRG		0.75889		1.3177	2	15	0.05	0.99	
Bromofluorobenzene	1.0982	1.0774	1.0744	1.0859	1.0843	1.0803	1.1372	1.1254	1.1480	AVRG		0.90806		1.1012	3	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12	2.5000	7	5.0000	-14	10.0000	4	20.0000	-7	50.0000	4	60.0000	6	75.0000	9	100.00	2	200.00	-11
Chloromethane	2.5000	23	5.0000	-3	10.0000	5	20.0000	-4	50.0000	-1	60.0000	-1	75.0000	-1	100.00	-5	200.00	-14
Vinyl Chloride	2.5000	27	5.0000	-10	10.0000	4	20.0000	-7	50.0000	-2	60.0000	5	75.0000	-1	100.00	-2	200.00	-14
Bromomethane	2.5000	29	5.0000	10	10.0000	11	20.0000	-1	50.0000	2	60.0000	-9	75.0000	-7	100.00	-14	200.00	-22
Chloroethane	2.5000	30	5.0000	-5	10.0000	6	20.0000	-3	50.0000	-4	60.0000	0	75.0000	-1	100.00	-5	200.00	-18
Trichlorofluoromethane	2.5000	5	5.0000	-11	10.0000	4	20.0000	-8	50.0000	4	60.0000	7	75.0000	5	100.00	1	200.00	-8
Acetone					10.0000	15	20.0000	-14	50.0000	20	60.0000	-6	75.0000	-4	100.00	-2	200.00	0
Freon 113	2.5000	2	5.0000	-17	10.0000	9	20.0000	5	50.0000	7	60.0000	12	75.0000	1	100.00	-11	200.00	-8
1,1-Dichloroethene	2.5000	22	5.0000	-2	10.0000	7	20.0000	-3	50.0000	2	60.0000	5	75.0000	-1	100.00	-15	200.00	-15
Methylene Chloride	2.5000	9	5.0000	-4	10.0000	11	20.0000	5	50.0000	9	60.0000	5	75.0000	-2	100.00	-13	200.00	-19
Carbon Disulfide	2.5000	-17	5.0000	0	10.0000	9	20.0000	4	50.0000	14	60.0000	11	75.0000	3	100.00	-9	200.00	-15
MTBE			5.0000	-20	10.0000	0	20.0000	-5	50.0000	10	60.0000	17	75.0000	5	100.00	-5	200.00	-3
trans-1,2-Dichloroethene	2.5000	15	5.0000	3	10.0000	9	20.0000	-3	50.0000	6	60.0000	4	75.0000	1	100.00	-19	200.00	-17
Vinyl Acetate			5.0000	25	10.0000	9	20.0000	-18	50.0000	4	60.0000	3	75.0000	-3				
1,1-Dichloroethane	2.5000	7	5.0000	1	10.0000	11	20.0000	1	50.0000	8	60.0000	6	75.0000	-2	100.00	-17	200.00	-15
2-Butanone	2.5000	-14	5.0000	-9	10.0000	5	20.0000	-7	50.0000	8	60.0000	12	75.0000	7	100.00	-5	200.00	3
2,2-Dichloropropane	2.5000	-13	5.0000	-17	10.0000	0	20.0000	-5	50.0000	14	60.0000	15	75.0000	9	100.00	-5	200.00	1
cis-1,2-Dichloroethene	2.5000	3	5.0000	1	10.0000	8	20.0000	-1	50.0000	9	60.0000	7	75.0000	-2	100.00	-12	200.00	-14
Chloroform	2.5000	5	5.0000	0	10.0000	9	20.0000	2	50.0000	10	60.0000	5	75.0000	-3	100.00	-14	200.00	-16
Bromochloromethane	2.5000	7	5.0000	0	10.0000	16	20.0000	0	50.0000	7	60.0000	2	75.0000	1	100.00	-15	200.00	-18
1,1,1-Trichloroethane	2.5000	0	5.0000	-7	10.0000	9	20.0000	0	50.0000	9	60.0000	9	75.0000	2	100.00	-11	200.00	-10
1,1-Dichloropropene	2.5000	-12	5.0000	-9	10.0000	6	20.0000	1	50.0000	14	60.0000	15	75.0000	6	100.00	-7	200.00	-15
Carbon Tetrachloride			5.0000	-17	10.0000	7	20.0000	-1	50.0000	11	60.0000	12	75.0000	7	100.00	-8	200.00	-12
1,2-Dichloroethane	2.5000	-1	5.0000	-2	10.0000	21	20.0000	1	50.0000	7	60.0000	7	75.0000	2	100.00	-15	200.00	-19
Benzene	2.5000	0	5.0000	-5	10.0000	13	20.0000	0	50.0000	8	60.0000	10	75.0000	6	100.00	-10	200.00	-21
Trichloroethene	2.5000	-5	5.0000	-8	10.0000	8	20.0000	-2	50.0000	10	60.0000	16	75.0000	4	100.00	-10	200.00	-13
1,2-Dichloropropane	2.5000	-13	5.0000	-3	10.0000	13	20.0000	0	50.0000	12	60.0000	15	75.0000	2	100.00	-11	200.00	-16
Bromodichloromethane			5.0000	-12	10.0000	10	20.0000	-4	50.0000	11	60.0000	13	75.0000	4	100.00	-10	200.00	-14
Dibromomethane	2.5000	-1	5.0000	-3	10.0000	21	20.0000	2	50.0000	5	60.0000	9	75.0000	0	100.00	-14	200.00	-19
4-Methyl-2-Pentanone	2.5000	-17	5.0000	-13	10.0000	12	20.0000	-1	50.0000	7	60.0000	19	75.0000	4	100.00	-6	200.00	-5
cis-1,3-Dichloropropene			5.0000	-21	10.0000	3	20.0000	-11	50.0000	15	60.0000	17	75.0000	9	100.00	-4	200.00	-8
Toluene	2.5000	7	5.0000	0	10.0000	14	20.0000	3	50.0000	1	60.0000	9	75.0000	-1	100.00	-15	200.00	-17
trans-1,3-Dichloropropene			5.0000	-23	10.0000	0	20.0000	-8	50.0000	9	60.0000	16	75.0000	10	100.00	-3	200.00	-1
1,1,2-Trichloroethane	2.5000	-13	5.0000	-10	10.0000	11	20.0000	0	50.0000	11	60.0000	14	75.0000	4	100.00	-8	200.00	-8
2-Hexanone			5.0000	-10	10.0000	15	20.0000	-5	50.0000	6	60.0000	11	75.0000	-1	100.00	-8	200.00	-9
1,3-Dichloropropane	2.5000	-10	5.0000	-8	10.0000	12	20.0000	-2	50.0000	9	60.0000	12	75.0000	4	100.00	-7	200.00	-10
Tetrachloroethene	2.5000	6	5.0000	-4	10.0000	11	20.0000	0	50.0000	9	60.0000	8	75.0000	-1	100.00	-14	200.00	-15
Dibromochloromethane			5.0000	-16	10.0000	1	20.0000	-6	50.0000	8	60.0000	12	75.0000	7	100.00	-3	200.00	-3
1,2-Dibromoethane	2.5000	-4	5.0000	-2	10.0000	13	20.0000	2	50.0000	5	60.0000	8	75.0000	3	100.00	-12	200.00	-12
Chlorobenzene	2.5000	2	5.0000	5	10.0000	12	20.0000	-2	50.0000	7	60.0000	9	75.0000	-1	100.00	-13	200.00	-20
1,1,1,2-Tetrachloroethane	2.5000	-11	5.0000	1	10.0000	7	20.0000	-8	50.0000	9	60.0000	13	75.0000	7	100.00	-11	200.00	-6
Ethylbenzene	2.5000	5	5.0000	6	10.0000	16	20.0000	1	50.0000	6	60.0000	8	75.0000	-2	100.00	-17	200.00	-23

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	5.0000	7	10.000	6	20.000	19	40.000	6	100.00	7	120.00	3	150.00	-6	200.00	-17	400.00	-26
o-Xylene	2.5000	3	5.0000	11	10.000	14	20.000	4	50.000	9	60.000	2	75.000	-5	100.00	-15	200.00	-22
Styrene	2.5000	3	5.0000	9	10.000	15	20.000	2	50.000	8	60.000	4	75.000	-5	100.00	-15	200.00	-21
Bromoform			5.0000	-16	10.000	2	20.000	-6	50.000	10	60.000	10	75.000	7	100.00	-7	200.00	-1
Isopropylbenzene	2.5000	-4	5.0000	-6	10.000	9	20.000	2	50.000	8	60.000	14	75.000	2	100.00	-11	200.00	-14
1,1,2,2-Tetrachloroethane	2.5000	-6	5.0000	-5	10.000	8	20.000	-6	50.000	11	60.000	13	75.000	3	100.00	-11	200.00	-6
1,2,3-Trichloropropane			5.0000	-6	10.000	10	20.000	-5	50.000	6	60.000	11	75.000	1	100.00	-9	200.00	-8
Propylbenzene	2.5000	6	5.0000	-2	10.000	17	20.000	3	50.000	10	60.000	10	75.000	-5	100.00	-18	200.00	-21
Bromobenzene	2.5000	-2	5.0000	8	10.000	8	20.000	0	50.000	8	60.000	9	75.000	0	100.00	-17	200.00	-13
1,3,5-Trimethylbenzene	2.5000	8	5.0000	-2	10.000	14	20.000	6	50.000	5	60.000	7	75.000	-3	100.00	-16	200.00	-19
2-Chlorotoluene	2.5000	4	5.0000	5	10.000	13	20.000	0	50.000	6	60.000	4	75.000	-1	100.00	-13	200.00	-18
4-Chlorotoluene	2.5000	9	5.0000	5	10.000	12	20.000	4	50.000	10	60.000	6	75.000	-7	100.00	-19	200.00	-20
tert-Butylbenzene	2.5000	2	5.0000	-13	10.000	13	20.000	3	50.000	11	60.000	10	75.000	2	100.00	-16	200.00	-13
1,2,4-Trimethylbenzene	2.5000	9	5.0000	5	10.000	13	20.000	2	50.000	7	60.000	8	75.000	-5	100.00	-18	200.00	-22
sec-Butylbenzene	2.5000	3	5.0000	-8	10.000	9	20.000	1	50.000	9	60.000	10	75.000	5	100.00	-15	200.00	-14
para-Isopropyl Toluene	2.5000	9	5.0000	-6	10.000	12	20.000	4	50.000	7	60.000	8	75.000	-4	100.00	-12	200.00	-17
1,3-Dichlorobenzene	2.5000	12	5.0000	7	10.000	10	20.000	3	50.000	7	60.000	3	75.000	-6	100.00	-15	200.00	-21
1,4-Dichlorobenzene	2.5000	11	5.0000	12	10.000	13	20.000	-1	50.000	5	60.000	2	75.000	-3	100.00	-18	200.00	-21
n-Butylbenzene	2.5000	10	5.0000	-6	10.000	16	20.000	8	50.000	7	60.000	7	75.000	-1	100.00	-17	200.00	-24
1,2-Dichlorobenzene	2.5000	8	5.0000	13	10.000	14	20.000	-1	50.000	6	60.000	4	75.000	-7	100.00	-17	200.00	-22
1,2-Dibromo-3-Chloropropane	2.5000	22	5.0000	-4	10.000	5	20.000	-2	50.000	6	60.000	1	75.000	-3	100.00	-16	200.00	-9
1,2,4-Trichlorobenzene	2.5000	19	5.0000	9	10.000	8	20.000	-2	50.000	4	60.000	1	75.000	-2	100.00	-17	200.00	-21
Hexachlorobutadiene	2.5000	3	5.0000	-12	10.000	10	20.000	-1	50.000	5	60.000	11	75.000	6	100.00	-12	200.00	-10
Naphthalene	2.5000	23	5.0000	2	10.000	7	20.000	-1	50.000	6	60.000	5	75.000	-4	100.00	-16	200.00	-21
1,2,3-Trichlorobenzene	2.5000	27	5.0000	9	10.000	8	20.000	-2	50.000	6	60.000	0	75.000	-5	100.00	-21	200.00	-22
Dibromofluoromethane	50.0000	1	50.000	-3	50.000	-1	50.000	2	50.000	-1	50.000	-2	50.000	0	50.000	1	50.000	3
1,2-Dichloroethane-d4	50.0000	1	50.000	0	50.000	8	50.000	5	50.000	-3	50.000	-3	50.000	2	50.000	0	50.000	-10
Trifluorotoluene	2.5000	-5	5.0000	-6	10.000	10	20.000	-3	50.000	12	60.000	15	75.000	2	100.00	-13	200.00	-12
Toluene-d8	50.0000	-2	50.000	1	50.000	2	50.000	2	50.000	-4	50.000	-1	50.000	0	50.000	1	50.000	2
Bromofluorobenzene	50.0000	0	50.000	-2	50.000	-2	50.000	-1	50.000	-2	50.000	-2	50.000	-2	50.000	2	50.000	4

MJB 06/28/13 [Freon 12]: Combined split peak in multiple levels.

MJB 06/28/13 [Chloromethane]: Combined split peak in multiple levels.

MJB 06/28/13 [Bromomethane]: Combined split peak in multiple levels.

MJB 06/28/13 [Ethanol]: Combined split peak in multiple levels.

MJB 06/28/13 [Acetone]: Corrected baseline noise or negative peak in multiple levels.

MJB 06/28/13 [Isopropanol]: Combined split peak in (dfr06).

MJB 06/28/13 [Vinyl Acetate]: Corrected automatically drawn baseline in multiple levels.

MJB 06/28/13 [2-Chlorotoluene]: Separated from coeluting peak in multiple levels.

Analyst: MJB

Date: 06/28/13

Reviewer: IW

Date: 06/28/13

m>manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor; LINR=Linear regression; QUAD=Quadratic regression

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433257006002

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 MSVOA Soil  
EPA 8260B

Inst : MSVOA04  
Calnum : 433257006002

Name : 826GOX4S  
Cal Date : 27-JUN-2013

Type : SOIL

ICV 433257006015 (dfr15 27-JUN-2013) stds: S22435 (10000X), S22539 (5000X)  
ICV 433257006016 (dfr16 27-JUN-2013) stds: S22666 (10000X), S22596 (10000X),  
S22609 (10000X), S22539 (5000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	433257006015	20.00	21.27	ug/L	6	30	m
Chloromethane	433257006015	20.00	20.12	ug/L	1	30	m
Vinyl Chloride	433257006015	20.00	20.21	ug/L	1	20	
Bromomethane	433257006015	20.00	14.03	ug/L	-30	30	!v- m
Chloroethane	433257006015	20.00	20.96	ug/L	5	30	
Trichlorofluoromethane	433257006015	20.00	17.91	ug/L	-10	30	
Acetone	433257006016	25.00	23.03	ug/L	-8	40	
Freon 113	433257006016	25.00	24.12	ug/L	-4	30	
1,1-Dichloroethene	433257006016	25.00	22.43	ug/L	-10	20	
Methylene Chloride	433257006016	25.00	24.65	ug/L	-1	30	
Carbon Disulfide	433257006016	25.00	26.57	ug/L	6	30	
MTBE	433257006016	25.00	21.87	ug/L	-13	30	
trans-1,2-Dichloroethene	433257006016	25.00	24.74	ug/L	-1	30	
Vinyl Acetate	433257006016	25.00	19.31	ug/L	-23	40	!v-
1,1-Dichloroethane	433257006016	25.00	23.33	ug/L	-7	30	
2-Butanone	433257006016	25.00	23.74	ug/L	-5	40	
2,2-Dichloropropane	433257006016	25.00	22.91	ug/L	-8	30	
cis-1,2-Dichloroethene	433257006016	25.00	24.20	ug/L	-3	30	
Chloroform	433257006016	25.00	23.56	ug/L	-6	20	
Bromochloromethane	433257006016	25.00	23.18	ug/L	-7	30	
1,1,1-Trichloroethane	433257006016	25.00	24.64	ug/L	-1	30	
1,1-Dichloropropene	433257006016	25.00	26.98	ug/L	8	30	
Carbon Tetrachloride	433257006016	25.00	26.12	ug/L	4	30	
1,2-Dichloroethane	433257006016	25.00	25.89	ug/L	4	30	
Benzene	433257006016	25.00	26.33	ug/L	5	30	
Trichloroethene	433257006016	25.00	27.42	ug/L	10	30	
1,2-Dichloropropane	433257006016	25.00	24.96	ug/L	0	20	
Bromodichloromethane	433257006016	25.00	24.35	ug/L	-3	30	
Dibromomethane	433257006016	25.00	25.68	ug/L	3	30	
4-Methyl-2-Pentanone	433257006016	25.00	25.33	ug/L	1	40	
cis-1,3-Dichloropropene	433257006016	25.00	25.55	ug/L	2	30	
Toluene	433257006016	25.00	25.57	ug/L	2	20	
trans-1,3-Dichloropropene	433257006016	25.00	22.21	ug/L	-11	30	
1,1,2-Trichloroethane	433257006016	25.00	24.68	ug/L	-1	30	
2-Hexanone	433257006016	25.00	26.18	ug/L	5	40	
1,3-Dichloropropane	433257006016	25.00	25.16	ug/L	1	30	
Tetrachloroethene	433257006016	25.00	26.16	ug/L	5	30	
Dibromochloromethane	433257006016	25.00	23.67	ug/L	-5	30	
1,2-Dibromoethane	433257006016	25.00	24.44	ug/L	-2	30	
Chlorobenzene	433257006016	25.00	23.44	ug/L	-6	30	
1,1,1,2-Tetrachloroethane	433257006016	25.00	23.46	ug/L	-6	30	
Ethylbenzene	433257006016	25.00	25.19	ug/L	1	20	
m,p-Xylenes	433257006016	50.00	49.21	ug/L	-2	30	
o-Xylene	433257006016	25.00	23.44	ug/L	-6	30	
Styrene	433257006016	25.00	24.66	ug/L	-1	30	
Bromoform	433257006016	25.00	25.53	ug/L	2	30	
Isopropylbenzene	433257006016	25.00	23.68	ug/L	-5	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	433257006016	25.00	23.59	ug/L	-6	30	
1,2,3-Trichloropropane	433257006016	25.00	24.14	ug/L	-3	30	
Propylbenzene	433257006016	25.00	22.79	ug/L	-9	30	
Bromobenzene	433257006016	25.00	23.05	ug/L	-8	30	
1,3,5-Trimethylbenzene	433257006016	25.00	25.73	ug/L	3	30	
2-Chlorotoluene	433257006016	25.00	22.38	ug/L	-10	30	m
4-Chlorotoluene	433257006016	25.00	21.04	ug/L	-16	30	
tert-Butylbenzene	433257006016	25.00	23.02	ug/L	-8	30	
1,2,4-Trimethylbenzene	433257006016	25.00	25.15	ug/L	1	30	
sec-Butylbenzene	433257006016	25.00	24.02	ug/L	-4	30	
para-Isopropyl Toluene	433257006016	25.00	23.26	ug/L	-7	30	
1,3-Dichlorobenzene	433257006016	25.00	21.91	ug/L	-12	30	
1,4-Dichlorobenzene	433257006016	25.00	24.01	ug/L	-4	30	
n-Butylbenzene	433257006016	25.00	25.18	ug/L	1	30	
1,2-Dichlorobenzene	433257006016	25.00	22.49	ug/L	-10	30	
1,2-Dibromo-3-Chloropropane	433257006016	25.00	23.06	ug/L	-8	30	
1,2,4-Trichlorobenzene	433257006016	25.00	22.99	ug/L	-8	30	
Hexachlorobutadiene	433257006016	25.00	24.94	ug/L	0	30	
Naphthalene	433257006016	25.00	23.60	ug/L	-6	30	
1,2,3-Trichlorobenzene	433257006016	25.00	23.02	ug/L	-8	30	

433257006015: Analyst: MJB Date: 06/28/13 Reviewer: LW Date: 06/28/13  
433257006016: Analyst: MJB Date: 06/28/13 Reviewer: LW Date: 06/28/13

!=warning --low bias m=manual integration v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 MSVOA Soil: EPA 8260B

Inst : MSVOA05 Name : 826G0X5S Type : SOIL  
 Calnum : 443223853002 Date : 04-JUN-2013 14:45  
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	ef409	443223853009	04-JUN-2013 14:45	S22357 (200000X), S21634 (200000X), S22288 (200000X), S22165 (5000X)
L2	ef410	443223853010	04-JUN-2013 15:22	S22357 (100000X), S21634 (100000X), S22288 (100000X), S22165 (5000X)
L3	ef411	443223853011	04-JUN-2013 15:59	S22357 (50000X), S21634 (50000X), S22288 (50000X), S22165 (5000X)
L4	ef412	443223853012	04-JUN-2013 16:36	S22357 (25000X), S21634 (25000X), S22288 (25000X), S22165 (5000X)
L5	ef413	443223853013	04-JUN-2013 17:13	S22357 (10000X), S21634 (10000X), S22288 (10000X), S22165 (5000X)
L6	ef414	443223853014	04-JUN-2013 17:50	S22357 (8333X), S21634 (8333X), S22288 (8333X), S22165 (5000X)
L7	ef415	443223853015	04-JUN-2013 18:27	S22357 (6667X), S21634 (6667X), S22288 (6667X), S22165 (5000X)
L8	ef416	443223853016	04-JUN-2013 19:04	S22357 (5000X), S21634 (5000X), S22288 (5000X), S22165 (5000X)
L9	ef417	443223853017	04-JUN-2013 19:41	S22357 (2500X), S21634 (2500X), S22288 (2500X), S22165 (5000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12	1.4310m	1.5506m	1.3367m	1.4021m	1.5139m	1.3889m	1.3835m	1.3191	1.3444m	AVRG	0.71033	0.71033		1.4078	6	15	0.05	0.99	
Chloromethane		1.0434m	0.9323m	0.8639m	0.8705m	0.8370m	0.7999m	0.7421	0.6436m	AVRG		1.18822		0.8416	14	15	0.10	0.99	
Vinyl Chloride	0.7854m	0.8378	0.7434	0.7342	0.8193	0.7417	0.7393	0.7240	0.7196	AVRG		1.31488		0.7605	6	15	0.05	0.99	
Bromomethane		0.4723m	0.4293m	0.3885m	0.4552m	0.4391m	0.4384m	0.4180m	0.3916m	AVRG		2.33080		0.4290	7	15	0.05	0.99	
Chloroethane	0.4209	0.4333	0.3801	0.3574	0.4187	0.3930	0.3871	0.3642	0.3453	AVRG		2.57148		0.3889	8	15	0.05	0.99	
Trichlorofluoromethane	1.6057	1.7625	1.5528	1.5866	1.6505	1.5989	1.6343	1.5563	1.6019	AVRG		0.61857		1.6166	4	15	0.05	0.99	
Acetone			0.3495	0.3565	0.3610	0.3775	0.3931			AVRG		2.72105		0.3675	5	15	0.05	0.99	
Freon 113	0.6513	0.6425	0.5694	0.6213	0.6432	0.6384	0.6313	0.6051		AVRG		1.59920		0.6253	4	15	0.05	0.99	
1,1-Dichloroethene	0.5071	0.4938	0.4507	0.4661	0.4663	0.4601	0.4667	0.2837		AVRG		2.22568		0.4493	15	15	0.05	0.99	
Methylene Chloride	0.5705	0.5009	0.5792	0.4765	0.5350	0.5314	0.5499	0.4770	0.5002	AVRG		1.90650		0.5245	7	15	0.05	0.99	
Carbon Disulfide	1.8767	1.4687	1.6517	1.3668	1.6585	1.6079	1.7026	1.4543	1.4812	AVRG		0.63076		1.5854	10	15	0.05	0.99	
MTBE	1.9920	1.7065	1.8786	1.6691	1.8620	1.8229	1.9330	1.7585	1.7887	AVRG		0.54840		1.8235	6	15	0.05	0.99	
trans-1,2-Dichloroethene	0.6253	0.5392	0.5622	0.4796	0.5234	0.5007	0.5407	0.4662	0.4808	AVRG		1.90757		0.5242	10	15	0.05	0.99	
Vinyl Acetate		0.9983	1.0293	1.0831	1.0808	1.0735	1.0029	0.8287	0.8240	AVRG		1.01001		0.9901	11	15	0.05	0.99	
1,1-Dichloroethane	1.1653	1.1426	1.1741	0.9584	1.0522	1.0133	1.0777	1.0475	1.0224	AVRG		0.93231		1.0726	7	15	0.10	0.99	
2-Butanone		0.3952	0.4114	0.2958	0.3386	0.3507	0.3737	0.2731	0.2825	AVRG		2.94008		0.3401	15	15	0.05	0.99	
2,2-Dichloropropane	1.2640	1.2543	1.2635	1.0674	1.1879	1.1458	1.1949	1.0262	0.9915	AVRG		0.86577		1.1550	9	15	0.05	0.99	
cis-1,2-Dichloroethene	0.6879	0.6293	0.6307	0.5817	0.5721	0.5517	0.5958	0.4980	0.4823	AVRG		1.72098		0.5811	11	15	0.05	0.99	
Chloroform	1.3570	1.4131	1.3961	1.1313	1.2791	1.2602	1.3454	1.0774	1.0862	AVRG		0.79326		1.2606	10	15	0.05	0.99	
Bromochloromethane	0.3297	0.3448	0.2955	0.3162	0.2908	0.2834	0.2907	0.2546	0.2270	AVRG		3.41839		0.2925	12	15	0.05	0.99	
1,1,1-Trichloroethane	1.3044	1.1704	1.2720	1.1094	1.2159	1.1639	1.2271	1.0365	1.0639	AVRG		0.85199		1.1737	8	15	0.05	0.99	
1,1-Dichloropropene	0.6325	0.6013	0.5618	0.5281	0.5408	0.5192	0.5490	0.4719	0.4389	AVRG		1.85812		0.5382	11	15	0.05	0.99	
Carbon Tetrachloride	0.5622	0.6615	0.6212	0.6414	0.6824	0.6574	0.6842	0.6201	0.6301	AVRG		1.56238		0.6400	6	15	0.05	0.99	
1,2-Dichloroethane	0.7894	0.6884	0.7766	0.6444	0.7329	0.7294	0.7708	0.6423	0.6367	AVRG		1.40386		0.7123	9	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	Flg
Benzene	1.3851	1.3100	1.3095	1.1005	1.1520	1.0876	1.1583	0.9626	0.8501	AVRG	0.87247	0.87247		1.1462	15	15	0.05	0.99	
Trichloroethene	0.4482	0.4429	0.4821	0.4214	0.4197	0.3992	0.4342	0.3964	0.3783	AVRG	2.35455	2.35455		0.4247	7	15	0.05	0.99	
1,2-Dichloropropane	0.3465	0.3522	0.3539	0.3261	0.3314	0.3090	0.3427	0.2837	0.2715m	AVRG	3.08539	3.08539		0.3241	9	15	0.05	0.99	
Bromodichloromethane	0.6332	0.6863	0.7149	0.6378	0.6749	0.6578	0.7045	0.6155	0.6142	AVRG	1.51542	1.51542		0.6599	6	15	0.05	0.99	
Dibromomethane	0.3367	0.3373	0.3314	0.3180	0.3145	0.3087	0.3244	0.2943	0.2820	AVRG	3.16101	3.16101		0.3164	6	15	0.05	0.99	
4-Methyl-2-Pentanone			0.5052	0.3833	0.4536	0.4597	0.4930	0.3837	0.3910	AVRG	2.28058	2.28058		0.4385	12	15	0.05	0.99	
cis-1,3-Dichloropropene	0.6544m	0.6405m	0.6953m	0.6069m	0.6198m	0.6058m	0.6683m	0.5549m	0.5413m	AVRG	1.61086	1.61086		0.6208	8	15	0.05	0.99	
Toluene	1.0487	0.9114	0.9102	0.8280	0.8529	0.8442	0.8890	0.7293	0.6647	AVRG	1.17211	1.17211		0.8532	13	15	0.05	0.99	
trans-1,3-Dichloropropene	0.6910	0.7187	0.7212	0.6643	0.7631	0.7588	0.7826	0.6544	0.6241	AVRG	1.41106	1.41106		0.7087	8	15	0.05	0.99	
1,1,2-Trichloroethane	0.2055	0.2149	0.2085	0.1927	0.2283	0.2134	0.2056	0.1790	0.1646	AVRG	4.96579	4.96579		0.2014	10	15	0.05	0.99	
2-Hexanone			0.3523	0.3009	0.3290	0.3435	0.3781	0.3233	0.3274	AVRG	2.97316	2.97316		0.3363	7	15	0.05	0.99	
1,3-Dichloropropane	0.6140	0.6276	0.6182	0.6068	0.5822	0.5532	0.5773	0.5462	0.5086	AVRG	1.71953	1.71953		0.5816	7	15	0.05	0.99	
Tetrachloroethene	0.5280	0.4897	0.4902	0.4642	0.4535	0.4492	0.4303	0.4088	0.3726	AVRG	2.20237	2.20237		0.4541	10	15	0.05	0.99	
Dibromochloromethane	0.4941	0.5329	0.5273	0.5430	0.5378	0.5381	0.5530	0.5123	0.4993	AVRG	1.89958	1.89958		0.5264	4	15	0.05	0.99	
1,2-Dibromoethane	0.4551	0.4408	0.4309	0.4178	0.4280	0.4291	0.4477	0.3999	0.3783	AVRG	2.35136	2.35136		0.4253	6	15	0.05	0.99	
Chlorobenzene	1.0608	1.1152	1.0766	1.0146	0.9666	0.9698	0.9832	0.9173	0.7941	AVRG	1.01145	1.01145		0.9887	10	15	0.30	0.99	
1,1,1,2-Tetrachloroethane	0.4575	0.4494	0.4735	0.4399	0.4496	0.4448	0.4660	0.4356	0.4109	AVRG	2.23485	2.23485		0.4475	4	15	0.05	0.99	
Ethylbenzene	2.0894	1.9039	1.9299	1.8024	1.7661	1.7500	1.7638	1.6201	1.4727	AVRG	0.55907	0.55907		1.7887	10	15	0.05	0.99	
m,p-Xylenes	0.6956	0.6970	0.6730	0.6393	0.5815	0.5763	0.5738	0.5201	0.4543	AVRG	1.66334	1.66334		0.6012	14	15	0.05	0.99	
o-Xylene	0.7288	0.6866	0.6891	0.6307	0.6025	0.5967	0.6028	0.5484	0.4714	AVRG	1.61957	1.61957		0.6174	13	15	0.05	0.99	
Styrene	1.1317	1.1916	1.1770	1.1187	1.0529	1.0324	1.0748	0.9601	0.8313	AVRG	0.94040	0.94040		1.0634	11	15	0.05	0.99	
Bromoform	0.2163	0.3228	0.3569	0.3643	0.3726	0.3801	0.3908	0.3627	0.3537	AVRG	2.88457	2.88457		0.3467	15	15	0.10	0.99	
Isopropylbenzene	3.6109	3.2803	3.1972	2.9766	2.9028	2.7813	3.0874	2.8446	2.6720	AVRG	0.32903	0.32903		3.0392	10	15	0.05	0.99	
1,1,2,2-Tetrachloroethane	0.9730	0.8444	0.8361	0.8043	0.8262	0.8248	0.8798	0.7769	0.7396	AVRG	1.19918	1.19918		0.8339	8	15	0.30	0.99	
1,2,3-Trichloropropane	0.7882	0.6671	0.7211	0.6935	0.7019	0.7059	0.7854	0.7349	0.7057	AVRG	1.38379	1.38379		0.7227	6	15	0.05	0.99	
Propylbenzene	4.1515	3.8470	4.0876	3.6517	3.5391	3.4344	3.6651	3.3263	3.1144	AVRG	0.27425	0.27425		3.6464	9	15	0.05	0.99	
Bromobenzene	0.9529	0.8950	0.8739	0.8148	0.7745	0.7631	0.8192	0.7337	0.6712	AVRG	1.23316	1.23316		0.8109	11	15	0.05	0.99	
1,3,5-Trimethylbenzene	2.9915	2.8607	2.8444	2.6325	2.5188	2.3977	2.5796	2.3629	2.2575	AVRG	0.38387	0.38387		2.6051	10	15	0.05	0.99	
2-Chlorotoluene	2.9064	2.7251	2.6630	2.5447	2.4348	2.3416	2.5664	2.3482	2.2910	AVRG	0.39437	0.39437		2.5357	8	15	0.05	0.99	
4-Chlorotoluene	2.7364	2.6214	2.5473	2.3866	2.3855	2.2661	2.5384	2.3241	2.1563	AVRG	0.40980	0.40980		2.4402	8	15	0.05	0.99	
tert-Butylbenzene	2.5565	2.4292	2.4498	2.3091	2.2385	2.1501	2.3251	2.1714	1.9685	AVRG	0.43693	0.43693		2.2887	8	15	0.05	0.99	
1,2,4-Trimethylbenzene	3.0426	2.9042	2.9210	2.7514	2.6433	2.5664	2.8389	2.5954	2.4186	AVRG	0.36464	0.36464		2.7424	7	15	0.05	0.99	
sec-Butylbenzene	4.1004	3.8116	3.6364	3.6143	3.4025	3.3831	3.4861	3.2138	2.8921	AVRG	0.28544	0.28544		3.5034	10	15	0.05	0.99	
para-Isopropyl Toluene	3.3981	3.2267	3.2516	3.1234	2.9683	2.8568	3.0008	2.7796	2.5399	AVRG	0.33155	0.33155		3.0161	9	15	0.05	0.99	
1,3-Dichlorobenzene	1.7549	1.7729	1.6944	1.6008	1.5745	1.5137	1.6327	1.4691	1.3468	AVRG	0.62675	0.62675		1.5955	9	15	0.05	0.99	
1,4-Dichlorobenzene	1.7062	1.7435	1.7037	1.5875	1.5576	1.5257	1.6503	1.4509	1.3331	AVRG	0.63120	0.63120		1.5843	8	15	0.05	0.99	
n-Butylbenzene	3.0459	3.1259	3.1967	3.0081	2.9350	2.8451	3.0533	2.7550	2.5276	AVRG	0.33972	0.33972		2.9436	7	15	0.05	0.99	
1,2-Dichlorobenzene	1.6558	1.6377	1.6581	1.5322	1.4803	1.4547	1.6136	1.4088	1.2980	AVRG	0.65459	0.65459		1.5277	8	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane	0.2484	0.2376	0.2291	0.2173	0.2347	0.2249	0.2603	0.2344	0.2490	AVRG	4.21411	4.21411		0.2373	6	15	0.05	0.99	
1,2,4-Trichlorobenzene	0.9603	1.1191	1.1254	1.0907	1.1174	1.0723	1.2093	1.0607	1.0553	AVRG	0.91739	0.91739		1.0900	6	15	0.05	0.99	
Hexachlorobutadiene	0.7696	0.8186	0.7905	0.7586	0.7519	0.7277	0.7885	0.7257	0.7020	AVRG	1.31713	1.31713		0.7592	5	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	FLg
Naphthalene	1.6793	1.9493	2.1801	2.1510	2.2494	2.3079	2.5945	2.4026	2.3995	AVRG	0.45196	0.45196		2.2126	12	15	0.05	0.99	
1,2,3-Trichlorobenzene	0.8515	0.9292	1.0334	1.0162	1.0089	1.0089	1.1090	0.9939	1.0065	AVRG	1.00474	1.00474		0.9953	7	15	0.05	0.99	
Dibromofluoromethane	0.6673	0.6551	0.6525	0.6436	0.6660	0.6788	0.6648	0.6054	0.6032	AVRG	1.54195	1.54195		0.6485	4	15	0.05	0.99	
1,2-Dichloroethane-d4	0.5933	0.5230	0.6018	0.5328	0.5963	0.5893	0.5805	0.5237	0.5364	AVRG	1.77268	1.77268		0.5641	6	15	0.05	0.99	
Trifluorotoluene	0.5893	0.6700	0.5832	0.5936	0.5679	0.5412	0.5538	0.5321	0.5140	AVRG	1.74928	1.74928		0.5717	8	15	0.05	0.99	
Toluene-d8	1.2071	1.1128	1.1404	1.1403	1.2376	1.2783	1.2102	1.1305	1.1249	AVRG	0.85048	0.85048		1.1758	5	15	0.05	0.99	
Bromofluorobenzene	0.9860	0.9080	0.9159	0.9366	0.9309	0.9405	0.9763	1.0208	1.0459	AVRG	1.03915	1.03915		0.9623	5	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12	2.5000	2	5.0000	10	10.000	-5	20.000	0	50.000	8	60.000	-1	75.000	-2	100.00	-6	200.00	-5
Chloromethane			5.0000	<b>24</b>	10.000	11	20.000	3	50.000	3	60.000	-1	75.000	-5	100.00	-12	200.00	<b>-24</b>
Vinyl Chloride	2.5000	3	5.0000	10	10.000	-2	20.000	-3	50.000	8	60.000	-2	75.000	-3	100.00	-5	200.00	-5
Bromomethane			5.0000	10	10.000	0	20.000	-9	50.000	6	60.000	2	75.000	2	100.00	-3	200.00	-9
Chloroethane	2.5000	8	5.0000	11	10.000	-2	20.000	-8	50.000	8	60.000	1	75.000	0	100.00	-6	200.00	-11
Trichlorofluoromethane	2.5000	-1	5.0000	9	10.000	-4	20.000	-2	50.000	2	60.000	-1	75.000	1	100.00	-4	200.00	-1
Acetone					10.000	-5	20.000	-3	50.000	-2	60.000	3	75.000	7				
Freon 113	2.5000	4	5.0000	3	10.000	-9	20.000	-1	50.000	3	60.000	2	75.000	1	100.00	-3		
1,1-Dichloroethene	2.5000	13	5.0000	10	10.000	0	20.000	4	50.000	4	60.000	2	75.000	4	100.00	<b>-37</b>		
Methylene Chloride	2.5000	9	5.0000	-5	10.000	10	20.000	-9	50.000	2	60.000	1	75.000	5	100.00	-9	200.00	-5
Carbon Disulfide	2.5000	18	5.0000	-7	10.000	4	20.000	-14	50.000	5	60.000	1	75.000	7	100.00	-8	200.00	-7
MTBE	2.5000	9	5.0000	-6	10.000	3	20.000	-8	50.000	2	60.000	0	75.000	6	100.00	-4	200.00	-2
trans-1,2-Dichloroethene	2.5000	19	5.0000	3	10.000	7	20.000	-9	50.000	0	60.000	-4	75.000	3	100.00	-11	200.00	-8
Vinyl Acetate			5.0000	1	10.000	4	20.000	9	50.000	9	60.000	8	75.000	1	100.00	-16	200.00	-17
1,1-Dichloroethane	2.5000	9	5.0000	7	10.000	9	20.000	-11	50.000	-2	60.000	-6	75.000	0	100.00	-2	200.00	-5
2-Butanone			5.0000	16	10.000	<b>21</b>	20.000	-13	50.000	0	60.000	3	75.000	10	100.00	-20	200.00	-17
2,2-Dichloropropane	2.5000	9	5.0000	9	10.000	9	20.000	-8	50.000	3	60.000	-1	75.000	3	100.00	-11	200.00	-14
cis-1,2-Dichloroethene	2.5000	18	5.0000	8	10.000	9	20.000	0	50.000	-2	60.000	-5	75.000	3	100.00	-14	200.00	-17
Chloroform	2.5000	8	5.0000	12	10.000	11	20.000	-10	50.000	1	60.000	0	75.000	7	100.00	-15	200.00	-14
Bromochloromethane	2.5000	13	5.0000	18	10.000	1	20.000	8	50.000	-1	60.000	-3	75.000	-1	100.00	-13	200.00	<b>-22</b>
1,1,1-Trichloroethane	2.5000	11	5.0000	0	10.000	8	20.000	-5	50.000	4	60.000	-1	75.000	5	100.00	-12	200.00	-9
1,1-Dichloropropene	2.5000	18	5.0000	12	10.000	4	20.000	-2	50.000	0	60.000	-4	75.000	2	100.00	-12	200.00	-18
Carbon Tetrachloride	2.5000	-12	5.0000	3	10.000	-3	20.000	0	50.000	7	60.000	3	75.000	7	100.00	-3	200.00	-2
1,2-Dichloroethane	2.5000	11	5.0000	-3	10.000	9	20.000	-10	50.000	3	60.000	2	75.000	8	100.00	-10	200.00	-11
Benzene	2.5000	<b>21</b>	5.0000	14	10.000	14	20.000	-4	50.000	1	60.000	-5	75.000	1	100.00	-16	200.00	<b>-26</b>
Trichloroethene	2.5000	6	5.0000	4	10.000	14	20.000	14	50.000	-1	60.000	-6	75.000	2	100.00	-7	200.00	-11
1,2-Dichloropropane	2.5000	7	5.0000	9	10.000	9	20.000	1	50.000	2	60.000	-5	75.000	6	100.00	-12	200.00	-16
Bromodichloromethane	2.5000	-4	5.0000	4	10.000	8	20.000	-3	50.000	2	60.000	0	75.000	7	100.00	-7	200.00	-7
Dibromomethane	2.5000	6	5.0000	7	10.000	5	20.000	1	50.000	-1	60.000	-2	75.000	3	100.00	-7	200.00	-11
4-Methyl-2-Pentanone					10.000	15	20.000	-13	50.000	3	60.000	5	75.000	12	100.00	-12	200.00	-11
cis-1,3-Dichloropropene	2.5000	5	5.0000	3	10.000	12	20.000	-2	50.000	0	60.000	-2	75.000	8	100.00	-11	200.00	-13
Toluene	2.5000	<b>23</b>	5.0000	7	10.000	7	20.000	-3	50.000	0	60.000	-1	75.000	4	100.00	-15	200.00	<b>-22</b>
trans-1,3-Dichloropropene	2.5000	-2	5.0000	1	10.000	2	20.000	-6	50.000	8	60.000	7	75.000	10	100.00	-8	200.00	-12
1,1,2-Trichloroethane	2.5000	2	5.0000	7	10.000	4	20.000	-4	50.000	13	60.000	6	75.000	2	100.00	-11	200.00	-18
2-Hexanone					10.000	5	20.000	-11	50.000	-2	60.000	2	75.000	12	100.00	-4	200.00	-3
1,3-Dichloropropane	2.5000	6	5.0000	8	10.000	6	20.000	4	50.000	0	60.000	-5	75.000	-1	100.00	-6	200.00	-13
Tetrachloroethene	2.5000	16	5.0000	8	10.000	8	20.000	2	50.000	0	60.000	-1	75.000	-5	100.00	-10	200.00	-18
Dibromochloromethane	2.5000	-6	5.0000	1	10.000	0	20.000	3	50.000	2	60.000	2	75.000	5	100.00	-3	200.00	-5
1,2-Dibromoethane	2.5000	7	5.0000	4	10.000	1	20.000	-2	50.000	1	60.000	1	75.000	5	100.00	-6	200.00	-11
Chlorobenzene	2.5000	7	5.0000	13	10.000	9	20.000	3	50.000	-2	60.000	-2	75.000	-1	100.00	-7	200.00	-20
1,1,1,2-Tetrachloroethane	2.5000	2	5.0000	0	10.000	6	20.000	-2	50.000	0	60.000	-1	75.000	4	100.00	-3	200.00	-8
Ethylbenzene	2.5000	17	5.0000	6	10.000	8	20.000	1	50.000	-1	60.000	-2	75.000	-1	100.00	-9	200.00	-18

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	5.0000	16	10.000	16	20.000	12	40.000	6	100.00	-3	120.00	-4	150.00	-5	200.00	-13	400.00	-24
o-Xylene	2.5000	18	5.0000	11	10.000	12	20.000	2	50.000	-2	60.000	-3	75.000	-2	100.00	-11	200.00	-24
Styrene	2.5000	6	5.0000	12	10.000	11	20.000	5	50.000	-1	60.000	-3	75.000	1	100.00	-10	200.00	-22
Bromoform	2.5000	-38	5.0000	-7	10.000	3	20.000	5	50.000	7	60.000	10	75.000	13	100.00	5	200.00	2
Isopropylbenzene	2.5000	19	5.0000	8	10.000	5	20.000	-2	50.000	-4	60.000	-8	75.000	2	100.00	-6	200.00	-12
1,1,2,2-Tetrachloroethane	2.5000	17	5.0000	1	10.000	0	20.000	-4	50.000	-1	60.000	-1	75.000	6	100.00	-7	200.00	-11
1,2,3-Trichloropropane	2.5000	9	5.0000	-8	10.000	0	20.000	-4	50.000	-3	60.000	-2	75.000	9	100.00	2	200.00	-2
Propylbenzene	2.5000	14	5.0000	6	10.000	12	20.000	0	50.000	-3	60.000	-6	75.000	1	100.00	-9	200.00	-15
Bromobenzene	2.5000	18	5.0000	10	10.000	8	20.000	0	50.000	-4	60.000	-6	75.000	1	100.00	-10	200.00	-17
1,3,5-Trimethylbenzene	2.5000	15	5.0000	10	10.000	9	20.000	1	50.000	-3	60.000	-8	75.000	-1	100.00	-9	200.00	-13
2-Chlorotoluene	2.5000	15	5.0000	7	10.000	5	20.000	0	50.000	-4	60.000	-8	75.000	1	100.00	-7	200.00	-10
4-Chlorotoluene	2.5000	12	5.0000	7	10.000	4	20.000	-2	50.000	-2	60.000	-7	75.000	4	100.00	-5	200.00	-12
tert-Butylbenzene	2.5000	12	5.0000	6	10.000	7	20.000	1	50.000	-2	60.000	-6	75.000	2	100.00	-5	200.00	-14
1,2,4-Trimethylbenzene	2.5000	11	5.0000	6	10.000	7	20.000	0	50.000	-4	60.000	-6	75.000	4	100.00	-5	200.00	-12
sec-Butylbenzene	2.5000	17	5.0000	9	10.000	4	20.000	3	50.000	-3	60.000	-3	75.000	0	100.00	-8	200.00	-18
para-Isopropyl Toluene	2.5000	13	5.0000	7	10.000	8	20.000	4	50.000	-2	60.000	-5	75.000	-1	100.00	-8	200.00	-16
1,3-Dichlorobenzene	2.5000	10	5.0000	11	10.000	6	20.000	0	50.000	-1	60.000	-5	75.000	2	100.00	-8	200.00	-16
1,4-Dichlorobenzene	2.5000	8	5.0000	10	10.000	8	20.000	0	50.000	-2	60.000	-4	75.000	4	100.00	-8	200.00	-16
n-Butylbenzene	2.5000	3	5.0000	6	10.000	9	20.000	2	50.000	0	60.000	-3	75.000	4	100.00	-6	200.00	-14
1,2-Dichlorobenzene	2.5000	9	5.0000	7	10.000	9	20.000	0	50.000	-3	60.000	-5	75.000	6	100.00	-8	200.00	-15
1,2-Dibromo-3-Chloropropane	2.5000	5	5.0000	0	10.000	-3	20.000	-8	50.000	-1	60.000	-5	75.000	10	100.00	-1	200.00	5
1,2,4-Trichlorobenzene	2.5000	-12	5.0000	3	10.000	3	20.000	0	50.000	3	60.000	-2	75.000	11	100.00	-3	200.00	-3
Hexachlorobutadiene	2.5000	1	5.0000	8	10.000	4	20.000	0	50.000	-1	60.000	-4	75.000	4	100.00	-4	200.00	-8
Naphthalene	2.5000	-24	5.0000	-12	10.000	-1	20.000	-3	50.000	2	60.000	4	75.000	17	100.00	9	200.00	8
1,2,3-Trichlorobenzene	2.5000	-14	5.0000	-7	10.000	4	20.000	2	50.000	1	60.000	1	75.000	11	100.00	0	200.00	1
Dibromofluoromethane	50.0000	3	50.000	1	50.000	1	50.000	-1	50.000	3	50.000	5	50.000	3	50.000	-7	50.000	-7
1,2-Dichloroethane-d4	50.0000	5	50.000	-7	50.000	7	50.000	-6	50.000	6	50.000	4	50.000	3	50.000	-7	50.000	-5
Trifluorotoluene	2.5000	3	5.0000	17	10.000	2	20.000	4	50.000	-1	60.000	-5	75.000	-3	100.00	-7	200.00	-10
Toluene-d8	50.0000	3	50.000	-5	50.000	-3	50.000	-3	50.000	5	50.000	9	50.000	3	50.000	-4	50.000	-4
Bromofluorobenzene	50.0000	2	50.000	-6	50.000	-5	50.000	-3	50.000	-3	50.000	-2	50.000	1	50.000	6	50.000	9

TEW 06/06/13 [Freon 12]: Combined split peak in multiple levels.

TEW 06/06/13 [Chloromethane]: Combined split peak in multiple levels.

TEW 06/06/13 [Vinyl Chloride]: Combined split peak in (ef409).

TEW 06/06/13 [Bromomethane]: Combined split peak in all levels.

TEW 06/06/13 [Ethanol]: Combined split peak in multiple levels.

TEW 06/06/13 [Iodomethane]: Combined split peak in multiple levels.

TEW 06/06/13 [1,2-Dichloropropane]: Separated from coeluting peak in (ef417).  
TEW 06/06/13 [cis-1,3-Dichloropropene]: Picked or reassigned peak in all levels.

Analyst: TEW Date: 06/06/13 Reviewer: IW Date: 06/06/13

m>manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor

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443223853002

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 MSVOA Soil  
EPA 8260B

Inst : MSVOA05  
Calnum : 443223853002

Name : 826GOX5S  
Cal Date : 04-JUN-2013

Type : SOIL

ICV 443223853019 (ef419 04-JUN-2013) stds: S22174 (10000X), S22258 (10000X), S22408 (10000X), S22165 (5000X)

ICV 443225232005 (ef505 05-JUN-2013) stds: S22387 (10000X), S22165 (5000X)

Analyte	ICV Seqnum	Date	Spiked	Quant	Units	%D	Max	Flags
Freon 12	443225232005	05-JUN-2013	20.00	18.35	ug/L	-8	30	m
Chloromethane	443225232005	05-JUN-2013	20.00	20.18	ug/L	1	30	
Vinyl Chloride	443225232005	05-JUN-2013	20.00	22.47	ug/L	12	20	
Bromomethane	443225232005	05-JUN-2013	20.00	16.66	ug/L	-17	30	m
Chloroethane	443225232005	05-JUN-2013	20.00	21.42	ug/L	7	30	
Trichlorofluoromethane	443225232005	05-JUN-2013	20.00	20.17	ug/L	1	30	
Acetone	443223853019	04-JUN-2013	25.00	24.29	ug/L	-3	40	
Freon 113	443223853019	04-JUN-2013	25.00	23.10	ug/L	-8	30	
1,1-Dichloroethene	443223853019	04-JUN-2013	25.00	23.58	ug/L	-6	20	
Methylene Chloride	443223853019	04-JUN-2013	25.00	26.32	ug/L	5	30	
Carbon Disulfide	443223853019	04-JUN-2013	25.00	22.96	ug/L	-8	30	
MTBE	443223853019	04-JUN-2013	25.00	23.39	ug/L	-6	30	
trans-1,2-Dichloroethene	443223853019	04-JUN-2013	25.00	25.37	ug/L	1	30	
Vinyl Acetate	443223853019	04-JUN-2013	25.00	21.91	ug/L	-12	40	
1,1-Dichloroethane	443223853019	04-JUN-2013	25.00	24.10	ug/L	-4	30	
2-Butanone	443223853019	04-JUN-2013	25.00	26.51	ug/L	6	40	
2,2-Dichloropropane	443223853019	04-JUN-2013	25.00	25.57	ug/L	2	30	
cis-1,2-Dichloroethene	443223853019	04-JUN-2013	25.00	24.44	ug/L	-2	30	
Chloroform	443223853019	04-JUN-2013	25.00	26.55	ug/L	6	20	
Bromochloromethane	443223853019	04-JUN-2013	25.00	25.62	ug/L	2	30	
1,1,1-Trichloroethane	443223853019	04-JUN-2013	25.00	25.80	ug/L	3	30	
1,1-Dichloropropene	443223853019	04-JUN-2013	25.00	25.88	ug/L	4	30	
Carbon Tetrachloride	443223853019	04-JUN-2013	25.00	25.91	ug/L	4	30	
1,2-Dichloroethane	443223853019	04-JUN-2013	25.00	26.75	ug/L	7	30	
Benzene	443223853019	04-JUN-2013	25.00	25.60	ug/L	2	30	
Trichloroethene	443223853019	04-JUN-2013	25.00	25.48	ug/L	2	30	
1,2-Dichloropropane	443223853019	04-JUN-2013	25.00	26.07	ug/L	4	20	
Bromodichloromethane	443223853019	04-JUN-2013	25.00	24.56	ug/L	-2	30	
Dibromomethane	443223853019	04-JUN-2013	25.00	26.79	ug/L	7	30	
4-Methyl-2-Pentanone	443223853019	04-JUN-2013	25.00	21.79	ug/L	-13	40	
cis-1,3-Dichloropropene	443223853019	04-JUN-2013	25.00	25.14	ug/L	1	30	
Toluene	443223853019	04-JUN-2013	25.00	24.28	ug/L	-3	20	
trans-1,3-Dichloropropene	443223853019	04-JUN-2013	25.00	23.45	ug/L	-6	30	
1,1,2-Trichloroethane	443223853019	04-JUN-2013	25.00	24.41	ug/L	-2	30	
2-Hexanone	443223853019	04-JUN-2013	25.00	24.81	ug/L	-1	40	
1,3-Dichloropropane	443223853019	04-JUN-2013	25.00	26.32	ug/L	5	30	
Tetrachloroethene	443223853019	04-JUN-2013	25.00	26.17	ug/L	5	30	
Dibromochloromethane	443223853019	04-JUN-2013	25.00	25.44	ug/L	2	30	
1,2-Dibromoethane	443223853019	04-JUN-2013	25.00	26.04	ug/L	4	30	
Chlorobenzene	443223853019	04-JUN-2013	25.00	24.18	ug/L	-3	30	
1,1,1,2-Tetrachloroethane	443223853019	04-JUN-2013	25.00	24.84	ug/L	-1	30	
Ethylbenzene	443223853019	04-JUN-2013	25.00	25.87	ug/L	3	20	
m,p-Xylenes	443223853019	04-JUN-2013	50.00	51.03	ug/L	2	30	
o-Xylene	443223853019	04-JUN-2013	25.00	23.85	ug/L	-5	30	
Styrene	443223853019	04-JUN-2013	25.00	25.19	ug/L	1	30	
Bromoform	443223853019	04-JUN-2013	25.00	28.20	ug/L	13	30	
Isopropylbenzene	443223853019	04-JUN-2013	25.00	23.55	ug/L	-6	30	

Analyte	ICV Seqnum	Date	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	443223853019	04-JUN-2013	25.00	24.88	ug/L	0	30	
1,2,3-Trichloropropane	443223853019	04-JUN-2013	25.00	25.51	ug/L	2	30	
Propylbenzene	443223853019	04-JUN-2013	25.00	23.36	ug/L	-7	30	
Bromobenzene	443223853019	04-JUN-2013	25.00	25.15	ug/L	1	30	
1,3,5-Trimethylbenzene	443223853019	04-JUN-2013	25.00	25.53	ug/L	2	30	
2-Chlorotoluene	443223853019	04-JUN-2013	25.00	23.63	ug/L	-5	30	
4-Chlorotoluene	443223853019	04-JUN-2013	25.00	22.63	ug/L	-9	30	
tert-Butylbenzene	443223853019	04-JUN-2013	25.00	23.43	ug/L	-6	30	
1,2,4-Trimethylbenzene	443223853019	04-JUN-2013	25.00	25.80	ug/L	3	30	
sec-Butylbenzene	443223853019	04-JUN-2013	25.00	23.37	ug/L	-7	30	
para-Isopropyl Toluene	443223853019	04-JUN-2013	25.00	23.14	ug/L	-7	30	
1,3-Dichlorobenzene	443223853019	04-JUN-2013	25.00	23.78	ug/L	-5	30	
1,4-Dichlorobenzene	443223853019	04-JUN-2013	25.00	25.78	ug/L	3	30	
n-Butylbenzene	443223853019	04-JUN-2013	25.00	25.71	ug/L	3	30	
1,2-Dichlorobenzene	443223853019	04-JUN-2013	25.00	24.66	ug/L	-1	30	
1,2-Dibromo-3-Chloropropane	443223853019	04-JUN-2013	25.00	24.25	ug/L	-3	30	
1,2,4-Trichlorobenzene	443223853019	04-JUN-2013	25.00	25.51	ug/L	2	30	
Hexachlorobutadiene	443223853019	04-JUN-2013	25.00	25.58	ug/L	2	30	
Naphthalene	443223853019	04-JUN-2013	25.00	27.77	ug/L	11	30	
1,2,3-Trichlorobenzene	443223853019	04-JUN-2013	25.00	26.27	ug/L	5	30	

443223853019: Analyst: TEW Date: 06/06/13 Reviewer: LW Date: 06/06/13  
443225232005: Analyst: TEW Date: 06/06/13 Reviewer: LW Date: 06/06/13

m=manual integration



Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,2,3-Trichloropropane	1.0537	0.8074	20.00	15.32	ug/L	-23	30	0.0500	!c-
Propylbenzene	5.1069	3.8134	20.00	14.93	ug/L	-25	30	0.0500	!c-
Bromobenzene	1.0224	0.8584	20.00	16.79	ug/L	-16	30	0.0500	
1,3,5-Trimethylbenzene	3.3640	2.7331	20.00	16.25	ug/L	-19	30	0.0500	
2-Chlorotoluene	3.1831	2.4534	20.00	15.42	ug/L	-23	30	0.0500	!c- m
4-Chlorotoluene	3.3069	2.5309	20.00	15.31	ug/L	-23	30	0.0500	!c-
tert-Butylbenzene	2.3883	2.1680	20.00	18.15	ug/L	-9	30	0.0500	
1,2,4-Trimethylbenzene	3.5305	2.6756	20.00	15.16	ug/L	-24	30	0.0500	!c-
sec-Butylbenzene	4.1777	3.4549	20.00	16.54	ug/L	-17	30	0.0500	
para-Isopropyl Toluene	3.2410	2.8839	20.00	17.80	ug/L	-11	30	0.0500	
1,3-Dichlorobenzene	1.8441	1.5935	20.00	17.28	ug/L	-14	30	0.0500	
1,4-Dichlorobenzene	1.9136	1.5547	20.00	16.25	ug/L	-19	30	0.0500	
n-Butylbenzene	3.9229	2.8720	20.00	14.64	ug/L	-27	30	0.0500	!c-
1,2-Dichlorobenzene	1.8452	1.5794	20.00	17.12	ug/L	-14	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2684	0.2339	20.00	17.43	ug/L	-13	30	0.0500	
1,2,4-Trichlorobenzene	1.4669	1.0665	20.00	14.54	ug/L	-27	30	0.0500	!c-
Hexachlorobutadiene	0.6345	0.6563	20.00	20.69	ug/L	3	30	0.0500	
Naphthalene	3.7788	3.1826	20.00	16.84	ug/L	-16	30	0.0500	
1,2,3-Trichlorobenzene	1.4783	1.1345	20.00	15.35	ug/L	-23	30	0.0500	!c-
Dibromofluoromethane	0.9291	0.9066	50.00	48.79	ug/L	-2	30	0.0500	
1,2-Dichloroethane-d4	0.4765	0.5706	50.00	59.88	ug/L	20	30	0.0500	
Trifluorotoluene	0.4404	0.4423	20.00	20.08	ug/L	0	30	0.0500	
Toluene-d8	1.3177	1.2607	50.00	47.84	ug/L	-4	30	0.0500	
Bromofluorobenzene	1.1012	0.9508	50.00	43.17	ug/L	-14	30	0.0500	

ISTD (ICAL dfr10)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	376999	278679	-26.08	8.86	8.86	0.00
1,4-Difluorobenzene	734399	467378	-36.36	9.96	9.96	0.01
Chlorobenzene-d5	606717	383243	-36.83	14.26	14.25	-0.01
1,4-Dichlorobenzene-d4	308479	218542	-29.15	17.05	17.05	0.00

MJB 08/20/13 [Freon 12]: Combined split peak.

MJB 08/20/13 [Chloromethane]: Combined split peak.

MJB 08/20/13 [Ethanol]: Combined split peak.

MJB 08/20/13 [Isopropanol]: Combined split peak.

MJB 08/20/13 [2-Chlorotoluene]: Combined split peak.

Analyst: MJB Date: 08/20/13 Reviewer: BO Date: 08/21/13

!=warning --low bias c=CCV m>manual integration v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSVOA Soil  
EPA 8260B

Inst : MSVOA05                      Run Name : 25PPB                      IDF : 1.0  
 Seqnum : 443328860007              File : ehg07                      Time : 16-AUG-2013 11:17  
 Cal : 443223853002                  Caldate : 04-JUN-2013              Caltype : SOIL  
 Standards: S22920 (20000X), S21857 (20000X), S22914 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	1.4078	1.1184	25.00	19.86	ug/L	-21	30	0.0500	!c- m
Chloromethane	0.8416	0.9026	25.00	26.81	ug/L	7	30	0.1000	m
Vinyl Chloride	0.7605	0.7034	25.00	23.12	ug/L	-8	20	0.0500	
Bromomethane	0.4290	0.4651	25.00	27.10	ug/L	8	30	0.0500	
Chloroethane	0.3889	0.4124	25.00	26.51	ug/L	6	30	0.0500	
Trichlorofluoromethane	1.6166	1.4846	25.00	22.96	ug/L	-8	30	0.0500	
Acetone	0.3675	0.4958	25.00	33.73	ug/L	35	40	0.0500	!c+
Freon 113	0.6253	0.5217	25.00	20.86	ug/L	-17	30	0.0500	
1,1-Dichloroethene	0.4493	0.4080	25.00	22.70	ug/L	-9	20	0.0500	
Methylene Chloride	0.5245	0.5553	25.00	26.47	ug/L	6	30	0.0500	
Carbon Disulfide	1.5854	1.5034	25.00	23.71	ug/L	-5	30	0.0500	
MTBE	1.8235	1.4783	25.00	20.27	ug/L	-19	30	0.0500	
trans-1,2-Dichloroethene	0.5242	0.4917	25.00	23.45	ug/L	-6	30	0.0500	
Vinyl Acetate	0.9901	1.0876	25.00	27.46	ug/L	10	40	0.0500	
1,1-Dichloroethane	1.0726	1.0788	25.00	25.15	ug/L	1	30	0.1000	
2-Butanone	0.3401	0.3577	25.00	26.29	ug/L	5	40	0.0500	
2,2-Dichloropropane	1.1550	0.9547	25.00	20.66	ug/L	-17	30	0.0500	
cis-1,2-Dichloroethene	0.5811	0.5602	25.00	24.10	ug/L	-4	30	0.0500	
Chloroform	1.2606	1.2350	25.00	24.49	ug/L	-2	20	0.0500	
Bromochloromethane	0.2925	0.3386	25.00	28.94	ug/L	16	30	0.0500	
1,1,1-Trichloroethane	1.1737	1.0173	25.00	21.67	ug/L	-13	30	0.0500	
1,1-Dichloropropene	0.5382	0.4157	25.00	19.31	ug/L	-23	30	0.0500	!c-
Carbon Tetrachloride	0.6400	0.5512	25.00	21.53	ug/L	-14	30	0.0500	
1,2-Dichloroethane	0.7123	0.7775	25.00	27.29	ug/L	9	30	0.0500	
Benzene	1.1462	1.1854	25.00	25.86	ug/L	3	30	0.0500	
Trichloroethene	0.4247	0.3611	25.00	21.25	ug/L	-15	30	0.0500	
1,2-Dichloropropane	0.3241	0.3335	25.00	25.73	ug/L	3	20	0.0500	
Bromodichloromethane	0.6599	0.5436	25.00	20.59	ug/L	-18	30	0.0500	
Dibromomethane	0.3164	0.3269	25.00	25.84	ug/L	3	30	0.0500	
4-Methyl-2-Pentanone	0.4385	0.3288	25.00	18.75	ug/L	-25	40	0.0500	!c-
cis-1,3-Dichloropropene	0.6208	0.4555	25.00	18.34	ug/L	-27	30	0.0500	!c-
Toluene	0.8532	0.7003	25.00	20.52	ug/L	-18	20	0.0500	
trans-1,3-Dichloropropene	0.7087	0.5510	25.00	19.44	ug/L	-22	30	0.0500	!c-
1,1,2-Trichloroethane	0.2014	0.1726	25.00	21.42	ug/L	-14	30	0.0500	
2-Hexanone	0.3363	0.2783	25.00	20.69	ug/L	-17	40	0.0500	
1,3-Dichloropropane	0.5816	0.5609	25.00	24.11	ug/L	-4	30	0.0500	
Tetrachloroethene	0.4541	0.3572	25.00	19.67	ug/L	-21	30	0.0500	!c-
Dibromochloromethane	0.5264	0.4840	25.00	22.98	ug/L	-8	30	0.0500	
1,2-Dibromoethane	0.4253	0.3820	25.00	22.45	ug/L	-10	30	0.0500	
Chlorobenzene	0.9887	1.0027	25.00	25.36	ug/L	1	30	0.3000	
1,1,1,2-Tetrachloroethane	0.4475	0.4382	25.00	24.48	ug/L	-2	30	0.0500	
Ethylbenzene	1.7887	1.5529	25.00	21.70	ug/L	-13	20	0.0500	
m,p-Xylenes	0.6012	0.5977	50.00	49.71	ug/L	-1	30	0.0500	
o-Xylene	0.6174	0.5784	25.00	23.42	ug/L	-6	30	0.0500	
Styrene	1.0634	1.0732	25.00	25.23	ug/L	1	30	0.0500	
Bromoform	0.3467	0.3645	25.00	26.28	ug/L	5	30	0.1000	
Isopropylbenzene	3.0392	2.4613	25.00	20.25	ug/L	-19	30	0.0500	
1,1,2,2-Tetrachloroethane	0.8339	0.8223	25.00	24.65	ug/L	-1	30	0.3000	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,2,3-Trichloropropane	0.7227	0.6695	25.00	23.16	ug/L	-7	30	0.0500	
Propylbenzene	3.6464	3.1142	25.00	21.35	ug/L	-15	30	0.0500	
Bromobenzene	0.8109	0.8533	25.00	26.31	ug/L	5	30	0.0500	
1,3,5-Trimethylbenzene	2.6051	2.3109	25.00	22.18	ug/L	-11	30	0.0500	
2-Chlorotoluene	2.5357	2.2401	25.00	22.09	ug/L	-12	30	0.0500	
4-Chlorotoluene	2.4402	2.0863	25.00	21.37	ug/L	-15	30	0.0500	
tert-Butylbenzene	2.2887	1.8608	25.00	20.33	ug/L	-19	30	0.0500	
1,2,4-Trimethylbenzene	2.7424	2.4933	25.00	22.73	ug/L	-9	30	0.0500	
sec-Butylbenzene	3.5034	2.8819	25.00	20.57	ug/L	-18	30	0.0500	
para-Isopropyl Toluene	3.0161	2.5109	25.00	20.81	ug/L	-17	30	0.0500	
1,3-Dichlorobenzene	1.5955	1.4632	25.00	22.93	ug/L	-8	30	0.0500	
1,4-Dichlorobenzene	1.5843	1.5244	25.00	24.06	ug/L	-4	30	0.0500	
n-Butylbenzene	2.9436	2.3150	25.00	19.66	ug/L	-21	30	0.0500	!c-
1,2-Dichlorobenzene	1.5277	1.4624	25.00	23.93	ug/L	-4	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2373	0.1921	25.00	20.23	ug/L	-19	30	0.0500	
1,2,4-Trichlorobenzene	1.0900	0.9078	25.00	20.82	ug/L	-17	30	0.0500	
Hexachlorobutadiene	0.7592	0.5936	25.00	19.55	ug/L	-22	30	0.0500	!c-
Naphthalene	2.2126	1.7302	25.00	19.55	ug/L	-22	30	0.0500	!c-
1,2,3-Trichlorobenzene	0.9953	0.9123	25.00	22.91	ug/L	-8	30	0.0500	
Dibromofluoromethane	0.6485	0.6497	50.00	50.09	ug/L	0	30	0.0500	
1,2-Dichloroethane-d4	0.5641	0.6115	50.00	54.20	ug/L	8	30	0.0500	
Trifluorotoluene	0.5717	0.4668	25.00	20.42	ug/L	-18	30	0.0500	
Toluene-d8	1.1758	1.1191	50.00	47.59	ug/L	-5	30	0.0500	
Bromofluorobenzene	0.9623	0.8551	50.00	44.43	ug/L	-11	30	0.0500	

ISTD (ICAL ef413)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	233201	247886	6.30	9.94	9.93	-0.01
1,4-Difluorobenzene	359078	372967	3.87	11.05	11.05	0.00
Chlorobenzene-d5	321868	323657	0.56	15.14	15.14	0.00
1,4-Dichlorobenzene-d4	202654	201077	-0.78	17.89	17.89	0.00

TEW 08/18/13 [Freon 12]: Combined split peak.

TEW 08/18/13 [Chloromethane]: Combined split peak.

TEW 08/18/13 [Ethanol]: Combined split peak.

Analyst: TEW Date: 08/18/13 Reviewer: BO Date: 08/19/13

!=warning +=high bias -=low bias c=CCV m=manual integration

CURTIS & TOMPKINS SPIKE USER REPORT FOR 248030 MSVOA Soil  
EPA 8260B

Inst : MSVOA05                      Run Name : QC702828                      IDF : 1.0  
 Seqnum : 443334805006.3          File : ehk06                      Time : 20-AUG-2013 14:43  
 Cal : 443223853002                  Caldate : 04-JUN-2013          Caltype : SOIL  
 Standards: S23020 (12500X), S22435 (12500X), S22927 (12500X), S22975 (12500X),  
 S22914 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	1.4078	1.2936	16.00	14.70	ug/L	-8	30	0.0500	m u
Chloromethane	0.8416	0.8748	16.00	16.63	ug/L	4	30	0.1000	m u
Vinyl Chloride	0.7605	0.8160	16.00	17.17	ug/L	7	20	0.0500	u
Bromomethane	0.4290	0.5309	16.00	19.80	ug/L	24	30	0.0500	u
Chloroethane	0.3889	0.4506	16.00	18.54	ug/L	16	30	0.0500	u
Trichlorofluoromethane	1.6166	1.6116	16.00	15.95	ug/L	0	30	0.0500	u
Acetone	0.3675	0.3543	20.00	19.28	ug/L	-4	40	0.0500	u
Freon 113	0.6253	0.7440	20.00	23.79	ug/L	19	30	0.0500	u
1,1-Dichloroethene	0.4493	0.5061	20.00	22.53	ug/L	13	20	0.0500	u
Methylene Chloride	0.5245	0.5885	20.00	22.44	ug/L	12	30	0.0500	u
Carbon Disulfide	1.5854	1.8754	20.00	23.66	ug/L	18	30	0.0500	u
MTBE	1.8235	1.5147	20.00	16.61	ug/L	-17	30	0.0500	u
trans-1,2-Dichloroethene	0.5242	0.5686	20.00	21.69	ug/L	8	30	0.0500	u
Vinyl Acetate	0.9901	1.1451	20.00	23.13	ug/L	16	40	0.0500	u
1,1-Dichloroethane	1.0726	1.0705	20.00	19.96	ug/L	0	30	0.1000	u
2-Butanone	0.3401	0.3234	20.00	19.02	ug/L	-5	40	0.0500	u
cis-1,2-Dichloroethene	0.5811	0.5872	20.00	20.21	ug/L	1	30	0.0500	u
2,2-Dichloropropane	1.1550	1.0813	20.00	18.72	ug/L	-6	30	0.0500	u
Chloroform	1.2606	1.2652	20.00	20.07	ug/L	0	20	0.0500	u
Bromochloromethane	0.2925	0.3069	20.00	20.98	ug/L	5	30	0.0500	u
1,1,1-Trichloroethane	1.1737	1.1981	20.00	20.42	ug/L	2	30	0.0500	u
1,1-Dichloropropene	0.5382	0.5525	20.00	20.53	ug/L	3	30	0.0500	u
Carbon Tetrachloride	0.6400	0.7502	20.00	23.44	ug/L	17	30	0.0500	u
1,2-Dichloroethane	0.7123	0.8490	20.00	23.84	ug/L	19	30	0.0500	u
Benzene	1.1462	1.2736	20.00	22.22	ug/L	11	30	0.0500	u
Trichloroethene	0.4247	0.4090	20.00	19.26	ug/L	-4	30	0.0500	u
1,2-Dichloropropane	0.3241	0.3488	20.00	21.52	ug/L	8	20	0.0500	u
Bromodichloromethane	0.6599	0.6609	20.00	20.03	ug/L	0	30	0.0500	u
Dibromomethane	0.3164	0.2877	20.00	18.19	ug/L	-9	30	0.0500	u
4-Methyl-2-Pentanone	0.4385	0.3497	20.00	15.95	ug/L	-20	40	0.0500	u
cis-1,3-Dichloropropene	0.6208	0.5936	20.00	19.12	ug/L	-4	30	0.0500	u
Toluene	0.8532	0.9926	20.00	23.27	ug/L	16	20	0.0500	u
trans-1,3-Dichloropropene	0.7087	0.7838	20.00	22.12	ug/L	11	30	0.0500	u
1,1,2-Trichloroethane	0.2014	0.1985	20.00	19.72	ug/L	-1	30	0.0500	u
2-Hexanone	0.3363	0.2383	20.00	14.17	ug/L	-29	40	0.0500	u
1,3-Dichloropropane	0.5816	0.5810	20.00	19.98	ug/L	0	30	0.0500	u
Tetrachloroethene	0.4541	0.4418	20.00	19.46	ug/L	-3	30	0.0500	u
Dibromochloromethane	0.5264	0.5517	20.00	20.96	ug/L	5	30	0.0500	u
1,2-Dibromoethane	0.4253	0.3839	20.00	18.06	ug/L	-10	30	0.0500	u
Chlorobenzene	0.9887	1.1798	20.00	23.87	ug/L	19	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.4475	0.4981	20.00	22.26	ug/L	11	30	0.0500	u
Ethylbenzene	1.7887	1.7245	20.00	19.28	ug/L	-4	20	0.0500	u
m,p-Xylenes	0.6012	0.6746	40.00	44.88	ug/L	12	30	0.0500	u
o-Xylene	0.6174	0.6187	20.00	20.04	ug/L	0	30	0.0500	u
Styrene	1.0634	1.1253	20.00	21.17	ug/L	6	30	0.0500	u
Bromoform	0.3467	0.3674	20.00	21.19	ug/L	6	30	0.1000	u
Isopropylbenzene	3.0392	3.0107	20.00	19.81	ug/L	-1	30	0.0500	u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.8339	0.7940	20.00	19.04	ug/L	-5	30	0.3000	u
1,2,3-Trichloropropane	0.7227	0.6823	20.00	18.88	ug/L	-6	30	0.0500	u
Propylbenzene	3.6464	3.5315	20.00	19.37	ug/L	-3	30	0.0500	u
Bromobenzene	0.8109	0.8963	20.00	22.11	ug/L	11	30	0.0500	u
1,3,5-Trimethylbenzene	2.6051	2.7920	20.00	21.44	ug/L	7	30	0.0500	u
2-Chlorotoluene	2.5357	2.6988	20.00	21.29	ug/L	6	30	0.0500	u
4-Chlorotoluene	2.4402	2.3103	20.00	18.93	ug/L	-5	30	0.0500	u
tert-Butylbenzene	2.2887	2.3982	20.00	20.96	ug/L	5	30	0.0500	u
1,2,4-Trimethylbenzene	2.7424	2.8190	20.00	20.56	ug/L	3	30	0.0500	u
sec-Butylbenzene	3.5034	3.5812	20.00	20.44	ug/L	2	30	0.0500	u
para-Isopropyl Toluene	3.0161	2.8272	20.00	18.75	ug/L	-6	30	0.0500	u
1,3-Dichlorobenzene	1.5955	1.7102	20.00	21.44	ug/L	7	30	0.0500	u
1,4-Dichlorobenzene	1.5843	1.7105	20.00	21.59	ug/L	8	30	0.0500	u
n-Butylbenzene	2.9436	2.7100	20.00	18.41	ug/L	-8	30	0.0500	u
1,2-Dichlorobenzene	1.5277	1.6403	20.00	21.47	ug/L	7	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.2373	0.1951	20.00	16.45	ug/L	-18	30	0.0500	u
1,2,4-Trichlorobenzene	1.0900	0.9680	20.00	17.76	ug/L	-11	30	0.0500	u
Hexachlorobutadiene	0.7592	0.8160	20.00	21.50	ug/L	7	30	0.0500	u
Naphthalene	2.2126	1.6442	20.00	14.86	ug/L	-26	30	0.0500	u
1,2,3-Trichlorobenzene	0.9953	0.9464	20.00	19.02	ug/L	-5	30	0.0500	u
Dibromofluoromethane	0.6485	0.6684	50.00	51.53	ug/L	3	30	0.0500	u
1,2-Dichloroethane-d4	0.5641	0.6317	50.00	55.99	ug/L	12	30	0.0500	u
Toluene-d8	1.1758	1.4276	50.00	60.71	ug/L	21	30	0.0500	u
Bromofluorobenzene	0.9623	0.9013	50.00	46.83	ug/L	-6	30	0.0500	u

ISTD (ICAL ef413)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	233201	293870	26.02	9.94	9.93	-0.01
1,4-Difluorobenzene	359078	422100	17.55	11.05	11.04	-0.01
Chlorobenzene-d5	321868	317202	-1.45	15.14	15.14	0.00
1,4-Dichlorobenzene-d4	202654	197890	-2.35	17.89	17.88	-0.01

TEW 08/21/13 [Freon 12]: Combined split peak. [general version]

TEW 08/21/13 [Chloromethane]: Combined split peak. [general version]

Analyst: MJB Date: 08/21/13 Reviewer: SJD Date: 08/21/13

m=manual integration u=use

## Logbooks & Sequences

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 433334518

Date : 08/20/13  
 Sequence : MSVOA04 dhk

Reference : dfr10  
 Analyzed : 06/27/13 16:29

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	376999	8.86	734399	9.96	606717	14.26	308479	17.05
		LOWER LIMIT	188500	8.36	367200	9.46	303359	13.76	154240	16.55
		UPPER LIMIT	753998	9.36	1468798	10.46	1213434	14.76	616958	17.55
003	CCV		281061	8.86	462433	9.96	405770	14.25	220545	17.04
005	CCV		278679	8.86	467378	9.96	383243	14.25	218542	17.05
006	BS	QC702742	283734	8.86	475178	9.96	398770	14.25	219723	17.05
007	BSD	QC702743	289474	8.86	514589	9.96	422470	14.25	219642	17.05
008	BLANK	QC702744	260830	8.86	431630	9.96	354074	14.25	191394	17.05
009	SAMPLE	247996-002	0 *	0.00 *	0 *	0.00 *	1139 *	14.26	807 *	17.05
010	SAMPLE	248030-015	205425	8.87	299380 *	9.96	290655 *	14.25	171379	17.05

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 443328860

Date : 08/16/13  
 Sequence : MSVOA05 ehg

Reference : ef413  
 Analyzed : 06/04/13 17:13

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	233201	9.94	359078	11.05	321868	15.14	202654	17.89
		LOWER LIMIT	116601	9.44	179539	10.55	160934	14.64	101327	17.39
		UPPER LIMIT	466402	10.44	718156	11.55	643736	15.64	405308	18.39
007	CCV	25PPB	247886	9.93	372967	11.05	323657	15.14	201077	17.89
008	LCS	QC702261	272542	9.93	401977	11.04	341386	15.14	209082	17.88
009	BLANK	QC702262	257783	9.93	386882	11.05	280566	15.14	159730	17.89
010	MSS	248039-005	190613	9.96	302264	11.07	274672	15.14	153667	17.88
011	SAMPLE	248039-006	159681	9.93	239377	11.04	178801	15.14	96284 *	17.88
012	SAMPLE	248039-007	217539	9.92	323883	11.05	238975	15.14	135186	17.89
013	SAMPLE	248039-008	200968	9.95	312019	11.06	279017	15.14	160139	17.88
014	SAMPLE	248030-002	187820	9.95	298212	11.06	270992	15.14	142059	17.88
015	SAMPLE	248030-003	218838	9.92	333159	11.05	255692	15.14	145693	17.89
016	SAMPLE	248030-011	202420	9.93	302892	11.05	231750	15.14	145598	17.88
017	SAMPLE	248030-012	185695	9.94	297793	11.06	269464	15.15	151870	17.89
018	SAMPLE	248030-014	172791	9.95	280873	11.06	218041	15.14	76734 *	17.88
019	SAMPLE	248030-015	350705	9.92	514637	11.05	380132	15.14	153516	17.89
020	SAMPLE	248030-036	306450	9.95	470080	11.06	373375	15.14	157416	17.88
021	SAMPLE	248039-006	217934	9.92	315696	11.04	235127	15.14	119961	17.88
022	MS	QC702299	298579	9.93	429131	11.04	347077	15.14	206357	17.88
023	MSD	QC702300	250337	9.95	350957	11.06	342894	15.14	206820	17.88

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 443334805

Date : 08/20/13  
 Sequence : MSVOA05 ehk

Reference : ef413  
 Analyzed : 06/04/13 17:13

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	233201	9.94	359078	11.05	321868	15.14	202654	17.89
		LOWER LIMIT	116601	9.44	179539	10.55	160934	14.64	101327	17.39
		UPPER LIMIT	466402	10.44	718156	11.55	643736	15.64	405308	18.39
004	CCV	25PPB	229949	9.93	337035	11.04	271124	15.14	183565	17.88
005	BS	QC702828	267101	9.93	389203	11.04	302099	15.14	195371	17.88
006	CCV/BS	QC702828	293870	9.93	422100	11.04	317202	15.14	197890	17.88
007	BLANK	QC702827	278276	9.93	393456	11.05	275443	15.14	151187	17.89
008	BSD	QC702829	252201	9.93	362994	11.05	294653	15.15	200429	17.89
009	SAMPLE	248109-001	250357	9.93	366197	11.04	254157	15.14	148036	17.88
010	SAMPLE	248097-007	228111	9.93	329367	11.05	228072	15.15	131892	17.88
011	SAMPLE	248097-008	226518	9.93	322567	11.04	231343	15.14	133535	17.88
012	SAMPLE	248030-014	223056	9.91	266164	11.04	246087	15.14	171428	17.89



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 433334518

Instrument : MSVOA04 Begun : 08/20/13 07:18  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	dhk01	X	IB			08/20/13 07:18	1.0	1	
002	dhk02	TUN	BFB			08/20/13 09:57	1.0	2	
003	dhk03	CCV				08/20/13 10:29	1.0	3 4 5 1	cc+
004	dhk04	TUN	BFB			08/20/13 11:32	1.0	2	
005	dhk05	CCV				08/20/13 12:05	1.0	3 4 5 1	
006	dhk06	BS	QC702742	Soil	201901	08/20/13 12:52	1.0	6 7 8 9 1	
007	dhk07	BSD	QC702743	Soil	201901	08/20/13 13:25	1.0	6 7 8 9 1	spk
008	dhk08	BLANK	QC702744	Soil	201901	08/20/13 13:59	1.0	1	
009	dhk09	SAMPLE	247996-002	Soil	201901	08/20/13 17:34	0.9579	1	
010	dhk10	SAMPLE	248030-015	Soil	201901	08/20/13 19:44	0.7716	1	spk

MJB 08/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 10.

MJB 08/21/13 : Matrix spikes were not performed for this analysis in batch 201901 due to insufficient sample amount.

Analyst: MJB Date: 08/21/13 Reviewer: BO Date: 08/21/13

Standards used: 1=S22914 2=S22624 3=S23013 4=S22920 5=S21857 6=S22975 7=S22927 8=S23020 9=S22435

Flags used: +=high bias cc=CCV CCC failure spk=5% spike rule

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 443223853

Instrument : MSVOA05 Begun : 06/04/13 10:53  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ef401	TUN	BFB			06/04/13 10:53	1.0	1	t
002	ef402	TUN	BFB			06/04/13 11:10	1.0	1	t
003	ef403	TUN	BFB			06/04/13 11:31	1.0	1	t
004	ef404	TUN	BFB			06/04/13 11:44	1.0	1	t
005	ef405	X	IB			06/04/13 12:16	1.0	2	
006	ef406	TUN	BFB			06/04/13 12:52	1.0	1	
007	ef407	X	IB			06/04/13 13:21	1.0	2	
008	ef408	IB	CALIB			06/04/13 13:58	1.0	2	
009	ef409	ICAL				06/04/13 14:45	1.0	3 4 5 2	
010	ef410	ICAL				06/04/13 15:22	1.0	3 4 5 2	
011	ef411	ICAL				06/04/13 15:59	1.0	3 4 5 2	
012	ef412	ICAL				06/04/13 16:36	1.0	3 4 5 2	
013	ef413	ICAL				06/04/13 17:13	1.0	3 4 5 2	
014	ef414	ICAL				06/04/13 17:50	1.0	3 4 5 2	
015	ef415	ICAL				06/04/13 18:27	1.0	3 4 5 2	
016	ef416	ICAL				06/04/13 19:04	1.0	3 4 5 2	
017	ef417	ICAL				06/04/13 19:41	1.0	3 4 5 2	
018	ef418	ICV	GASES			06/04/13 20:18	1.0	6 2	
019	ef419	ICV				06/04/13 20:56	1.0	7 8 9 2	
020	ef420	X	IB			06/04/13 21:33	1.0	2	

TEW 06/04/13 : Adjusted tune prior to file ef403.

TEW 06/04/13 : Adjusted tune prior to file ef405.

TEW 06/05/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 20.

Analyst: TEW Date: 06/05/13 Reviewer: LW Date: 06/06/13

Standards used: 1=S21369 2=S22165 3=S22357 4=S21634 5=S22288 6=S22180 7=S22174 8=S22258 9=S22408

Flags used: t=tune failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 443225232

Instrument : MSVOA05 Begun : 06/05/13 09:52  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ef501	X	IB				06/05/13 09:52	1.0	1	
002	ef502	TUN	BFB				06/05/13 10:32	1.0	2	t
003	ef503	TUN	BFB				06/05/13 10:50	1.0	2	
004	ef504	ICV	GASES				06/05/13 11:20	1.0	3 1	
005	ef505	ICV	GASES				06/05/13 12:15	1.0	3 1	
006	ef506	TUN	BFB				06/05/13 12:50	1.0	2	
007	ef507	CCV	22.5PPB				06/05/13 13:18	1.0	4 5 6 1	
008	ef508	BS	QC692263		Soil	199362	06/05/13 14:04	1.0	7 3 8 9 1	
009	ef509	BSD	QC692264		Soil	199362	06/05/13 14:41	1.0	7 3 8 9 1	
010	ef510	X	IB				06/05/13 15:17	1.0	1	
011	ef511	BLANK	QC692262		Soil	199362	06/05/13 15:54	1.0	1	
012	ef512	SAMPLE	245819-001		Soil	199362	06/05/13 16:31	0.9747	1	
013	ef513	SAMPLE	245847-010		Soil	199362	06/05/13 17:08	0.9381	1	
014	ef514	SAMPLE	245745-006		Soil	199362	06/05/13 17:45	0.9506	1	1:ACE=140
015	ef515	SAMPLE	245745-008		Soil	199362	06/05/13 18:22	1.188	1	
016	ef516	SAMPLE	245745-003	M	Soil	199362	06/05/13 18:59	44.57	1	
017	ef517	SAMPLE	245129-001		Soil	199362	06/05/13 19:36	1.0	1	sh , 3:ACE=310
018	ef518	SAMPLE	245882-001		Soil	199362	06/05/13 20:19	0.8251	1	
019	ef519	SAMPLE	245882-002		Soil	199362	06/05/13 20:56	0.9434	1	
020	ef520	SAMPLE	245882-005		Soil	199362	06/05/13 21:33	0.9615	1	
021	ef521	SAMPLE	245882-006		Soil	199362	06/05/13 22:10	1.053	1	
022	ef522	SAMPLE	245882-007		Soil	199362	06/05/13 22:47	0.9381	1	
023	ef523	SAMPLE	245882-008		Soil	199362	06/05/13 23:24	0.8547	1	
024	ef524	SAMPLE	245882-009		Soil	199362	06/06/13 00:01	0.8361	1	
025	ef525	IB					06/06/13 00:38	1.0	1	
026	ef526	IB					06/06/13 01:15	1.0	1	<<t
027	ef527	SAMPLE	245664-005		Soil	199362	06/06/13 01:52	1.0	1	<<t

TEW 06/05/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 5.

TEW 06/06/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 6 through 27.

TEW 06/06/13 : Matrix spikes were not performed for this analysis in batch 199362 due to insufficient sample amount.

Analyst: TEW Date: 06/06/13 Reviewer: LW Date: 06/06/13

Standards used: 1=S22165 2=S21369 3=S22387 4=S22357 5=S21634 6=S22288 7=S22534 8=S22258 9=S22408

Flags used: <<t=out of clock sh=out of sample hold t=tune failure



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 443334805

Instrument : MSVOA05 Begun : 08/20/13 12:05  
 Method : EPA 8260B SOP Version : TVH\_8260B\_rv1

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ehk01	X	IB				08/20/13 12:05	1.0	1	
002	ehk02	TUN	BFB				08/20/13 12:40	1.0	2	t
003	ehk03	TUN	BFB				08/20/13 12:55	1.0	2	
004	ehk04	CCV	25PPB				08/20/13 13:23	1.0	3 4 5 1	
005	ehk05	BS	QC702828		Soil	201925	08/20/13 14:06	1.0	6 7 8 9 1	
006	ehk06	CCV/BS	QC702828		Soil	201925	08/20/13 14:43	1.0	6 7 8 9 1	
007	ehk07	BLANK	QC702827		Soil	201925	08/20/13 15:19	1.0	1	
008	ehk08	BSD	QC702829		Soil	201925	08/20/13 15:59	1.0	6 7 8 9 1	
009	ehk09	SAMPLE	248109-001		Soil	201925	08/20/13 16:50	1.323	1	
010	ehk10	SAMPLE	248097-007		Soil	201925	08/20/13 17:27	1.163	1	
011	ehk11	SAMPLE	248097-008		Soil	201925	08/20/13 18:03	1.02	1	
012	ehk12	SAMPLE	248030-014	M	Soil	201925	08/20/13 18:39	53.54	1	
013	ehk13	X	IB				08/20/13 19:16	1.0	1	

TEW 08/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 13.

TEW 08/21/13 : Matrix spikes were not performed for this analysis in batch 201925 due to insufficient sample amount.

Analyst: TEW Date: 08/21/13 Reviewer: BO Date: 08/21/13

Standards used: 1=S22914 2=S22624 3=S22920 4=S21857 5=S23013 6=S23020 7=S22435 8=S22927 9=S22975

Flags used: t=tune failure



**MSVOA SOIL PREPSHEET**

Curtis & Tompkins, Ltd.

Date: 2/20/13

Batch #: 201901

Sample ID	grams or mL	core #	Me oh	Inst.	RR	DF	Comments	20 %	hold	due	enc.	jar	Prep
1	2.47996	.5.02	D	CM	2	1	ISTD ↓ *2 Acctm → VP 4 Vx						by KMG/20 2/20/13
2	2.472030	6.48	D		2	1							
3													
4													
5													
6													
7													
8													
9													
10													
11													
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PROJECT 5035 MeOH Prep Log

Notebook No. BK3087

Continued From Page

Date & initial	Sample ID	Soil wt. (g)	MeOH Vol. (mL)	MeOH Lot #	Surrogate Std. #	Surrogate Std. Vol. (mL)	Comments
7/24/13 JR	Blank	5.00	5.0	DH955	S20557	0.005	
	247194 - 1 A	5.60	5.6			0.0056	
	- 2	6.10	6.1			0.0061	
	- 3	5.40	5.4			0.0054	
	- 4	5.50	5.5			0.0055	
	- 5	5.80	5.8			0.0058	
	- 6	5.70	5.7			0.0057	
	- 7	5.50	5.5			0.0055	
7/25/13 JR	Blank	5.00	5.0	DH955	S20557	0.005	
	247248 - 1 A	5.60	5.6			0.0056	
	- 2	5.60	5.6			0.0056	
7/29/13 JR	247295-3 C	5.76	5.0	DE695	-	-	Client Prepped
8/5/13 JR	247508-11 D	5.31	5.0	DH247	-	-	↓
8/6/13 JR	247539-22 C	6.60	5.0	DE695	-	-	↓
	- 23	6.64	↓	↓	↓	↓	↓
8/9/13 MG	BLANK	5.00	5.0	DH955	S20557	0.005	
	247747-1 C	4.28	4.28	↓	↓	0.00428	
8/14/13 JR	247844-24 D	6.50	5.0	DH247	-	-	client Prepped
	- 1	6.40	↓	↓	-	-	↓
8/15/13 JR	247844-49 E	6.02	5.0	DD471	-	-	↓
	247930-1	4.65	↓	DH247	-	-	↓
8/19/13 JR	247996-2 E	4.78	5.0	DH247	-	-	↓
8/20/13 JR	248030-14 F	4.67	5.0	DD471	-	-	↓

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

Laboratory Job Number 248030

ANALYTICAL REPORT

Semivolatile Organics by GC/MS

Matrix: Water

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3520C
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-40	Batch#:	201823
Lab ID:	248030-038	Sampled:	08/15/13
Matrix:	Water	Received:	08/15/13
Units:	ug/L	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/19/13

Analyte	Result	RL
Naphthalene	ND	9.8
Acenaphthylene	ND	9.8
Acenaphthene	ND	9.8
Fluorene	ND	9.8
Phenanthrene	ND	9.8
Anthracene	ND	9.8
Fluoranthene	ND	9.8
Pyrene	ND	9.8
Benzo(a)anthracene	ND	9.8
Chrysene	ND	9.8
Benzo(b)fluoranthene	ND	9.8
Benzo(k)fluoranthene	ND	9.8
Benzo(a)pyrene	ND	9.8
Indeno(1,2,3-cd)pyrene	ND	9.8
Dibenz(a,h)anthracene	ND	9.8
Benzo(g,h,i)perylene	ND	9.8

Surrogate	%REC	Limits
Nitrobenzene-d5	72	52-120
2-Fluorobiphenyl	79	49-120
Terphenyl-d14	64	21-120

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Polynuclear Aromatics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3520C
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC702408	Batch#:	201823
Matrix:	Water	Prepared:	08/16/13
Units:	ug/L	Analyzed:	08/19/13

Analyte	Result	RL
Naphthalene	ND	10
Acenaphthylene	ND	10
Acenaphthene	ND	10
Fluorene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzo(a)anthracene	ND	10
Chrysene	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	%REC	Limits
Nitrobenzene-d5	84	52-120
2-Fluorobiphenyl	84	49-120
Terphenyl-d14	74	21-120

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

Polynuclear Aromatics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3520C
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	201823
Units:	ug/L	Prepared:	08/16/13
Diln Fac:	2.000	Analyzed:	08/19/13

Type: BS Lab ID: QC702409

Analyte	Spiked	Result	%REC	Limits
Naphthalene	30.00	25.86	86	62-120
Acenaphthylene	30.00	27.20	91	62-120
Acenaphthene	30.00	24.60	82	63-120
Fluorene	30.00	27.20	91	67-120
Phenanthrene	30.00	28.34	94	65-120
Anthracene	30.00	28.63	95	65-120
Fluoranthene	30.00	28.47	95	67-120
Pyrene	30.00	27.57	92	65-120
Benzo(a)anthracene	30.00	25.32	84	66-120
Chrysene	30.00	26.32	88	66-120
Benzo(b)fluoranthene	30.00	24.00	80	65-120
Benzo(k)fluoranthene	30.00	26.68	89	64-120
Benzo(a)pyrene	30.00	24.12	80	65-120
Indeno(1,2,3-cd)pyrene	30.00	26.13	87	65-120
Dibenz(a,h)anthracene	30.00	26.30	88	66-120
Benzo(g,h,i)perylene	30.00	27.57	92	65-120

Surrogate	%REC	Limits
Nitrobenzene-d5	81	52-120
2-Fluorobiphenyl	86	49-120
Terphenyl-d14	81	21-120

Type: BSD Lab ID: QC702410

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Naphthalene	30.00	26.60	89	62-120	3	20
Acenaphthylene	30.00	27.93	93	62-120	3	22
Acenaphthene	30.00	25.09	84	63-120	2	20
Fluorene	30.00	28.10	94	67-120	3	20
Phenanthrene	30.00	29.02	97	65-120	2	20
Anthracene	30.00	28.99	97	65-120	1	20
Fluoranthene	30.00	29.19	97	67-120	2	20
Pyrene	30.00	28.56	95	65-120	4	20
Benzo(a)anthracene	30.00	26.35	88	66-120	4	20
Chrysene	30.00	27.32	91	66-120	4	20
Benzo(b)fluoranthene	30.00	24.28	81	65-120	1	28
Benzo(k)fluoranthene	30.00	27.26	91	64-120	2	26
Benzo(a)pyrene	30.00	24.86	83	65-120	3	21
Indeno(1,2,3-cd)pyrene	30.00	26.96	90	65-120	3	26
Dibenz(a,h)anthracene	30.00	27.19	91	66-120	3	27
Benzo(g,h,i)perylene	30.00	28.10	94	65-120	2	25

Surrogate	%REC	Limits
Nitrobenzene-d5	86	52-120
2-Fluorobiphenyl	89	49-120
Terphenyl-d14	84	21-120

RPD= Relative Percent Difference

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Water  
EPA 8270C

Inst : MSBNA05                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 543222414002              File : xf302                      Time : 03-JUN-2013 13:33

Standards: S21994

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	218750	50.18	
68	< 2% of mass 69	0	0.00	
69		270130	100.00	
70	< 2% of mass 69	1387	0.51	
127	40% - 60% of mass 198	244032	55.98	
197	< 1% of mass 198	0	0.00	
198		435925	100.00	
199	5% - 9% of mass 198	31029	7.12	
275	10% - 30% of mass 198	112986	25.92	
365	> 1% of mass 198	12177	2.79	
441	Present, < mass 443	60290	79.66	
442	> 40% and < 100% of mass 198	379242	87.00	
443	17% - 23% of mass 442	75688	19.96	

Analyst:   KMH                        Date:   06/04/13                        Reviewer:   LW                        Date:   06/07/13

PEM Report

File Name : G:\msbna05\060313\XF302.D  
 Date Acquired : 3 Jun 2013 1:33 pm  
 Sample Name : TUN,S21994  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA05 BNA DFTPP/PEM  
 Inst. Name : MSBNA05  
 AcquisitionMeth: DFTPP05.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.106	5.38	611867
Benzidine	0.745	7.24	2795176
4,4'-DDT		8.26	1655991
4,4'-DDE		7.47	3473
4,4'-DDD		7.88	52161
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	3%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.1	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Water  
EPA 8270C

Inst : MSBNA05                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 543333265001              File : xhj01                      Time : 19-AUG-2013 10:25

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	152170	46.49	
68	< 2% of mass 69	0	0.00	
69		194225	100.00	
70	< 2% of mass 69	830	0.43	
127	40% - 60% of mass 198	172066	52.57	
197	< 1% of mass 198	0	0.00	
198		327317	100.00	
199	5% - 9% of mass 198	22506	6.88	
275	10% - 30% of mass 198	90632	27.69	
365	> 1% of mass 198	9057	2.77	
441	Present, < mass 443	37386	84.11	
442	> 40% and < 100% of mass 198	227605	69.54	
443	17% - 23% of mass 442	44448	19.53	

Analyst:   KMH                        Date:   08/19/13                        Reviewer:   LLH                        Date:   08/19/13

PEM Report

File Name : G:\msbna05\081913\XHJ01.D  
 Date Acquired : 19 Aug 2013 10:25 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA05 BNA DFTPP/PEM  
 Inst. Name : MSBNA05  
 AcquisitionMeth: DFTPP05.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.780	5.39	308020
Benzidine	0.747	7.23	2203909
4,4'-DDT		8.24	1178038
4,4'-DDE		7.46	8440
4,4'-DDD		7.87	55069
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	5%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.8	PASS
	8270D <=2	2	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 MSBNA Water: EPA 8270C

Inst : MSBNA05  
 Calnum : 543222414001  
 Units : ug/mL

Name : 6PTBNA5  
 Date : 03-JUN-2013 15:00  
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	xf303	543222414003	ICAL1 03-JUN-2013 15:00	S22456
L2	xf304	543222414004	ICAL2 03-JUN-2013 15:37	S22457
L3	xf305	543222414005	ICAL3 03-JUN-2013 16:13	S22458
L4	xf306	543222414006	ICAL4 03-JUN-2013 16:49	S22459
L5	xf307	543222414007	ICAL5 03-JUN-2013 17:27	S22460
L6	xf308	543222414008	ICAL6 03-JUN-2013 18:04	S22461
L7	xf309	543222414009	ICAL7 03-JUN-2013 18:40	S22462
L8	xf310	543222414010	ICAL8 03-JUN-2013 19:16	S22463
L9	xf311	543222414011	ICAL9 03-JUN-2013 19:54	S22464

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min %RSD	Min r^2	Flg
Naphthalene	1.2614	1.2486	1.1830	1.1391	1.1188	1.0931	0.9857	0.9432	0.9009	AVRG	0.91150	0.91150		1.0971	12	15	0.05	0.99	
Acenaphthylene	2.1224	2.0796	1.9621	1.8568	1.8497	1.8088	1.6689	1.5923	1.5478	AVRG	0.54583	0.54583		1.8321	11	15	0.05	0.99	
Acenaphthene	1.2365	1.2581	1.2651	1.2414	1.2366	1.2308	1.0984	1.0692	1.0414	AVRG	0.84288	0.84288		1.1864	8	15	0.05	0.99	
Fluorene	1.5457	1.5402	1.5116	1.4031	1.3706	1.3478m	1.2408	1.1894	1.1457	AVRG	0.73201	0.73201		1.3661	11	15	0.05	0.99	
Phenanthrene	1.3186	1.2756	1.2247	1.1558	1.1084	1.1010m	0.9933	0.9503m	0.9152	AVRG	0.89615	0.89615		1.1159	13	15	0.05	0.99	
Anthracene	1.3548	1.2935	1.2272	1.1756	1.1366	1.1300	1.0118	0.9641	0.9193	AVRG	0.88123	0.88123		1.1348	13	15	0.05	0.99	
Fluoranthene	1.5030	1.4919	1.3903	1.3786	1.3513	1.3403	1.2027	1.1611	1.1096	AVRG	0.75449	0.75449		1.3254	11	15	0.05	0.99	
Pyrene	1.4223	1.3574	1.3290	1.3167	1.2909	1.2758	1.1857	1.1343	1.1078	AVRG	0.78809	0.78809		1.2689	8	15	0.05	0.99	
Benzo(a)anthracene	1.3459	1.2981	1.3014	1.2483	1.2364	1.2289m	1.1862	1.1417m	1.1322	AVRG	0.80941	0.80941		1.2355	6	15	0.05	0.99	
Chrysene	1.1578	1.1162	1.1447	1.1001	1.0873	1.0903	1.0250	0.9963	0.9907m	AVRG	0.92703	0.92703		1.0787	6	15	0.05	0.99	
Benzo(b)fluoranthene	1.1366	1.1277	1.1923	1.1864	1.1871	1.1967m	1.2484	1.2529m	1.3529m	AVRG	0.82713	0.82713		1.2090	6	15	0.05	0.99	
Benzo(k)fluoranthene	1.0965	1.1203	1.1333	1.1023	1.1278	1.1272	1.0778	1.0458m	0.9025	AVRG	0.92465	0.92465		1.0815	7	15	0.05	0.99	
Benzo(a)pyrene	1.0022	1.0087	1.0613	1.0463	1.0643	1.0759m	1.0853	1.0822	1.1046	AVRG	0.94431	0.94431		1.0590	3	15	0.05	0.99	
Indeno(1,2,3-cd)pyrene	1.0939	1.1076	1.1756	1.2049	1.2274	1.2555	1.3012	1.3098	1.3404	AVRG	0.81697	0.81697		1.2240	7	15	0.05	0.99	
Dibenz(a,h)anthracene	0.9160	0.9248	1.0237	1.0272	1.0430	1.0535	1.0911	1.0934	1.1176	AVRG	0.96875	0.96875		1.0323	7	15	0.05	0.99	
Benzo(g,h,i)perylene	0.9661	0.9235	0.9246	0.9318	0.9684	0.9983	1.0348	1.0426	1.0634	AVRG	1.01654	1.01654		0.9837	5	15	0.05	0.99	
Nitrobenzene-d5	0.5106	0.5301	0.5405	0.5435	0.5461	0.5544	0.5395	0.5414	0.5536	AVRG	1.85197	1.85197		0.5400	2	15	0.05	0.99	
2-Fluorobiphenyl	1.6929	1.6203	1.5263	1.4595	1.4218	1.3774	1.2617	1.2090	1.1553	AVRG	0.70731	0.70731		1.4138	13	15	0.05	0.99	
Terphenyl-d14	1.0816	1.0532	1.0268	1.0057	1.0180	1.0113	0.9403	0.8943	0.8554	AVRG	1.01275	1.01275		0.9874	8	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Naphthalene	2.0000	15	5.0000	14	10.000	8	16.000	4	20.000	4	25.000	0	40.000	-10	50.000	-14	60.000	-18
Acenaphthylene	2.0000	16	5.0000	14	10.000	7	16.000	1	20.000	1	25.000	-1	40.000	-9	50.000	-13	60.000	-16
Acenaphthene	2.0000	4	5.0000	6	10.000	7	16.000	5	20.000	4	25.000	4	40.000	-7	50.000	-10	60.000	-12
Fluorene	2.0000	13	5.0000	13	10.000	11	16.000	3	20.000	0	25.000	-1	40.000	-9	50.000	-13	60.000	-16
Phenanthrene	2.0000	18	5.0000	14	10.000	10	16.000	4	20.000	-1	25.000	-1	40.000	-11	50.000	-15	60.000	-18
Anthracene	2.0000	19	5.0000	14	10.000	8	16.000	4	20.000	4	25.000	0	40.000	-11	50.000	-15	60.000	-19
Fluoranthene	2.0000	13	5.0000	13	10.000	5	16.000	4	20.000	2	25.000	1	40.000	-9	50.000	-12	60.000	-16
Pyrene	2.0000	12	5.0000	7	10.000	5	16.000	4	20.000	2	25.000	1	40.000	-7	50.000	-11	60.000	-13
Benzo(a)anthracene	2.0000	9	5.0000	5	10.000	5	16.000	1	20.000	0	25.000	-1	40.000	-4	50.000	-8	60.000	-8
Chrysene	2.0000	7	5.0000	3	10.000	6	16.000	2	20.000	1	25.000	1	40.000	-5	50.000	-8	60.000	-8
Benzo(b)fluoranthene	2.0000	-6	5.0000	-7	10.000	-1	16.000	-2	20.000	-2	25.000	-1	40.000	3	50.000	4	60.000	12
Benzo(k)fluoranthene	2.0000	1	5.0000	4	10.000	5	16.000	2	20.000	2	25.000	4	40.000	0	50.000	-3	60.000	-17
Benzo(a)pyrene	2.0000	-5	5.0000	-5	10.000	0	16.000	-1	20.000	1	25.000	2	40.000	2	50.000	2	60.000	4
Indeno(1,2,3-cd)pyrene	2.0000	-11	5.0000	-10	10.000	-4	16.000	-2	20.000	0	25.000	3	40.000	6	50.000	7	60.000	10
Dibenz(a,h)anthracene	2.0000	-11	5.0000	-10	10.000	-1	16.000	0	20.000	1	25.000	2	40.000	6	50.000	6	60.000	8
Benzo(g,h,i)perylene	2.0000	-2	5.0000	-6	10.000	-6	16.000	-5	20.000	-2	25.000	1	40.000	5	50.000	6	60.000	8
Nitrobenzene-d5	2.0000	-5	5.0000	-2	10.000	0	16.000	1	20.000	1	25.000	3	40.000	0	50.000	0	60.000	3
2-Fluorobiphenyl	2.0000	20	5.0000	15	10.000	8	16.000	3	20.000	1	25.000	-3	40.000	-11	50.000	-14	60.000	-18
Terphenyl-d14	2.0000	10	5.0000	7	10.000	4	16.000	2	20.000	2	25.000	2	40.000	-5	50.000	-9	60.000	-13

KMH 06/04/13 [Aniline]: Picked or reassigned peak in all levels.

KMH 06/04/13 [2-Nitrophenol]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [bis(2-Chloroethoxy)methane]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [4-Chloroaniline]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [2,4,5-Trichlorophenol]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [Benzidine]: Picked or reassigned peak in all levels.

KMH 06/04/13 [Pyridine]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [4-Nitroaniline]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [Benzoic acid]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [3-Nitroaniline]: Corrected automatically drawn baseline in ICAL3 (xf305).

KMH 06/04/13 [Carbazole]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [Phenanthrene-d10]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [2,4,6-Trichlorophenol]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Fluorene]: Picked or reassigned peak in ICAL6 (xf308).  
KMH 06/04/13 [Phenanthrene]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(a)anthracene]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(b)fluoranthene]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(a)pyrene]: Picked or reassigned peak in ICAL6 (xf308).  
KMH 06/04/13 [bis(2-Chloroethyl)ether]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/04/13 [4-Methylphenol]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/04/13 [bis(2-Ethylhexyl)phthalate]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(k)fluoranthene]: Corrected automatically drawn baseline in ICAL8 (xf310).  
KMH 06/04/13 [Phenol]: Picked or reassigned peak in ICAL9 (xf311).  
KMH 06/04/13 [Chrysene]: Corrected automatically drawn baseline in ICAL9 (xf311).

Analyst: KMH

Date: 06/04/13

Reviewer: LW

Date: 06/07/13

m>manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor

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543222414001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 MSBNA Water  
EPA 8270C

Inst : MSBNA05  
Calnum : 543222414001

Name : 6PTBNA5  
Cal Date : 03-JUN-2013

ICV 543222414012 (xf312 03-JUN-2013) stds: S22440

Analyte	Spiked	Quant	Units	%D	Max	Flags
Naphthalene	40.00	35.35	ug/mL	-12	30	
Acenaphthylene	40.00	35.35	ug/mL	-12	30	
Acenaphthene	40.00	37.09	ug/mL	-7	20	
Fluorene	40.00	36.03	ug/mL	-10	30	
Phenanthrene	40.00	35.87	ug/mL	-10	30	
Anthracene	40.00	35.76	ug/mL	-11	30	
Fluoranthene	40.00	35.55	ug/mL	-11	20	
Pyrene	40.00	36.86	ug/mL	-8	30	
Benzo(a)anthracene	40.00	37.62	ug/mL	-6	30	
Chrysene	40.00	36.24	ug/mL	-9	30	
Benzo(b)fluoranthene	40.00	40.29	ug/mL	1	30	
Benzo(k)fluoranthene	40.00	40.63	ug/mL	2	30	
Benzo(a)pyrene	40.00	43.20	ug/mL	8	20	
Indeno(1,2,3-cd)pyrene	40.00	41.23	ug/mL	3	30	
Dibenz(a,h)anthracene	40.00	39.91	ug/mL	0	30	
Benzo(g,h,i)perylene	40.00	39.94	ug/mL	0	30	

Analyst: KMH

Date: 06/04/13

Reviewer: LW

Date: 06/07/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Water  
EPA 8270C

Inst : MSBNA05 IDF : 1.0  
 Seqnum : 543333265002 File : xhj02 Time : 19-AUG-2013 10:44  
 Cal : 543222414001 Caldate : 03-JUN-2013  
 Standards: S22460

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.0971	1.1750	20.00	21.42	ug/mL	7	30	0.0500	
Acenaphthylene	1.8321	2.0125	20.00	21.97	ug/mL	10	30	0.0500	
Acenaphthene	1.1864	1.1877	20.00	20.02	ug/mL	0	20	0.0500	
Fluorene	1.3661	1.4575	20.00	21.34	ug/mL	7	30	0.0500	
Phenanthrene	1.1159	1.1243	20.00	20.15	ug/mL	1	30	0.0500	
Anthracene	1.1348	1.1812	20.00	20.82	ug/mL	4	30	0.0500	
Fluoranthene	1.3254	1.4059	20.00	21.21	ug/mL	6	20	0.0500	
Pyrene	1.2689	1.3647	20.00	21.51	ug/mL	8	30	0.0500	
Benzo(a)anthracene	1.2355	1.2978	20.00	21.01	ug/mL	5	30	0.0500	
Chrysene	1.0787	1.1452	20.00	21.23	ug/mL	6	30	0.0500	
Benzo(b)fluoranthene	1.2090	1.2019	20.00	19.88	ug/mL	-1	30	0.0500	
Benzo(k)fluoranthene	1.0815	1.1380	20.00	21.05	ug/mL	5	30	0.0500	
Benzo(a)pyrene	1.0590	1.0954	20.00	20.69	ug/mL	3	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2240	1.3603	20.00	22.23	ug/mL	11	30	0.0500	
Dibenz(a,h)anthracene	1.0323	1.1506	20.00	22.29	ug/mL	11	30	0.0500	
Benzo(g,h,i)perylene	0.9837	1.0321	20.00	20.98	ug/mL	5	30	0.0500	
Nitrobenzene-d5	0.5400	0.5844	20.00	21.65	ug/mL	8	30	0.0500	
2-Fluorobiphenyl	1.4138	1.5428	20.00	21.83	ug/mL	9	30	0.0500	
Terphenyl-d14	0.9874	1.0630	20.00	21.53	ug/mL	8	30	0.0500	

KMH 08/19/13 [Aniline]: Picked or reassigned peak.

KMH 08/19/13 [3-Nitroaniline]: Picked or reassigned peak.

KMH 08/19/13 [4-Nitroaniline]: Corrected automatically drawn baseline.

Analyst:     KMH     Date:   08/19/13   Reviewer:   LLH   Date:   08/19/13

## Logbooks & Sequences

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 543333265

Date : 08/19/13  
 Sequence : MSBNA05 xhj

Reference : xhj02  
 Analyzed : 08/19/13 10:44

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT	
		CCV+CCV/BS+CCV/LCS+ICV/BS+ICV/ICV/CCV+ICV/LCS+RCCV+RICV	STD	896377	6.12	3046387	7.61	1861326	9.76	3085374	11.60	3133945	15.00	3440911	17.93
	LOWER LIMIT			448189	5.62	1523194	7.11	930663	9.26	1542687	11.10	1566973	14.50	1720456	17.43
	UPPER LIMIT			1792754	6.62	6092774	8.11	3722652	10.26	6170748	12.10	6267890	15.50	6881822	18.43
002	CCV			896377	6.12	3046387	7.61	1861326	9.76	3085374	11.60	3133945	15.00	3440911	17.93
003	BLANK	QC702408		1046752	6.12	3358879	7.61	2017123	9.75	3082134	11.60	3557571	14.99	3641794	17.93
004	BS	QC702409		1017674	6.12	3147511	7.61	1891490	9.75	2955444	11.60	3216895	14.99	3293417	17.92
005	BSD	QC702410		1051685	6.12	3208450	7.61	1925257	9.75	3025377	11.60	3252950	14.99	3393727	17.93
006	SAMPLE	247976-001		1103581	6.12	3495889	7.61	2116257	9.75	3290551	11.60	3712650	14.99	3811710	17.93
007	SAMPLE	247844-017		1154681	6.12	3605202	7.61	2134913	9.75	3292293	11.60	3774484	14.99	3738868	17.93
008	SAMPLE	247844-049		910088	6.13	2978606	7.61	1985792	9.75	3109614	11.60	3449716	14.99	3656864	17.93
009	SAMPLE	248032-001		1088209	6.12	3477277	7.60	2095095	9.75	3261299	11.60	3668308	14.99	3915193	17.93
010	SAMPLE	248030-038		1137110	6.12	3596320	7.61	2143932	9.75	3302057	11.60	3679109	14.99	3821783	17.93
011	SAMPLE	247957-002		1078681	6.12	3216792	7.61	2065519	9.75	3251816	11.60	3631326	14.99	3909219	17.93
012	SAMPLE	247993-006		1105330	6.12	3571907	7.61	2135154	9.75	3140352	11.59	3507456	14.98	3667967	17.93
013	SAMPLE	247993-001		1065397	6.12	3073761	7.61	1894403	9.75	3000421	11.60	3000323	14.99	3193914	17.95
014	SAMPLE	248030-012		1367291	6.13	4115279	7.61	2427892	9.75	3739875	11.60	3963378	14.99	4119915	17.93
015	SAMPLE	248030-003		1245094	6.12	3785156	7.61	2247997	9.75	3436293	11.60	3725863	14.99	3897163	17.93
016	SAMPLE	247925-004		1124870	6.12	3540719	7.61	1955007	9.75	3054372	11.60	3277214	15.00	3501910	17.95
017	SAMPLE	248030-010		1189074	6.12	3595338	7.61	2031225	9.75	3156451	11.60	3175331	15.01	3463411	17.97
018	SAMPLE	248030-013		611183	6.11	2000663	7.60	1139594	9.75	1801239	11.60	1791399	15.00	1787612	17.94
019	SAMPLE	248030-014		1219364	6.12	3598208	7.61	1937765	9.76	2898779	11.60	3183378	15.01	3389183	17.98
020	SAMPLE	248030-015		1070695	6.12	3336551	7.61	1941631	9.75	3053396	11.60	2937495	15.02	3262310	17.98
021	SAMPLE	248030-016		1069859	6.12	3370378	7.61	2053329	9.75	3092955	11.60	3363746	15.00	3424064	17.94
022	SAMPLE	248030-009		1180443	6.12	3559765	7.61	2059655	9.75	3098414	11.60	3216651	15.00	3274730	17.96

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 543222414

Instrument : MSBNA05 Begun : 06/03/13 10:54  
 Method : EPA 8270C SOP Version : bna\_rv.12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	xf301	TUN	DFTPP/PEM			06/03/13 10:54	1.0	1	
002	xf302	TUN	DFTPP/PEM			06/03/13 13:33	1.0	1	
003	xf303	ICAL	ICAL1			06/03/13 15:00	1.0	2	
004	xf304	ICAL	ICAL2			06/03/13 15:37	1.0	3	
005	xf305	ICAL	ICAL3			06/03/13 16:13	1.0	4	
006	xf306	ICAL	ICAL4			06/03/13 16:49	1.0	5	
007	xf307	ICAL	ICAL5			06/03/13 17:27	1.0	6	
008	xf308	ICAL	ICAL6			06/03/13 18:04	1.0	7	
009	xf309	ICAL	ICAL7			06/03/13 18:40	1.0	8	
010	xf310	ICAL	ICAL8			06/03/13 19:16	1.0	9	
011	xf311	ICAL	ICAL9			06/03/13 19:54	1.0	10	
012	xf312	ICV	ICV			06/03/13 20:29	1.0	11	

KMH 06/04/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 12.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 543333265

Instrument : MSBNA05 Begun : 08/19/13 10:25  
 Method : EPA 8270C SOP Version : bna\_rv.12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	xhj01	TUN	DFTPP/PEM			08/19/13 10:25	1.0	1	
002	xhj02	CCV				08/19/13 10:44	1.0	2	
003	xhj03	BLANK	QC702408	Water	201823	08/19/13 11:22	1.0	3	
004	xhj04	BS	QC702409	Water	201823	08/19/13 12:00	2.0	3	
005	xhj05	BSD	QC702410	Water	201823	08/19/13 12:38	2.0	3	
006	xhj06	SAMPLE	247976-001	Water	201823	08/19/13 13:18	1.0	3	
007	xhj07	SAMPLE	247844-017	Soil	201733	08/19/13 13:57	1.0	3	
008	xhj08	SAMPLE	247844-049	Soil	201733	08/19/13 14:38	1.0	3	
009	xhj09	SAMPLE	248032-001	Water	201823	08/19/13 15:17	1.0	3	
010	xhj10	SAMPLE	248030-038	Water	201823	08/19/13 15:54	1.0	3	
011	xhj11	SAMPLE	247957-002	Water	201823	08/19/13 16:36	1.0	3	
012	xhj12	SAMPLE	247993-006	Water	201823	08/19/13 17:19	10.0	3	
013	xhj13	SAMPLE	247993-001	Water	201823	08/19/13 17:59	10.0	3	
014	xhj14	SAMPLE	248030-012	Soil	201803	08/19/13 18:36	1.0	3	
015	xhj15	SAMPLE	248030-003	Soil	201803	08/19/13 19:13	1.0	3	
016	xhj16	SAMPLE	247925-004	Soil	201803	08/19/13 19:49	2.0	3	
017	xhj17	SAMPLE	248030-010	Soil	201803	08/19/13 20:24	3.0	3	
018	xhj18	SAMPLE	248030-013	Soil	201803	08/19/13 21:01	3.0	3	
019	xhj19	SAMPLE	248030-014	Soil	201803	08/19/13 21:36	6.0	3	
020	xhj20	SAMPLE	248030-015	Soil	201803	08/19/13 22:14	10.0	3	
021	xhj21	SAMPLE	248030-016	Soil	201803	08/19/13 22:49	20.0	3	<<t
022	xhj22	SAMPLE	248030-009	Soil	201803	08/19/13 23:25	5.0	3	<<t

KMH 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 22.

Standards used: 1=S22578 2=S22460 3=S22587

Flags used: <<t=out of clock

SAMPLE PREPARATION SUMMARY

Batch # : 201823  
 Started By : ICK  
 Method : 3520C  
 Spike #1 ID : S23002

Prep Date : 16-AUG-2013 17:50  
 SOP Version : 8270\_3520\_rv19  
 Spike #2 ID : S23045

Analysis : 8100  
 Finished By : TFB  
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
247957-002		Water	1070	1	1	0.0009346	7	.4				8270-1	
247976-001		Water	1070	1	1	0.0009346	4	.4				625	
247993-001		Water	1000	1	1	0.001	9	.4				625	foamy
247993-006		Water	960	1	1	0.001042	7	.4				625	foamy
248030-038		Water	1020	1	1	0.0009804	7	.4				8100	
248032-001		Water	1040	1	1	0.0009615	7	.4				8270-1	
QC702408	BLANK	Water	1000	1	1	0.001		.4				8270-1	
QC702409	BS	Water	1000	1	1	0.001		.4	1			8270-1	
QC702410	BSD	Water	1000	1	1	0.001		.4	1			8270-1	

KMH 08/19/13 : Matrix spikes were not performed for this analysis in batch 201823 due to insufficient sample amount.

Analyst:     KMH    

Date:   08/19/13  

Reviewer:   LLH  

Date:   08/19/13

LIMS Batch No: 201823 Extraction Method:  
 LIMS Analysis: 8270-1/625  EPA 3520c cont. L/L  
 Date Extracted: 8/16/13

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Confirmed pH ≤ 2	Comments
247957-002	A	1070	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> ≤ 2	
247976-001	L	1070	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 4	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> ≤ 2	
247993-001	E	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> ≤ 2	foggy
↓ -006	F	960	<input type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> ≤ 2	↓
5 248030-038	N	1020	<input type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> ≤ 2	
248032-001	A	1040	<input type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> ≤ 2	
MB 6C702408	NA	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> NA	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> ≤ 2	
BS ↓ 09	↓	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> ↓	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> ≤ 2	
BSD ↓ 10	↓	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> ↓	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> ≤ 2	
10			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
15			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
20			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> ≤ 2	

Lot# / LIMS# / Time      Date/ Initials

0.4 mL of surrogate solution was added to all samples 5230025 ICK 8/16/13

1.0 mL of matrix spiking solution was added to all spikes 523045C

pH of all samples adjusted to pH ≤ 2 with H<sub>2</sub>SO<sub>4</sub> ES130041

Cont. L/L extracted with 450mL of CH<sub>2</sub>Cl<sub>2</sub> EM53053

Extraction Start Time: 1750

Extraction End Time: 1150 TFB 8/17/13

pH of all samples adjusted to pH ≥ 11 with 10 N NaOH N/A

Extraction Start Time: ↓

Extraction End Time: ↓

Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed granular Na<sub>2</sub>SO<sub>4</sub> EMVJ116

Concentrated to final volume at temperature (degrees C) 70°

Relinquished to BNA department ✓

 8/16/13  
 Extraction Chemist      Date

Continued from Page 1  
 Continued on Page   

 8/19/13  
 Reviewed by      Date

Laboratory Job Number 248030

ANALYTICAL REPORT

Semivolatile Organics by GC/MS

Matrix: Soil

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-01	Batch#:	201803
Lab ID:	248030-001	Chemist:	LLH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	25.00	Analyzed:	08/19/13

Moisture: 2%

Analyte	Result	RL
Naphthalene	ND	1,700
Acenaphthene	ND	1,700
Fluorene	ND	1,700
Anthracene	ND	1,700
Fluoranthene	ND	1,700
Pyrene	ND	1,700
Benzo(a)anthracene	ND	1,700
Chrysene	ND	1,700
Benzo(b)fluoranthene	ND	1,700
Benzo(k)fluoranthene	ND	1,700
Benzo(a)pyrene	ND	1,700
Indeno(1,2,3-cd)pyrene	ND	1,700
Dibenz(a,h)anthracene	ND	1,700

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-08A	Batch#:	201803
Lab ID:	248030-002	Chemist:	LLH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	50.00	Analyzed:	08/19/13

Moisture: 5%

Analyte	Result	RL
Naphthalene	ND	7,000
Acenaphthene	ND	7,000
Fluorene	ND	7,000
Anthracene	ND	7,000
Fluoranthene	ND	7,000
Pyrene	ND	7,000
Benzo(a)anthracene	ND	7,000
Chrysene	ND	7,000
Benzo(b)fluoranthene	ND	7,000
Benzo(k)fluoranthene	ND	7,000
Benzo(a)pyrene	ND	7,000
Indeno(1,2,3-cd)pyrene	ND	7,000
Dibenz(a,h)anthracene	ND	7,000

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-08B	Batch#:	201803
Lab ID:	248030-003	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/19/13

Moisture: 13%

Analyte	Result	RL
Naphthalene	ND	76
Acenaphthene	ND	76
Fluorene	ND	76
Anthracene	ND	76
Fluoranthene	ND	76
Pyrene	ND	76
Benzo(a)anthracene	ND	76
Chrysene	ND	76
Benzo(b)fluoranthene	ND	76
Benzo(k)fluoranthene	ND	76
Benzo(a)pyrene	ND	76
Indeno(1,2,3-cd)pyrene	ND	76
Dibenz(a,h)anthracene	ND	76

Surrogate	%REC	Limits
Nitrobenzene-d5	67	49-120
2-Fluorobiphenyl	69	52-120
Terphenyl-d14	69	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-11A	Batch#:	201803
Lab ID:	248030-004	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/16/13

Moisture: 11%

Analyte	Result	RL
Naphthalene	ND	74
Acenaphthene	ND	74
Fluorene	ND	74
Anthracene	ND	74
Fluoranthene	ND	74
Pyrene	ND	74
Benzo(a)anthracene	ND	74
Chrysene	ND	74
Benzo(b)fluoranthene	ND	74
Benzo(k)fluoranthene	ND	74
Benzo(a)pyrene	ND	74
Indeno(1,2,3-cd)pyrene	ND	74
Dibenz(a,h)anthracene	ND	74

Surrogate	%REC	Limits
Nitrobenzene-d5	68	49-120
2-Fluorobiphenyl	69	52-120
Terphenyl-d14	80	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-11B	Batch#:	201803
Lab ID:	248030-005	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/16/13

Moisture: 18%

Analyte	Result	RL
Naphthalene	ND	80
Acenaphthene	ND	80
Fluorene	ND	80
Anthracene	ND	80
Fluoranthene	ND	80
Pyrene	93	80
Benzo(a)anthracene	ND	80
Chrysene	ND	80
Benzo(b)fluoranthene	ND	80
Benzo(k)fluoranthene	ND	80
Benzo(a)pyrene	ND	80
Indeno(1,2,3-cd)pyrene	ND	80
Dibenz(a,h)anthracene	ND	80

Surrogate	%REC	Limits
Nitrobenzene-d5	57	49-120
2-Fluorobiphenyl	52	52-120
Terphenyl-d14	68	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-2A	Batch#:	201803
Lab ID:	248030-006	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/16/13

Moisture: 10%

Analyte	Result	RL
Naphthalene	ND	73
Acenaphthene	ND	73
Fluorene	ND	73
Anthracene	ND	73
Fluoranthene	77	73
Pyrene	89	73
Benzo(a)anthracene	ND	73
Chrysene	ND	73
Benzo(b)fluoranthene	ND	73
Benzo(k)fluoranthene	ND	73
Benzo(a)pyrene	ND	73
Indeno(1,2,3-cd)pyrene	ND	73
Dibenz(a,h)anthracene	ND	73

Surrogate	%REC	Limits
Nitrobenzene-d5	72	49-120
2-Fluorobiphenyl	72	52-120
Terphenyl-d14	79	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-2B	Batch#:	201803
Lab ID:	248030-007	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/16/13

Moisture: 10%

Analyte	Result	RL
Naphthalene	ND	74
Acenaphthene	ND	74
Fluorene	ND	74
Anthracene	ND	74
Fluoranthene	ND	74
Pyrene	ND	74
Benzo(a)anthracene	ND	74
Chrysene	ND	74
Benzo(b)fluoranthene	ND	74
Benzo(k)fluoranthene	ND	74
Benzo(a)pyrene	ND	74
Indeno(1,2,3-cd)pyrene	ND	74
Dibenz(a,h)anthracene	ND	74

Surrogate	%REC	Limits
Nitrobenzene-d5	62	49-120
2-Fluorobiphenyl	61	52-120
Terphenyl-d14	77	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-35B	Batch#:	201803
Lab ID:	248030-008	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/16/13

Moisture: 12%

Analyte	Result	RL
Naphthalene	ND	75
Acenaphthene	ND	75
Fluorene	ND	75
Anthracene	ND	75
Fluoranthene	ND	75
Pyrene	ND	75
Benzo(a)anthracene	ND	75
Chrysene	ND	75
Benzo(b)fluoranthene	ND	75
Benzo(k)fluoranthene	ND	75
Benzo(a)pyrene	ND	75
Indeno(1,2,3-cd)pyrene	ND	75
Dibenz(a,h)anthracene	ND	75

Surrogate	%REC	Limits
Nitrobenzene-d5	73	49-120
2-Fluorobiphenyl	71	52-120
Terphenyl-d14	82	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-03	Batch#:	201803
Lab ID:	248030-009	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	10.00	Analyzed:	08/20/13

Moisture: 8%

Analyte	Result	RL
Naphthalene	ND	720
Acenaphthene	ND	720
Fluorene	ND	720
Anthracene	ND	720
Fluoranthene	1,000	720
Pyrene	1,400	720
Benzo(a)anthracene	780	720
Chrysene	820	720
Benzo(b)fluoranthene	820	720
Benzo(k)fluoranthene	ND	720
Benzo(a)pyrene	790	720
Indeno(1,2,3-cd)pyrene	ND	720
Dibenz(a,h)anthracene	ND	720

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-04	Batch#:	201803
Lab ID:	248030-010	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	3.000	Analyzed:	08/19/13

Moisture: 5%

Analyte	Result	RL
Naphthalene	ND	210
Acenaphthene	ND	210
Fluorene	ND	210
Anthracene	670	210
Fluoranthene	2,600	210
Pyrene	3,000	210
Benzo(a)anthracene	1,700	210
Chrysene	1,800	210
Benzo(b)fluoranthene	1,900	210
Benzo(k)fluoranthene	540	210
Benzo(a)pyrene	1,700	210
Indeno(1,2,3-cd)pyrene	790	210
Dibenz(a,h)anthracene	260	210

Surrogate	%REC	Limits
Nitrobenzene-d5	90	49-120
2-Fluorobiphenyl	106	52-120
Terphenyl-d14	91	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-10A	Batch#:	201803
Lab ID:	248030-011	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/16/13

Moisture: 8%

Analyte	Result	RL
Naphthalene	ND	72
Acenaphthene	ND	72
Fluorene	ND	72
Anthracene	ND	72
Fluoranthene	150	72
Pyrene	220	72
Benzo(a)anthracene	110	72
Chrysene	130	72
Benzo(b)fluoranthene	130	72
Benzo(k)fluoranthene	ND	72
Benzo(a)pyrene	120	72
Indeno(1,2,3-cd)pyrene	ND	72
Dibenz(a,h)anthracene	ND	72

Surrogate	%REC	Limits
Nitrobenzene-d5	68	49-120
2-Fluorobiphenyl	71	52-120
Terphenyl-d14	82	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-10B	Batch#:	201803
Lab ID:	248030-012	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/19/13

Moisture: 14%

Analyte	Result	RL
Naphthalene	ND	77
Acenaphthene	ND	77
Fluorene	ND	77
Anthracene	ND	77
Fluoranthene	ND	77
Pyrene	ND	77
Benzo(a)anthracene	ND	77
Chrysene	ND	77
Benzo(b)fluoranthene	ND	77
Benzo(k)fluoranthene	ND	77
Benzo(a)pyrene	ND	77
Indeno(1,2,3-cd)pyrene	ND	77
Dibenz(a,h)anthracene	ND	77

Surrogate	%REC	Limits
Nitrobenzene-d5	58	49-120
2-Fluorobiphenyl	59	52-120
Terphenyl-d14	65	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-37	Batch#:	201803
Lab ID:	248030-013	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	3.000	Analyzed:	08/19/13

Moisture: 4%

Analyte	Result	RL
Naphthalene	ND	210
Acenaphthene	ND	210
Fluorene	ND	210
Anthracene	610	210
Fluoranthene	3,100	210
Pyrene	3,700	210
Benzo(a)anthracene	1,900	210
Chrysene	2,100	210
Benzo(b)fluoranthene	2,300	210
Benzo(k)fluoranthene	610	210
Benzo(a)pyrene	1,900	210
Indeno(1,2,3-cd)pyrene	960	210
Dibenz(a,h)anthracene	290	210

Surrogate	%REC	Limits
Nitrobenzene-d5	76	49-120
2-Fluorobiphenyl	99	52-120
Terphenyl-d14	90	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-14A	Batch#:	201803
Lab ID:	248030-014	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	6.000	Analyzed:	08/19/13

Moisture: 9%

Analyte	Result	RL
Naphthalene	ND	440
Acenaphthene	ND	440
Fluorene	ND	440
Anthracene	790	440
Fluoranthene	3,400	440
Pyrene	3,800	440
Benzo(a)anthracene	2,200	440
Chrysene	2,700	440
Benzo(b)fluoranthene	2,800	440
Benzo(k)fluoranthene	1,200	440
Benzo(a)pyrene	3,000	440
Indeno(1,2,3-cd)pyrene	1,600	440
Dibenz(a,h)anthracene	500	440

Surrogate	%REC	Limits
Nitrobenzene-d5	91	49-120
2-Fluorobiphenyl	109	52-120
Terphenyl-d14	95	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-14B	Batch#:	201803
Lab ID:	248030-015	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	10.00	Analyzed:	08/19/13

Moisture: 15%

Analyte	Result	RL
Naphthalene	1,200	780
Acenaphthene	ND	780
Fluorene	2,200	780
Anthracene	3,200	780
Fluoranthene	12,000	780
Pyrene	14,000	780
Benzo(a)anthracene	8,700	780
Chrysene	11,000	780
Benzo(b)fluoranthene	10,000	780
Benzo(k)fluoranthene	3,500	780
Benzo(a)pyrene	9,300	780
Indeno(1,2,3-cd)pyrene	3,900	780
Dibenz(a,h)anthracene	1,300	780

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-7	Batch#:	201803
Lab ID:	248030-016	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	10.00	Analyzed:	08/20/13

Moisture: 7%

Analyte	Result	RL
Naphthalene	ND	710
Acenaphthene	ND	710
Fluorene	ND	710
Anthracene	ND	710
Fluoranthene	ND	710
Pyrene	ND	710
Benzo(a)anthracene	ND	710
Chrysene	ND	710
Benzo(b)fluoranthene	ND	710
Benzo(k)fluoranthene	ND	710
Benzo(a)pyrene	ND	710
Indeno(1,2,3-cd)pyrene	ND	710
Dibenz(a,h)anthracene	ND	710

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-6	Batch#:	201803
Lab ID:	248030-017	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/16/13

Moisture: 6%

Analyte	Result	RL
Naphthalene	ND	71
Acenaphthene	ND	71
Fluorene	ND	71
Anthracene	ND	71
Fluoranthene	200	71
Pyrene	220	71
Benzo(a)anthracene	120	71
Chrysene	130	71
Benzo(b)fluoranthene	170	71
Benzo(k)fluoranthene	ND	71
Benzo(a)pyrene	120	71
Indeno(1,2,3-cd)pyrene	ND	71
Dibenz(a,h)anthracene	ND	71

Surrogate	%REC	Limits
Nitrobenzene-d5	66	49-120
2-Fluorobiphenyl	68	52-120
Terphenyl-d14	78	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-5	Batch#:	201931
Lab ID:	248030-018	Chemist:	LLH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/20/13
Diln Fac:	20.00	Analyzed:	08/21/13

Moisture: 2%

Analyte	Result	RL
Naphthalene	ND	3,400
Acenaphthene	ND	3,400
Fluorene	ND	3,400
Anthracene	ND	3,400
Fluoranthene	ND	3,400
Pyrene	ND	3,400
Benzo(a)anthracene	ND	3,400
Chrysene	ND	3,400
Benzo(b)fluoranthene	ND	3,400
Benzo(k)fluoranthene	ND	3,400
Benzo(a)pyrene	ND	3,400
Indeno(1,2,3-cd)pyrene	ND	3,400
Dibenz(a,h)anthracene	ND	3,400

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-9	Batch#:	201803
Lab ID:	248030-019	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	14.00	Analyzed:	08/20/13

Moisture: 3%

Analyte	Result	RL
Naphthalene	ND	960
Acenaphthene	ND	960
Fluorene	ND	960
Anthracene	ND	960
Fluoranthene	1,300	960
Pyrene	1,400	960
Benzo(a)anthracene	ND	960
Chrysene	ND	960
Benzo(b)fluoranthene	ND	960
Benzo(k)fluoranthene	ND	960
Benzo(a)pyrene	ND	960
Indeno(1,2,3-cd)pyrene	ND	960
Dibenz(a,h)anthracene	ND	960

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-34	Batch#:	201803
Lab ID:	248030-020	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/16/13
Diln Fac:	7.000	Analyzed:	08/20/13

Moisture: 3%

Analyte	Result	RL
Naphthalene	ND	480
Acenaphthene	ND	480
Fluorene	ND	480
Anthracene	830	480
Fluoranthene	2,000	480
Pyrene	2,200	480
Benzo(a)anthracene	910	480
Chrysene	940	480
Benzo(b)fluoranthene	1,000	480
Benzo(k)fluoranthene	ND	480
Benzo(a)pyrene	830	480
Indeno(1,2,3-cd)pyrene	ND	480
Dibenz(a,h)anthracene	ND	480

Surrogate	%REC	Limits
Nitrobenzene-d5	71	49-120
2-Fluorobiphenyl	93	52-120
Terphenyl-d14	91	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-15	Batch#:	201864
Lab ID:	248030-021	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	25.00	Analyzed:	08/20/13

Moisture: 8%

Analyte	Result	RL
Naphthalene	ND	3,600
Acenaphthene	ND	3,600
Fluorene	ND	3,600
Anthracene	ND	3,600
Fluoranthene	ND	3,600
Pyrene	ND	3,600
Benzo(a)anthracene	ND	3,600
Chrysene	ND	3,600
Benzo(b)fluoranthene	ND	3,600
Benzo(k)fluoranthene	ND	3,600
Benzo(a)pyrene	ND	3,600
Indeno(1,2,3-cd)pyrene	ND	3,600
Dibenz(a,h)anthracene	ND	3,600

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-24A	Batch#:	201864
Lab ID:	248030-022	Chemist:	LLH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	8.000	Analyzed:	08/20/13

Moisture: 5%

Analyte	Result	RL
Naphthalene	ND	1,100
Acenaphthene	ND	1,100
Fluorene	ND	1,100
Anthracene	ND	1,100
Fluoranthene	ND	1,100
Pyrene	ND	1,100
Benzo(a)anthracene	ND	1,100
Chrysene	ND	1,100
Benzo(b)fluoranthene	ND	1,100
Benzo(k)fluoranthene	ND	1,100
Benzo(a)pyrene	ND	1,100
Indeno(1,2,3-cd)pyrene	ND	1,100
Dibenz(a,h)anthracene	ND	1,100

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-24B	Batch#:	201864
Lab ID:	248030-023	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	10.00	Analyzed:	08/20/13

Moisture: 10%

Analyte	Result	RL
Naphthalene	ND	1,500
Acenaphthene	ND	1,500
Fluorene	ND	1,500
Anthracene	ND	1,500
Fluoranthene	ND	1,500
Pyrene	ND	1,500
Benzo(a)anthracene	ND	1,500
Chrysene	ND	1,500
Benzo(b)fluoranthene	ND	1,500
Benzo(k)fluoranthene	ND	1,500
Benzo(a)pyrene	ND	1,500
Indeno(1,2,3-cd)pyrene	ND	1,500
Dibenz(a,h)anthracene	ND	1,500

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-39B	Batch#:	201864
Lab ID:	248030-024	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	10.00	Analyzed:	08/20/13

Moisture: 10%

Analyte	Result	RL
Naphthalene	ND	1,500
Acenaphthene	ND	1,500
Fluorene	ND	1,500
Anthracene	ND	1,500
Fluoranthene	ND	1,500
Pyrene	ND	1,500
Benzo(a)anthracene	ND	1,500
Chrysene	ND	1,500
Benzo(b)fluoranthene	ND	1,500
Benzo(k)fluoranthene	ND	1,500
Benzo(a)pyrene	ND	1,500
Indeno(1,2,3-cd)pyrene	ND	1,500
Dibenz(a,h)anthracene	ND	1,500

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-12	Batch#:	201864
Lab ID:	248030-025	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	50.00	Analyzed:	08/20/13

Moisture: 1%

Analyte	Result	RL
Naphthalene	ND	6,800
Acenaphthene	ND	6,800
Fluorene	ND	6,800
Anthracene	ND	6,800
Fluoranthene	ND	6,800
Pyrene	ND	6,800
Benzo(a)anthracene	ND	6,800
Chrysene	ND	6,800
Benzo(b)fluoranthene	ND	6,800
Benzo(k)fluoranthene	ND	6,800
Benzo(a)pyrene	ND	6,800
Indeno(1,2,3-cd)pyrene	ND	6,800
Dibenz(a,h)anthracene	ND	6,800

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-16	Batch#:	201864
Lab ID:	248030-026	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	1.000	Analyzed:	08/21/13

Moisture: 0%

Analyte	Result	RL
Naphthalene	ND	130
Acenaphthene	ND	130
Fluorene	ND	130
Anthracene	ND	130
Fluoranthene	180	130
Pyrene	230	130
Benzo(a)anthracene	ND	130
Chrysene	ND	130
Benzo(b)fluoranthene	180	130
Benzo(k)fluoranthene	ND	130
Benzo(a)pyrene	140	130
Indeno(1,2,3-cd)pyrene	ND	130
Dibenz(a,h)anthracene	ND	130

Surrogate	%REC	Limits
Nitrobenzene-d5	65	49-120
2-Fluorobiphenyl	73	52-120
Terphenyl-d14	77	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-17	Batch#:	201864
Lab ID:	248030-027	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	5.000	Analyzed:	08/22/13

Moisture: 7%

Analyte	Result	RL
Naphthalene	ND	720
Acenaphthene	ND	720
Fluorene	ND	720
Anthracene	870	720
Fluoranthene	4,500	720
Pyrene	4,400	720
Benzo(a)anthracene	2,000	720
Chrysene	2,300	720
Benzo(b)fluoranthene	2,400	720
Benzo(k)fluoranthene	800	720
Benzo(a)pyrene	1,800	720
Indeno(1,2,3-cd)pyrene	1,200	720
Dibenz(a,h)anthracene	ND	720

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-18	Batch#:	201864
Lab ID:	248030-028	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	10.00	Analyzed:	08/22/13

Moisture: 10%

Analyte	Result	RL
Naphthalene	ND	1,500
Acenaphthene	ND	1,500
Fluorene	ND	1,500
Anthracene	ND	1,500
Fluoranthene	ND	1,500
Pyrene	ND	1,500
Benzo(a)anthracene	ND	1,500
Chrysene	ND	1,500
Benzo(b)fluoranthene	ND	1,500
Benzo(k)fluoranthene	ND	1,500
Benzo(a)pyrene	ND	1,500
Indeno(1,2,3-cd)pyrene	ND	1,500
Dibenz(a,h)anthracene	ND	1,500

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-23D	Batch#:	201864
Lab ID:	248030-029	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	5.000	Analyzed:	08/21/13

Moisture: 25%

Analyte	Result	RL
Naphthalene	ND	890
Acenaphthene	ND	890
Fluorene	ND	890
Anthracene	ND	890
Fluoranthene	ND	890
Pyrene	ND	890
Benzo(a)anthracene	ND	890
Chrysene	ND	890
Benzo(b)fluoranthene	ND	890
Benzo(k)fluoranthene	ND	890
Benzo(a)pyrene	ND	890
Indeno(1,2,3-cd)pyrene	ND	890
Dibenz(a,h)anthracene	ND	890

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-38D	Batch#:	201864
Lab ID:	248030-030	Chemist:	LLH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	10.00	Analyzed:	08/22/13

Moisture: 31%

Analyte	Result	RL
Naphthalene	ND	1,900
Acenaphthene	ND	1,900
Fluorene	ND	1,900
Anthracene	ND	1,900
Fluoranthene	ND	1,900
Pyrene	ND	1,900
Benzo(a)anthracene	ND	1,900
Chrysene	ND	1,900
Benzo(b)fluoranthene	ND	1,900
Benzo(k)fluoranthene	ND	1,900
Benzo(a)pyrene	ND	1,900
Indeno(1,2,3-cd)pyrene	ND	1,900
Dibenz(a,h)anthracene	ND	1,900

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-25D	Batch#:	201864
Lab ID:	248030-031	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	1.000	Analyzed:	08/21/13

Moisture: 55%

Analyte	Result	RL
Naphthalene	ND	150
Acenaphthene	ND	150
Fluorene	ND	150
Anthracene	ND	150
Fluoranthene	210	150
Pyrene	200	150
Benzo(a)anthracene	ND	150
Chrysene	ND	150
Benzo(b)fluoranthene	150	150
Benzo(k)fluoranthene	ND	150
Benzo(a)pyrene	ND	150
Indeno(1,2,3-cd)pyrene	ND	150
Dibenz(a,h)anthracene	ND	150

Surrogate	%REC	Limits
Nitrobenzene-d5	56	49-120
2-Fluorobiphenyl	60	52-120
Terphenyl-d14	66	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-32D	Batch#:	201864
Lab ID:	248030-032	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	1.000	Analyzed:	08/21/13

Moisture: 53%

Analyte	Result	RL
Naphthalene	ND	140
Acenaphthene	ND	140
Fluorene	ND	140
Anthracene	ND	140
Fluoranthene	240	140
Pyrene	240	140
Benzo(a)anthracene	ND	140
Chrysene	ND	140
Benzo(b)fluoranthene	170	140
Benzo(k)fluoranthene	ND	140
Benzo(a)pyrene	ND	140
Indeno(1,2,3-cd)pyrene	ND	140
Dibenz(a,h)anthracene	ND	140

Surrogate	%REC	Limits
Nitrobenzene-d5	54	49-120
2-Fluorobiphenyl	53	52-120
Terphenyl-d14	64	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-26	Batch#:	201864
Lab ID:	248030-033	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	25.00	Analyzed:	08/20/13

Moisture: 16%

Analyte	Result	RL
Naphthalene	ND	3,900
Acenaphthene	ND	3,900
Fluorene	ND	3,900
Anthracene	ND	3,900
Fluoranthene	ND	3,900
Pyrene	ND	3,900
Benzo(a)anthracene	ND	3,900
Chrysene	ND	3,900
Benzo(b)fluoranthene	ND	3,900
Benzo(k)fluoranthene	ND	3,900
Benzo(a)pyrene	ND	3,900
Indeno(1,2,3-cd)pyrene	ND	3,900
Dibenz(a,h)anthracene	ND	3,900

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-33A	Batch#:	201864
Lab ID:	248030-034	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	100.0	Analyzed:	08/20/13

Moisture: 5%

Analyte	Result	RL
Naphthalene	ND	18,000
Acenaphthene	ND	18,000
Fluorene	ND	18,000
Anthracene	ND	18,000
Fluoranthene	ND	18,000
Pyrene	ND	18,000
Benzo(a)anthracene	ND	18,000
Chrysene	ND	18,000
Benzo(b)fluoranthene	ND	18,000
Benzo(k)fluoranthene	ND	18,000
Benzo(a)pyrene	ND	18,000
Indeno(1,2,3-cd)pyrene	ND	18,000
Dibenz(a,h)anthracene	ND	18,000

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-33B	Batch#:	201864
Lab ID:	248030-035	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	10.00	Analyzed:	08/20/13

Moisture: 10%

Analyte	Result	RL
Naphthalene	ND	1,500
Acenaphthene	ND	1,500
Fluorene	ND	1,500
Anthracene	ND	1,500
Fluoranthene	ND	1,500
Pyrene	ND	1,500
Benzo(a)anthracene	ND	1,500
Chrysene	ND	1,500
Benzo(b)fluoranthene	ND	1,500
Benzo(k)fluoranthene	ND	1,500
Benzo(a)pyrene	ND	1,500
Indeno(1,2,3-cd)pyrene	ND	1,500
Dibenz(a,h)anthracene	ND	1,500

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-29A	Batch#:	201864
Lab ID:	248030-036	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	20.00	Analyzed:	08/20/13

Moisture: 6%

Analyte	Result	RL
Naphthalene	ND	2,900
Acenaphthene	ND	2,900
Fluorene	ND	2,900
Anthracene	ND	2,900
Fluoranthene	ND	2,900
Pyrene	ND	2,900
Benzo(a)anthracene	ND	2,900
Chrysene	ND	2,900
Benzo(b)fluoranthene	ND	2,900
Benzo(k)fluoranthene	ND	2,900
Benzo(a)pyrene	ND	2,900
Indeno(1,2,3-cd)pyrene	ND	2,900
Dibenz(a,h)anthracene	ND	2,900

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-29B	Batch#:	201864
Lab ID:	248030-037	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	10.00	Analyzed:	08/20/13

Moisture: 8%

Analyte	Result	RL
Naphthalene	ND	1,400
Acenaphthene	ND	1,400
Fluorene	ND	1,400
Anthracene	ND	1,400
Fluoranthene	ND	1,400
Pyrene	ND	1,400
Benzo(a)anthracene	ND	1,400
Chrysene	ND	1,400
Benzo(b)fluoranthene	ND	1,400
Benzo(k)fluoranthene	ND	1,400
Benzo(a)pyrene	ND	1,400
Indeno(1,2,3-cd)pyrene	ND	1,400
Dibenz(a,h)anthracene	ND	1,400

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-20	Batch#:	201864
Lab ID:	248030-039	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13
Diln Fac:	25.00	Analyzed:	08/20/13

Moisture: 1%

Analyte	Result	RL
Naphthalene	ND	3,300
Acenaphthene	ND	3,300
Fluorene	ND	3,300
Anthracene	ND	3,300
Fluoranthene	ND	3,300
Pyrene	ND	3,300
Benzo(a)anthracene	ND	3,300
Chrysene	ND	3,300
Benzo(b)fluoranthene	ND	3,300
Benzo(k)fluoranthene	ND	3,300
Benzo(a)pyrene	ND	3,300
Indeno(1,2,3-cd)pyrene	ND	3,300
Dibenz(a,h)anthracene	ND	3,300

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

### Polynuclear Aromatics by GC/MS

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-22	Batch#:	201931
Lab ID:	248030-040	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/20/13
Diln Fac:	10.00	Analyzed:	08/21/13

Moisture: 1%

Analyte	Result	RL
Naphthalene	ND	680
Acenaphthene	ND	680
Fluorene	ND	680
Anthracene	ND	680
Fluoranthene	760	680
Pyrene	750	680
Benzo(a)anthracene	ND	680
Chrysene	ND	680
Benzo(b)fluoranthene	ND	680
Benzo(k)fluoranthene	ND	680
Benzo(a)pyrene	ND	680
Indeno(1,2,3-cd)pyrene	ND	680
Dibenz(a,h)anthracene	ND	680

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-27	Batch#:	201931
Lab ID:	248030-041	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/20/13
Diln Fac:	10.00	Analyzed:	08/21/13

Moisture: 1%

Analyte	Result	RL
Naphthalene	ND	1,700
Acenaphthene	ND	1,700
Fluorene	ND	1,700
Anthracene	ND	1,700
Fluoranthene	ND	1,700
Pyrene	ND	1,700
Benzo(a)anthracene	ND	1,700
Chrysene	ND	1,700
Benzo(b)fluoranthene	ND	1,700
Benzo(k)fluoranthene	ND	1,700
Benzo(a)pyrene	ND	1,700
Indeno(1,2,3-cd)pyrene	ND	1,700
Dibenz(a,h)anthracene	ND	1,700

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-28	Batch#:	201931
Lab ID:	248030-042	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/20/13
Diln Fac:	20.00	Analyzed:	08/21/13

Moisture: 1%

Analyte	Result	RL
Naphthalene	ND	3,400
Acenaphthene	4,600	3,400
Fluorene	4,100	3,400
Anthracene	12,000	3,400
Fluoranthene	67,000	3,400
Pyrene	62,000	3,400
Benzo(a)anthracene	40,000	3,400
Chrysene	46,000	3,400
Benzo(b)fluoranthene	50,000	3,400
Benzo(k)fluoranthene	21,000	3,400
Benzo(a)pyrene	37,000	3,400
Indeno(1,2,3-cd)pyrene	23,000	3,400
Dibenz(a,h)anthracene	7,500	3,400

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-30	Batch#:	201931
Lab ID:	248030-043	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/20/13
Diln Fac:	20.00	Analyzed:	08/21/13

Moisture: 0%

Analyte	Result	RL
Naphthalene	ND	1,300
Acenaphthene	ND	1,300
Fluorene	ND	1,300
Anthracene	ND	1,300
Fluoranthene	3,500	1,300
Pyrene	3,100	1,300
Benzo(a)anthracene	1,500	1,300
Chrysene	1,900	1,300
Benzo(b)fluoranthene	1,700	1,300
Benzo(k)fluoranthene	ND	1,300
Benzo(a)pyrene	ND	1,300
Indeno(1,2,3-cd)pyrene	ND	1,300
Dibenz(a,h)anthracene	ND	1,300

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	49-120
2-Fluorobiphenyl	DO	52-120
Terphenyl-d14	DO	48-120

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-31	Batch#:	201931
Lab ID:	248030-044	Chemist:	KMH
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/20/13
Diln Fac:	8.000	Analyzed:	08/21/13

Moisture: 0%

Analyte	Result	RL
Naphthalene	ND	530
Acenaphthene	ND	530
Fluorene	ND	530
Anthracene	ND	530
Fluoranthene	ND	530
Pyrene	ND	530
Benzo(a)anthracene	ND	530
Chrysene	ND	530
Benzo(b)fluoranthene	ND	530
Benzo(k)fluoranthene	ND	530
Benzo(a)pyrene	ND	530
Indeno(1,2,3-cd)pyrene	ND	530
Dibenz(a,h)anthracene	ND	530

Surrogate	%REC	Limits
Nitrobenzene-d5	73	49-120
2-Fluorobiphenyl	91	52-120
Terphenyl-d14	85	48-120

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Polynuclear Aromatics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Type:	BLANK	Batch#:	201803
Lab ID:	QC702320	Chemist:	KMH
Matrix:	Soil	Prepared:	08/16/13
Units:	ug/Kg	Analyzed:	08/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Naphthalene	ND	67
Acenaphthene	ND	67
Fluorene	ND	67
Anthracene	ND	67
Fluoranthene	ND	67
Pyrene	ND	67
Benzo(a)anthracene	ND	67
Chrysene	ND	67
Benzo(b)fluoranthene	ND	67
Benzo(k)fluoranthene	ND	67
Benzo(a)pyrene	ND	67
Indeno(1,2,3-cd)pyrene	ND	67
Dibenz(a,h)anthracene	ND	67

Surrogate	%REC	Limits
Nitrobenzene-d5	80	49-120
2-Fluorobiphenyl	84	52-120
Terphenyl-d14	73	48-120

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Polynuclear Aromatics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Type:	LCS	Batch#:	201803
Lab ID:	QC702321	Chemist:	KMH
Matrix:	Soil	Prepared:	08/16/13
Units:	ug/Kg	Analyzed:	08/16/13
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Naphthalene	994.4	861.6	87	58-120
Acenaphthene	994.4	824.2	83	57-120
Fluorene	994.4	873.6	88	61-120
Anthracene	994.4	898.7	90	61-120
Fluoranthene	994.4	922.3	93	64-120
Pyrene	994.4	834.0	84	60-120
Benzo(a)anthracene	994.4	858.1	86	61-120
Chrysene	994.4	867.4	87	62-120
Benzo(b)fluoranthene	994.4	817.9	82	61-120
Benzo(k)fluoranthene	994.4	857.8	86	59-120
Benzo(a)pyrene	994.4	845.1	85	63-120
Indeno(1,2,3-cd)pyrene	994.4	909.5	91	59-120
Dibenz(a,h)anthracene	994.4	899.4	90	60-120

Surrogate	%REC	Limits
Nitrobenzene-d5	86	49-120
2-Fluorobiphenyl	76	52-120
Terphenyl-d14	77	48-120



## Batch QC Report

Polynuclear Aromatics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Type:	BLANK	Batch#:	201864
Lab ID:	QC702577	Chemist:	KMH
Matrix:	Soil	Prepared:	08/19/13
Units:	ug/Kg	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Naphthalene	ND	66
Acenaphthene	ND	66
Fluorene	ND	66
Anthracene	ND	66
Fluoranthene	ND	66
Pyrene	ND	66
Benzo(a)anthracene	ND	66
Chrysene	ND	66
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66

Surrogate	%REC	Limits
Nitrobenzene-d5	77	49-120
2-Fluorobiphenyl	77	52-120
Terphenyl-d14	70	48-120

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Polynuclear Aromatics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Type:	LCS	Batch#:	201864
Lab ID:	QC702578	Chemist:	KMH
Matrix:	Soil	Prepared:	08/19/13
Units:	ug/Kg	Analyzed:	08/20/13
Diln Fac:	2.000		

Analyte	Spiked	Result	%REC	Limits
Naphthalene	1,009	957.1	95	58-120
Acenaphthene	1,009	900.2	89	57-120
Fluorene	1,009	991.7	98	61-120
Anthracene	1,009	1,019	101	61-120
Fluoranthene	1,009	1,052	104	64-120
Pyrene	1,009	948.2	94	60-120
Benzo(a)anthracene	1,009	927.9	92	61-120
Chrysene	1,009	966.1	96	62-120
Benzo(b)fluoranthene	1,009	839.4	83	61-120
Benzo(k)fluoranthene	1,009	919.6	91	59-120
Benzo(a)pyrene	1,009	882.7	88	63-120
Indeno(1,2,3-cd)pyrene	1,009	923.5	92	59-120
Dibenz(a,h)anthracene	1,009	929.0	92	60-120

Surrogate	%REC	Limits
Nitrobenzene-d5	85	49-120
2-Fluorobiphenyl	89	52-120
Terphenyl-d14	83	48-120

## Batch QC Report

Polynuclear Aromatics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Type:	BLANK	Batch#:	201931
Lab ID:	QC702848	Chemist:	KMH
Matrix:	Soil	Prepared:	08/20/13
Units:	ug/Kg	Analyzed:	08/21/13
Diln Fac:	1.000		

Analyte	Result	RL
Naphthalene	ND	66
Acenaphthene	ND	66
Fluorene	ND	66
Anthracene	ND	66
Fluoranthene	ND	66
Pyrene	ND	66
Benzo(a)anthracene	ND	66
Chrysene	ND	66
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66

Surrogate	%REC	Limits
Nitrobenzene-d5	69	49-120
2-Fluorobiphenyl	72	52-120
Terphenyl-d14	64	48-120

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Polynuclear Aromatics by GC/MS			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Type:	LCS	Batch#:	201931
Lab ID:	QC702849	Chemist:	KMH
Matrix:	Soil	Prepared:	08/20/13
Units:	ug/Kg	Analyzed:	08/21/13
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Naphthalene	998.7	818.0	82	58-120
Acenaphthene	998.7	773.3	77	57-120
Fluorene	998.7	836.9	84	61-120
Anthracene	998.7	837.0	84	61-120
Fluoranthene	998.7	866.1	87	64-120
Pyrene	998.7	791.3	79	60-120
Benzo(a)anthracene	998.7	799.2	80	61-120
Chrysene	998.7	827.7	83	62-120
Benzo(b)fluoranthene	998.7	753.1	75	61-120
Benzo(k)fluoranthene	998.7	801.2	80	59-120
Benzo(a)pyrene	998.7	785.2	79	63-120
Indeno(1,2,3-cd)pyrene	998.7	853.4	85	59-120
Dibenz(a,h)anthracene	998.7	835.9	84	60-120

Surrogate	%REC	Limits
Nitrobenzene-d5	80	49-120
2-Fluorobiphenyl	72	52-120
Terphenyl-d14	71	48-120

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA05                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 543222414002              File : xf302                      Time : 03-JUN-2013 13:33

Standards: S21994

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	218750	50.18	
68	< 2% of mass 69	0	0.00	
69		270130	100.00	
70	< 2% of mass 69	1387	0.51	
127	40% - 60% of mass 198	244032	55.98	
197	< 1% of mass 198	0	0.00	
198		435925	100.00	
199	5% - 9% of mass 198	31029	7.12	
275	10% - 30% of mass 198	112986	25.92	
365	> 1% of mass 198	12177	2.79	
441	Present, < mass 443	60290	79.66	
442	> 40% and < 100% of mass 198	379242	87.00	
443	17% - 23% of mass 442	75688	19.96	

Analyst:   KMH                        Date:   06/04/13                        Reviewer:   LW                        Date:   06/07/13

PEM Report

File Name : G:\msbna05\060313\XF302.D  
 Date Acquired : 3 Jun 2013 1:33 pm  
 Sample Name : TUN,S21994  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA05 BNA DFTPP/PEM  
 Inst. Name : MSBNA05  
 AcquisitionMeth: DFTPP05.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.106	5.38	611867
Benzidine	0.745	7.24	2795176
4,4'-DDT		8.26	1655991
4,4'-DDE		7.47	3473
4,4'-DDD		7.88	52161
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	3%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.1	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA05                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 543329067003              File : xhg03                      Time : 16-AUG-2013 16:04

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	246756	56.13	
68	< 2% of mass 69	0	0.00	
69		308493	100.00	
70	< 2% of mass 69	459	0.15	
127	40% - 60% of mass 198	249429	56.74	
197	< 1% of mass 198	0	0.00	
198		439594	100.00	
199	5% - 9% of mass 198	31632	7.20	
275	10% - 30% of mass 198	119058	27.08	
365	> 1% of mass 198	11581	2.63	
441	Present, < mass 443	32864	55.92	
442	> 40% and < 100% of mass 198	301141	68.50	
443	17% - 23% of mass 442	58765	19.51	

Analyst:   KMH                        Date:   08/16/13                        Reviewer:   LLH                        Date:   08/19/13

PEM Report

File Name : G:\msbna05\081613\XHG03.D  
 Date Acquired : 16 Aug 2013 4:04 pm  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA05 BNA DFTPP/PEM  
 Inst. Name : MSBNA05  
 AcquisitionMeth: DFTPP05.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	0.919	5.39	516859
Benzidine	0.722	7.23	3140634
4,4'-DDT		8.24	1591667
4,4'-DDE		7.46	6803
4,4'-DDD		7.87	161848
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	10%	PASS
Tailing: Pentachlorophenol	8270C <5.0	0.9	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA05                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 543333265001              File : xhj01                      Time : 19-AUG-2013 10:25

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	152170	46.49	
68	< 2% of mass 69	0	0.00	
69		194225	100.00	
70	< 2% of mass 69	830	0.43	
127	40% - 60% of mass 198	172066	52.57	
197	< 1% of mass 198	0	0.00	
198		327317	100.00	
199	5% - 9% of mass 198	22506	6.88	
275	10% - 30% of mass 198	90632	27.69	
365	> 1% of mass 198	9057	2.77	
441	Present, < mass 443	37386	84.11	
442	> 40% and < 100% of mass 198	227605	69.54	
443	17% - 23% of mass 442	44448	19.53	

Analyst:   KMH                        Date:   08/19/13                        Reviewer:   LLH                        Date:   08/19/13

PEM Report

File Name : G:\msbna05\081913\XHJ01.D  
 Date Acquired : 19 Aug 2013 10:25 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA05 BNA DFTPP/PEM  
 Inst. Name : MSBNA05  
 AcquisitionMeth: DFTPP05.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.780	5.39	308020
Benzidine	0.747	7.23	2203909
4,4'-DDT		8.24	1178038
4,4'-DDE		7.46	8440
4,4'-DDD		7.87	55069
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	5%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.8	PASS
	8270D <=2	2	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA05                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 543334704001              File : xhk01                      Time : 20-AUG-2013 10:24

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	173582	54.00	
68	< 2% of mass 69	0	0.00	
69		220758	100.00	
70	< 2% of mass 69	1023	0.46	
127	40% - 60% of mass 198	179541	55.85	
197	< 1% of mass 198	0	0.00	
198		321472	100.00	
199	5% - 9% of mass 198	22760	7.08	
275	10% - 30% of mass 198	84517	26.29	
365	> 1% of mass 198	8096	2.52	
441	Present, < mass 443	22128	55.98	
442	> 40% and < 100% of mass 198	200746	62.45	
443	17% - 23% of mass 442	39528	19.69	

Analyst: LLH                      Date: 08/20/13                      Reviewer: KMH                      Date: 08/20/13

PEM Report

File Name : G:\msbna05\082013\XHK01.D  
 Date Acquired : 20 Aug 2013 10:24 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA05 BNA DFTPP/PEM  
 Inst. Name : MSBNA05  
 AcquisitionMeth: DFTPP05.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.860	5.39	182571
Benzidine	0.632	7.24	2286361
4,4'-DDT		8.25	1061131
4,4'-DDE		7.46	5855
4,4'-DDD		7.87	89161
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	8%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.9	PASS
	8270D <=2	2	PASS
Tailing: Benzidine	8270C <3.0	0.6	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA05                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 543336162001              File : xhl01                      Time : 21-AUG-2013 10:42

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	163476	52.61	
68	< 2% of mass 69	0	0.00	
69		205333	100.00	
70	< 2% of mass 69	629	0.31	
127	40% - 60% of mass 198	170688	54.93	
197	< 1% of mass 198	0	0.00	
198		310741	100.00	
199	5% - 9% of mass 198	22122	7.12	
275	10% - 30% of mass 198	81501	26.23	
365	> 1% of mass 198	8047	2.59	
441	Present, < mass 443	33949	87.58	
442	> 40% and < 100% of mass 198	195776	63.00	
443	17% - 23% of mass 442	38762	19.80	

Analyst:   KMH                        Date:   08/21/13                        Reviewer:   LLH                        Date:   08/21/13

PEM Report

File Name : G:\msbna05\082113\XHL01.D  
 Date Acquired : 21 Aug 2013 10:42 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA05 BNA DFTPP/PEM  
 Inst. Name : MSBNA05  
 AcquisitionMeth: DFTPP05.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.037	5.41	169447
Benzidine	0.678	7.25	2291392
4,4'-DDT		8.26	1023297
4,4'-DDE		7.47	7449
4,4'-DDD		7.89	87074
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	8%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.0	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA06                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 553242752005              File : yfh05                      Time : 17-JUN-2013 16:55

Standards: S21994

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	199998	48.18	
68	< 2% of mass 69	0	0.00	
69		152921	100.00	
70	< 2% of mass 69	522	0.34	
127	40% - 60% of mass 198	181568	43.74	
197	< 1% of mass 198	0	0.00	
198		415082	100.00	
199	5% - 9% of mass 198	27840	6.71	
275	10% - 30% of mass 198	98754	23.79	
365	> 1% of mass 198	12622	3.04	
441	Present, < mass 443	50610	81.60	
442	> 40% and < 100% of mass 198	317034	76.38	
443	17% - 23% of mass 442	62021	19.56	

Analyst:   KMH                        Date:   06/18/13                        Reviewer:   LW                        Date:   06/19/13

PEM Report

File Name : G:\msbna06\061713\YFH05.D  
 Date Acquired : 17 Jun 2013 4:55 pm  
 Sample Name : TUN,S21994  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA06 BNA DFTPP/PEM  
 Inst. Name : MSBNA06  
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	0.841	5.56	654841
Benzidine	0.634	7.43	3142381
4,4'-DDT		8.46	1692094
4,4'-DDE		7.67	3968
4,4'-DDD		8.08	37549
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	2%	PASS
Tailing: Pentachlorophenol	8270C <5.0	0.8	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.6	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA06                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 553329023001              File : yhg01                      Time : 16-AUG-2013 11:43

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	129696	45.36	
68	< 2% of mass 69	0	0.00	
69		104701	100.00	
70	< 2% of mass 69	493	0.47	
127	40% - 60% of mass 198	133909	46.84	
197	< 1% of mass 198	0	0.00	
198		285909	100.00	
199	5% - 9% of mass 198	19205	6.72	
275	10% - 30% of mass 198	64733	22.64	
365	> 1% of mass 198	7663	2.68	
441	Present, < mass 443	40536	81.83	
442	> 40% and < 100% of mass 198	252970	88.48	
443	17% - 23% of mass 442	49536	19.58	

Analyst:   KMH                        Date:   08/16/13                        Reviewer:   LLH                        Date:   08/16/13

PEM Report

File Name : G:\msbna06\081613\YHG01.D  
 Date Acquired : 16 Aug 2013 11:43 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA06 BNA DFTPP/PEM  
 Inst. Name : MSBNA06  
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.106	5.32	486675
Benzidine	0.704	7.18	2156569
4,4'-DDT		8.20	972076
4,4'-DDE		7.42	3924
4,4'-DDD		7.83	61741
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	6%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.1	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA06                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 553334692001              File : yhk01                      Time : 20-AUG-2013 10:12

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	116321	43.76	
68	< 2% of mass 69	0	0.00	
69		94770	100.00	
70	< 2% of mass 69	336	0.35	
127	40% - 60% of mass 198	122965	46.26	
197	< 1% of mass 198	0	0.00	
198		265792	100.00	
199	5% - 9% of mass 198	17475	6.57	
275	10% - 30% of mass 198	61400	23.10	
365	> 1% of mass 198	7214	2.71	
441	Present, < mass 443	37557	80.07	
442	> 40% and < 100% of mass 198	241728	90.95	
443	17% - 23% of mass 442	46904	19.40	

Analyst:   KMH                        Date:   08/20/13                        Reviewer:   LLH                        Date:   08/20/13

PEM Report

File Name : G:\msbna06\082013\YHK01.D  
 Date Acquired : 20 Aug 2013 10:12 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA06 BNA DFTPP/PEM  
 Inst. Name : MSBNA06  
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.009	5.33	260874
Benzidine	0.615	7.18	2073243
4,4'-DDT		8.20	916844
4,4'-DDE		7.41	8062
4,4'-DDD		7.83	44374
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	5%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.0	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.6	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA06                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 553337587001              File : yhm01                      Time : 22-AUG-2013 10:27

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	121191	45.64	
68	< 2% of mass 69	0	0.00	
69		98266	100.00	
70	< 2% of mass 69	551	0.56	
127	40% - 60% of mass 198	127080	47.85	
197	< 1% of mass 198	0	0.00	
198		265557	100.00	
199	5% - 9% of mass 198	18389	6.92	
275	10% - 30% of mass 198	61962	23.33	
365	> 1% of mass 198	7454	2.81	
441	Present, < mass 443	36914	80.61	
442	> 40% and < 100% of mass 198	235200	88.57	
443	17% - 23% of mass 442	45794	19.47	

Analyst: LLH                      Date: 08/22/13                      Reviewer: KMH                      Date: 08/22/13

PEM Report

File Name : G:\msbna06\082213\YHM01.D  
 Date Acquired : 22 Aug 2013 10:27 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA06 BNA DFTPP/PEM  
 Inst. Name : MSBNA06  
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.176	5.33	285601
Benzidine	0.534	7.19	2151573
4,4'-DDT		8.21	914872
4,4'-DDE		7.42	7010
4,4'-DDD		7.83	63336
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	7%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.2	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.5	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA07                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 563304405006              File : zgu06                      Time : 30-JUL-2013 15:15

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	202033	47.56	
68	< 2% of mass 69	0	0.00	
69		181546	100.00	
70	< 2% of mass 69	951	0.52	
127	40% - 60% of mass 198	208810	49.16	
197	< 1% of mass 198	0	0.00	
198		424789	100.00	
199	5% - 9% of mass 198	28464	6.70	
275	10% - 30% of mass 198	116045	27.32	
365	> 1% of mass 198	11037	2.60	
441	Present, < mass 443	54986	76.11	
442	> 40% and < 100% of mass 198	362858	85.42	
443	17% - 23% of mass 442	72250	19.91	

Analyst:   KMH                        Date:   08/01/13                        Reviewer:   LW                        Date:   08/02/13

PEM Report

File Name : G:\msbna07\073013\ZGU06.D  
 Date Acquired : 30 Jul 2013 3:15 pm  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA07 BNA DFTPP/PEM  
 Inst. Name : MSBNA07  
 AcquisitionMeth: DFTPP07.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	0.923	5.55	772239
Benzidine	0.795	7.41	3390639
4,4'-DDT		8.44	1765315
4,4'-DDE		7.65	5631
4,4'-DDD		8.06	111876
% Breakdown: 4,4'-DDT	LIMIT <=20%	6%	PASS
Tailing: Pentachlorophenol	8270C <5.0	0.9	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.8	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA07 Run Name : DFTPP/PEM IDF : 1.0  
Seqnum : 563328976004 File : zhg04 Time : 16-AUG-2013 11:57

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	186215	46.53	
68	< 2% of mass 69	0	0.00	
69		172010	100.00	
70	< 2% of mass 69	938	0.55	
127	40% - 60% of mass 198	212181	53.02	
197	< 1% of mass 198	0	0.00	
198		400192	100.00	
199	5% - 9% of mass 198	26680	6.67	
275	10% - 30% of mass 198	104578	26.13	
365	> 1% of mass 198	10010	2.50	
441	Present, < mass 443	51845	73.54	
442	> 40% and < 100% of mass 198	351466	87.82	
443	17% - 23% of mass 442	70496	20.06	

Analyst: KMH Date: 08/16/13 Reviewer: LLH Date: 08/16/13

PEM Report

File Name : G:\msbna07\081613\ZHG04.D  
 Date Acquired : 16 Aug 2013 11:57 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA07 BNA DFTPP/PEM  
 Inst. Name : MSBNA07  
 AcquisitionMeth: DFTPP07.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.091	5.56	594557
Benzidine	0.727	7.42	3291061
4,4'-DDT		8.45	1492815
4,4'-DDE		7.66	1967
4,4'-DDD		8.07	75535
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	5%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.1	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA09                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 583238510003              File : rfe03                      Time : 14-JUN-2013 18:09

Standards: S21994

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	269559	53.97	
68	< 2% of mass 69	4570	1.68	
69		272780	100.00	
70	< 2% of mass 69	1122	0.41	
127	40% - 60% of mass 198	264256	52.91	
197	< 1% of mass 198	0	0.00	
198		499490	100.00	
199	5% - 9% of mass 198	34154	6.84	
275	10% - 30% of mass 198	117381	23.50	
365	> 1% of mass 198	13407	2.68	
441	Present, < mass 443	57613	76.50	
442	> 40% and < 100% of mass 198	393578	78.80	
443	17% - 23% of mass 442	75312	19.14	

Analyst: LLH                      Date: 06/14/13                      Reviewer: LW                      Date: 06/18/13

PEM Report

File Name : G:\msbna09\061413\RFE03.D  
 Date Acquired : 14 Jun 2013 6:09 pm  
 Sample Name : TUN,S21994  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA09 BNA DFTPP/PEM  
 Inst. Name : MSBNA09  
 AcquisitionMeth: DFTPP09.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.205	5.52	677450
Benzidine	0.945	7.39	3803911
4,4'-DDT		8.42	2646864
4,4'-DDE		7.62	5355
4,4'-DDD		8.04	41087
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	2%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.2	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.9	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA09                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 583333262001              File : rhj01                      Time : 19-AUG-2013 10:22

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	254033	53.84	
68	< 2% of mass 69	4120	1.59	
69		258430	100.00	
70	< 2% of mass 69	1393	0.54	
127	40% - 60% of mass 198	248981	52.77	
197	< 1% of mass 198	0	0.00	
198		471850	100.00	
199	5% - 9% of mass 198	31472	6.67	
275	10% - 30% of mass 198	117954	25.00	
365	> 1% of mass 198	12129	2.57	
441	Present, < mass 443	56432	78.80	
442	> 40% and < 100% of mass 198	375125	79.50	
443	17% - 23% of mass 442	71618	19.09	

Analyst:   KMH                        Date:   08/19/13                        Reviewer:   LLH                        Date:   08/19/13

PEM Report

File Name : G:\msbna09\081913\RHJ01.D  
 Date Acquired : 19 Aug 2013 10:22 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA09 BNA DFTPP/PEM  
 Inst. Name : MSBNA09  
 AcquisitionMeth: DFTPP09.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.225	5.51	555639
Benzidine	0.679	7.37	3449592
4,4'-DDT		8.40	1983066
4,4'-DDE		7.60	11538
4,4'-DDD		8.02	42021
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	3%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.2	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA09 Run Name : DFTPP/PEM IDF : 1.0  
Seqnum : 583336150001 File : rhl01 Time : 21-AUG-2013 10:30

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	262793	55.32	
68	< 2% of mass 69	5071	1.88	
69		269667	100.00	
70	< 2% of mass 69	1433	0.53	
127	40% - 60% of mass 198	252074	53.06	
197	< 1% of mass 198	0	0.00	
198		475050	100.00	
199	5% - 9% of mass 198	31848	6.70	
275	10% - 30% of mass 198	119146	25.08	
365	> 1% of mass 198	12591	2.65	
441	Present, < mass 443	56584	78.87	
442	> 40% and < 100% of mass 198	382229	80.46	
443	17% - 23% of mass 442	71746	18.77	

Analyst: LLH Date: 08/21/13 Reviewer: KMH Date: 08/21/13



CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 MSBNA Soil: EPA 8270C

Inst : MSBNA05 Name : 6PTBNA5  
 Calnum : 543222414001 Date : 03-JUN-2013 15:00  
 Units : ug/mL X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	xf303	543222414003	ICAL1 03-JUN-2013 15:00	S22456
L2	xf304	543222414004	ICAL2 03-JUN-2013 15:37	S22457
L3	xf305	543222414005	ICAL3 03-JUN-2013 16:13	S22458
L4	xf306	543222414006	ICAL4 03-JUN-2013 16:49	S22459
L5	xf307	543222414007	ICAL5 03-JUN-2013 17:27	S22460
L6	xf308	543222414008	ICAL6 03-JUN-2013 18:04	S22461
L7	xf309	543222414009	ICAL7 03-JUN-2013 18:40	S22462
L8	xf310	543222414010	ICAL8 03-JUN-2013 19:16	S22463
L9	xf311	543222414011	ICAL9 03-JUN-2013 19:54	S22464

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Naphthalene	1.2614	1.2486	1.1830	1.1391	1.1188	1.0931	0.9857	0.9432	0.9009	AVRG	0.91150	0.91150		1.0971	12	15	0.05	0.99	
Acenaphthene	1.2365	1.2581	1.2651	1.2414	1.2366	1.2308	1.0984	1.0692	1.0414	AVRG	0.84288	0.84288		1.1864	8	15	0.05	0.99	
Fluorene	1.5457	1.5402	1.5116	1.4031	1.3706	1.3478m	1.2408	1.1894	1.1457	AVRG	0.73201	0.73201		1.3661	11	15	0.05	0.99	
Anthracene	1.3548	1.2935	1.2272	1.1756	1.1366	1.1300	1.0118	0.9641	0.9193	AVRG	0.88123	0.88123		1.1348	13	15	0.05	0.99	
Fluoranthene	1.5030	1.4919	1.3903	1.3786	1.3513	1.3403	1.2027	1.1611	1.1096	AVRG	0.75449	0.75449		1.3254	11	15	0.05	0.99	
Pyrene	1.4223	1.3574	1.3290	1.3167	1.2909	1.2758	1.1857	1.1343	1.1078	AVRG	0.78809	0.78809		1.2689	8	15	0.05	0.99	
Benzo(a)anthracene	1.3459	1.2981	1.3014	1.2483	1.2364	1.2289m	1.1862	1.1417m	1.1322	AVRG	0.80941	0.80941		1.2355	6	15	0.05	0.99	
Chrysene	1.1578	1.1162	1.1447	1.1001	1.0873	1.0903	1.0250	0.9963	0.9907m	AVRG	0.92703	0.92703		1.0787	6	15	0.05	0.99	
Benzo(b)fluoranthene	1.1366	1.1277	1.1923	1.1864	1.1871	1.1967m	1.2484	1.2529m	1.3529m	AVRG	0.82713	0.82713		1.2090	6	15	0.05	0.99	
Benzo(k)fluoranthene	1.0965	1.1203	1.1333	1.1023	1.1278	1.1272	1.0778	1.0458m	0.9025	AVRG	0.92465	0.92465		1.0815	7	15	0.05	0.99	
Benzo(a)pyrene	1.0022	1.0087	1.0613	1.0463	1.0643	1.0759m	1.0853	1.0822	1.1046	AVRG	0.94431	0.94431		1.0590	3	15	0.05	0.99	
Indeno(1,2,3-cd)pyrene	1.0939	1.1076	1.1756	1.2049	1.2274	1.2555	1.3012	1.3098	1.3404	AVRG	0.81697	0.81697		1.2240	7	15	0.05	0.99	
Dibenz(a,h)anthracene	0.9160	0.9248	1.0237	1.0272	1.0430	1.0535	1.0911	1.0934	1.1176	AVRG	0.96875	0.96875		1.0323	7	15	0.05	0.99	
Nitrobenzene-d5	0.5106	0.5301	0.5405	0.5435	0.5461	0.5544	0.5395	0.5414	0.5536	AVRG	1.85197	1.85197		0.5400	2	15	0.05	0.99	
2-Fluorobiphenyl	1.6929	1.6203	1.5263	1.4595	1.4218	1.3774	1.2617	1.2090	1.1553	AVRG	0.70731	0.70731		1.4138	13	15	0.05	0.99	
Terphenyl-d14	1.0816	1.0532	1.0268	1.0057	1.0180	1.0113	0.9403	0.8943	0.8554	AVRG	1.01275	1.01275		0.9874	8	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Naphthalene	2.0000	15	5.0000	14	10.000	8	16.000	4	20.000	2	25.000	0	40.000	-10	50.000	-14	60.000	-18
Acenaphthene	2.0000	4	5.0000	6	10.000	7	16.000	5	20.000	4	25.000	4	40.000	-7	50.000	-10	60.000	-12
Fluorene	2.0000	13	5.0000	13	10.000	11	16.000	3	20.000	0	25.000	-1	40.000	-9	50.000	-13	60.000	-16
Anthracene	2.0000	19	5.0000	14	10.000	8	16.000	4	20.000	0	25.000	0	40.000	-11	50.000	-15	60.000	-19
Fluoranthene	2.0000	13	5.0000	13	10.000	5	16.000	4	20.000	2	25.000	1	40.000	-9	50.000	-12	60.000	-16
Pyrene	2.0000	12	5.0000	7	10.000	5	16.000	4	20.000	2	25.000	1	40.000	-7	50.000	-11	60.000	-13
Benzo(a)anthracene	2.0000	9	5.0000	5	10.000	5	16.000	1	20.000	0	25.000	-1	40.000	-4	50.000	-8	60.000	-8
Chrysene	2.0000	7	5.0000	3	10.000	6	16.000	2	20.000	1	25.000	1	40.000	-5	50.000	-8	60.000	-8
Benzo(b)fluoranthene	2.0000	-6	5.0000	-7	10.000	-1	16.000	-2	20.000	-2	25.000	-1	40.000	3	50.000	4	60.000	12
Benzo(k)fluoranthene	2.0000	1	5.0000	4	10.000	5	16.000	2	20.000	4	25.000	4	40.000	0	50.000	-3	60.000	-17
Benzo(a)pyrene	2.0000	-5	5.0000	-5	10.000	0	16.000	-1	20.000	1	25.000	2	40.000	2	50.000	2	60.000	4
Indeno(1,2,3-cd)pyrene	2.0000	-11	5.0000	-10	10.000	-4	16.000	-2	20.000	0	25.000	3	40.000	6	50.000	7	60.000	10
Dibenz(a,h)anthracene	2.0000	-11	5.0000	-10	10.000	-1	16.000	0	20.000	1	25.000	2	40.000	6	50.000	6	60.000	8
Nitrobenzene-d5	2.0000	-5	5.0000	-2	10.000	0	16.000	1	20.000	1	25.000	3	40.000	0	50.000	0	60.000	3
2-Fluorobiphenyl	2.0000	20	5.0000	15	10.000	8	16.000	3	20.000	1	25.000	-3	40.000	-11	50.000	-14	60.000	-18
Terphenyl-d14	2.0000	10	5.0000	7	10.000	4	16.000	2	20.000	3	25.000	2	40.000	-5	50.000	-9	60.000	-13

KMH 06/04/13 [Aniline]: Picked or reassigned peak in all levels.

KMH 06/04/13 [2-Nitrophenol]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [bis(2-Chloroethoxy)methane]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [4-Chloroaniline]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [2,4,5-Trichlorophenol]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [Benzidine]: Picked or reassigned peak in all levels.

KMH 06/04/13 [Pyridine]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [4-Nitroaniline]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [Benzoic acid]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [3-Nitroaniline]: Corrected automatically drawn baseline in ICAL3 (xf305).

KMH 06/04/13 [Carbazole]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [Phenanthrene-d10]: Picked or reassigned peak in multiple levels.

KMH 06/04/13 [2,4,6-Trichlorophenol]: Picked or reassigned peak in multiple levels.

KMH 06/04/13 [Fluorene]: Picked or reassigned peak in ICAL6 (xf308).  
KMH 06/04/13 [Phenanthrene]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(a)anthracene]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(b)fluoranthene]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(a)pyrene]: Picked or reassigned peak in ICAL6 (xf308).  
KMH 06/04/13 [bis(2-Chloroethyl)ether]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/04/13 [4-Methylphenol]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/04/13 [bis(2-Ethylhexyl)phthalate]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(k)fluoranthene]: Corrected automatically drawn baseline in ICAL8 (xf310).  
KMH 06/04/13 [Phenol]: Picked or reassigned peak in ICAL9 (xf311).  
KMH 06/04/13 [Chrysene]: Corrected automatically drawn baseline in ICAL9 (xf311).

Analyst: KMH

Date: 06/04/13

Reviewer: LW

Date: 06/07/13

m>manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor

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543222414001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA05  
Calnum : 543222414001

Name : 6PTBNA5  
Cal Date : 03-JUN-2013

ICV 543222414012 (xf312 03-JUN-2013) stds: S22440

Analyte	Spiked	Quant	Units	%D	Max	Flags
Naphthalene	40.00	35.35	ug/mL	-12	30	
Acenaphthene	40.00	37.09	ug/mL	-7	20	
Fluorene	40.00	36.03	ug/mL	-10	30	
Anthracene	40.00	35.76	ug/mL	-11	30	
Fluoranthene	40.00	35.55	ug/mL	-11	20	
Pyrene	40.00	36.86	ug/mL	-8	30	
Benzo(a)anthracene	40.00	37.62	ug/mL	-6	30	
Chrysene	40.00	36.24	ug/mL	-9	30	
Benzo(b)fluoranthene	40.00	40.29	ug/mL	1	30	
Benzo(k)fluoranthene	40.00	40.63	ug/mL	2	30	
Benzo(a)pyrene	40.00	43.20	ug/mL	8	20	
Indeno(1,2,3-cd)pyrene	40.00	41.23	ug/mL	3	30	
Dibenz(a,h)anthracene	40.00	39.91	ug/mL	0	30	

Analyst: KMH

Date: 06/04/13

Reviewer: LW

Date: 06/07/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 MSBNA Soil: EPA 8270C

Inst : MSBNA06  
 Calnum : 553242752001  
 Units : ug/mL

Name : 6PTBNA6  
 Date : 17-JUN-2013 17:55  
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	Yfh06	553242752006	ICAL1 17-JUN-2013 17:55	S22456
L2	Yfh07	553242752007	ICAL2 17-JUN-2013 18:30	S22457
L3	Yfh08	553242752008	ICAL3 17-JUN-2013 19:05	S22458
L4	Yfh09	553242752009	ICAL4 17-JUN-2013 19:40	S22459
L5	Yfh10	553242752010	ICAL5 17-JUN-2013 20:15	S22460
L6	Yfh11	553242752011	ICAL6 17-JUN-2013 20:50	S22461
L7	Yfh12	553242752012	ICAL7 17-JUN-2013 21:26	S22462
L8	Yfh13	553242752013	ICAL8 17-JUN-2013 22:03	S22463
L9	Yfh14	553242752014	ICAL9 17-JUN-2013 22:38	S22464

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min %RSD	Min r^2	Flg
Naphthalene	1.1451	1.1209	1.1191	1.0209	1.0160	1.0256	0.9728	0.9239	0.8949	AVRG	0.97413	0.97413		1.0266	9	15	0.05	0.99	
Acenaphthene	1.2630	1.2054	1.2683	1.2504	1.2555	1.2293	1.0749	1.0087	1.0146	AVRG	0.85145	0.85145		1.1745	9	15	0.05	0.99	
Fluorene	1.7194	1.5889	1.5896	1.4747	1.4381	1.4046	1.3325	1.2987	1.2128	AVRG	0.68916	0.68916		1.4510	11	15	0.05	0.99	
Anthracene	1.1768	1.1318	1.1584	1.0744	1.0898	0.9877	0.9615	0.8804	0.8768	AVRG	0.96384	0.96384		1.0375	11	15	0.05	0.99	
Fluoranthene	1.5513	1.3915	1.5853	1.4226	1.4228	1.4312	1.3006	1.2445	1.2242	AVRG	0.71576	0.71576		1.3971	9	15	0.05	0.99	
Pyrene	1.3829	1.3515	1.3488	1.2780	1.2903	1.2658	1.1821	1.1581	1.1058	AVRG	0.79202	0.79202		1.2626	8	15	0.05	0.99	
Benzo(a)anthracene	1.3007	1.2124	1.2011	1.1570m	1.1373	1.1198	1.0828	1.0558	1.0486	AVRG	0.87248	0.87248		1.1462	7	15	0.05	0.99	
Chrysene	1.1035	1.0889	1.1276	1.0538	1.0508	1.0354	1.0230	1.0254	1.0383m	AVRG	0.94214	0.94214		1.0614	3	15	0.05	0.99	
Benzo(b)fluoranthene	1.1164	1.1569	1.1240	1.1195	1.1187	1.1363	1.1841	1.2419	1.2735	AVRG	0.85298	0.85298		1.1724	5	15	0.05	0.99	
Benzo(k)fluoranthene	1.1107	1.1228	1.0693	1.1206	1.0777	1.0657	0.9828	1.0282m	0.9143m	AVRG	0.94816	0.94816		1.0547	7	15	0.05	0.99	
Benzo(a)pyrene	1.0307	0.9158	1.0694	1.0796	1.0549	1.0237	1.0285	1.0583	1.0525	AVRG	0.96635	0.96635		1.0348	5	15	0.05	0.99	
Indeno(1,2,3-cd)pyrene	1.1186m	1.0903	1.1574m	1.2044	1.1917	1.2105	1.1655	1.2605	1.2400	AVRG	0.84596	0.84596		1.1821	5	15	0.05	0.99	
Dibenz(a,h)anthracene	0.9365m	0.9234m	0.9826	1.0049	1.0028	0.9835	0.9611	1.0134	1.0032	AVRG	1.02140	1.02140		0.9790	3	15	0.05	0.99	
Nitrobenzene-d5	0.3068	0.3444	0.3760	0.3629	0.3827m	0.3729	0.3738	0.3660	0.3529	AVRG	2.77903	2.77903		0.3598	6	15	0.05	0.99	
2-Fluorobiphenyl	1.8916	1.6963	1.6807	1.5937	1.5259	1.4984	1.3997	1.3757	1.3335	AVRG	0.64306	0.64306		1.5551	12	15	0.05	0.99	
Terphenyl-d14	1.0567	1.0019	1.0451	0.9776	1.0062	0.9793	0.9262	0.8951	0.8742	AVRG	1.02713	1.02713		0.9736	7	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Naphthalene	2.0000	12	5.0000	9	10.000	9	16.000	-1	20.000	-1	25.000	0	40.000	-5	50.000	-10	60.000	-13
Acenaphthene	2.0000	8	5.0000	3	10.000	8	16.000	6	20.000	7	25.000	5	40.000	-8	50.000	-14	60.000	-14
Fluorene	2.0000	18	5.0000	9	10.000	9	16.000	2	20.000	-1	25.000	-3	40.000	-8	50.000	-10	60.000	-16
Anthracene	2.0000	13	5.0000	9	10.000	9	16.000	4	20.000	5	25.000	-5	40.000	-7	50.000	-15	60.000	-15
Fluoranthene	2.0000	11	5.0000	0	10.000	13	16.000	2	20.000	2	25.000	2	40.000	-7	50.000	-11	60.000	-12
Pyrene	2.0000	10	5.0000	7	10.000	7	16.000	1	20.000	2	25.000	0	40.000	-6	50.000	-8	60.000	-12
Benzo(a)anthracene	2.0000	13	5.0000	6	10.000	6	16.000	1	20.000	-1	25.000	-2	40.000	-6	50.000	-8	60.000	-9
Chrysene	2.0000	4	5.0000	3	10.000	3	16.000	-1	20.000	-1	25.000	-2	40.000	-3	50.000	-3	60.000	-2
Benzo(b)fluoranthene	2.0000	-5	5.0000	-1	10.000	-4	16.000	2	20.000	-5	25.000	-3	40.000	1	50.000	6	60.000	9
Benzo(k)fluoranthene	2.0000	5	5.0000	6	10.000	6	16.000	6	20.000	2	25.000	1	40.000	-7	50.000	-3	60.000	-13
Benzo(a)pyrene	2.0000	0	5.0000	-11	10.000	3	16.000	4	20.000	2	25.000	-1	40.000	-1	50.000	2	60.000	2
Indeno(1,2,3-cd)pyrene	2.0000	-5	5.0000	-8	10.000	-2	16.000	2	20.000	1	25.000	2	40.000	-1	50.000	7	60.000	5
Dibenz(a,h)anthracene	2.0000	-4	5.0000	-6	10.000	0	16.000	3	20.000	2	25.000	0	40.000	-2	50.000	4	60.000	2
Nitrobenzene-d5	2.0000	-15	5.0000	-4	10.000	5	16.000	1	20.000	6	25.000	4	40.000	4	50.000	2	60.000	-2
2-Fluorobiphenyl	2.0000	22	5.0000	9	10.000	8	16.000	2	20.000	-2	25.000	-4	40.000	-10	50.000	-12	60.000	-14
Terphenyl-d14	2.0000	9	5.0000	3	10.000	7	16.000	0	20.000	3	25.000	1	40.000	-5	50.000	-8	60.000	-10

KMH 06/18/13 [1,4-Dichlorobenzene-d4]: Picked or reassigned peak in multiple levels.

KMH 06/18/13 [Pyridine]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [N-Nitrosodimethylamine]: Corrected automatically drawn baseline in ICAL1 (yfh06).

KMH 06/18/13 [Aniline]: Picked or reassigned peak in all levels.

KMH 06/18/13 [bis(2-Chloroethyl)ether]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [2,4,5-Trichlorophenol]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [Indeno(1,2,3-cd)pyrene]: Combined split peak in multiple levels.

KMH 06/18/13 [Dibenz(a,h)anthracene]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [Benzoic acid]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [4-Chloroaniline]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [N-Nitroso-di-n-propylamine]: Picked or reassigned peak in multiple levels.

KMH 06/18/13 [bis(2-Chloroisopropyl) ether]: Corrected automatically drawn baseline in ICAL4 (yfh09).

KMH 06/18/13 [3-Nitroaniline]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [4-Nitrophenol]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/18/13 [4,6-Dinitro-2-methylphenol]: Corrected automatically drawn baseline in ICAL4 (yfh09).  
KMH 06/18/13 [Benzo(a)anthracene]: Corrected automatically drawn baseline in ICAL4 (yfh09).  
KMH 06/18/13 [Nitrobenzene-d5]: Corrected automatically drawn baseline in ICAL5 (yfh10).  
KMH 06/18/13 [2,4-Dimethylphenol]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/18/13 [Nitrobenzene]: Corrected automatically drawn baseline in ICAL6 (yfh11).  
KMH 06/18/13 [Phenol]: Corrected automatically drawn baseline in ICAL7 (yfh12).  
KMH 06/18/13 [4-Methylphenol]: Combined split peak in multiple levels.  
KMH 06/18/13 [N-Nitroso-di-n-propylamine]: Corrected automatically drawn baseline in ICAL7 (yfh12).  
KMH 06/18/13 [Benzo(k)fluoranthene]: Picked or reassigned peak in multiple levels.  
KMH 06/18/13 [2-Nitrophenol]: Corrected automatically drawn baseline in ICAL9 (yfh14).  
KMH 06/18/13 [2,4-Dichlorophenol]: Corrected automatically drawn baseline in ICAL9 (yfh14).  
KMH 06/18/13 [Resorcinol]: Combined split peak in ICAL9 (yfh14).  
KMH 06/18/13 [4-Nitrophenol]: Picked or reassigned peak in ICAL9 (yfh14).  
KMH 06/18/13 [Chrysene]: Corrected automatically drawn baseline in ICAL9 (yfh14).  
KMH 07/30/13 : PCP fails D method in tune and fails low in ccv, cut 2 loops and primed  
KMH 07/31/13 : PCP still tailing cut 1 more loop, passing

Analyst: KMH Date: 06/18/13 Reviewer: LW Date: 06/19/13

m=manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor

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553242752001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA06  
Calnum : 553242752001

Name : 6PTBNA6  
Cal Date : 17-JUN-2013

ICV 553242752015 (yfh15 17-JUN-2013) stds: S22440

Analyte	Spiked	Quant	Units	%D	Max	Flags
Naphthalene	40.00	35.34	ug/mL	-12	30	
Acenaphthene	40.00	36.42	ug/mL	-9	20	
Fluorene	40.00	34.69	ug/mL	-13	30	
Anthracene	40.00	34.72	ug/mL	-13	30	
Fluoranthene	40.00	35.90	ug/mL	-10	20	
Pyrene	40.00	37.79	ug/mL	-6	30	
Benzo(a)anthracene	40.00	38.81	ug/mL	-3	30	
Chrysene	40.00	37.70	ug/mL	-6	30	
Benzo(b)fluoranthene	40.00	40.96	ug/mL	2	30	
Benzo(k)fluoranthene	40.00	37.65	ug/mL	-6	30	
Benzo(a)pyrene	40.00	42.60	ug/mL	7	20	
Indeno(1,2,3-cd)pyrene	40.00	40.71	ug/mL	2	30	
Dibenz(a,h)anthracene	40.00	38.78	ug/mL	-3	30	

Analyst: KMH

Date: 06/18/13

Reviewer: LW

Date: 06/19/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 MSBNA Soil: EPA 8270C

Inst : MSBNA07  
 Calnum : 563304405001  
 Units : ug/mL

Name : 6PTBNA7  
 Date : 30-JUL-2013 15:37  
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Std
L1	zqu07 563304405007	ICAL1	30-JUL-2013 15:37	S22456
L2	zqu08 563304405008	ICAL2	30-JUL-2013 16:14	S22457
L3	zqu09 563304405009	ICAL3	30-JUL-2013 16:50	S22458
L4	zqu10 563304405010	ICAL4	30-JUL-2013 17:26	S22459
L5	zqu11 563304405011	ICAL5	30-JUL-2013 18:04	S22460
L6	zqu12 563304405012	ICAL6	30-JUL-2013 18:41	S22461
L7	zqu13 563304405013	ICAL7	30-JUL-2013 19:17	S22462
L8	zqu14 563304405014	ICAL8	30-JUL-2013 19:55	S22463
L9	zqu15 563304405015	ICAL9	30-JUL-2013 20:34	S22464

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min %RSD	Min r^2	Flg
Naphthalene	1.3787	1.3463	1.3073	1.2483	1.2018	1.1498	1.0338	0.9728	0.9195	AVRG	0.85240	0.85240		1.1732	14	15	0.05	0.99	
Acenaphthene	1.3874	1.3672	1.3861	1.3579	1.3035	1.2946	1.1020	1.0151	0.9752	AVRG	0.80436	0.80436		1.2432	13	15	0.05	0.99	
Fluorene	1.6995	1.6415	1.5863	1.4956	1.4266	1.3976	1.2420	1.1817	1.1259	AVRG	0.70330	0.70330		1.4219	14	15	0.05	0.99	
Anthracene	1.3479	1.3021	1.2516	1.2176	1.1745	1.1418	1.0251	0.9735	0.9263m	AVRG	0.86868	0.86868		1.1512	13	15	0.05	0.99	
Fluoranthene	1.3798	1.3712	1.3524	1.3375	1.2841	1.2617	1.1751	1.1139	1.0680	AVRG	0.79341	0.79341		1.2604	9	15	0.05	0.99	
Pyrene	1.2901	1.2706	1.2926	1.2679	1.2617	1.2507	1.1390	1.1069	1.1051	AVRG	0.81933	0.81933		1.2205	6	15	0.05	0.99	
Benzo(a)anthracene	1.2350	1.1850	1.1968	1.1705	1.1526	1.1558	1.1416	1.1226	1.1253	AVRG	0.85836	0.85836		1.1650	3	15	0.05	0.99	
Chrysene	1.1174m	1.0763m	1.0917m	1.0593m	1.0474m	1.0495m	1.0176m	1.0003m	1.0091m	AVRG	0.95050	0.95050		1.0521	4	15	0.05	0.99	
Benzo(b)fluoranthene	0.9909	1.0636	1.1155	1.1618	1.1868	1.2170	1.2813	1.3182	1.4163	AVRG	0.83710	0.83710		1.1946	11	15	0.05	0.99	
Benzo(k)fluoranthene	1.0331	1.0505	1.1240	1.1257	1.1198	1.1332	1.0967	1.0622m	1.0193m	AVRG	0.92169	0.92169		1.0850	4	15	0.05	0.99	
Benzo(a)pyrene	0.8390	0.9190	0.9959	1.0296	1.0429	1.0645	1.0899	1.0932	1.1318	AVRG	0.97764	0.97764		1.0229	9	15	0.05	0.99	
Indeno(1,2,3-cd)pyrene	0.9374	1.0029	1.1165	1.1937	1.2043	1.2517	1.3260	1.3238	1.3537	AVRG	0.84035	0.84035		1.1900	12	15	0.05	0.99	
Dibenz(a,h)anthracene	0.8130	0.8872	0.9752	1.0459	1.0506	1.0817	1.1314	1.1235	1.1513	AVRG	0.97194	0.97194		1.0289	11	15	0.05	0.99	
Nitrobenzene-d5	0.4158	0.4267	0.4301	0.4365	0.4290	0.4203	0.3677	0.3685	0.3786	AVRG	2.45008	2.45008		0.4081	7	15	0.05	0.99	
2-Fluorobiphenyl	1.8061	1.7732	1.6762	1.5475	1.4918	1.4414	1.3080	1.2305	1.1736	AVRG	0.66924	0.66924		1.4942	15	15	0.05	0.99	
Terphenyl-d14	0.9447	0.9399	0.9678	0.9758	0.9559	0.9570	0.9266	0.8936	0.8625	AVRG	1.06841	1.06841		0.9360	4	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Naphthalene	2.0000	18	5.0000	15	10.000	11	16.000	6	20.000	2	25.000	-2	40.000	-12	50.000	-17	60.000	-22
Acenaphthene	2.0000	12	5.0000	10	10.000	11	16.000	9	20.000	5	25.000	4	40.000	-11	50.000	-18	60.000	-22
Fluorene	2.0000	20	5.0000	15	10.000	12	16.000	5	20.000	0	25.000	-2	40.000	-13	50.000	-17	60.000	-21
Anthracene	2.0000	17	5.0000	13	10.000	9	16.000	6	20.000	2	25.000	-1	40.000	-11	50.000	-15	60.000	-20
Fluoranthene	2.0000	9	5.0000	9	10.000	7	16.000	6	20.000	2	25.000	0	40.000	-7	50.000	-12	60.000	-15
Pyrene	2.0000	6	5.0000	4	10.000	6	16.000	4	20.000	3	25.000	2	40.000	-7	50.000	-9	60.000	-9
Benzo(a)anthracene	2.0000	6	5.0000	2	10.000	3	16.000	0	20.000	-1	25.000	-1	40.000	-2	50.000	-4	60.000	-3
Chrysene	2.0000	6	5.0000	2	10.000	4	16.000	1	20.000	0	25.000	0	40.000	-3	50.000	-5	60.000	-4
Benzo(b)fluoranthene	2.0000	-17	5.0000	-11	10.000	-7	16.000	-3	20.000	-1	25.000	2	40.000	7	50.000	10	60.000	19
Benzo(k)fluoranthene	2.0000	-5	5.0000	-3	10.000	4	16.000	4	20.000	3	25.000	4	40.000	1	50.000	-2	60.000	-6
Benzo(a)pyrene	2.0000	-18	5.0000	-10	10.000	-3	16.000	1	20.000	2	25.000	4	40.000	7	50.000	7	60.000	11
Indeno(1,2,3-cd)pyrene	2.0000	-21	5.0000	-16	10.000	-6	16.000	0	20.000	1	25.000	5	40.000	11	50.000	11	60.000	14
Dibenz(a,h)anthracene	2.0000	-21	5.0000	-14	10.000	-5	16.000	2	20.000	2	25.000	5	40.000	10	50.000	9	60.000	12
Nitrobenzene-d5	2.0000	2	5.0000	5	10.000	5	16.000	7	20.000	5	25.000	3	40.000	-10	50.000	-10	60.000	-7
2-Fluorobiphenyl	2.0000	21	5.0000	19	10.000	12	16.000	4	20.000	0	25.000	-4	40.000	-12	50.000	-18	60.000	-21
Terphenyl-d14	2.0000	1	5.0000	0	10.000	3	16.000	4	20.000	2	25.000	2	40.000	-1	50.000	-5	60.000	-8

KMH 08/01/13 [Pyridine]: Corrected automatically drawn baseline in multiple levels.

KMH 08/01/13 [N-Nitrosodimethylamine]: Corrected automatically drawn baseline in multiple levels.

KMH 08/01/13 [Aniline]: Picked or reassigned peak in multiple levels.

KMH 08/01/13 [bis(2-Chloroethyl)ether]: Corrected automatically drawn baseline in multiple levels.

KMH 08/01/13 [2-Nitrophenol]: Picked or reassigned peak in multiple levels.

KMH 08/01/13 [bis(2-Chloroethoxy)methane]: Corrected automatically drawn baseline in ICAL1 (zgu07).

KMH 08/01/13 [3-Nitroaniline]: Corrected automatically drawn baseline in multiple levels.

KMH 08/01/13 [Chrysene]: Picked or reassigned peak in all levels.

KMH 08/01/13 [2,4-Dimethylphenol]: Picked or reassigned peak in ICAL2 (zgu08).

KMH 08/01/13 [Benzidine]: q-deleted in ICAL2 (zgu08)

KMH 08/01/13 [3-Nitroaniline]: Picked or reassigned peak in ICAL2 (zgu08).

KMH 08/01/13 [Benzidine]: Corrected automatically drawn baseline in ICAL3 (zgu09).

KMH 08/01/13 [bis(2-Chloroisopropyl) ether]: Corrected automatically drawn baseline in multiple levels.

KMH 08/01/13 [2,4,5-Trichlorophenol]: Corrected automatically drawn baseline in multiple levels.  
KMH 08/01/13 [Benzo(k)fluoranthene]: Picked or reassigned peak in multiple levels.  
KMH 08/01/13 [Aniline]: Corrected automatically drawn baseline in ICAL9 (zgu15).  
KMH 08/01/13 [4-Methylphenol]: Combined split peak in ICAL9 (zgu15).  
KMH 08/01/13 [4-Nitrophenol]: Picked or reassigned peak in ICAL9 (zgu15).  
KMH 08/01/13 [Anthracene]: Corrected automatically drawn baseline in ICAL9 (zgu15).  
KMH 08/01/13 [3,3'-Dichlorobenzidine]: Corrected automatically drawn baseline in ICAL9 (zgu15).

Analyst: KMH Date: 08/01/13 Reviewer: LW Date: 08/02/13

m>manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor

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563304405001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA07  
Calnum : 563304405001

Name : 6PTBNA7  
Cal Date : 30-JUL-2013

ICV 563304405016 (zgu16 30-JUL-2013) stds: S22440

Analyte	Spiked	Quant	Units	%D	Max	Flags
Naphthalene	40.00	34.65	ug/mL	-13	30	
Acenaphthene	40.00	35.52	ug/mL	-11	20	
Fluorene	40.00	34.53	ug/mL	-14	30	
Anthracene	40.00	35.52	ug/mL	-11	30	
Fluoranthene	40.00	36.40	ug/mL	-9	20	
Pyrene	40.00	37.83	ug/mL	-5	30	
Benzo(a)anthracene	40.00	39.22	ug/mL	-2	30	
Chrysene	40.00	37.03	ug/mL	-7	30	
Benzo(b)fluoranthene	40.00	42.59	ug/mL	6	30	
Benzo(k)fluoranthene	40.00	41.35	ug/mL	3	30	m
Benzo(a)pyrene	40.00	45.41	ug/mL	14	20	
Indeno(1,2,3-cd)pyrene	40.00	43.56	ug/mL	9	30	
Dibenz(a,h)anthracene	40.00	41.68	ug/mL	4	30	

Analyst: KMH

Date: 08/01/13

Reviewer: LW

Date: 08/02/13

m=manual integration

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 MSBNA Soil: EPA 8270C

Inst : MSBNA09 Name : 6PTBNA9  
 Calnum : 583238510002 Date : 14-JUN-2013 18:25  
 Units : ug/mL X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Std	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min %RSD	Min r^2	Flg
L1	rfe04	583238510004	ICAL 14-JUN-2013 18:25	S22456	1.1742	1.1512	1.1798	1.1485	1.1380	1.1169	1.1008	1.0877	1.1155	AVRG	0.88126	0.88126		1.1347	3	15	0.05	0.99	
L2	rfe05	583238510005	ICAL 14-JUN-2013 18:55	S22457	1.2223	1.2035	1.2437	1.2084	1.2102	1.2367	1.2271	1.2251	1.2664	AVRG	0.81497	0.81497		1.2270	2	15	0.05	0.99	
L3	rfe06	583238510006	ICAL 14-JUN-2013 19:25	S22458	1.5256	1.4558	1.4571	1.4166	1.4182	1.4302	1.4232	1.4063	1.4392	AVRG	0.69379	0.69379		1.4414	2	15	0.05	0.99	
L4	rfe07	583238510007	ICAL 14-JUN-2013 19:56	S22459	1.2628	1.2143	1.2193	1.1698	1.1764m	1.1630	1.1553m	1.1583m	1.1771m	AVRG	0.84142	0.84142		1.1885	3	15	0.05	0.99	
L5	rfe08	583238510008	ICAL 14-JUN-2013 20:27	S22460	1.4063	1.3680	1.3793	1.2939	1.2704	1.2719	1.2306	1.2202	1.2409	AVRG	0.77045	0.77045		1.2980	5	15	0.05	0.99	
L6	rfe09	583238510009	ICAL 14-JUN-2013 20:57	S22461	1.2975	1.2964	1.3645	1.3642	1.3562	1.3465	1.3075	1.3155	1.3233	AVRG	0.75178	0.75178		1.3302	2	15	0.05	0.99	
L7	rfe10	583238510010	ICAL 14-JUN-2013 21:29	S22462	1.1684	1.1095	1.1384	1.1267	1.1238	1.1209	1.1193	1.1329	1.1680	AVRG	0.88168	0.88168		1.1342	2	15	0.05	0.99	
L8	rfe11	583238510011	ICAL 14-JUN-2013 21:59	S22463	1.1119	1.0733	1.1121	1.0561	1.0780	1.0784	1.0601	1.0812	1.1108	AVRG	0.92195	0.92195		1.0847	2	15	0.05	0.99	
L9	rfe12	583238510012	ICAL 14-JUN-2013 22:31	S22464	1.1165m	1.1132m	1.1749m	1.1624	1.1796	1.2059	1.1763	1.2242	1.3030	AVRG	0.84459	0.84459		1.1840	5	15	0.05	0.99	
					1.1465	1.1181	1.1563m	1.1555	1.1734	1.1629	1.2027	1.1984	1.2162	AVRG	0.85471	0.85471		1.1700	3	15	0.05	0.99	
					0.9744	0.9676	1.0170	1.0197	1.0314	1.0488	1.0542	1.0661	1.1026	AVRG	0.96965	0.96965		1.0313	4	15	0.05	0.99	
					1.0240	1.0521	1.0720	1.0860	1.1210	1.1394	1.1216	1.1400	1.1780	AVRG	0.90596	0.90596		1.1038	4	15	0.05	0.99	
					0.8691	0.9072	0.9281	0.9296	0.9750	0.9900	0.9862	1.0018	1.0547	AVRG	1.04146	1.04146		0.9602	6	15	0.05	0.99	
					0.5374	0.5437	0.5810	0.5569	0.5592	0.5587	0.5406	0.5465	0.5597	AVRG	1.80593	1.80593		0.5537	2	15	0.05	0.99	
					1.5207	1.4691	1.5075	1.4647	1.4604	1.4617	1.4128	1.3985	1.4438	AVRG	0.68498	0.68498		1.4599	3	15	0.05	0.99	
					0.9436	0.9557	1.0060	1.0074	1.0080	1.0097	1.0134	1.0376	1.0557	AVRG	0.99590	0.99590		1.0041	4	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Naphthalene	2.0000	3	5.0000	1	10.000	4	16.000	1	20.000	0	25.000	-2	40.000	-3	50.000	-4	60.000	-2
Acenaphthene	2.0000	0	5.0000	-2	10.000	1	16.000	-2	20.000	-1	25.000	1	40.000	0	50.000	0	60.000	3
Fluorene	2.0000	6	5.0000	1	10.000	1	16.000	-2	20.000	-2	25.000	-1	40.000	-1	50.000	-2	60.000	0
Anthracene	2.0000	6	5.0000	2	10.000	3	16.000	-2	20.000	-1	25.000	-2	40.000	-3	50.000	-3	60.000	-1
Fluoranthene	2.0000	8	5.0000	5	10.000	6	16.000	0	20.000	-2	25.000	-2	40.000	-5	50.000	-6	60.000	-4
Pyrene	2.0000	-2	5.0000	-3	10.000	3	16.000	3	20.000	2	25.000	1	40.000	-2	50.000	-1	60.000	-1
Benzo(a)anthracene	2.0000	3	5.0000	-2	10.000	0	16.000	-1	20.000	-1	25.000	-1	40.000	-1	50.000	0	60.000	3
Chrysene	2.0000	3	5.0000	-1	10.000	3	16.000	-3	20.000	-1	25.000	-1	40.000	-2	50.000	0	60.000	2
Benzo(b)fluoranthene	2.0000	-6	5.0000	-6	10.000	-1	16.000	-2	20.000	0	25.000	2	40.000	-1	50.000	3	60.000	10
Benzo(k)fluoranthene	2.0000	-2	5.0000	-4	10.000	-1	16.000	-1	20.000	0	25.000	-1	40.000	3	50.000	2	60.000	4
Benzo(a)pyrene	2.0000	-6	5.0000	-6	10.000	-1	16.000	-1	20.000	0	25.000	2	40.000	2	50.000	3	60.000	7
Indeno(1,2,3-cd)pyrene	2.0000	-7	5.0000	-5	10.000	-3	16.000	-2	20.000	2	25.000	3	40.000	2	50.000	3	60.000	7
Dibenz(a,h)anthracene	2.0000	-9	5.0000	-6	10.000	-3	16.000	-3	20.000	2	25.000	3	40.000	3	50.000	4	60.000	10
Nitrobenzene-d5	2.0000	-3	5.0000	-2	10.000	5	16.000	1	20.000	1	25.000	1	40.000	-2	50.000	-1	60.000	1
2-Fluorobiphenyl	2.0000	4	5.0000	1	10.000	3	16.000	0	20.000	0	25.000	0	40.000	-3	50.000	-4	60.000	-1
Terphenyl-d14	2.0000	-6	5.0000	-5	10.000	0	16.000	0	20.000	0	25.000	1	40.000	1	50.000	3	60.000	5

LLH 06/17/13 [Aniline]: Picked or reassigned peak in all levels.

LLH 06/17/13 [bis(2-Chloroethyl)ether]: Corrected automatically drawn baseline in multiple levels.

LLH 06/17/13 [2-Nitrophenol]: Corrected automatically drawn baseline in ICAL (rfe12).

LLH 06/17/13 [Benzoic acid]: Corrected automatically drawn baseline in ICAL (rfe09).

LLH 06/17/13 [4-Chloroaniline]: Corrected automatically drawn baseline in multiple levels.

LLH 06/17/13 [2,4,5-Trichlorophenol]: Corrected automatically drawn baseline in ICAL (rfe12).

LLH 06/17/13 [Anthracene]: Corrected automatically drawn baseline in multiple levels.

LLH 06/17/13 [4,6-Dinitro-2-methylphenol]: Picked or reassigned peak in ICAL (rfe05).

LLH 06/17/13 [Benzo(b)fluoranthene]: Picked or reassigned peak in multiple levels.

LLH 06/17/13 [Benzo(k)fluoranthene]: Corrected automatically drawn baseline in ICAL (rfe06).

Analyst: LLH

Date: 06/17/13

Reviewer: LW

Date: 06/19/13

m=manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor

Page 2 of 2

583238510002

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA09  
Calnum : 583238510002

Name : 6PTBNA9  
Cal Date : 14-JUN-2013

ICV 583238510013 (rfe13 14-JUN-2013) stds: S22440

Analyte	Spiked	Quant	Units	%D	Max	Flags
Naphthalene	40.00	37.66	ug/mL	-6	30	
Acenaphthene	40.00	37.36	ug/mL	-7	20	
Fluorene	40.00	38.54	ug/mL	-4	30	
Anthracene	40.00	38.69	ug/mL	-3	30	m
Fluoranthene	40.00	36.92	ug/mL	-8	20	
Pyrene	40.00	39.12	ug/mL	-2	30	
Benzo(a)anthracene	40.00	38.46	ug/mL	-4	30	
Chrysene	40.00	37.38	ug/mL	-7	30	
Benzo(b)fluoranthene	40.00	41.63	ug/mL	4	30	
Benzo(k)fluoranthene	40.00	39.58	ug/mL	-1	30	
Benzo(a)pyrene	40.00	43.02	ug/mL	8	20	
Indeno(1,2,3-cd)pyrene	40.00	39.63	ug/mL	-1	30	
Dibenz(a,h)anthracene	40.00	38.98	ug/mL	-3	30	

Analyst: LLH

Date: 06/17/13

Reviewer: LW

Date: 06/19/13

m=manual integration

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA05 IDF : 1.0  
 Seqnum : 543329067004 File : xhg04 Time : 16-AUG-2013 16:24  
 Cal : 543222414001 Caldate : 03-JUN-2013  
 Standards: S22459

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.0971	1.2105	16.00	17.65	ug/mL	10	30	0.0500	
Acenaphthene	1.1864	1.2260	16.00	16.53	ug/mL	3	20	0.0500	
Fluorene	1.3661	1.5372	16.00	18.00	ug/mL	13	30	0.0500	
Anthracene	1.1348	1.2351	16.00	17.41	ug/mL	9	30	0.0500	
Fluoranthene	1.3254	1.5054	16.00	18.17	ug/mL	14	20	0.0500	
Pyrene	1.2689	1.4019	16.00	17.68	ug/mL	10	30	0.0500	
Benzo(a)anthracene	1.2355	1.3416	16.00	17.38	ug/mL	9	30	0.0500	
Chrysene	1.0787	1.2034	16.00	17.85	ug/mL	12	30	0.0500	
Benzo(b)fluoranthene	1.2090	1.2521	16.00	16.57	ug/mL	4	30	0.0500	
Benzo(k)fluoranthene	1.0815	1.2188	16.00	18.03	ug/mL	13	30	0.0500	
Benzo(a)pyrene	1.0590	1.1373	16.00	17.18	ug/mL	7	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2240	1.3956	16.00	18.24	ug/mL	14	30	0.0500	
Dibenz(a,h)anthracene	1.0323	1.1760	16.00	18.23	ug/mL	14	30	0.0500	
Nitrobenzene-d5	0.5400	0.5926	16.00	17.56	ug/mL	10	30	0.0500	
2-Fluorobiphenyl	1.4138	1.6210	16.00	18.35	ug/mL	15	30	0.0500	
Terphenyl-d14	0.9874	1.0990	16.00	17.81	ug/mL	11	30	0.0500	

KMH 08/16/13 [Aniline]: Picked or reassigned peak.

KMH 08/16/13 [3-Nitroaniline]: Picked or reassigned peak.

Analyst:     KMH     Date:   08/16/13   Reviewer:   LLH   Date:   08/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA05 IDF : 1.0  
 Seqnum : 543333265002 File : xhj02 Time : 19-AUG-2013 10:44  
 Cal : 543222414001 Caldate : 03-JUN-2013  
 Standards: S22460

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.0971	1.1750	20.00	21.42	ug/mL	7	30	0.0500	
Acenaphthene	1.1864	1.1877	20.00	20.02	ug/mL	0	20	0.0500	
Fluorene	1.3661	1.4575	20.00	21.34	ug/mL	7	30	0.0500	
Anthracene	1.1348	1.1812	20.00	20.82	ug/mL	4	30	0.0500	
Fluoranthene	1.3254	1.4059	20.00	21.21	ug/mL	6	20	0.0500	
Pyrene	1.2689	1.3647	20.00	21.51	ug/mL	8	30	0.0500	
Benzo(a)anthracene	1.2355	1.2978	20.00	21.01	ug/mL	5	30	0.0500	
Chrysene	1.0787	1.1452	20.00	21.23	ug/mL	6	30	0.0500	
Benzo(b)fluoranthene	1.2090	1.2019	20.00	19.88	ug/mL	-1	30	0.0500	
Benzo(k)fluoranthene	1.0815	1.1380	20.00	21.05	ug/mL	5	30	0.0500	
Benzo(a)pyrene	1.0590	1.0954	20.00	20.69	ug/mL	3	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2240	1.3603	20.00	22.23	ug/mL	11	30	0.0500	
Dibenz(a,h)anthracene	1.0323	1.1506	20.00	22.29	ug/mL	11	30	0.0500	
Nitrobenzene-d5	0.5400	0.5844	20.00	21.65	ug/mL	8	30	0.0500	
2-Fluorobiphenyl	1.4138	1.5428	20.00	21.83	ug/mL	9	30	0.0500	
Terphenyl-d14	0.9874	1.0630	20.00	21.53	ug/mL	8	30	0.0500	

KMH 08/19/13 [Aniline]: Picked or reassigned peak.

KMH 08/19/13 [3-Nitroaniline]: Picked or reassigned peak.

KMH 08/19/13 [4-Nitroaniline]: Corrected automatically drawn baseline.

Analyst:     KMH     Date:   08/19/13   Reviewer:   LLH   Date:   08/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA05 IDF : 1.0  
 Seqnum : 543334704002 File : xhk02 Time : 20-AUG-2013 10:47  
 Cal : 543222414001 Caldate : 03-JUN-2013  
 Standards: S22459

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.0971	1.1977	16.00	17.47	ug/mL	9	30	0.0500	
Acenaphthene	1.1864	1.1958	16.00	16.13	ug/mL	1	20	0.0500	
Fluorene	1.3661	1.4974	16.00	17.54	ug/mL	10	30	0.0500	
Anthracene	1.1348	1.2420	16.00	17.51	ug/mL	9	30	0.0500	
Fluoranthene	1.3254	1.4829	16.00	17.90	ug/mL	12	20	0.0500	
Pyrene	1.2689	1.3626	16.00	17.18	ug/mL	7	30	0.0500	
Benzo(a)anthracene	1.2355	1.3145	16.00	17.02	ug/mL	6	30	0.0500	
Chrysene	1.0787	1.1806	16.00	17.51	ug/mL	9	30	0.0500	
Benzo(b)fluoranthene	1.2090	1.2304	16.00	16.28	ug/mL	2	30	0.0500	
Benzo(k)fluoranthene	1.0815	1.1707	16.00	17.32	ug/mL	8	30	0.0500	
Benzo(a)pyrene	1.0590	1.1179	16.00	16.89	ug/mL	6	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2240	1.3542	16.00	17.70	ug/mL	11	30	0.0500	
Dibenz(a,h)anthracene	1.0323	1.1478	16.00	17.79	ug/mL	11	30	0.0500	
Nitrobenzene-d5	0.5400	0.5754	16.00	17.05	ug/mL	7	30	0.0500	
2-Fluorobiphenyl	1.4138	1.5782	16.00	17.86	ug/mL	12	30	0.0500	
Terphenyl-d14	0.9874	1.0706	16.00	17.35	ug/mL	8	30	0.0500	

LLH 08/20/13 [Aniline]: Picked or reassigned peak.

LLH 08/20/13 [3-Nitroaniline]: Picked or reassigned peak.

LLH 08/20/13 [4-Nitroaniline]: Corrected automatically drawn baseline.

LLH 08/20/13 [Benzidine]: qdeleted

LLH 08/20/13 : Resorcinol and Benzidine are non-target for this sequence

Analyst: LLH Date: 08/20/13 Reviewer: KMH Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA05 IDF : 1.0  
 Seqnum : 543336162002 File : xh102 Time : 21-AUG-2013 11:05  
 Cal : 543222414001 Caldate : 03-JUN-2013  
 Standards: S22460

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.0971	1.1623	20.00	21.19	ug/mL	6	30	0.0500	
Acenaphthene	1.1864	1.1960	20.00	20.16	ug/mL	1	20	0.0500	
Fluorene	1.3661	1.4885	20.00	21.79	ug/mL	9	30	0.0500	
Anthracene	1.1348	1.2054	20.00	21.24	ug/mL	6	30	0.0500	
Fluoranthene	1.3254	1.4377	20.00	21.69	ug/mL	8	20	0.0500	
Pyrene	1.2689	1.3384	20.00	21.09	ug/mL	5	30	0.0500	
Benzo(a)anthracene	1.2355	1.2973	20.00	21.00	ug/mL	5	30	0.0500	
Chrysene	1.0787	1.1784	20.00	21.85	ug/mL	9	30	0.0500	
Benzo(b)fluoranthene	1.2090	1.2385	20.00	20.49	ug/mL	2	30	0.0500	
Benzo(k)fluoranthene	1.0815	1.1535	20.00	21.33	ug/mL	7	30	0.0500	m
Benzo(a)pyrene	1.0590	1.1105	20.00	20.97	ug/mL	5	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2240	1.3701	20.00	22.39	ug/mL	12	30	0.0500	
Dibenz(a,h)anthracene	1.0323	1.1476	20.00	22.24	ug/mL	11	30	0.0500	
Nitrobenzene-d5	0.5400	0.5785	20.00	21.43	ug/mL	7	30	0.0500	
2-Fluorobiphenyl	1.4138	1.5552	20.00	22.00	ug/mL	10	30	0.0500	
Terphenyl-d14	0.9874	1.0555	20.00	21.38	ug/mL	7	30	0.0500	

KMH 08/21/13 [Aniline]: Picked or reassigned peak.

KMH 08/21/13 [4-Nitroaniline]: Picked or reassigned peak.

KMH 08/21/13 [Benzo(k)fluoranthene]: Picked or reassigned peak.

KMH 08/21/13 [3-Nitroaniline]: Corrected automatically drawn baseline.

Analyst:   KMH   Date:   08/21/13   Reviewer:   LLH   Date:   08/21/13  

m=manual integration

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA06 IDF : 1.0  
 Seqnum : 553329023003 File : yhg03 Time : 16-AUG-2013 12:51  
 Cal : 553242752001 Caldate : 17-JUN-2013  
 Standards: S22459

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.0266	1.0138	16.00	15.80	ug/mL	-1	30	0.0500	
Acenaphthene	1.1745	1.1685	16.00	15.92	ug/mL	-1	20	0.0500	
Fluorene	1.4510	1.4274	16.00	15.74	ug/mL	-2	30	0.0500	
Anthracene	1.0375	1.0481	16.00	16.16	ug/mL	1	30	0.0500	
Fluoranthene	1.3971	1.3797	16.00	15.80	ug/mL	-1	20	0.0500	
Pyrene	1.2626	1.2593	16.00	15.96	ug/mL	0	30	0.0500	
Benzo(a)anthracene	1.1462	1.1541	16.00	16.11	ug/mL	1	30	0.0500	
Chrysene	1.0614	1.0783	16.00	16.25	ug/mL	2	30	0.0500	
Benzo(b)fluoranthene	1.1724	1.1116	16.00	15.17	ug/mL	-5	30	0.0500	
Benzo(k)fluoranthene	1.0547	1.0554	16.00	16.01	ug/mL	0	30	0.0500	
Benzo(a)pyrene	1.0348	1.0394	16.00	16.07	ug/mL	0	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.1821	1.2696	16.00	17.18	ug/mL	7	30	0.0500	
Dibenz(a,h)anthracene	0.9790	1.0407	16.00	17.01	ug/mL	6	30	0.0500	
Nitrobenzene-d5	0.3598	0.3259	16.00	14.49	ug/mL	-9	30	0.0500	
2-Fluorobiphenyl	1.5551	1.4867	16.00	15.30	ug/mL	-4	30	0.0500	
Terphenyl-d14	0.9736	0.9840	16.00	16.17	ug/mL	1	30	0.0500	

KMH 08/16/13 [1,4-Dichlorobenzene-d4]: Picked or reassigned peak.

KMH 08/16/13 [Aniline]: Picked or reassigned peak.

KMH 08/16/13 [N-Nitroso-di-n-propylamine]: Picked or reassigned peak.

KMH 08/16/13 [Nitrobenzene]: Picked or reassigned peak.

KMH 08/16/13 [2,4-Dimethylphenol]: Picked or reassigned peak.

Analyst:     KMH     Date:   08/16/13   Reviewer:   LLH   Date:   08/16/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA06 IDF : 1.0  
 Seqnum : 553334692003 File : yhk03 Time : 20-AUG-2013 11:08  
 Cal : 553242752001 Caldate : 17-JUN-2013  
 Standards: S22459

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.0266	1.0105	16.00	15.75	ug/mL	-2	30	0.0500	
Acenaphthene	1.1745	1.1072	16.00	15.08	ug/mL	-6	20	0.0500	
Fluorene	1.4510	1.4564	16.00	16.06	ug/mL	0	30	0.0500	
Anthracene	1.0375	1.0685	16.00	16.48	ug/mL	3	30	0.0500	
Fluoranthene	1.3971	1.3967	16.00	16.00	ug/mL	0	20	0.0500	
Pyrene	1.2626	1.3407	16.00	16.99	ug/mL	6	30	0.0500	
Benzo(a)anthracene	1.1462	1.1537	16.00	16.11	ug/mL	1	30	0.0500	
Chrysene	1.0614	1.0197	16.00	15.37	ug/mL	-4	30	0.0500	
Benzo(b)fluoranthene	1.1724	1.1375	16.00	15.52	ug/mL	-3	30	0.0500	
Benzo(k)fluoranthene	1.0547	1.0555	16.00	16.01	ug/mL	0	30	0.0500	
Benzo(a)pyrene	1.0348	1.0390	16.00	16.06	ug/mL	0	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.1821	1.2190	16.00	16.50	ug/mL	3	30	0.0500	
Dibenz(a,h)anthracene	0.9790	1.0018	16.00	16.37	ug/mL	2	30	0.0500	
Nitrobenzene-d5	0.3598	0.3303	16.00	14.69	ug/mL	-8	30	0.0500	
2-Fluorobiphenyl	1.5551	1.5131	16.00	15.57	ug/mL	-3	30	0.0500	
Terphenyl-d14	0.9736	1.0125	16.00	16.64	ug/mL	4	30	0.0500	

KMH 08/20/13 [Aniline]: Picked or reassigned peak.

KMH 08/20/13 [N-Nitroso-di-n-propylamine]: Picked or reassigned peak.

KMH 08/20/13 [Nitrobenzene]: Picked or reassigned peak.

KMH 08/20/13 [2,4-Dimethylphenol]: Picked or reassigned peak.

KMH 08/20/13 [4-Nitroaniline]: Corrected automatically drawn baseline.

Analyst:     KMH     Date:     08/20/13     Reviewer:     LLH     Date:     08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA06  
 Seqnum : 553337587002  
 Cal : 553242752001  
 Standards: S22459

File : yhm02  
 Caldate : 17-JUN-2013

IDF : 1.0  
 Time : 22-AUG-2013 10:44

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.0266	0.9853	16.00	15.36	ug/mL	-4	30	0.0500	
Acenaphthene	1.1745	1.0613	16.00	14.46	ug/mL	-10	20	0.0500	
Fluorene	1.4510	1.3370	16.00	14.74	ug/mL	-8	30	0.0500	
Anthracene	1.0375	1.0949	16.00	16.88	ug/mL	6	30	0.0500	
Fluoranthene	1.3971	1.3928	16.00	15.95	ug/mL	0	20	0.0500	
Pyrene	1.2626	1.3193	16.00	16.72	ug/mL	4	30	0.0500	
Benzo(a)anthracene	1.1462	1.1147	16.00	15.56	ug/mL	-3	30	0.0500	
Chrysene	1.0614	1.0409	16.00	15.69	ug/mL	-2	30	0.0500	
Benzo(b)fluoranthene	1.1724	1.1394	16.00	15.55	ug/mL	-3	30	0.0500	
Benzo(k)fluoranthene	1.0547	1.0662	16.00	16.17	ug/mL	1	30	0.0500	
Benzo(a)pyrene	1.0348	1.0514	16.00	16.26	ug/mL	2	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.1821	1.2245	16.00	16.57	ug/mL	4	30	0.0500	
Dibenz(a,h)anthracene	0.9790	1.0110	16.00	16.52	ug/mL	3	30	0.0500	
Nitrobenzene-d5	0.3598	0.3247	16.00	14.44	ug/mL	-10	30	0.0500	
2-Fluorobiphenyl	1.5551	1.4668	16.00	15.09	ug/mL	-6	30	0.0500	
Terphenyl-d14	0.9736	0.9845	16.00	16.18	ug/mL	1	30	0.0500	

LLH 08/22/13 [Aniline]: Picked or reassigned peak.

LLH 08/22/13 [N-Nitroso-di-n-propylamine]: Picked or reassigned peak.

LLH 08/22/13 [Nitrobenzene]: Picked or reassigned peak.

LLH 08/22/13 [2,4-Dimethylphenol]: Picked or reassigned peak.

LLH 08/22/13 [4-Nitroaniline]: Corrected automatically drawn baseline.

Analyst: LLH

Date: 08/22/13

Reviewer: KMH

Date: 08/22/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA07 IDF : 1.0  
 Seqnum : 563328976005 File : zhg05 Time : 16-AUG-2013 12:17  
 Cal : 563304405001 Caldate : 30-JUL-2013  
 Standards: S22459

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.1732	1.1299	16.00	15.41	ug/mL	-4	30	0.0500	
Acenaphthene	1.2432	1.2345	16.00	15.89	ug/mL	-1	20	0.0500	
Fluorene	1.4219	1.3861	16.00	15.60	ug/mL	-3	30	0.0500	
Anthracene	1.1512	1.0579	16.00	14.70	ug/mL	-8	30	0.0500	
Fluoranthene	1.2604	1.2170	16.00	15.45	ug/mL	-3	20	0.0500	
Pyrene	1.2205	1.2471	16.00	16.35	ug/mL	2	30	0.0500	
Benzo(a)anthracene	1.1650	1.0952	16.00	15.04	ug/mL	-6	30	0.0500	
Chrysene	1.0521	0.9633	16.00	14.65	ug/mL	-8	30	0.0500	
Benzo(b)fluoranthene	1.1946	1.1503	16.00	15.41	ug/mL	-4	30	0.0500	
Benzo(k)fluoranthene	1.0850	1.1211	16.00	16.53	ug/mL	3	30	0.0500	
Benzo(a)pyrene	1.0229	1.0211	16.00	15.97	ug/mL	0	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.1900	1.1585	16.00	15.58	ug/mL	-3	30	0.0500	
Dibenz(a,h)anthracene	1.0289	0.9821	16.00	15.27	ug/mL	-5	30	0.0500	
Nitrobenzene-d5	0.4081	0.3763	16.00	14.75	ug/mL	-8	30	0.0500	
2-Fluorobiphenyl	1.4942	1.4452	16.00	15.47	ug/mL	-3	30	0.0500	
Terphenyl-d14	0.9360	0.9148	16.00	15.64	ug/mL	-2	30	0.0500	

KMH 08/16/13 [1,4-Dichlorobenzene-d4]: Picked or reassigned peak.

KMH 08/16/13 [Aniline]: Picked or reassigned peak.

KMH 08/16/13 [2-Nitrophenol]: Picked or reassigned peak.

KMH 08/16/13 [2,4-Dimethylphenol]: Picked or reassigned peak.

Analyst:     KMH     Date:   08/16/13   Reviewer:   LLH   Date:   08/16/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA09  
Seqnum : 583333262003  
Cal : 583238510002  
Standards: S22460

File : rhj03  
Caldate : 14-JUN-2013

IDF : 1.0  
Time : 19-AUG-2013 10:50

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.1347	1.1133	20.00	19.62	ug/mL	-2	30	0.0500	
Acenaphthene	1.2270	1.2519	20.00	20.41	ug/mL	2	20	0.0500	
Fluorene	1.4414	1.4618	20.00	20.28	ug/mL	1	30	0.0500	
Anthracene	1.1885	1.1441	20.00	19.25	ug/mL	-4	30	0.0500	
Fluoranthene	1.2980	1.2274	20.00	18.91	ug/mL	-5	20	0.0500	
Pyrene	1.3302	1.2875	20.00	19.36	ug/mL	-3	30	0.0500	
Benzo(a)anthracene	1.1342	1.0978	20.00	19.36	ug/mL	-3	30	0.0500	
Chrysene	1.0847	1.0490	20.00	19.34	ug/mL	-3	30	0.0500	
Benzo(b)fluoranthene	1.1840	1.1601	20.00	19.60	ug/mL	-2	30	0.0500	
Benzo(k)fluoranthene	1.1700	1.1473	20.00	19.61	ug/mL	-2	30	0.0500	
Benzo(a)pyrene	1.0313	0.9988	20.00	19.37	ug/mL	-3	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.1038	1.0977	20.00	19.89	ug/mL	-1	30	0.0500	
Dibenz(a,h)anthracene	0.9602	0.9513	20.00	19.81	ug/mL	-1	30	0.0500	
Nitrobenzene-d5	0.5537	0.5399	20.00	19.50	ug/mL	-2	30	0.0500	
2-Fluorobiphenyl	1.4599	1.4310	20.00	19.60	ug/mL	-2	30	0.0500	
Terphenyl-d14	1.0041	0.9858	20.00	19.63	ug/mL	-2	30	0.0500	

KMH 08/22/13 [Aniline]: Picked or reassigned peak.

Analyst: LLH

Date: 08/22/13

Reviewer: KMH

Date: 08/22/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 MSBNA Soil  
EPA 8270C

Inst : MSBNA09  
Seqnum : 583336150002  
Cal : 583238510002  
Standards: S22460

File : rh102  
Caldate : 14-JUN-2013

IDF : 1.0  
Time : 21-AUG-2013 10:45

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.1347	1.1131	20.00	19.62	ug/mL	-2	30	0.0500	
Acenaphthene	1.2270	1.2405	20.00	20.22	ug/mL	1	20	0.0500	
Fluorene	1.4414	1.3974	20.00	19.39	ug/mL	-3	30	0.0500	
Anthracene	1.1885	1.1296	20.00	19.01	ug/mL	-5	30	0.0500	
Fluoranthene	1.2980	1.2870	20.00	19.83	ug/mL	-1	20	0.0500	
Pyrene	1.3302	1.2269	20.00	18.45	ug/mL	-8	30	0.0500	
Benzo(a)anthracene	1.1342	1.0825	20.00	19.09	ug/mL	-5	30	0.0500	
Chrysene	1.0847	1.0414	20.00	19.20	ug/mL	-4	30	0.0500	
Benzo(b)fluoranthene	1.1840	1.1185	20.00	18.89	ug/mL	-6	30	0.0500	
Benzo(k)fluoranthene	1.1700	1.1473	20.00	19.61	ug/mL	-2	30	0.0500	
Benzo(a)pyrene	1.0313	0.9951	20.00	19.30	ug/mL	-4	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.1038	1.1069	20.00	20.06	ug/mL	0	30	0.0500	
Dibenz(a,h)anthracene	0.9602	0.9663	20.00	20.13	ug/mL	1	30	0.0500	
Nitrobenzene-d5	0.5537	0.5336	20.00	19.27	ug/mL	-4	30	0.0500	
2-Fluorobiphenyl	1.4599	1.4390	20.00	19.71	ug/mL	-1	30	0.0500	
Terphenyl-d14	1.0041	0.9605	20.00	19.13	ug/mL	-4	30	0.0500	

LLH 08/21/13 [Aniline]: Picked or reassigned peak.

LLH 08/21/13 [2,4-Dinitrophenol]: Corrected automatically drawn baseline.

LLH 08/21/13 [3-Nitroaniline]: Corrected automatically drawn baseline.

LLH 08/21/13 [4-Nitroaniline]: Corrected automatically drawn baseline.

Analyst: LLH

Date: 08/21/13

Reviewer: KMH

Date: 08/21/13

## Logbooks & Sequences

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 543329067

Date : 08/16/13  
 Sequence : MSBNA05 xhg

Reference : xhg04  
 Analyzed : 08/16/13 16:24

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
	CCV+CCV/BS+CCV/LCS+ICV/BS+ICV/ICV/BS+ICV/CCV+ICV/LCS+RCCV+RICV STD		1008142	6.12	3307773	7.61	1977940	9.76	3267075	11.60	3452980	15.00	3716979	17.93
	LOWER LIMIT		504071	5.62	1653887	7.11	988970	9.26	1633538	11.10	1726490	14.50	1858490	17.43
	UPPER LIMIT		2016284	6.62	6615546	8.11	3955880	10.26	6534150	12.10	6905960	15.50	7433958	18.43
004	CCV		1008142	6.12	3307773	7.61	1977940	9.76	3267075	11.60	3452980	15.00	3716979	17.93
005	BLANK QC702320		1052404	6.12	3408357	7.61	2059412	9.75	3197264	11.60	3849233	14.99	4096416	17.93
006	LCS QC702321		1026620	6.13	3087730	7.61	1897244	9.76	3055726	11.60	3383844	15.00	3802805	17.94
007	LCS QC702321		1420144	6.13	4219004	7.61	2612804	9.76	4134538	11.60	4810967	15.00	5618153	17.95

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 543333265

Date : 08/19/13  
 Sequence : MSBNA05 xhj

Reference : xhj02  
 Analyzed : 08/19/13 10:44

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
	CCV+CCV/BS+CCV/LCS+ICV/BS+ICV/ICV/CCV+ICV/LCS+RCCV+R1CV	STD	896377	6.12	3046387	7.61	1861326	9.76	3085374	11.60	3133945	15.00	3440911	17.93
	LOWER LIMIT		448189	5.62	1523194	7.11	930663	9.26	1542687	11.10	1566973	14.50	1720456	17.43
	UPPER LIMIT		1792754	6.62	6092774	8.11	3722652	10.26	6170748	12.10	6267890	15.50	6881822	18.43
002	CCV		896377	6.12	3046387	7.61	1861326	9.76	3085374	11.60	3133945	15.00	3440911	17.93
003	BLANK	QC702408	1046752	6.12	3358879	7.61	2017123	9.75	3082134	11.60	3557571	14.99	3641794	17.93
004	BS	QC702409	1017674	6.12	3147511	7.61	1891490	9.75	2955444	11.60	3216895	14.99	3293417	17.92
005	BSD	QC702410	1051685	6.12	3208450	7.61	1925257	9.75	3025377	11.60	3252950	14.99	3393727	17.93
006	SAMPLE	247976-001	1103581	6.12	3495889	7.61	2116257	9.75	3290551	11.60	3712650	14.99	3811710	17.93
007	SAMPLE	247844-017	1154681	6.12	3605202	7.61	2134913	9.75	3292293	11.60	3774484	14.99	3738868	17.93
008	SAMPLE	247844-049	910088	6.13	2978606	7.61	1985792	9.75	3109614	11.60	3449716	14.99	3656864	17.93
009	SAMPLE	248032-001	1088209	6.12	3477277	7.60	2095095	9.75	3261299	11.60	3668308	14.99	3915193	17.93
010	SAMPLE	248030-038	1137110	6.12	3596320	7.61	2143932	9.75	3302057	11.60	3679109	14.99	3821783	17.93
011	SAMPLE	247957-002	1078681	6.12	3216792	7.61	2065519	9.75	3251816	11.60	3631326	14.99	3909219	17.93
012	SAMPLE	247993-006	1105330	6.12	3571907	7.61	2135154	9.75	3140352	11.59	3507456	14.98	3667967	17.93
013	SAMPLE	247993-001	1065397	6.12	3073761	7.61	1894403	9.75	3000421	11.60	3000323	14.99	3193914	17.95
014	SAMPLE	248030-012	1367291	6.13	4115279	7.61	2427892	9.75	3739875	11.60	3963378	14.99	4119915	17.93
015	SAMPLE	248030-003	1245094	6.12	3785156	7.61	2247997	9.75	3436293	11.60	3725863	14.99	3897163	17.93
016	SAMPLE	247925-004	1124870	6.12	3540719	7.61	1955007	9.75	3054372	11.60	3277214	15.00	3501910	17.95
017	SAMPLE	248030-010	1189074	6.12	3595338	7.61	2031225	9.75	3156451	11.60	3175331	15.01	3463411	17.97
018	SAMPLE	248030-013	611183	6.11	2000663	7.60	1139594	9.75	1801239	11.60	1791399	15.00	1787612	17.94
019	SAMPLE	248030-014	1219364	6.12	3598208	7.61	1937765	9.76	2898779	11.60	3183378	15.01	3389183	17.98
020	SAMPLE	248030-015	1070695	6.12	3336551	7.61	1941631	9.75	3053396	11.60	2937495	15.02	3262310	17.98
021	SAMPLE	248030-016	1069859	6.12	3370378	7.61	2053329	9.75	3092955	11.60	3363746	15.00	3424064	17.94
022	SAMPLE	248030-009	1180443	6.12	3559765	7.61	2059655	9.75	3098414	11.60	3216651	15.00	3274730	17.96

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 543334704

Date : 08/20/13  
 Sequence : MSBNA05 xhk

Reference : xhk02  
 Analyzed : 08/20/13 10:47

#	Type	Sample ID	DCBZ14D4	RT	NAPH8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT	
			CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+R1CV STD	856595	6.12	2924122	7.61	1785736	9.76	2925826	11.60	3174205	15.00	3376427	17.94
			LOWER LIMIT	428298	5.62	1462061	7.11	892868	9.26	1462913	11.10	1587103	14.50	1688214	17.44
			UPPER LIMIT	1713190	6.62	5848244	8.11	3571472	10.26	5851652	12.10	6348410	15.50	6752854	18.44
002	CCV			856595	6.12	2924122	7.61	1785736	9.76	2925826	11.60	3174205	15.00	3376427	17.94
003	BLANK	QC702577		1113311	6.13	3499004	7.61	2123208	9.75	3186821	11.60	3913107	15.00	4168180	17.94
004	LCS	QC702578		1048939	6.13	3138642	7.61	1901471	9.76	3069918	11.60	3533496	15.00	3899239	17.94
005	MSS	248074-009		1132934	6.12	3523502	7.61	2102543	9.75	3241539	11.60	3707096	15.00	3833105	17.94
006	SAMPLE	248074-010		1172264	6.12	3604745	7.61	2166435	9.75	3316340	11.60	3621553	15.00	3728278	17.95
007	MS	QC702579		1124216	6.12	3342311	7.61	1974455	9.76	3148752	11.60	3280596	15.00	3058525	17.97
008	SAMPLE	248030-021		1112431	6.12	3495805	7.61	2047607	9.76	3169730	11.60	3505526	15.00	3410533	17.95
009	SAMPLE	248030-022		1142050	6.12	3563136	7.61	2107691	9.75	3305385	11.60	3576706	15.00	3476386	17.95
010	SAMPLE	248030-023		1119754	6.12	3456858	7.61	2086057	9.75	3231700	11.60	3580213	15.00	3488339	17.95
011	SAMPLE	248030-024		1129995	6.12	3460724	7.61	2082408	9.76	3218799	11.60	3599222	15.00	3483271	17.95
012	SAMPLE	248030-025		1082107	6.12	3468377	7.61	2056642	9.76	3237506	11.60	3023696	15.01	3216109	17.97

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 543336162

Date : 08/21/13

Sequence : MSBNA05 xhl

Reference : xhl02

Analyzed : 08/21/13 11:05

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
	CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+R1CV	STD	859112	6.13	2883753	7.62	1717569	9.77	2921315	11.61	3059454	15.02	3377019	17.98
	LOWER LIMIT		429556	5.63	1441877	7.12	858785	9.27	1460658	11.11	1529727	14.52	1688510	17.48
	UPPER LIMIT		1718224	6.63	5767506	8.12	3435138	10.27	5842630	12.11	6118908	15.52	6754038	18.48
002	CCV		859112	6.13	2883753	7.62	1717569	9.77	2921315	11.61	3059454	15.02	3377019	17.98
003	BLANK	QC702848	1142663	6.13	3583105	7.61	2103838	9.77	3280750	11.61	3968465	15.02	4257754	17.98
004	LCS	QC702849	1114310	6.13	3329443	7.62	2062805	9.77	3312429	11.61	3842784	15.02	4349051	17.99
005	LCS	QC702849	933977	6.13	2900293	7.62	1767257	9.77	2897107	11.61	3219084	15.02	3654529	17.99
006	SAMPLE	248106-001	1030293	6.12	3162110	7.61	1785616	9.77	2845550	11.62	2939115	15.04	3432662	18.03
007	SAMPLE	248106-001	1038057	6.12	3200148	7.61	1832077	9.77	2950634	11.61	3101578	15.03	3531523	18.01
008	SAMPLE	248113-001	1110820	6.13	3313030	7.62	2099784	9.77	1324583 *	11.62	3802918	15.04	4193337	18.01
009	SAMPLE	248163-001	1131183	6.12	3173953	7.62	1789128	9.77	3003868	11.61	3445824	15.02	1162643 *	17.98
011	SAMPLE	248113-001	1005467	6.12	3097297	7.61	1885140	9.77	3020757	11.61	3610148	15.02	3842671	17.98
012	SAMPLE	248163-001	1040514	6.12	3161900	7.61	1861187	9.77	3042624	11.61	3600776	15.01	3433025	17.98
013	MSS	248030-018	1046009	6.12	3354122	7.61	1969018	9.77	3206136	11.61	3649103	15.02	3864301	17.98
014	SAMPLE	248030-040	1077260	6.12	3427822	7.61	2064150	9.76	3276125	11.61	3645440	15.02	3851630	17.98
015	SAMPLE	248030-041	1062950	6.12	3457347	7.61	2057963	9.77	3320952	11.61	3708844	15.02	3879403	17.99
016	SAMPLE	248030-042	1071094	6.12	3412071	7.61	2044138	9.77	3324102	11.61	3668881	15.03	3779212	18.00
017	SAMPLE	248030-043	1078059	6.12	3404832	7.61	2057837	9.77	3304290	11.61	3661863	15.02	3809156	17.99
018	SAMPLE	248030-044	1083318	6.12	3422587	7.61	2071867	9.77	3298881	11.61	3678278	15.02	3766375	17.99

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 553329023

Date : 08/16/13  
 Sequence : MSBNA06 yhg

Reference : yhg03  
 Analyzed : 08/16/13 12:51

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
	CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+R1CV	STD	207925	5.93	695719	7.42	393074	9.57	766921	11.42	797541	14.77	883193	17.51
	LOWER LIMIT		103963	5.43	347860	6.92	196537	9.07	383461	10.92	398771	14.27	441597	17.01
	UPPER LIMIT		415850	6.43	1391438	7.92	786148	10.07	1533842	11.92	1595082	15.27	1766386	18.01
003	CCV		207925	5.93	695719	7.42	393074	9.57	766921	11.42	797541	14.77	883193	17.51
004	SAMPLE	247939-001	268035	5.93	936125	7.42	457050	9.57	778066	11.41	774059	14.76	795746	17.53
005	SAMPLE	247844-017	228464	5.93	789364	7.42	475465	9.57	831079	11.41	951116	14.76	976784	17.51
006	SAMPLE	247844-049	151472	5.94	639061	7.42	453343	9.57	826140	11.41	953563	14.76	978309	17.51
007	SAMPLE	247844-043	229718	5.93	849684	7.42	468729	9.57	834142	11.41	863382	14.76	836367	17.51
008	SAMPLE	247844-042	239796	5.93	879338	7.42	456025	9.57	821224	11.41	798750	14.76	674924	17.52
009	SAMPLE	247925-001	226256	5.93	823291	7.42	425666	9.57	767833	11.41	789892	14.76	691010	17.51
010	SAMPLE	247925-002	229938	5.93	845282	7.42	438913	9.57	736333	11.41	597130	14.77	448076	17.55
011	SAMPLE	247925-003	239526	5.93	857086	7.42	461877	9.57	813265	11.41	801873	14.76	610027	17.51
012	SAMPLE	247844-045	249455	5.94	914757	7.42	490691	9.57	896377	11.41	853042	14.77	608891	17.52
013	SAMPLE	247844-047	238170	5.94	878469	7.42	481067	9.57	860695	11.41	850515	14.77	621456	17.51
014	SAMPLE	248030-017	247367	5.94	926054	7.42	524188	9.57	821626	11.41	778135	14.77	641820	17.53
015	SAMPLE	248030-011	207536	5.94	742730	7.42	473589	9.57	735942	11.42	681648	14.78	523004	17.54
016	SAMPLE	247925-004	237222	5.93	877955	7.42	421949	9.57	737672	11.42	731442	14.77	503074	17.52
017	SAMPLE	248030-010	217965	5.93	817700	7.42	437545	9.57	732140	11.42	673060	14.78	448328	17.53
018	SAMPLE	248030-013	216158	5.93	811335	7.42	421534	9.57	762648	11.42	677369	14.78	482595	17.54
019	SAMPLE	248030-014	200325	5.94	726783	7.42	367755	9.57	584518	11.42	557339	14.78	373486	17.54
020	SAMPLE	248030-015	215720	5.93	797546	7.42	398728	9.57	727634	11.42	613691	14.79	415038	17.53
021	SAMPLE	248030-016	238209	5.93	842716	7.42	439901	9.57	782415	11.41	721994	14.77	444653	17.51

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 553334692

Date : 08/20/13  
 Sequence : MSBNA06 yhk

Reference : yhk03  
 Analyzed : 08/20/13 11:08

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
			CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+RICV	STD										
	LOWER LIMIT		210423	5.93	693886	7.42	421835	9.57	822297	11.41	836581	14.76	916071	17.51
	UPPER LIMIT		105212	5.43	346943	6.92	210918	9.07	411149	10.91	418291	14.26	458036	17.01
			420846	6.43	1387772	7.92	843670	10.07	1644594	11.91	1673162	15.26	1832142	18.01
003	CCV		210423	5.93	693886	7.42	421835	9.57	822297	11.41	836581	14.76	916071	17.51
004	SAMPLE	248030-009	245540	5.93	884968	7.41	478151	9.56	787261	11.41	811907	14.76	845921	17.52
005	SAMPLE	248030-016	244822	5.92	899297	7.41	507523	9.56	801965	11.41	811108	14.76	788295	17.51
006	SAMPLE	248030-019	261781	5.93	929207	7.41	538374	9.57	885933	11.41	842367	14.76	829853	17.52
007	SAMPLE	248030-020	245179	5.93	884173	7.42	502579	9.57	832594	11.41	787424	14.77	732289	17.53
008	SAMPLE	248030-031	233466	5.94	825067	7.42	529157	9.57	832869	11.41	881430	14.76	832155	17.52
009	SAMPLE	248030-032	245002	5.94	790123	7.42	559092	9.57	893637	11.41	948412	14.77	875555	17.51
010	SAMPLE	248030-033	271923	5.93	963342	7.41	549630	9.57	953503	11.41	905767	14.76	799866	17.51
011	SAMPLE	248030-034	288668	5.93	1002070	7.41	556879	9.57	931496	11.41	938023	14.76	777801	17.51
012	SAMPLE	248030-035	260590	5.93	944732	7.41	554708	9.57	933028	11.41	946701	14.76	763820	17.50
013	SAMPLE	248030-036	277632	5.93	964313	7.41	531509	9.57	887436	11.41	883515	14.76	672620	17.51
014	SAMPLE	248030-037	258448	5.93	951204	7.41	543719	9.57	900778	11.41	914713	14.76	715852	17.50
015	SAMPLE	248030-039	272365	5.93	940953	7.41	534196	9.57	900679	11.41	905997	14.76	687504	17.51

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 553337587

Date : 08/22/13  
 Sequence : MSBNA06 yhm

Reference : yhm02  
 Analyzed : 08/22/13 10:44

#	Type	Sample ID	DCEZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+R1CV STD	207055	5.93	747356	7.42	436758	9.57	807244	11.42	833298	14.77	896654	17.52
	LOWER LIMIT		103528	5.43	373678	6.92	218379	9.07	403622	10.92	416649	14.27	448327	17.02
	UPPER LIMIT		414110	6.43	1494712	7.92	873516	10.07	1614488	11.92	1666596	15.27	1793308	18.02
002	CCV		207055	5.93	747356	7.42	436758	9.57	807244	11.42	833298	14.77	896654	17.52
003	SAMPLE	248030-027	214419	5.93	751041	7.42	409189	9.57	584209	11.41	640909	14.77	662270	17.53
004	SAMPLE	248030-028	232462	5.93	837547	7.42	459428	9.57	785058	11.41	777791	14.76	737175	17.51
005	SAMPLE	248030-030	225454	5.93	834403	7.42	460289	9.57	766693	11.41	797225	14.76	751954	17.51
006	SAMPLE	248085-001	211645	5.93	710861	7.42	424280	9.57	634705	11.42	594317	14.78	525160	17.55
007	SAMPLE	248085-002	214872	5.94	809860	7.42	461641	9.57	709322	11.41	693361	14.77	646585	17.53
008	SAMPLE	248085-003	213823	5.94	804605	7.42	455800	9.57	725740	11.42	683311	14.77	666529	17.53

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 563328976

Date : 08/16/13

Sequence : MSBNA07 zhg

Reference : zhg05

Analyzed : 08/16/13 12:17

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
	CCV+CCV/BS+CCV/LCS+ICV/BS+ICV/CCV+ICV/LCS+RCCV+RICV	STD	306013	6.14	1182947	7.64	664796	9.80	1123455	11.65	1097147	15.08	961719	18.06
	LOWER LIMIT		153007	5.64	591474	7.14	332398	9.30	561728	11.15	548574	14.58	480860	17.56
	UPPER LIMIT		612026	6.64	2365894	8.14	1329592	10.30	2246910	12.15	2194294	15.58	1923438	18.56
005	CCV		306013	6.14	1182947	7.64	664796	9.80	1123455	11.65	1097147	15.08	961719	18.06
006	BLANK	QC701895	360916	6.15	1306313	7.64	733770	9.80	1234194	11.65	1455138	15.08	1335253	18.06
007	BS	QC701896	334342	6.15	1177600	7.65	674152	9.80	1080416	11.66	1139632	15.09	1048878	18.06
008	BSD	QC701897	330647	6.15	1172238	7.65	662974	9.80	1058965	11.66	1115916	15.09	1015660	18.06
009	SAMPLE	247933-001	314345	6.14	1141083	7.64	638018	9.80	1070246	11.65	1162973	15.08	1050736	18.05
010	SAMPLE	247933-001	342902	6.15	1240815	7.64	688743	9.80	1177775	11.65	1326426	15.08	1234597	18.05
011	SAMPLE	247939-001	315428	6.14	1144523	7.64	644672	9.80	1068831	11.65	995935	15.08	804747	18.08
012	MS	QC701989	305965	6.15	1089353	7.65	616022	9.80	975906	11.66	968872	15.09	817369	18.06
013	MSD	QC701990	299293	6.15	1067309	7.65	598749	9.80	960204	11.66	1000247	15.09	859053	18.06
014	SAMPLE	247845-001	307363	6.14	1117878	7.64	606152	9.80	1008084	11.65	1025040	15.09	879429	18.06
015	SAMPLE	247845-002	307972	6.14	1108019	7.64	611483	9.80	1003154	11.65	1158389	15.08	1039803	18.05
016	MSS	248030-005	333321	6.15	1232794	7.64	719549	9.80	1169813	11.65	1130341	15.08	1025931	18.06
017	MS	QC702322	314713	6.15	1137122	7.65	647235	9.80	1021843	11.66	980070	15.09	896673	18.07
018	MSD	QC702323	316086	6.15	1135870	7.65	647301	9.80	1024803	11.66	982137	15.09	895541	18.07
019	SAMPLE	248030-012	335917	6.15	1254691	7.64	738805	9.80	1190218	11.65	1276639	15.08	1121651	18.06
020	SAMPLE	248030-008	344060	6.15	1266753	7.64	754713	9.80	1234169	11.65	1311990	15.08	1152200	18.06
021	SAMPLE	248030-007	328301	6.15	1226630	7.64	715760	9.80	1181224	11.65	1249792	15.08	1099097	18.06
022	SAMPLE	248030-006	325655	6.15	1160966	7.64	704630	9.80	1145799	11.65	1160690	15.08	997246	18.06
023	SAMPLE	248030-004	342057	6.15	1260479	7.64	739545	9.80	1200157	11.65	1056308	15.09	912283	18.08
024	SAMPLE	248030-003	346555	6.15	1302413	7.64	761364	9.80	1233889	11.65	1256951	15.08	1075602	18.06

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 583333262

Date : 08/19/13  
 Sequence : MSBNA09 rhj

Reference : rhj03  
 Analyzed : 08/19/13 10:50

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+RICV STD	535475	6.21	2320033	7.70	1478701	9.86	2765002	11.72	2622532	15.16	2175610	18.18
		LOWER LIMIT	267738	5.71	1160017	7.20	739351	9.36	1382501	11.22	1311266	14.66	1087805	17.68
		UPPER LIMIT	1070950	6.71	4640066	8.20	2957402	10.36	5530004	12.22	5245064	15.66	4351220	18.68
003	CCV		535475	6.21	2320033	7.70	1478701	9.86	2765002	11.72	2622532	15.16	2175610	18.18
013	SAMPLE	248030-001	528354	6.21	2068888	7.70	1284975	9.86	2198928	11.72	2217890	15.16	1577376	18.18
014	SAMPLE	248030-002	516623	6.21	2034938	7.70	1249268	9.86	2144359	11.71	2155603	15.15	1387632	18.17
015	SAMPLE	248030-009	478897	6.21	1235116	7.70	1368352	9.86	2321512	11.72	1972150	15.15	1012586 *	18.17
016	SAMPLE	248030-019	518569	6.21	2045559	7.70	1277976	9.86	2242182	11.71	1980865	15.15	1069203 *	18.16
017	SAMPLE	248030-020	512779	6.21	2004772	7.70	1288994	9.86	2248555	11.71	1853490	15.15	879020 *	18.17

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 583336150

Date : 08/21/13  
 Sequence : MSBNA09 rhl

Reference : rhl02  
 Analyzed : 08/21/13 10:45

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV/BS+ICV/ICV/CCV+ICV/LCS+RCCV+R1CV STD	578876	6.21	2443568	7.70	1538986	9.86	2787874	11.72	2868966	15.16	2455155	18.19
	LOWER LIMIT		289438	5.71	1221784	7.20	769493	9.36	1393937	11.22	1434483	14.66	1227578	17.69
	UPPER LIMIT		1157752	6.71	4887136	8.20	3077972	10.36	5575748	12.22	5737932	15.66	4910310	18.69
002	CCV		578876	6.21	2443568	7.70	1538986	9.86	2787874	11.72	2868966	15.16	2455155	18.19
005	BLANK	QC702837	703044	6.21	2750495	7.70	1728862	9.86	2915566	11.72	3703471	15.16	3188318	18.19
006	BS	QC702838	710623	6.22	2862385	7.71	1845542	9.87	3305763	11.72	3691903	15.16	3243281	18.19
007	BSD	QC702839	692515	6.21	2812511	7.70	1806238	9.87	3218974	11.72	3603773	15.16	3123222	18.19
008	BS	QC702838	601450	6.22	2408177	7.71	1507865	9.87	2609780	11.72	2808388	15.16	2428670	18.19
009	BSD	QC702839	565705	6.21	2222522	7.70	1393236	9.86	2410337	11.72	2552503	15.16	2191260	18.18
010	SAMPLE	248030-031	699699	6.22	2921140	7.71	1740641	9.86	2949156	11.72	3165541	15.16	2379139	18.19
011	SAMPLE	248030-032	681918	6.22	2951986	7.70	1760344	9.86	3029046	11.72	3160449	15.16	2210999	18.18
013	SAMPLE	248030-029	573288	6.21	2056457	7.70	1484084	9.86	2516097	11.71	2724046	15.15	1830911	18.17
014	SAMPLE	248030-026	704185	6.22	2613232	7.70	1718740	9.86	2924207	11.72	2690977	15.15	1340018	18.17
015	SAMPLE	248030-027	570132	6.21	2399279	7.70	1523287	9.86	2573790	11.72	2298542	15.16	1077099	18.17
016	SAMPLE	248030-028	615266	6.21	2327187	7.70	1508710	9.86	2522822	11.71	2480703	15.15	1143427	18.16
017	SAMPLE	248030-030	587260	6.21	2227020	7.70	1497722	9.86	2475271	11.71	2398645	15.15	1098363	18.16
018	SAMPLE	248085-001	555142	6.21	2445108	7.70	1618083	9.86	2764342	11.72	2142249	15.16	884310	18.19
019	SAMPLE	248085-002	657064	6.22	2407827	7.70	1575960	9.86	2681853	11.72	2129910	15.16	874265	18.17
020	SAMPLE	248085-003	665670	6.22	2595875	7.70	1595946	9.86	2727875	11.72	2315683	15.16	1005400	18.17





CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 543333265

Instrument : MSBNA05 Begun : 08/19/13 10:25  
 Method : EPA 8270C SOP Version : bna\_rv.12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	xhj01	TUN	DFTPP/PEM			08/19/13 10:25	1.0	1	
002	xhj02	CCV				08/19/13 10:44	1.0	2	
003	xhj03	BLANK	QC702408	Water	201823	08/19/13 11:22	1.0	3	
004	xhj04	BS	QC702409	Water	201823	08/19/13 12:00	2.0	3	
005	xhj05	BSD	QC702410	Water	201823	08/19/13 12:38	2.0	3	
006	xhj06	SAMPLE	247976-001	Water	201823	08/19/13 13:18	1.0	3	
007	xhj07	SAMPLE	247844-017	Soil	201733	08/19/13 13:57	1.0	3	
008	xhj08	SAMPLE	247844-049	Soil	201733	08/19/13 14:38	1.0	3	
009	xhj09	SAMPLE	248032-001	Water	201823	08/19/13 15:17	1.0	3	
010	xhj10	SAMPLE	248030-038	Water	201823	08/19/13 15:54	1.0	3	
011	xhj11	SAMPLE	247957-002	Water	201823	08/19/13 16:36	1.0	3	
012	xhj12	SAMPLE	247993-006	Water	201823	08/19/13 17:19	10.0	3	
013	xhj13	SAMPLE	247993-001	Water	201823	08/19/13 17:59	10.0	3	
014	xhj14	SAMPLE	248030-012	Soil	201803	08/19/13 18:36	1.0	3	
015	xhj15	SAMPLE	248030-003	Soil	201803	08/19/13 19:13	1.0	3	
016	xhj16	SAMPLE	247925-004	Soil	201803	08/19/13 19:49	2.0	3	
017	xhj17	SAMPLE	248030-010	Soil	201803	08/19/13 20:24	3.0	3	
018	xhj18	SAMPLE	248030-013	Soil	201803	08/19/13 21:01	3.0	3	
019	xhj19	SAMPLE	248030-014	Soil	201803	08/19/13 21:36	6.0	3	
020	xhj20	SAMPLE	248030-015	Soil	201803	08/19/13 22:14	10.0	3	
021	xhj21	SAMPLE	248030-016	Soil	201803	08/19/13 22:49	20.0	3	<<t
022	xhj22	SAMPLE	248030-009	Soil	201803	08/19/13 23:25	5.0	3	<<t

KMH 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 22.

Standards used: 1=S22578 2=S22460 3=S22587

Flags used: <<t=out of clock







CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 553329023

Instrument : MSBNA06 Begun : 08/16/13 11:43  
 Method : EPA 8270C SOP Version : bna\_rv.12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	yhg01	TUN	DFTPP/PEM			08/16/13 11:43	1.0	1	
002	yhg02	CCV				08/16/13 12:00	1.0	2	cc+
003	yhg03	CCV				08/16/13 12:51	1.0	2	
004	yhg04	SAMPLE	247939-001	Soil	201733	08/16/13 16:38	5.0	3	
005	yhg05	SAMPLE	247844-017	Soil	201733	08/16/13 17:15	1.0	3	
006	yhg06	SAMPLE	247844-049	Soil	201733	08/16/13 17:52	1.0	3	
007	yhg07	SAMPLE	247844-043	Soil	201733	08/16/13 18:28	1.0	3	
008	yhg08	SAMPLE	247844-042	Soil	201733	08/16/13 19:04	3.0	3	
009	yhg09	SAMPLE	247925-001	Soil	201733	08/16/13 19:39	3.0	3	
010	yhg10	SAMPLE	247925-002	Soil	201733	08/16/13 20:16	3.0	3	
011	yhg11	SAMPLE	247925-003	Soil	201733	08/16/13 20:53	2.0	3	
012	yhg12	SAMPLE	247844-045	Soil	201733	08/16/13 21:30	1.0	3	
013	yhg13	SAMPLE	247844-047	Soil	201733	08/16/13 22:09	1.0	3	
014	yhg14	SAMPLE	248030-017	Soil	201803	08/16/13 22:45	1.0	3	
015	yhg15	SAMPLE	248030-011	Soil	201803	08/16/13 23:22	1.0	3	
016	yhg16	SAMPLE	247925-004	Soil	201803	08/16/13 23:59	2.0	3	<<t
017	yhg17	SAMPLE	248030-010	Soil	201803	08/17/13 00:34	3.0	3	<<t
018	yhg18	SAMPLE	248030-013	Soil	201803	08/17/13 01:11	3.0	3	<<t
019	yhg19	SAMPLE	248030-014	Soil	201803	08/17/13 01:46	6.0	3	<<t
020	yhg20	SAMPLE	248030-015	Soil	201803	08/17/13 02:21	10.0	3	<<t
021	yhg21	SAMPLE	248030-016	Soil	201803	08/17/13 02:59	20.0	3	<<t

KMH 08/19/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 21.





CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 563304405

Instrument : MSBNA07 Begun : 07/30/13 09:25  
 Method : EPA 8270C SOP Version : bna\_rv.12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	zgu01	TUN	DFTPP/PEM			07/30/13 09:25	1.0	1	
002	zgu02	CCV				07/30/13 09:44	1.0	2	cc+
003	zgu03	TUN	DFTPP/PEM			07/30/13 12:00	1.0	1	
004	zgu04	CCV				07/30/13 12:20	1.0	2	cc+
005	zgu05	CCV				07/30/13 14:41	1.0	3	cc+
006	zgu06	TUN	DFTPP/PEM			07/30/13 15:15	1.0	1	
007	zgu07	ICAL	ICAL1			07/30/13 15:37	1.0	4	
008	zgu08	ICAL	ICAL2			07/30/13 16:14	1.0	5	
009	zgu09	ICAL	ICAL3			07/30/13 16:50	1.0	3	
010	zgu10	ICAL	ICAL4			07/30/13 17:26	1.0	2	
011	zgu11	ICAL	ICAL5			07/30/13 18:04	1.0	6	
012	zgu12	ICAL	ICAL6			07/30/13 18:41	1.0	7	
013	zgu13	ICAL	ICAL7			07/30/13 19:17	1.0	8	
014	zgu14	ICAL	ICAL8			07/30/13 19:55	1.0	9	
015	zgu15	ICAL	ICAL9			07/30/13 20:34	1.0	10	
016	zgu16	ICV	ICV			07/30/13 21:13	1.0	11	

KMH 08/01/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 16.

Standards used: 1=S22578 2=S22459 3=S22458 4=S22456 5=S22457 6=S22460 7=S22461 8=S22462 9=S22463 10=S22464 11=S22440

Flags used: +=high bias cc=CCV CCC failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 563328976

Instrument : MSBNA07  
 Method : EPA 8270C

Begun : 08/16/13 10:56  
 SOP Version : bna\_rv.12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	zhg01	TUN	DFTPP/PEM			08/16/13 10:56	1.0	1	t
002	zhg02	TUN	DFTPP/PEM			08/16/13 11:09	1.0	1	t
003	zhg03	TUN	DFTPP/PEM			08/16/13 11:25	1.0	1	t
004	zhg04	TUN	DFTPP/PEM			08/16/13 11:57	1.0	1	
005	zhg05	CCV				08/16/13 12:17	1.0	2	
006	zhg06	BLANK	QC701895	Water	201707	08/16/13 12:54	1.0	3	
007	zhg07	BS	QC701896	Water	201707	08/16/13 13:31	1.0	3	
008	zhg08	BSD	QC701897	Water	201707	08/16/13 14:08	1.0	3	
009	zhg09	SAMPLE	247933-001	Water	201707	08/16/13 14:45	5.0	3	
010	zhg10	SAMPLE	247933-001	Water	201707	08/16/13 15:22	1.0	3	
011	zhg11	SAMPLE	247939-001	Soil	201733	08/16/13 15:59	3.0	3	1:BIS2EHP=56
012	zhg12	MS	QC701989	Soil	201733	08/16/13 16:38	1.0	3	
013	zhg13	MSD	QC701990	Soil	201733	08/16/13 17:16	1.0	3	
014	zhg14	SAMPLE	247845-001	Water	201657	08/16/13 17:53	3.0	3	
015	zhg15	SAMPLE	247845-002	Water	201657	08/16/13 18:29	3.0	3	
016	zhg16	MSS	248030-005	Soil	201803	08/16/13 19:05	1.0	3	
017	zhg17	MS	QC702322	Soil	201803	08/16/13 19:41	1.0	3	
018	zhg18	MSD	QC702323	Soil	201803	08/16/13 20:18	1.0	3	
019	zhg19	SAMPLE	248030-012	Soil	201803	08/16/13 20:55	1.0	3	
020	zhg20	SAMPLE	248030-008	Soil	201803	08/16/13 21:32	1.0	3	
021	zhg21	SAMPLE	248030-007	Soil	201803	08/16/13 22:10	1.0	3	
022	zhg22	SAMPLE	248030-006	Soil	201803	08/16/13 22:48	1.0	3	
023	zhg23	SAMPLE	248030-004	Soil	201803	08/16/13 23:25	1.0	3	
024	zhg24	SAMPLE	248030-003	Soil	201803	08/17/13 00:02	1.0	3	<<t

KMH 08/16/13 : adjusted tune after runs 2 & 3

KMH 08/19/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 24.

Standards used: 1=S22578 2=S22459 3=S22587

Flags used: <<t=out of clock t=tune failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 583238510

Instrument : MSBNA09 Begun : 06/14/13 15:10  
 Method : EPA 8270C SOP Version : bna\_rv.12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	rfe01	CCV	RT CHECK			06/14/13 15:10	1.0	1	cc+ cc- ?t
002	rfe02	TUN	DFTPP/PEM			06/14/13 17:31	1.0	2	t
003	rfe03	TUN	DFTPP/PEM			06/14/13 18:09	1.0	2	
004	rfe04	ICAL	ICAL			06/14/13 18:25	1.0	3	
005	rfe05	ICAL	ICAL			06/14/13 18:55	1.0	4	
006	rfe06	ICAL	ICAL			06/14/13 19:25	1.0	5	
007	rfe07	ICAL	ICAL			06/14/13 19:56	1.0	6	
008	rfe08	ICAL	ICAL			06/14/13 20:27	1.0	1	
009	rfe09	ICAL	ICAL			06/14/13 20:57	1.0	7	
010	rfe10	ICAL	ICAL			06/14/13 21:29	1.0	8	
011	rfe11	ICAL	ICAL			06/14/13 21:59	1.0	9	
012	rfe12	ICAL	ICAL			06/14/13 22:31	1.0	10	
013	rfe13	ICV	ICV			06/14/13 23:01	1.0	11	
014	rfe14	X	IB			06/14/13 23:32	1.0		
015	rfe15	ICAL	CPSC			06/14/13 23:58	1.0	12	
016	rfe16	ICAL	CPSC			06/15/13 00:12	1.0	13	
017	rfe17	ICAL	CPSC			06/15/13 00:26	1.0	14	
018	rfe18	ICAL	CPSC			06/15/13 00:40	1.0	15	
019	rfe19	ICAL	CPSC			06/15/13 00:53	1.0	16	
020	rfe20	ICAL	CPSC			06/15/13 01:07	1.0	17	
021	rfe21	ICAL	CPSC			06/15/13 01:21	1.0	18	
022	rfe22	ICAL	CPSC			06/15/13 01:35	1.0	19	
023	rfe23	ICV	CPSC			06/15/13 01:48	1.0	20	

LLH 06/17/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 001 through 023.

Standards used: 1=S22460 2=S21994 3=S22456 4=S22457 5=S22458 6=S22459 7=S22461 8=S22462 9=S22463 10=S22464 11=S22440  
 12=S22235 13=S22237 14=S22238 15=S22239 16=S22240 17=S22241 18=S22242 19=S22243 20=S21551  
 Flags used: +=high bias -=low bias ?t=missing tune cc=CCV CCC failure t=tune failure





SAMPLE PREPARATION SUMMARY

Batch # : 201803  
 Started By : EL  
 Method : 3550B  
 Spike #1 ID : S23002

Prep Date : 16-AUG-2013 11:30  
 SOP Version : 8270\_3550\_rv14  
 Spike #2 ID : S23045

Analysis : 8100  
 Finished By : EL  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
247925-004		Soil	30.38	1	1	0.03292		.4				8270	
248030-001		Soil	30.22	1	1	0.03309		.4				8100	
248030-002		Soil	30.07	2	1	0.06651		.4				8100	
248030-003		Soil	30.14	1	1	0.03318		.4				8100	
248030-004		Soil	30.4	1	1	0.03289		.4				8100	
248030-005		Soil	30.31	1	1	0.03299		.4				8100	MSS
248030-006		Soil	30.4	1	1	0.03289		.4				8100	
248030-007		Soil	30.14	1	1	0.03318		.4				8100	
248030-008		Soil	30.34	1	1	0.03296		.4				8100	
248030-009		Soil	30.24	1	1	0.03307		.4				8100	
248030-010		Soil	30.09	1	1	0.03323		.4				8100	
248030-011		Soil	30.15	1	1	0.03317		.4				8100	
248030-012		Soil	30.17	1	1	0.03315		.4				8100	
248030-013		Soil	30.3	1	1	0.033		.4				8100	
248030-014		Soil	30.13	1	1	0.03319		.4				8100	
248030-015		Soil	30.32	1	1	0.03298		.4				8100	
248030-016		Soil	30.12	1	1	0.0332		.4				8100	
248030-017		Soil	30.05	1	1	0.03328		.4				8100	
248030-019		Soil	30.15	1	1	0.03317		.4				8100	
248030-020		Soil	30.32	1	1	0.03298		.4				8100	
QC702320	BLANK	Soil	30.01	1	1	0.03332		.4				8270	
QC702321	LCS	Soil	30.17	1	1	0.03315		.4	1			8270	
QC702322	MS	Soil	30.12	1	1	0.0332		.4	1			8270	
QC702323	MSD	Soil	30.08	1	1	0.03324		.4	1			8270	

Analyst:     KMH    

Date:     08/19/13    

Reviewer:     LLH    

Date:     08/19/13

BNA Soil Prep Log

Curtis & Tompkins, Ltd.

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BK 3446

LIMS Batch No: 201803  
 LIMS Analysis 827D  
 Date Extracted: 8/16/13

Extraction Method:  
 EPA 3550b Sonication  
 Other \_\_\_\_\_

Cleanup Method (if necessary):  
 EPA 3640a GPC  
 Other \_\_\_\_\_

Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Cleanup (x if needed)	Comments
247925-004	A	30.38	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
248030-001	↓	30.22	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-002	H	30.07	<input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> 2.0		
-003	G	30.14	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-004	B	30.40	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-005	A	30.31	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		MSS
-006	D	30.40	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-007	↓	30.14	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-008	↓	30.34	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-009	A	30.24	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-010	B	30.09	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-011	D	30.15	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-012	↓	30.17	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-013	B	30.30	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-014	H	30.13	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-015	I	30.32	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-016	B	30.12	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-017	E	30.05	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
-019	B	30.15	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
↓ -020	↓	30.32	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
MS QC 702320	NA	30.01	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
LCS ↓ 1	↓	30.17	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
MS ↓ 2	A	30.12	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
MSD ↓ 3	↓	30.08	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/> _____		
			<input type="checkbox"/> 1.0 <input type="checkbox"/> _____		

Baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed granular Na<sub>2</sub>SO<sub>4</sub> used for QC & to dry samples  
0.4 mL of surrogate solution was added to all samples  
1.0 mL of matrix spiking solution was added to all spikes  
 ≥100mL 1:1 CH<sub>2</sub>Cl<sub>2</sub>:Acetone was added to all: CH<sub>2</sub>Cl<sub>2</sub>  
 Acetone  
**Solvent was added at (time)**  
 sonicated 3 times w/ ≥100mL  soxhlet extractors on at:  
 soxhlets off at:  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C)  
 Relinquished to BNA department

Mfg & Lot # / LIMS # / Time	Date/Initials
EMV L11B	EL 8/16/13
S23002B	
S23045C	
EM52089	
EM53032	
1130	
✓	
NA	
EM0862C504	
70°	
✓	

E. Long 8/16/13  
 Extraction Chemist / Date

Continued from page \_\_\_\_\_  
 Continued on page 1

Julie 8/19/13  
 Reviewed by / Date

TITLE SOIL ALIQUOT PROJECT DATE

Continued from page

SAMPLE ID	weight (g)	Analysis	Batch #	Comments
247925-004 A	30.38	8270		
248030-001 ↓	30.22			
5 -002 H	30.07			
-003 G	30.14			
-004 B	30.40			
-005 A	30.31			MSS
-006 D	30.40			
10 -007 ↓	30.14			
-008 ↓	30.34			
-009 A	30.24			
-010 B	30.09			
-011 D	30.15			
15 -012 ↓	30.17			
-013 B	30.30			
-014 H	30.13			
-015 I	30.32			
-016 B	30.12			
20 -017 E	30.05			
-019 B	30.15			
-020 B	30.32			
MB	30.01			EMVLIIB
LCS	30.17			↓
MS A	30.12			248030-005A
MSD ↓	30.08			↓
EC 8/10/13				

Continued to page

SIGNATURE

DATE

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

SAMPLE PREPARATION SUMMARY

Batch # : 201864  
 Started By : MB3  
 Method : 3550B  
 Spike #1 ID : S23002

Prep Date : 19-AUG-2013 11:45  
 SOP Version : 8270\_3550\_rv14  
 Spike #2 ID : S23045

Analysis : 8100  
 Finished By : MB3  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-021		Soil	30.43	2	1	0.06572	.4					8100	
248030-022		Soil	29.8	2	1	0.06711	.4					8100	
248030-023		Soil	30.45	2	1	0.06568	.4					8100	
248030-024		Soil	30.41	2	1	0.06577	.4					8100	
248030-025		Soil	29.9	2	1	0.06689	.4					8100	
248030-026		Soil	29.66	2	1	0.06743	.4					8100	
248030-027		Soil	30.07	2	1	0.06651	.4					8100	
248030-028		Soil	29.88	2	1	0.06693	.4					8100	
248030-029		Soil	29.96	2	1	0.06676	.4					8100	
248030-030		Soil	30.39	2	1	0.06581	.4					8100	
248030-031		Soil	30.03	1	1	0.0333	.4					8100	
248030-032		Soil	30.34	1	1	0.03296	.4					8100	
248030-033		Soil	30.46	2	1	0.06566	.4					8100	
248030-034		Soil	29.69	2.5	1	0.0842	.4					8100	
248030-035		Soil	30.06	2	1	0.06653	.4					8100	
248030-036		Soil	29.74	2	1	0.06725	.4					8100	
248030-037		Soil	30.27	2	1	0.06607	.4					8100	
248030-039		Soil	30.43	2	1	0.06572	.4					8100	
248074-009		Soil	29.87	2	1	0.06696	.4					8270	mss
248074-010		Soil	30.44	2	1	0.0657	.4					8270	
QC702577	BLANK	Soil	30.46	1	1	0.03283	.4					8270	
QC702578	LCS	Soil	29.74	1	1	0.03362	.4	1				8270	
QC702579	MS	Soil	29.59	2	1	0.06759	.4	1				8270	
QC702580	MSD	Soil	29.83	2	1	0.06705	.4	1				8270	

KMH 08/20/13 : Matrix spikes QC702579, QC702580 (batch 201864) were not reported because the parent sample required a dilution that would have diluted out the spikes.

Analyst:     KMH     Date:   08/20/13   Reviewer:   LLH     Date:   08/20/13

BNA Soil Prep Log

Curtis & Tompkins, Ltd.

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BK 3465

LIMS Batch No: 201864  
 LIMS Analysis: 8270/8100  
 Date Extracted: 8/19/13

Extraction Method:  
 EPA 3550b Sonication  
 Other \_\_\_\_\_

Cleanup Method (if necessary):  
 EPA 3640a GPC  
 Other \_\_\_\_\_

LI  
I  
C

Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Cleanup (x if needed)	Comments
248030-021	E	30.43	<input type="checkbox"/> 1.0 <del>2.0</del>		
22	A	29.80	<input type="checkbox"/> 1.0 <del>2.0</del>		
23	↓	30.45	<input type="checkbox"/> 1.0 <del>2.0</del>		
24	↓	30.41	<input type="checkbox"/> 1.0 <del>2.0</del>		
25	B	29.90	<input type="checkbox"/> 1.0 <del>2.0</del>		
26	↓	29.66	<input type="checkbox"/> 1.0 <del>2.0</del>		
27	↓	30.07	<input type="checkbox"/> 1.0 <del>2.0</del>		
28	A	29.88	<input type="checkbox"/> 1.0 <del>2.0</del>		
29	B	29.96	<input type="checkbox"/> 1.0 <del>2.0</del>		
30	↓	30.39	<input type="checkbox"/> 1.0 <del>2.0</del>		
31	↓	30.03	<input checked="" type="checkbox"/> 1.0 <del>2.0</del> MB3		
32	↓	30.34	<input checked="" type="checkbox"/> 1.0 <del>2.0</del> 8/19/13		
33	A	30.46	<input type="checkbox"/> 1.0 <del>2.0</del>		
34	D	29.69	<input type="checkbox"/> 1.0 <del>2.5</del>		
35	↓	30.06	<input type="checkbox"/> 1.0 <del>2.0</del>		
36	↓	29.74	<input type="checkbox"/> 1.0 <del>2.0</del>		
37	A	30.27	<input type="checkbox"/> 1.0 <del>2.0</del>		
39	D	30.43	<input type="checkbox"/> 1.0 <del>2.0</del>		
248074-009		29.87	<input type="checkbox"/> 1.0 <del>2.0</del>		MS <sub>1</sub> Comp. 248074-72,34 @ 500 µg ea.
010		30.44	<input type="checkbox"/> 1.0 <del>2.0</del>		↓ 56.78 ↓
MB QC702577		30.46	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
ICS	↓ 78	29.74	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
MS	↓ 79	29.59	<input type="checkbox"/> 1.0 <del>2.0</del>		
MSD	↓ 80	29.83	<input type="checkbox"/> 1.0 <del>2.0</del>		
			<input type="checkbox"/> 1.0 <del>2.0</del>		

Baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed granular Na<sub>2</sub>SO<sub>4</sub> used for QC & to dry samples  
 0.4 mL of surrogate solution was added to all samples  
 1.0 mL of matrix spiking solution was added to all spikes  
 ≥100mL 1:1 CH<sub>2</sub>Cl<sub>2</sub>:Acetone was added to all: CH<sub>2</sub>Cl<sub>2</sub>  
 Acetone  
**Solvent was added at (time)**  
 sonicated 3 times w/ ≥100mL  soxhlet extractors on at:  
 soxhlets off at:  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C)  
 Relinquished to BNA department

Mfg & Lot # / LIMS # / Time	Date/Initials
EMVLI1B	MB3 8/19/13
S23002B	
S23045C	
EM53123	
EM53832	
11:45	
N/A	
EM0802C504	
70	
✓	↓

*[Signature]* Baswell 8/19/13

Extraction Chemist / Date

Continued from page \_\_\_\_\_  
 Continued on page \_\_\_\_\_

*[Signature]* 8/20/13

Reviewed by / Date

TITLE Soil Aliquot PROJECT \_\_\_\_\_ DATE \_\_\_\_\_

Continued from page

Sample ID	Weight (g)	Analysis	Bath#	Comments
248030-021	E 30.43	8270/8100		
22	A 29.80			
23	↓ 30.45			
24	↓ 30.41			
25	B 29.90			
26	↓ 29.66			
27	↓ 30.07			
28	A 29.88			
29	B 29.96			
30	↓ 30.39			
31	↓ 30.03			
32	↓ 30.34			
33	A 30.46			
34	D 29.69			
35	↓ 30.06			
36	↓ 29.74			
37	A 36.27			
39	D 30.43			
248074-009	29.87			MS, Comp - 248074-1,2,3,4 B @ 50g ea
↓ 010	30.44			↓ 5,6,7,8 ↓
MB	30.46			EMVLIIB
LCS	24.74			↓
MS	29.59			248074-009
MSD	29.83			↓
			MB3 8/19/13	

Continued to page

SIGNATURE

DATE

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

SAMPLE PREPARATION SUMMARY

Batch # : 201931  
 Started By : CPK  
 Method : 3550B  
 Spike #1 ID : S23002

Prep Date : 20-AUG-2013 16:00  
 SOP Version : 8270\_3550\_rv14  
 Spike #2 ID : S23045

Analysis : 8100  
 Finished By : CPK  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-018		Soil	29.81	2.5	1	0.08386		.4				8100	mss
248030-040		Soil	29.73	1	1	0.03364		.4				8100	
248030-041		Soil	29.77	2.5	1	0.08398		.4				8100	
248030-042		Soil	29.71	2.5	1	0.08415		.4				8100	
248030-043		Soil	29.98	1	1	0.03336		.4				8100	
248030-044		Soil	30.18	1	1	0.03313		.4				8100	
248085-001		Miscell.	30.08	1	1	0.03324		.4				8100	
248085-002		Miscell.	30.03	2	1	0.0666		.4				8100	
248085-003		Miscell.	30.24	1	1	0.03307		.4				8100	
248109-002		Soil	30.15	1	1	0.03317		.4				8270	
248111-001		Soil	30	1	1	0.03333		.4				8270	
QC702848	BLANK	Soil	30.23	1	1	0.03308		.4				8100	
QC702849	LCS	Soil	30.04	1	1	0.03329		.4	1			8100	
QC702850	MS	Soil	29.88	1	1	0.03347		.4	1			8100	
QC702851	MSD	Soil	29.76	1	1	0.0336		.4	1			8100	

KMH 08/22/13 : Matrix spikes QC702850, QC702851 (batch 201931) were not reported because the parent sample required a dilution that would have diluted out the spikes.

Analyst:     KMH    

Date:     08/22/13    

Reviewer:     LLH    

Date:     08/22/13

BNA Soil Prep Log

Curtis & Tompkins, Ltd.

LIMS Batch No: 201931  
 LIMS Analysis 8270  
 Date Extracted: 8/20/13

Extraction Method:  
 EPA 3550b Sonication  
 Other \_\_\_\_\_

Page: 3 **BK 3465**  
 Cleanup Method (if necessary):  
 EPA 3640a GPC  
 Other \_\_\_\_\_

Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Cleanup (x if needed)	Comments
248030-018	A	29.81	<input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> 2.5		
↓ -040	A	29.73	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
↓ -041	B	29.77	<input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> 2.5		
↓ -042	A	29.71	<input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> 2.5		
5 ↓ -043	D	29.98	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
↓ -044	A	30.18	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
7 248085-001	B	30.08	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
↓ -002	↓	30.03	<input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> 2.0		
↓ -003	↓	30.24	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
10 248109-002	A	30.15	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
248111-001	↓	30.00	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
MB QC 702849	NA	30.23	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
LCS ↓ 50	↓	30.04	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
MS ↓ 51	A	29.88	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
15 MSD ↓ 52	↓	29.76	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		

Baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed granular Na<sub>2</sub>SO<sub>4</sub> used for QC & to dry samples  
0.4 mL of surrogate solution was added to all samples  
1.0 mL of matrix spiking solution was added to all spikes  
 ≥100mL 1:1 CH<sub>2</sub>Cl<sub>2</sub>:Acetone was added to all: CH<sub>2</sub>Cl<sub>2</sub>  
 Acetone  
**Solvent was added at (time)**  
 sonicated 3 times w/ ≥100mL  soxhlet extractors on at:  
 soxhlets off at:  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub> rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C)  
 Relinquished to BNA department

Mfg & Lot# / LIMS # / Time	Date/Initials
CMVLI13	LOK/20/13
S23022B	
S23045C	
CM53123	
CM53032	
1600	
✓	
NA	
CMVLI13	
100°	
✓	

  
 Extraction Chemist / Date

Continued from page /  
 Continued on page /

  
 Reviewed by / Date

TITLE Soil Aliquot

PROJECT

DATE

Continued from page

Sample ID	Weight (g)	Analysis	Batch #	Comments
248030-026 B	49.79	TEHM		MSS
27	49.71			
28 A	49.76			
29 B	50.38			
30	50.20			
31	50.02			
32	50.42			
33 A	49.71			
34 D	50.09			
35	50.42			
36	50.00			
37 A	50.15			
39 D	49.57			
40 A	49.55			
41 B	50.36			
42 A	50.07			
43 D	49.67			
MB	NA			
LCS	50.36			
MS	50.27			
MSD	49.59			
248030-044 A	49.60			
248030-018 A	29.61	0270/0100		
-040 A	29.73			
-041 B	29.77			
-042 A	29.71			
-043 D	29.95			
-044 A	70.18			
248085-001 B	30.08			
-002	30.03			
-003	30.24			
248109-002 A	30.15			
248111-001 A	30.00			
MB	30.23			
LCS	30.04			
MS	29.38			
MSD	29.76			

EMVLIIB  
 ↓  
 248030-026B  
 ↓  
 K218/0113/  
 MSS  
~~MSS~~ CRK 8/22/13

EMVLIIB  
 ↓  
 248030-044  
 ↓  
 CRK 8/22/13

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

DISCLOSED TO AND UNDERSTOOD BY \_\_\_\_\_ DATE \_\_\_\_\_

Continued to page

PROPRIETARY INFORMATION

Laboratory Job Number 248030

ANALYTICAL REPORT

PCBs

Matrix: Water

**Polychlorinated Biphenyls (PCBs)**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3520C
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Field ID:	IA-40	Chemist:	MA
Matrix:	Water	Sampled:	08/15/13
Units:	ug/L	Received:	08/15/13
Diln Fac:	1.000	Prepared:	08/16/13
Batch#:	201824	Analyzed:	08/18/13

Type: SAMPLE Lab ID: 248030-038

Analyte	Result	RL
Aroclor-1016	ND	0.49
Aroclor-1221	ND	0.98
Aroclor-1232	ND	0.49
Aroclor-1242	ND	0.49
Aroclor-1248	ND	0.49
Aroclor-1254	ND	0.49
Aroclor-1260	ND	0.49

Surrogate	%REC	Limits
TCMX	88	47-120
Decachlorobiphenyl	64	33-120

Type: BLANK Lab ID: QC702411

Analyte	Result	RL
Aroclor-1016	ND	0.50
Aroclor-1221	ND	1.0
Aroclor-1232	ND	0.50
Aroclor-1242	ND	0.50
Aroclor-1248	ND	0.50
Aroclor-1254	ND	0.50
Aroclor-1260	ND	0.50

Surrogate	%REC	Limits
TCMX	67	47-120
Decachlorobiphenyl	62	33-120

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3520C
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Water	Chemist:	MA
Units:	ug/L	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/18/13
Batch#:	201824		

Type: BS Lab ID: QC702412

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	5.000	4.843	97	69-131
Aroclor-1260	5.000	5.294	106	56-130

Surrogate	%REC	Limits
TCMX	81	47-120
Decachlorobiphenyl	60	33-120

Type: BSD Lab ID: QC702413

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	5.000	4.481	90	69-131	8	31
Aroclor-1260	5.000	4.746	95	56-130	11	40

Surrogate	%REC	Limits
TCMX	77	47-120
Decachlorobiphenyl	59	33-120

RPD= Relative Percent Difference

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 PCBS Water: EPA 8082

Inst : GC16  
 Calnum : 233295617001  
 Units : pg/u1

Name : 1660\_205  
 Date : 24-JUL-2013 14:28  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	205_013	233295617013	PCB10_2	24-JUL-2013 14:28	S22289
L2	205_014	233295617014	PCB25_5	24-JUL-2013 14:57	S22295
L3	205_015	233295617015	PCB100_20	24-JUL-2013 15:25	S22814
L4	205_016	233295617016	PCB250_50	24-JUL-2013 15:54	S22538
L5	205_017	233295617017	PCB500_100	24-JUL-2013 16:22	S22292
L6	205_018	233295617018	PCB750_150	24-JUL-2013 16:50	S22293

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r <sup>2</sup>	MnR <sup>2</sup>	MxRSD	Flg
Aroclor-1016 Peak # 1	A	3611.6	3951.7	2402.6	2374.7	2357.9	2562.6	LNLR	0.37747	4.01E-4		2876.9	0.996	.99	20	
Aroclor-1016 Peak # 2	A	4858.6	5828.2	3582.5	3407.9	3504.6	3818.2	LNLR	2.56080	2.69E-4		4166.7	0.996	.99	20	
Aroclor-1016 Peak # 3	A	2943.8	3259.8	2004.5	1979.7	2027.8	2248.9	LNLR	5.17808	4.57E-4		2410.8	0.995	.99	20	
Aroclor-1016 Peak # 4	A	1791.7	1871.8	1084.0	1163.0	1112.6	1239.7	LNLR	2.07365	8.32E-4		1377.1	0.995	.99	20	
Aroclor-1016 Peak # 5	A	2714.4	2847.6	1669.2	1689.4	1694.0	1875.1	LNLR	3.19403	5.49E-4		2081.6	0.995	.99	20	
Aroclor-1260 Peak # 1	A	10210	10125	5588.4	5262.6	5035.7	5407.1	LNLR	-9.0538	1.92E-4		6938.2	0.997	.99	20	
Aroclor-1260 Peak # 2	A	6722.8	7046.8	3963.8	3683.4	3629.2	3956.9	LNLR	-4.5667	2.62E-4		4833.8	0.996	.99	20	
Aroclor-1260 Peak # 3	A	6072.9	5900.6	3341.4	3282.8	3259.5	3545.6	LNLR	-1.7481	2.91E-4		4233.8	0.996	.99	20	
Aroclor-1260 Peak # 4	A	14084	14253	7870.5	7487.4	7272.6	7902.6	LNLR	-5.6929	1.31E-4		9811.7	0.996	.99	20	
Aroclor-1260 Peak # 5	A	5387.7	6541.3	3658.1	3472.5	3447.4	3972.5	LNLR	3.34560	2.62E-4		4413.3	0.991	.99	20	
TCMX	A	93261	99878	58558	56099	56280	60950	LNLR	-0.2467	1.69E-5		70838	0.996	.99	20	
Decachlorobiphenyl	A	99294	107355	56079	51113	47340	50676	LNLR	-3.0414	2.06E-5		68643	0.997	.99	20	
Aroclor-1016 Peak # 1	B	452.00	532.52	322.90	329.31	360.13	411.40	AVRG	0.00249	0.00249		401.38	20	.99	20	
Aroclor-1016 Peak # 2	B	493.70	684.00	419.91	430.60	450.09	527.79	AVRG	0.00200	0.00200		501.01	20	.99	20	
Aroclor-1016 Peak # 3	B	347.70	403.36	245.08	257.44	271.33	310.04	AVRG	0.00327	0.00327		305.82	20	.99	20	
Aroclor-1016 Peak # 4	B	427.80	458.64	284.55	295.69	321.61	365.80	AVRG	0.00279	0.00279		359.01	20	.99	20	
Aroclor-1016 Peak # 5	B	490.90	546.08	337.95	360.64	390.46	462.99	AVRG	0.00232	0.00232		431.50	19	.99	20	
Aroclor-1260 Peak # 1	B	1595.0	1708.4	1001.7	1066.1	1127.1		LNLR	-1.4617	9.02E-4		1299.6	0.997	.99	20	
Aroclor-1260 Peak # 2	B	1200.9	1406.3	882.56	938.77	1005.7	1170.9	AVRG		9.08E-4		1100.9	18	.99	20	
Aroclor-1260 Peak # 3	B	1106.2	1168.0	699.86	739.57	793.46		LNLR	-0.3562	0.00128		901.42	0.997	.99	20	
Aroclor-1260 Peak # 4	B	2255.3	2540.5	1546.6	1701.9	1843.4	2285.0	AVRG		4.93E-4		2028.8	19	.99	20	
Aroclor-1260 Peak # 5	B	1077.3	1130.5	718.67	788.51	875.29	1045.3	AVRG		0.00106		939.26	18	.99	20	
TCMX	B	13403	14707	9004.7	10218	11515	13681	AVRG		8.27E-5		12088	18	.99	20	
Decachlorobiphenyl	B	20838	24063	14107	14591	15279	17300	LNLR	2.02068	5.94E-5		17696	0.992	.99	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aroclor-1016 Peak # 1	A	10.000	49	25.000	60	100.00	-3	250.00	-5	500.00	-5	750.00	3
Aroclor-1016 Peak # 2	A	10.000	56	25.000	67	100.00	-1	250.00	-7	500.00	-5	750.00	3
Aroclor-1016 Peak # 3	A	10.000	86	25.000	70	100.00	-3	250.00	-7	500.00	-6	750.00	4
Aroclor-1016 Peak # 4	A	10.000	70	25.000	64	100.00	-8	250.00	-2	500.00	-7	750.00	3
Aroclor-1016 Peak # 5	A	10.000	81	25.000	69	100.00	-5	250.00	-6	500.00	-6	750.00	3
Aroclor-1260 Peak # 1	A	10.000	5	25.000	58	100.00	-2	250.00	-3	500.00	-5	750.00	3
Aroclor-1260 Peak # 2	A	10.000	31	25.000	66	100.00	-1	250.00	-5	500.00	-6	750.00	3
Aroclor-1260 Peak # 3	A	10.000	59	25.000	65	100.00	-4	250.00	-5	500.00	-5	750.00	3
Aroclor-1260 Peak # 4	A	10.000	28	25.000	64	100.00	-2	250.00	-4	500.00	-6	750.00	3
Aroclor-1260 Peak # 5	A	10.000	75	25.000	85	100.00	-1	250.00	-8	500.00	-9	750.00	5
TCMX	A	2.0000	45	5.0000	64	20.000	-2	50.000	-6	100.00	-5	150.00	3
Decachlorobiphenyl	A	2.0000	-47	5.0000	60	20.000	0	50.000	-1	100.00	-5	150.00	2
Aroclor-1016 Peak # 1	B	10.000	13	25.000	33	100.00	-20	250.00	-18	500.00	-10	750.00	2
Aroclor-1016 Peak # 2	B	10.000	-1	25.000	37	100.00	-16	250.00	-14	500.00	-10	750.00	5
Aroclor-1016 Peak # 3	B	10.000	14	25.000	32	100.00	-20	250.00	-16	500.00	-11	750.00	1
Aroclor-1016 Peak # 4	B	10.000	19	25.000	28	100.00	-21	250.00	-18	500.00	-10	750.00	2
Aroclor-1016 Peak # 5	B	10.000	14	25.000	27	100.00	-22	250.00	-16	500.00	-10	750.00	7
Aroclor-1260 Peak # 1	B	10.000	29	25.000	48	100.00	-11	250.00	-4	500.00	1		
Aroclor-1260 Peak # 2	B	10.000	9	25.000	28	100.00	-20	250.00	-15	500.00	-9	750.00	6
Aroclor-1260 Peak # 3	B	10.000	38	25.000	48	100.00	-11	250.00	-5	500.00	2		
Aroclor-1260 Peak # 4	B	10.000	11	25.000	25	100.00	-24	250.00	-16	500.00	-9	750.00	13
Aroclor-1260 Peak # 5	B	10.000	15	25.000	20	100.00	-23	250.00	-16	500.00	-7	750.00	11
TCMX	B	2.0000	11	5.0000	22	20.000	-26	50.000	-15	100.00	-5	150.00	13
Decachlorobiphenyl	B	2.0000	125	5.0000	83	20.000	-6	50.000	-9	100.00	-7	150.00	4

MA 07/25/13 : Corrected automatically drawn baseline in all levels.

Analyst: MA

Date: 07/25/13

Reviewer: EAH

Date: 07/25/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor; LINR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 PCBS Water  
EPA 8082

Inst : GC16  
Calnum : 233295617001

Name : 1660\_205  
Cal Date : 24-JUL-2013

ICV 233295617021 (205\_021 24-JUL-2013) stds: S22309

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aroclor-1016	A	250.0	267.6	pg/ul	7	15	
Aroclor-1260	A	250.0	271.4	pg/ul	9	15	
Aroclor-1016	B	250.0	231.5	pg/ul	-7	15	
Aroclor-1260	B	250.0	249.1	pg/ul	0	15	

Analyst: MA

Date: 07/25/13

Reviewer: EAH

Date: 07/25/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Water  
EPA 8082

Inst : GC16                      Run Name : PCB250\_50                      IDF : 1.0  
 Seqnum : 233331839002              File : 230\_002                      Time : 18-AUG-2013 11:07  
 Cal : 233295617001              Caldate : 24-JUL-2013  
 Standards: S22538

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			250.0	263.3	pg/ul	5	15	
Aroclor-1260	A			250.0	256.5	pg/ul	3	15	
TCMX	A	70838	61367	50.00	51.62	pg/ul	3	15	
Decachlorobiphenyl	A	68643	37483	50.00	35.59	pg/ul	<b>-29</b>	15	c-
Aroclor-1016	B			250.0	241.8	pg/ul	-3	15	
Aroclor-1260	B			250.0	225.5	pg/ul	-10	15	
TCMX	B	12088	12499	50.00	51.70	pg/ul	3	15	
Decachlorobiphenyl	B	17696	10028	50.00	31.83	pg/ul	<b>-36</b>	15	c-

MA 08/19/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/19/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Water  
EPA 8082

Inst : GC16                      Run Name : PCB100\_20                      IDF : 1.0  
 Seqnum : 233331839009          File : 230\_009                      Time : 18-AUG-2013 16:39  
 Cal : 233295617001              Caldate : 24-JUL-2013  
 Standards: S22814

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			100.0	110.3	pg/ul	10	15	
Aroclor-1260	A			100.0	112.0	pg/ul	12	15	
TCMX	A	70838	68439	20.00	22.89	pg/ul	14	15	
Decachlorobiphenyl	A	68643	45443	20.00	15.69	pg/ul	<b>-22</b>	15	c-
Aroclor-1016	B			100.0	98.83	pg/ul	-1	15	
Aroclor-1260	B			100.0	97.07	pg/ul	-3	15	
TCMX	B	12088	13227	20.00	21.88	pg/ul	9	15	
Decachlorobiphenyl	B	17696	11089	20.00	15.20	pg/ul	<b>-24</b>	15	c-

MA 08/19/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/19/13

--low bias c=CCV

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 233295617

Instrument : GC16  
 Method : EPA 8082

Begun : 07/24/13 06:57  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	205_001	X	HEX			07/24/13 06:57	1.0	
002	205_002	CCV	PCB250_50			07/24/13 07:25	1.0	1
003	205_003	CCV	PCB100_20			07/24/13 08:17	1.0	2
004	205_004	X	PRIMER			07/24/13 10:13	1.0	
005	205_005	X	PRIMER			07/24/13 10:42	1.0	
006	205_006	X	PRIMER			07/24/13 11:10	1.0	
007	205_007	X	PRIMER			07/24/13 11:38	1.0	
008	205_008	X	HEX			07/24/13 12:06	1.0	
009	205_009	X	HEX			07/24/13 12:35	1.0	
010	205_010	X	HEX			07/24/13 13:03	1.0	
011	205_011	X	HEX			07/24/13 13:32	1.0	
012	205_012	IB	CAL			07/24/13 14:00	1.0	
013	205_013	ICAL	PCB10_2			07/24/13 14:28	1.0	3
014	205_014	ICAL	PCB25_5			07/24/13 14:57	1.0	4
015	205_015	ICAL	PCB100_20			07/24/13 15:25	1.0	2
016	205_016	ICAL	PCB250_50			07/24/13 15:54	1.0	1
017	205_017	ICAL	PCB500_100			07/24/13 16:22	1.0	5
018	205_018	ICAL	PCB750_150			07/24/13 16:50	1.0	6
019	205_019	ICAL	PCB1000_200			07/24/13 17:19	1.0	7
020	205_020	X	HEX			07/24/13 17:47	1.0	
021	205_021	ICV	ULTRA_1660			07/24/13 18:16	1.0	8
022	205_022	X	ICV			07/24/13 18:44	1.0	8
023	205_023	X	HEX			07/24/13 19:13	1.0	
024	205_024	X	HEX			07/24/13 19:41	1.0	
025	205_025	IB	CAL			07/24/13 20:10	1.0	
026	205_026	ICAL	AR1242_10			07/24/13 20:38	1.0	9
027	205_027	ICAL	AR1242_100			07/24/13 21:07	1.0	10
028	205_028	ICAL	AR1242_100			07/24/13 21:35	1.0	10
029	205_029	ICAL	AR1242_250			07/24/13 22:03	1.0	11
030	205_030	ICAL	AR1242_250			07/24/13 22:32	1.0	11
031	205_031	ICAL	AR1242_500			07/24/13 23:00	1.0	12
032	205_032	ICAL	AR1242_1000			07/24/13 23:29	1.0	13
033	205_033	X	HEX			07/24/13 23:57	1.0	
034	205_034	ICV	ULTRA_1242			07/25/13 00:26	1.0	14
035	205_035	X	ICV			07/25/13 00:54	1.0	14
036	205_036	X	HEX			07/25/13 01:23	1.0	
037	205_037	CCV	PCB100_20			07/25/13 01:51	1.0	2
038	205_038	CCV	AR1242_100			07/25/13 02:20	1.0	10
039	205_039	SAMPLE	246924-009	Water	200611	07/25/13 02:48	1.0	
040	205_040	SAMPLE	247160-075	Soil	200876	07/25/13 03:17	1.0	
041	205_041	SAMPLE	247160-076	Soil	200876	07/25/13 03:45	1.0	
042	205_042	SAMPLE	247160-078	Soil	200876	07/25/13 04:13	1.0	
043	205_043	SAMPLE	247160-079	Soil	200876	07/25/13 04:42	1.0	
044	205_044	SAMPLE	247160-080	Soil	200876	07/25/13 05:10	1.0	
045	205_045	SAMPLE	247160-081	Soil	200876	07/25/13 05:39	1.0	
046	205_046	SAMPLE	247160-087	Soil	200876	07/25/13 06:07	1.0	
047	205_047	SAMPLE	247160-088	Soil	200876	07/25/13 06:36	1.0	
048	205_048	SAMPLE	247160-089	Soil	200876	07/25/13 07:04	1.0	
049	205_049	CCV	PCB250_50			07/25/13 07:32	1.0	1
050	205_050	X	CCV			07/25/13 08:01	1.0	1
051	205_051	CCV	AR1242_250			07/25/13 08:29	1.0	11
052	205_052	CCV	AR1254_250			07/25/13 15:41	1.0	15

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 233295617

Instrument : GC16  
 Method : EPA 8082

Begun : 07/24/13 06:57  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
053	205_053	SAMPLE	247160-082	Soil	200876	07/25/13 16:09	1.0	
054	205_054	SAMPLE	247160-083	Soil	200876	07/25/13 16:37	1.0	
055	205_055	SAMPLE	247160-084	Soil	200876	07/25/13 17:06	1.0	
056	205_056	SAMPLE	247160-085	Soil	200876	07/25/13 17:34	1.0	
057	205_057	SAMPLE	247160-090	Soil	200920	07/25/13 18:02	1.0	
058	205_058	SAMPLE	247160-092	Soil	200920	07/25/13 18:30	1.0	
059	205_059	SAMPLE	247160-093	Soil	200920	07/25/13 18:58	1.0	
060	205_060	CCV	PCB100_20			07/25/13 19:26	1.0	2
061	205_061	X	CCV			07/25/13 19:55	1.0	2
062	205_062	CCV	AR1254_250			07/25/13 20:23	1.0	15

MA 07/26/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 62.

Standards used: 1=S22538 2=S22814 3=S22289 4=S22295 5=S22292 6=S22293 7=S22294 8=S22309 9=S22619 10=S22620 11=S22621  
 12=S22622 13=S22623 14=S22067 15=S22505







REPORTING SUMMARY FOR 248030 PCBS Water

Sample ID	Analyte	Inst ID	Ch	Date & Time
248030-038	Aroclor-1016	GC16	A	08/18/13 16:10
248030-038	Aroclor-1221	GC16	A	08/18/13 16:10
248030-038	Aroclor-1232	GC16	A	08/18/13 16:10
248030-038	Aroclor-1242	GC16	A	08/18/13 16:10
248030-038	Aroclor-1248	GC16	A	08/18/13 16:10
248030-038	Aroclor-1254	GC16	A	08/18/13 16:10
248030-038	Aroclor-1260	GC16	A	08/18/13 16:10
248030-038	TCMX	GC16	A	08/18/13 16:10
248030-038	Decachlorobiphenyl	GC16	A	08/18/13 16:10
QC702411	Aroclor-1016	GC16	A	08/18/13 14:17
QC702411	Aroclor-1221	GC16	A	08/18/13 14:17
QC702411	Aroclor-1232	GC16	A	08/18/13 14:17
QC702411	Aroclor-1242	GC16	A	08/18/13 14:17
QC702411	Aroclor-1248	GC16	A	08/18/13 14:17
QC702411	Aroclor-1254	GC16	A	08/18/13 14:17
QC702411	Aroclor-1260	GC16	A	08/18/13 14:17
QC702411	TCMX	GC16	A	08/18/13 14:17
QC702411	Decachlorobiphenyl	GC16	A	08/18/13 14:17
QC702412	Aroclor-1016	GC16	A	08/18/13 14:45
QC702412	Aroclor-1260	GC16	A	08/18/13 14:45
QC702412	TCMX	GC16	A	08/18/13 14:45
QC702412	Decachlorobiphenyl	GC16	A	08/18/13 14:45
QC702413	Aroclor-1016	GC16	A	08/18/13 15:14
QC702413	Aroclor-1260	GC16	A	08/18/13 15:14
QC702413	TCMX	GC16	A	08/18/13 15:14
QC702413	Decachlorobiphenyl	GC16	A	08/18/13 15:14

Laboratory Job Number 248030

ANALYTICAL REPORT

PCBs

Matrix: Soil

### Polychlorinated Biphenyls (PCBs)

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID: IA-08A	Batch#: 201793
Type: SAMPLE	Chemist: MA
Lab ID: 248030-002	Prepared: 08/16/13
Moisture: 5%	Analyzed: 08/16/13
Diln Fac: 5.000	

Analyte	Result	RL
Aroclor-1016	ND	44
Aroclor-1221	ND	87
Aroclor-1232	ND	44
Aroclor-1242	ND	44
Aroclor-1248	ND	44
Aroclor-1254	ND	44
Aroclor-1260	ND	44

Surrogate	%REC	Limits
TCMX	68	66-142
Decachlorobiphenyl	65	43-139

Field ID: IA-08B	Batch#: 201793
Type: SAMPLE	Chemist: MA
Lab ID: 248030-003	Prepared: 08/16/13
Moisture: 13%	Analyzed: 08/16/13
Diln Fac: 1.000	

Analyte	Result	RL
Aroclor-1016	ND	14
Aroclor-1221	ND	27
Aroclor-1232	ND	14
Aroclor-1242	ND	14
Aroclor-1248	ND	14
Aroclor-1254	ND	14
Aroclor-1260	ND	14

Surrogate	%REC	Limits
TCMX	92	66-142
Decachlorobiphenyl	61	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

### Polychlorinated Biphenyls (PCBs)

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID: IA-11A	Batch#: 201793
Type: SAMPLE	Chemist: MA
Lab ID: 248030-004	Prepared: 08/16/13
Moisture: 11%	Analyzed: 08/16/13
Diln Fac: 1.000	

Analyte	Result	RL
Aroclor-1016	ND	13
Aroclor-1221	ND	27
Aroclor-1232	ND	13
Aroclor-1242	ND	13
Aroclor-1248	ND	13
Aroclor-1254	ND	13
Aroclor-1260	ND	13

Surrogate	%REC	Limits
TCMX	91	66-142
Decachlorobiphenyl	58	43-139

Field ID: IA-11B	Batch#: 201793
Type: SAMPLE	Chemist: MA
Lab ID: 248030-005	Prepared: 08/16/13
Moisture: 18%	Analyzed: 08/16/13
Diln Fac: 1.000	

Analyte	Result	RL
Aroclor-1016	ND	15
Aroclor-1221	ND	29
Aroclor-1232	ND	15
Aroclor-1242	ND	15
Aroclor-1248	ND	15
Aroclor-1254	ND	15
Aroclor-1260	ND	15

Surrogate	%REC	Limits
TCMX	102	66-142
Decachlorobiphenyl	66	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit  
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Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-03	Batch#:	201793
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-009	Prepared:	08/16/13
Moisture:	8%	Analyzed:	08/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	13
Aroclor-1221	ND	26
Aroclor-1232	ND	13
Aroclor-1242	ND	13
Aroclor-1248	ND	13
Aroclor-1254	140	13
Aroclor-1260	130	13

Surrogate	%REC	Limits
TCMX	69	66-142
Decachlorobiphenyl	32 *	43-139

Field ID:	IA-10A	Batch#:	201793
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-011	Prepared:	08/16/13
Moisture:	8%	Analyzed:	08/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	13
Aroclor-1221	ND	26
Aroclor-1232	ND	13
Aroclor-1242	ND	13
Aroclor-1248	ND	13
Aroclor-1254	ND	13
Aroclor-1260	76	13

Surrogate	%REC	Limits
TCMX	100	66-142
Decachlorobiphenyl	51	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

### Polychlorinated Biphenyls (PCBs)

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-10B	Batch#:	201793
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-012	Prepared:	08/16/13
Moisture:	14%	Analyzed:	08/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	14
Aroclor-1221	ND	28
Aroclor-1232	ND	14
Aroclor-1242	ND	14
Aroclor-1248	ND	14
Aroclor-1254	ND	14
Aroclor-1260	ND	14

Surrogate	%REC	Limits
TCMX	105	66-142
Decachlorobiphenyl	61	43-139

Field ID:	IA-14A	Batch#:	201793
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-014	Prepared:	08/16/13
Moisture:	9%	Analyzed:	08/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	13
Aroclor-1221	ND	26
Aroclor-1232	ND	13
Aroclor-1242	ND	13
Aroclor-1248	ND	13
Aroclor-1254	70	13
Aroclor-1260	97	13

Surrogate	%REC	Limits
TCMX	77	66-142
Decachlorobiphenyl	47	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit  
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Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-14B	Batch#:	201793
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-015	Prepared:	08/16/13
Moisture:	15%	Analyzed:	08/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	14
Aroclor-1221	ND	28
Aroclor-1232	ND	14
Aroclor-1242	ND	14
Aroclor-1248	ND	14
Aroclor-1254	ND	14
Aroclor-1260	ND	14

Surrogate	%REC	Limits
TCMX	75	66-142
Decachlorobiphenyl	70	43-139

Field ID:	IA-7	Batch#:	201793
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-016	Prepared:	08/16/13
Moisture:	7%	Analyzed:	08/16/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	13
Aroclor-1221	ND	25
Aroclor-1232	ND	13
Aroclor-1242	ND	13
Aroclor-1248	ND	13
Aroclor-1254	22	13
Aroclor-1260	ND	13

Surrogate	%REC	Limits
TCMX	85	66-142
Decachlorobiphenyl	24 *	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit  
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Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-6	Batch#:	201793
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-017	Prepared:	08/16/13
Moisture:	6%	Analyzed:	08/17/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	13
Aroclor-1221	ND	26
Aroclor-1232	ND	13
Aroclor-1242	ND	13
Aroclor-1248	ND	13
Aroclor-1254	ND	13
Aroclor-1260	ND	13

Surrogate	%REC	Limits
TCMX	98	66-142
Decachlorobiphenyl	61	43-139

Field ID:	IA-15	Batch#:	201896
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-021	Prepared:	08/19/13
Moisture:	8%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	13
Aroclor-1221	ND	26
Aroclor-1232	ND	13
Aroclor-1242	ND	13
Aroclor-1248	ND	13
Aroclor-1254	ND	13
Aroclor-1260	26	13

Surrogate	%REC	Limits
TCMX	83	66-142
Decachlorobiphenyl	67	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit  
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### Polychlorinated Biphenyls (PCBs)

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID: IA-16	Batch#: 201793
Type: SAMPLE	Chemist: MA
Lab ID: 248030-026	Prepared: 08/16/13
Moisture: 0%	Analyzed: 08/17/13
Diln Fac: 1.000	

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits
TCMX	97	66-142
Decachlorobiphenyl	48	43-139

Field ID: IA-17	Batch#: 201793
Type: SAMPLE	Chemist: MA
Lab ID: 248030-027	Prepared: 08/16/13
Moisture: 7%	Analyzed: 08/19/13
Diln Fac: 10.00	

Analyte	Result	RL
Aroclor-1016	ND	90
Aroclor-1221	ND	180
Aroclor-1232	ND	90
Aroclor-1242	ND	90
Aroclor-1248	ND	90
Aroclor-1254	5,200	90
Aroclor-1260	860	90

Surrogate	%REC	Limits
TCMX	DO	66-142
Decachlorobiphenyl	DO	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit  
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Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-38D	Batch#:	201867
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-030	Prepared:	08/19/13
Moisture:	31%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	14
Aroclor-1221	ND	28
Aroclor-1232	ND	14
Aroclor-1242	ND	14
Aroclor-1248	ND	14
Aroclor-1254	ND	14
Aroclor-1260	40	14

Surrogate	%REC	Limits
TCMX	86	66-142
Decachlorobiphenyl	72	43-139

Field ID:	IA-25D	Batch#:	201867
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-031	Prepared:	08/19/13
Moisture:	55%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	21
Aroclor-1221	ND	42
Aroclor-1232	ND	21
Aroclor-1242	ND	21
Aroclor-1248	ND	21
Aroclor-1254	ND	21
Aroclor-1260	140	21

Surrogate	%REC	Limits
TCMX	83	66-142
Decachlorobiphenyl	66	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-32D	Batch#:	201867
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-032	Prepared:	08/19/13
Moisture:	53%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	20
Aroclor-1221	ND	41
Aroclor-1232	ND	20
Aroclor-1242	ND	20
Aroclor-1248	ND	20
Aroclor-1254	ND	20
Aroclor-1260	220	20

Surrogate	%REC	Limits
TCMX	94	66-142
Decachlorobiphenyl	60	43-139

Field ID:	IA-26	Batch#:	201867
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-033	Prepared:	08/19/13
Moisture:	16%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	11
Aroclor-1221	ND	23
Aroclor-1232	ND	11
Aroclor-1242	ND	11
Aroclor-1248	ND	11
Aroclor-1254	ND	11
Aroclor-1260	ND	11

Surrogate	%REC	Limits
TCMX	87	66-142
Decachlorobiphenyl	40 *	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

**Polychlorinated Biphenyls (PCBs)**

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-33A	Batch#:	201867
Type:	SAMPLE	Chemist:	TFB
Lab ID:	248030-034	Prepared:	08/19/13
Moisture:	5%	Analyzed:	08/19/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	10
Aroclor-1221	ND	20
Aroclor-1232	ND	10
Aroclor-1242	ND	10
Aroclor-1248	ND	10
Aroclor-1254	ND	10
Aroclor-1260	ND	10

Surrogate	%REC	Limits
TCMX	105	66-142
Decachlorobiphenyl	5 *	43-139

Field ID:	IA-33B	Batch#:	201867
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-035	Prepared:	08/19/13
Moisture:	10%	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	11
Aroclor-1221	ND	21
Aroclor-1232	ND	11
Aroclor-1242	ND	11
Aroclor-1248	ND	11
Aroclor-1254	430	11
Aroclor-1260	32	11

Surrogate	%REC	Limits
TCMX	97	66-142
Decachlorobiphenyl	53	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID:	IA-29A	Batch#:	201867
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-036	Prepared:	08/19/13
Moisture:	6%	Analyzed:	08/19/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	10
Aroclor-1221	ND	20
Aroclor-1232	ND	10
Aroclor-1242	ND	10
Aroclor-1248	ND	10
Aroclor-1254	ND	10
Aroclor-1260	ND	10

Surrogate	%REC	Limits
TCMX	76	66-142
Decachlorobiphenyl	21 *	43-139

Field ID:	IA-29B	Batch#:	201867
Type:	SAMPLE	Chemist:	MA
Lab ID:	248030-037	Prepared:	08/19/13
Moisture:	8%	Analyzed:	08/19/13
Diln Fac:	1.000		

Analyte	Result	RL
Aroclor-1016	ND	10
Aroclor-1221	ND	21
Aroclor-1232	ND	10
Aroclor-1242	ND	10
Aroclor-1248	ND	10
Aroclor-1254	ND	10
Aroclor-1260	24	10

Surrogate	%REC	Limits
TCMX	102	66-142
Decachlorobiphenyl	22 *	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

### Polychlorinated Biphenyls (PCBs)

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID: IA-20	Batch#: 201867
Type: SAMPLE	Chemist: MA
Lab ID: 248030-039	Prepared: 08/19/13
Moisture: 1%	Analyzed: 08/19/13
Diln Fac: 1.000	

Analyte	Result	RL
Aroclor-1016	ND	9.7
Aroclor-1221	ND	19
Aroclor-1232	ND	9.7
Aroclor-1242	ND	9.7
Aroclor-1248	ND	9.7
Aroclor-1254	ND	9.7
Aroclor-1260	12	9.7

Surrogate	%REC	Limits
TCMX	96	66-142
Decachlorobiphenyl	20 *	43-139

Field ID: IA-22	Batch#: 201867
Type: SAMPLE	Chemist: MA
Lab ID: 248030-040	Prepared: 08/19/13
Moisture: 1%	Analyzed: 08/19/13
Diln Fac: 1.000	

Analyte	Result	RL
Aroclor-1016	ND	9.7
Aroclor-1221	ND	19
Aroclor-1232	ND	9.7
Aroclor-1242	ND	9.7
Aroclor-1248	ND	9.7
Aroclor-1254	120	9.7
Aroclor-1260	29	9.7

Surrogate	%REC	Limits
TCMX	103	66-142
Decachlorobiphenyl	27 *	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

### Polychlorinated Biphenyls (PCBs)

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Field ID: IA-27	Batch#: 201867
Type: SAMPLE	Chemist: MA
Lab ID: 248030-041	Prepared: 08/19/13
Moisture: 1%	Analyzed: 08/19/13
Diln Fac: 1.000	

Analyte	Result	RL
Aroclor-1016	ND	9.6
Aroclor-1221	ND	19
Aroclor-1232	ND	9.6
Aroclor-1242	ND	9.6
Aroclor-1248	ND	9.6
Aroclor-1254	120	9.6
Aroclor-1260	39	9.6

Surrogate	%REC	Limits
TCMX	103	66-142
Decachlorobiphenyl	31 *	43-139

Field ID: IA-28	Batch#: 201867
Type: SAMPLE	Chemist: MA
Lab ID: 248030-042	Prepared: 08/19/13
Moisture: 1%	Analyzed: 08/19/13
Diln Fac: 1.000	

Analyte	Result	RL
Aroclor-1016	ND	9.6
Aroclor-1221	ND	19
Aroclor-1232	ND	9.6
Aroclor-1242	ND	9.6
Aroclor-1248	ND	9.6
Aroclor-1254	ND	9.6
Aroclor-1260	36	9.6

Surrogate	%REC	Limits
TCMX	76	66-142
Decachlorobiphenyl	31 *	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit



Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Type:	BLANK	Chemist:	MA
Lab ID:	QC702253	Prepared:	08/16/13
Diln Fac:	1.000	Analyzed:	08/16/13
Batch#:	201793		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits
TCMX	101	66-142
Decachlorobiphenyl	79	43-139

Type:	BLANK	Chemist:	MA
Lab ID:	QC702594	Prepared:	08/19/13
Diln Fac:	1.000	Analyzed:	08/19/13
Batch#:	201867		

Analyte	Result	RL
Aroclor-1016	ND	9.6
Aroclor-1221	ND	19
Aroclor-1232	ND	9.6
Aroclor-1242	ND	9.6
Aroclor-1248	ND	9.6
Aroclor-1254	ND	9.6
Aroclor-1260	ND	9.6

Surrogate	%REC	Limits
TCMX	93	66-142
Decachlorobiphenyl	74	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

### Polychlorinated Biphenyls (PCBs)

Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	08/15/13
Units:	ug/Kg	Received:	08/15/13
Basis:	dry		

Type:	BLANK	Chemist:	MA
Lab ID:	QC702714	Prepared:	08/19/13
Diln Fac:	1.000	Analyzed:	08/20/13
Batch#:	201896		

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits
TCMX	89	66-142
Decachlorobiphenyl	73	43-139

\*= Value outside of QC limits; see narrative  
 DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Type:	LCS	Batch#:	201793
Lab ID:	QC702254	Chemist:	MA
Matrix:	Soil	Prepared:	08/16/13
Units:	ug/Kg	Analyzed:	08/16/13
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	165.0	152.5	92	64-143
Aroclor-1260	165.0	177.8	108	58-146

Surrogate	%REC	Limits
TCMX	88	66-142
Decachlorobiphenyl	84	43-139



## Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Type:	LCS	Batch#:	201867
Lab ID:	QC702595	Chemist:	MA
Matrix:	Soil	Prepared:	08/19/13
Units:	ug/Kg	Analyzed:	08/19/13
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	165.8	153.7	93	64-143
Aroclor-1260	165.8	139.6	84	58-146

Surrogate	%REC	Limits
TCMX	92	66-142
Decachlorobiphenyl	75	43-139



## Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Type:	LCS	Batch#:	201896
Lab ID:	QC702715	Chemist:	MA
Matrix:	Soil	Prepared:	08/19/13
Units:	ug/Kg	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	167.2	152.2	91	64-143
Aroclor-1260	167.2	161.2	96	58-146

Surrogate	%REC	Limits
TCMX	92	66-142
Decachlorobiphenyl	83	43-139

## Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Field ID:	ZZZZZZZZZZ	Batch#:	201896
MSS Lab ID:	248123-001	Chemist:	MA
Matrix:	Soil	Sampled:	08/19/13
Units:	ug/Kg	Received:	08/19/13
Basis:	as received	Prepared:	08/19/13
Diln Fac:	1.000	Analyzed:	08/20/13

Type: MS Lab ID: QC702716

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<2.986	167.8	152.0	91	50-150
Aroclor-1260	<0.9786	167.8	129.4	77	50-150

Surrogate	%REC	Limits
TCMX	97	66-142
Decachlorobiphenyl	58	43-139

Type: MSD Lab ID: QC702717

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	167.2	173.5	104	50-150	14	50
Aroclor-1260	167.2	167.3	100	50-150	26	50

Surrogate	%REC	Limits
TCMX	103	66-142
Decachlorobiphenyl	75	43-139

RPD= Relative Percent Difference

Confirmation Report for 248030 PCBS Soil  
Curtis & Tompkins Laboratories

Units: ug/Kg

Lab ID	Client ID	Analyte	Result	Confirmation	RPD	%D
248030-009	IA-03	Aroclor-1254	137.4	348.7	87	154
248030-009	IA-03	Aroclor-1260	130.8	103.4	23	-21
248030-011	IA-10A	Aroclor-1260	75.65	66.86	12	-12
248030-014	IA-14A	Aroclor-1254	70.23	195.9	94	179
248030-014	IA-14A	Aroclor-1260	97.21	40.23	83	-59
248030-016	IA-7	Aroclor-1254	22.28	37.70	51	69
248030-021	IA-15	Aroclor-1260	25.55	22.12	14	-13
248030-022	IA-24A	Aroclor-1260	17.58	8.491	70	-52
248030-025	IA-12	Aroclor-1254	248.6	395.3	46	59
248030-027	IA-17	Aroclor-1254	5208	2321	77	-55
248030-027	IA-17	Aroclor-1260	861.2	839.0	3	-3
248030-029	IA-23D	Aroclor-1254	78.85	128.1	48	62
248030-029	IA-23D	Aroclor-1260	44.91	39.40	13	-12
248030-030	IA-38D	Aroclor-1260	39.81	37.67	6	-5
248030-031	IA-25D	Aroclor-1260	138.0	63.65	74	-54
248030-032	IA-32D	Aroclor-1260	222.9	262.9	16	18
248030-035	IA-33B	Aroclor-1254	428.1	392.2	9	-8
248030-035	IA-33B	Aroclor-1260	32.31	26.33	20	-19
248030-037	IA-29B	Aroclor-1260	23.60	23.64	0	0
248030-039	IA-20	Aroclor-1260	12.28	14.76	18	20
248030-040	IA-22	Aroclor-1254	120.5	82.27	38	-32
248030-040	IA-22	Aroclor-1260	29.04	29.22	1	1
248030-041	IA-27	Aroclor-1254	117.0	66.35	55	-43
248030-041	IA-27	Aroclor-1260	38.84	34.81	11	-10
248030-042	IA-28	Aroclor-1260	36.24	91.99	87	154
248030-043	IA-30	Aroclor-1254	265.0	141.1	61	-47
248030-043	IA-30	Aroclor-1260	732.1	659.2	10	-10
248030-044	IA-31	Aroclor-1254	96.83	69.46	33	-28
248030-044	IA-31	Aroclor-1260	38.45	32.60	16	-15

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 PCBS Soil: EPA 8082

Inst : GC06  
 Calnum : 203310428001  
 Units : pg/uL

Name : 1660\_215  
 Date : 03-AUG-2013 19:46  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	215_010	203310428010	PCB10_2	03-AUG-2013 19:46	S22289
L2	215_011	203310428011	PCB25_5	03-AUG-2013 20:14	S22295
L3	215_012	203310428012	PCB100_20	03-AUG-2013 20:41	S22814
L4	215_013	203310428013	PCB250_50	03-AUG-2013 21:09	S22538
L5	215_014	203310428014	PCB500_100	03-AUG-2013 21:36	S22292
L6	215_015	203310428015	PCB750_150	03-AUG-2013 22:04	S22293

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r <sup>2</sup>	MnR <sup>2</sup>	MxRSD	Flg
Aroclor-1016 Peak # 1	A	670.70	809.88	468.39	454.49	463.90		LNLR	-8.2749	0.00221		573.47	0.999	.99	20	
Aroclor-1016 Peak # 2	A	912.60	1040.8	568.53	599.34	615.98		LNLR	-5.1559	0.00166		747.45	0.998	.99	20	
Aroclor-1016 Peak # 3	A	566.70	607.84	364.41	365.12	383.45		LNLR	-4.3223	0.00266		457.50	0.998	.99	20	
Aroclor-1016 Peak # 4	A	329.90	344.60	210.06	197.71	208.72		LNLR	-6.8221	0.00492		258.20	0.998	.99	20	
Aroclor-1016 Peak # 5	A	436.20	517.72	296.08	300.18	315.37		LNLR	-4.1333	0.00324		373.11	0.998	.99	20	
Aroclor-1260 Peak # 1	A	1795.2	1890.3	1010.2	993.22	1013.0		LNLR	-10.372	0.00102		1340.4	0.998	.99	20	
Aroclor-1260 Peak # 2	A	1161.7	1243.0	730.32	733.99	771.76		LNLR	-4.5133	0.00132		928.15	0.998	.99	20	
Aroclor-1260 Peak # 3	A	1231.9	1090.8	610.99	616.54	661.80		LNLR	-4.9890	0.00155		842.40	0.996	.99	20	
Aroclor-1260 Peak # 4	A	2629.0	2771.5	1493.9	1564.3	1661.8		LNLR	-3.6707	6.16E-4		2024.1	0.997	.99	20	
Aroclor-1260 Peak # 5	A	901.10	1114.5	666.60	722.13	782.03	938.58	AVRG	0.00117			854.15	19	.99	20	
TCMX	A	15409	17325	10258	10494	11086		LNLR	-0.5741	9.20E-5		12914	0.998	.99	20	
Decachlorobiphenyl	A	21758	23799	12846	13162	12847		LNLR	-2.2682	7.97E-5		16882	0.999	.99	20	
Aroclor-1016 Peak # 1	B	10365	8018.4	4497.1	4905.3	5447.6		LNLR	0.29925	1.88E-4		6646.7	0.994	.99	20	
Aroclor-1016 Peak # 2	B	3632.3	2887.5	1908.7	2149.6	2354.3		LNLR	3.94351	4.30E-4		2586.5	0.996	.99	20	
Aroclor-1016 Peak # 3	B	1020.5	2336.9	1403.1	1438.3	1649.7		LNLR	5.88554	6.14E-4		1569.7	0.994	.99	20	
Aroclor-1016 Peak # 4	B	2048.1	1733.6	1067.3	1139.7	1204.0		LNLR	-1.8185	8.46E-4		1438.5	0.997	.99	20	
Aroclor-1016 Peak # 5	B	3920.6	3310.2	2032.1	1974.8	2323.5		LNLR	1.74075	4.42E-4		2712.2	0.991	.99	20	
Aroclor-1260 Peak # 1	B	15923	15484	8233.9	8821.0	9875.4	11051	LNLR	13.0990	9.26E-5		11565	0.991	.99	20	
Aroclor-1260 Peak # 2	B	12457	13167	6835.2	7281.0	8061.6		LNLR	-0.5442	1.27E-4		9560.5	0.994	.99	20	
Aroclor-1260 Peak # 3	B	9850.2	10173	6348.4	7406.0	7565.5	8837.5	AVRG				8363.4	18	.99	20	
Aroclor-1260 Peak # 4	B	10572	10659	6064.1	6266.0	6384.5		LNLR	-6.6889	1.60E-4		7989.1	0.998	.99	20	
Aroclor-1260 Peak # 5	B	23787	22899	12303	13638	14071		LNLR	-3.8669	7.24E-5		17339	0.997	.99	20	
TCMX	B	109531	119002	71918	68164	68396	75613	LNLR	0.19654	1.37E-5		85437	0.995	.99	20	
Decachlorobiphenyl	B	154628	177668	92536	93871	93661	104499	LNLR	0.38974	9.90E-6		119477	0.994	.99	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aroclor-1016 Peak # 1	A	10.000	-35	25.000	46	100.00	-5	250.00	-3	500.00	1		
Aroclor-1016 Peak # 2	A	10.000	0	25.000	52	100.00	-11	250.00	-3	500.00	1		
Aroclor-1016 Peak # 3	A	10.000	8	25.000	45	100.00	-7	250.00	-4	500.00	1		
Aroclor-1016 Peak # 4	A	10.000	-6	25.000	42	100.00	-3	250.00	-5	500.00	1		
Aroclor-1016 Peak # 5	A	10.000	0	25.000	51	100.00	-8	250.00	-4	500.00	1		
Aroclor-1260 Peak # 1	A	10.000	-21	25.000	51	100.00	-8	250.00	-3	500.00	1		
Aroclor-1260 Peak # 2	A	10.000	9	25.000	47	100.00	-8	250.00	-5	500.00	1		
Aroclor-1260 Peak # 3	A	10.000	41	25.000	49	100.00	-10	250.00	-6	500.00	2		
Aroclor-1260 Peak # 4	A	10.000	25	25.000	56	100.00	-12	250.00	-5	500.00	2		
Aroclor-1260 Peak # 5	A	10.000	5	25.000	30	100.00	-22	250.00	-15	500.00	-8	750.00	10
TCMX	A	2.0000	13	5.0000	48	20.000	-9	50.000	-5	100.00	1		
Decachlorobiphenyl	A	2.0000	-40	5.0000	44	20.000	-9	50.000	0	100.00	0		
Aroclor-1016 Peak # 1	B	10.000	98	25.000	52	100.00	-15	250.00	-8	500.00	2		
Aroclor-1016 Peak # 2	B	10.000	95	25.000	40	100.00	-14	250.00	-6	500.00	2		
Aroclor-1016 Peak # 3	B	10.000	22	25.000	67	100.00	-8	250.00	-9	500.00	2		
Aroclor-1016 Peak # 4	B	10.000	55	25.000	39	100.00	-12	250.00	-4	500.00	1		
Aroclor-1016 Peak # 5	B	10.000	91	25.000	53	100.00	-8	250.00	-12	500.00	3		
Aroclor-1260 Peak # 1	B	10.000	179	25.000	96	100.00	-11	250.00	-13	500.00	-6	750.00	4
Aroclor-1260 Peak # 2	B	10.000	53	25.000	65	100.00	-14	250.00	-8	500.00	2		
Aroclor-1260 Peak # 3	B	10.000	18	25.000	22	100.00	-24	250.00	-11	500.00	-10	750.00	6
Aroclor-1260 Peak # 4	B	10.000	2	25.000	44	100.00	-10	250.00	-2	500.00	1		
Aroclor-1260 Peak # 5	B	10.000	34	25.000	50	100.00	-15	250.00	-3	500.00	1		
TCMX	B	2.0000	60	5.0000	67	20.000	-1	50.000	-6	100.00	-6	150.00	3
Decachlorobiphenyl	B	2.0000	73	5.0000	84	20.000	-6	50.000	-6	100.00	-7	150.00	4

MA 08/06/13 : Corrected automatically drawn baseline in all levels.

MA 08/06/13 : Dropped high points to improve %rsd/r^2

Analyst: MA

Date: 08/06/13

Reviewer: EAH

Date: 08/07/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor; LINR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06  
Calnum : 203310428001

Name : 1660\_215  
Cal Date : 03-AUG-2013

ICV 203310428018 (215\_018 03-AUG-2013) stds: S22989

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aroclor-1016	A	250.0	242.1	pg/uL	-3	15	
Aroclor-1260	A	250.0	224.9	pg/uL	-10	15	
Aroclor-1016	B	250.0	223.7	pg/uL	-11	15	
Aroclor-1260	B	250.0	219.5	pg/uL	-12	15	

Analyst: MA

Date: 08/06/13

Reviewer: EAH

Date: 08/06/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 PCBS Soil: EPA 8082

Inst : GC06  
 Calnum : 203327421001  
 Units : pg/uL  
 Name : 2154\_227\_7pt  
 Date : 15-AUG-2013 14:32

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	227_008	203327421008	AR2154_10	15-AUG-2013 14:59	S22503
L2	227_009	203327421009	AR2154_50	15-AUG-2013 15:27	S22504 (2X)
L3	227_010	203327421010	AR2154_100	15-AUG-2013 15:55	S22504
L4	227_011	203327421011	AR2154_125	15-AUG-2013 16:22	S22505 (2X)
L5	227_012	203327421012	AR2154_250	15-AUG-2013 16:50	S22505
L6	227_013	203327421013	AR2154_500	15-AUG-2013 17:17	S22506
L7	227_014	203327421014	AR2154_1000	15-AUG-2013 17:45	S22507

Analyte	Ch	L1	L2	L3	L4	L5	L6	L7	Type	X	a0	a1	a2	Avg	r^2	MnR^2	MxRSD	Flg
Aroclor-1221 Peak # 1	A	47.200	53.160	52.290	52.192	53.212	66.976	54.079	AVRG	R	0.01846	0.01846		54.158	11	.99	20	
Aroclor-1221 Peak # 2	A	146.90	144.94	147.32	149.82	137.89	170.17	126.66	AVRG	R	0.00684	0.00684		146.24	9	.99	20	
Aroclor-1221 Peak # 3	A	100.50	95.940	95.260	96.320	91.708	112.17	83.748	AVRG	R	0.01036	0.01036		96.521	9	.99	20	
Aroclor-1221 Peak # 4	A	420.90	396.14	386.30	385.06	355.91	415.23	303.26	AVRG	R	0.00263	0.00263		380.40	11	.99	20	
Aroclor-1221 Peak # 5	A	38.600	43.940	43.080	45.864	47.700	57.092	44.183	AVRG	R	0.02184	0.02184		45.780	12	.99	20	
Aroclor-1254 Peak # 1	A	541.20	488.92	467.84	471.06	426.36	490.79	370.79	AVRG	R	0.00215	0.00215		465.28	12	.99	20	
Aroclor-1254 Peak # 2	A	747.60	692.24	671.11	689.79	599.00	680.44	514.71	AVRG	R	0.00152	0.00152		656.41	12	.99	20	
Aroclor-1254 Peak # 3	A	731.00	473.54	468.59	511.70	431.31	530.17		AVRG	R	0.00191	0.00191		524.38	20	.99	20	
Aroclor-1254 Peak # 4	A	1014.9	829.42	877.03	863.38	777.62	877.78	671.04	AVRG	R	0.00118	0.00118		844.45	12	.99	20	
Aroclor-1254 Peak # 5	A	787.30	756.38	715.42	792.66	679.49	760.65	601.05	AVRG	R	0.00137	0.00137		727.56	9	.99	20	
Aroclor-1221 Peak # 1	B	985.00	481.46	529.56	583.21	650.81	791.25		QUAD	A	1429.16	485.747	0.606896	670.21	1.000	.99	20	
Aroclor-1221 Peak # 2	B	263.90	301.12	331.96	297.35	329.14	328.56	283.39	AVRG	R	0.00328	0.00328		305.06	9	.99	20	
Aroclor-1221 Peak # 3	B	2320.5	1706.1	1574.7	1459.0	1453.0	1656.2	1339.7	AVRG	R	6.08E-4	6.08E-4		1644.2	20	.99	20	
Aroclor-1221 Peak # 4	B	234.10	121.66	216.91	183.10	317.75	301.25	246.08	QUAD	A	-11216	376.804	-0.11870	231.55	0.995	.99	20	
Aroclor-1221 Peak # 5	B	263.90	372.84	345.39	455.51	362.91	487.80	404.97	AVRG	R	0.00260	0.00260		384.76	19	.99	20	
Aroclor-1254 Peak # 1	B	3618.5	3958.5	4198.2	4335.1	3979.3	4697.7	3553.6	AVRG	R	2.47E-4	2.47E-4		4048.7	10	.99	20	
Aroclor-1254 Peak # 2	B	5920.2	5931.8	5999.2	6210.1	5367.3	6514.3	4861.9	AVRG	R	1.73E-4	1.73E-4		5786.4	9	.99	20	
Aroclor-1254 Peak # 3	B	2749.9	4348.5	3742.9	3821.2	3300.7	4233.8	3245.1	AVRG	R	2.75E-4	2.75E-4		3634.6	16	.99	20	
Aroclor-1254 Peak # 4	B	5110.9	6476.1	6651.4	6947.0	6077.5	7935.3	5934.5	AVRG	R	1.55E-4	1.55E-4		6447.5	14	.99	20	
Aroclor-1254 Peak # 5	B	4631.7	6391.8	6553.6	6494.2	6227.8	7452.1	6115.4	AVRG	R	1.60E-4	1.60E-4		6266.7	13	.99	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D
Aroclor-1221 Peak # 1	A	10.000	-13	50.000	-2	100.00	-3	125.00	-4	250.00	-2	500.00	24	1000.0	0
Aroclor-1221 Peak # 2	A	10.000	0	50.000	-1	100.00	1	125.00	2	250.00	-6	500.00	16	1000.0	-13
Aroclor-1221 Peak # 3	A	10.000	4	50.000	-1	100.00	-1	125.00	0	250.00	-5	500.00	16	1000.0	-13
Aroclor-1221 Peak # 4	A	10.000	11	50.000	4	100.00	2	125.00	1	250.00	-6	500.00	9	1000.0	-20
Aroclor-1221 Peak # 5	A	10.000	-16	50.000	-4	100.00	-6	125.00	0	250.00	4	500.00	25	1000.0	-3
Aroclor-1254 Peak # 1	A	10.000	16	50.000	5	100.00	1	125.00	1	250.00	-8	500.00	5	1000.0	-20
Aroclor-1254 Peak # 2	A	10.000	14	50.000	5	100.00	2	125.00	5	250.00	-9	500.00	4	1000.0	-22
Aroclor-1254 Peak # 3	A	10.000	39	50.000	-10	100.00	-11	125.00	-2	250.00	-18	500.00	1		
Aroclor-1254 Peak # 4	A	10.000	20	50.000	-2	100.00	4	125.00	2	250.00	-8	500.00	4	1000.0	-21
Aroclor-1254 Peak # 5	A	10.000	8	50.000	4	100.00	-2	125.00	9	250.00	-7	500.00	5	1000.0	-17
Aroclor-1221 Peak # 1	B	10.000	70	50.000	-12	100.00	-5	125.00	2	250.00	1	500.00	0		
Aroclor-1221 Peak # 2	B	10.000	-13	50.000	-1	100.00	9	125.00	-3	250.00	8	500.00	8	1000.0	-7
Aroclor-1221 Peak # 3	B	10.000	41	50.000	4	100.00	-4	125.00	-11	250.00	-12	500.00	1	1000.0	-19
Aroclor-1221 Peak # 4	B	10.000	264	50.000	-7	100.00	-10	125.00	-25	250.00	5	500.00	2	1000.0	-1
Aroclor-1221 Peak # 5	B	10.000	-31	50.000	-3	100.00	-10	125.00	18	250.00	-6	500.00	27	1000.0	5
Aroclor-1254 Peak # 1	B	10.000	-11	50.000	-2	100.00	4	125.00	7	250.00	-2	500.00	16	1000.0	-12
Aroclor-1254 Peak # 2	B	10.000	2	50.000	3	100.00	-2	125.00	7	250.00	-7	500.00	13	1000.0	-16
Aroclor-1254 Peak # 3	B	10.000	-24	50.000	20	100.00	3	125.00	5	250.00	-9	500.00	16	1000.0	-11
Aroclor-1254 Peak # 4	B	10.000	-21	50.000	0	100.00	3	125.00	8	250.00	-6	500.00	23	1000.0	-8
Aroclor-1254 Peak # 5	B	10.000	-26	50.000	2	100.00	5	125.00	4	250.00	-1	500.00	19	1000.0	-2

MA 08/16/13 : Corrected automatically drawn baseline in all levels.

MA 08/16/13 : Changed fit type and dropped high point to improve %rsd/r^2

Analyst: MA

Date: 08/16/13

Reviewer: EAH

Date: 08/16/13

K=A: Instrument response = a0 + amount \* a1 + amount^2 \* a2 (invert equation before quantitating); X=R: Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor; QUAD=Quadratic regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06  
Calnum : 203327421001

Name : 2154\_227\_7pt  
Cal Date : 15-AUG-2013

ICV 203327421016 (227\_016 15-AUG-2013) stds: S22107  
ICV 203327421018 (227\_018 15-AUG-2013) stds: S22058

Analyte	Ch	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Aroclor-1221	A	203327421018	250.0	242.8	pg/uL	-3	15	
Aroclor-1254	A	203327421016	250.0	222.9	pg/uL	-11	15	
Aroclor-1221	B	203327421018	250.0	218.0	pg/uL	-13	15	
Aroclor-1254	B	203327421016	250.0	238.0	pg/uL	-5	15	

203327421016: Analyst: MA Date: 08/16/13 Reviewer: EAH Date: 08/16/13  
203327421018: Analyst: MA Date: 08/16/13 Reviewer: EAH Date: 08/16/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 PCBS Soil: EPA 8082

Inst : GC16 Name : 1660\_205  
 Calnum : 233295617001 Date : 24-JUL-2013 14:28  
 Units : pg/u X Axis : R

Level File	Segnum	Sample ID	Analyzed	Stds
L1	205_013	233295617013	24-JUL-2013 14:28	S22289
L2	205_014	233295617014	24-JUL-2013 14:57	S22295
L3	205_015	233295617015	24-JUL-2013 15:25	S22814
L4	205_016	233295617016	24-JUL-2013 15:54	S22538
L5	205_017	233295617017	24-JUL-2013 16:22	S22292
L6	205_018	233295617018	24-JUL-2013 16:50	S22293

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r <sup>2</sup>	MnR <sup>2</sup>	MxRSD	Flg
Aroclor-1016 Peak # 1	A	3611.6	3951.7	2402.6	2374.7	2357.9	2562.6	LNLR	0.37747	4.01E-4		2876.9	0.996	.99	20	
Aroclor-1016 Peak # 2	A	4858.6	5828.2	3582.5	3407.9	3504.6	3818.2	LNLR	2.56080	2.69E-4		4166.7	0.996	.99	20	
Aroclor-1016 Peak # 3	A	2943.8	3259.8	2004.5	1979.7	2027.8	2248.9	LNLR	5.17808	4.57E-4		2410.8	0.995	.99	20	
Aroclor-1016 Peak # 4	A	1791.7	1871.8	1084.0	1163.0	1112.6	1239.7	LNLR	2.07365	8.32E-4		1377.1	0.995	.99	20	
Aroclor-1016 Peak # 5	A	2714.4	2847.6	1669.2	1689.4	1694.0	1875.1	LNLR	3.19403	5.49E-4		2081.6	0.995	.99	20	
Aroclor-1260 Peak # 1	A	10210	10125	5588.4	5262.6	5035.7	5407.1	LNLR	-9.0538	1.92E-4		6938.2	0.997	.99	20	
Aroclor-1260 Peak # 2	A	6722.8	7046.8	3963.8	3683.4	3629.2	3956.9	LNLR	-4.5667	2.62E-4		4833.8	0.996	.99	20	
Aroclor-1260 Peak # 3	A	6072.9	5900.6	3341.4	3282.8	3259.5	3545.6	LNLR	-1.7481	2.91E-4		4233.8	0.996	.99	20	
Aroclor-1260 Peak # 4	A	14084	14253	7870.5	7487.4	7272.6	7902.6	LNLR	-5.6929	1.31E-4		9811.7	0.996	.99	20	
Aroclor-1260 Peak # 5	A	5387.7	6541.3	3658.1	3472.5	3447.4	3972.5	LNLR	3.34560	2.62E-4		4413.3	0.991	.99	20	
TCMX	A	93261	99878	58558	56099	56280	60950	LNLR	-0.2467	1.69E-5		70838	0.996	.99	20	
Decachlorobiphenyl	A	99294	107355	56079	51113	47340	50676	LNLR	-3.0414	2.06E-5		68643	0.997	.99	20	
Aroclor-1016 Peak # 1	B	452.00	532.52	322.90	329.31	360.13	411.40	AVRG	0.00249	0.00249		401.38	20	.99	20	
Aroclor-1016 Peak # 2	B	493.70	684.00	419.91	430.60	450.09	527.79	AVRG	0.00200	0.00200		501.01	20	.99	20	
Aroclor-1016 Peak # 3	B	347.70	403.36	245.08	257.44	271.33	310.04	AVRG	0.00327	0.00327		305.82	20	.99	20	
Aroclor-1016 Peak # 4	B	427.80	458.64	284.55	295.69	321.61	365.80	AVRG	0.00279	0.00279		359.01	20	.99	20	
Aroclor-1016 Peak # 5	B	490.90	546.08	337.95	360.64	390.46	462.99	AVRG	0.00232	0.00232		431.50	19	.99	20	
Aroclor-1260 Peak # 1	B	1595.0	1708.4	1001.7	1066.1	1127.1		LNLR	-1.4617	9.02E-4		1299.6	0.997	.99	20	
Aroclor-1260 Peak # 2	B	1200.9	1406.3	882.56	938.77	1005.7	1170.9	AVRG		9.08E-4		1100.9	18	.99	20	
Aroclor-1260 Peak # 3	B	1106.2	1168.0	699.86	739.57	793.46		LNLR	-0.3562	0.00128		901.42	0.997	.99	20	
Aroclor-1260 Peak # 4	B	2255.3	2540.5	1546.6	1701.9	1843.4	2285.0	AVRG		4.93E-4		2028.8	19	.99	20	
Aroclor-1260 Peak # 5	B	1077.3	1130.5	718.67	788.51	875.29	1045.3	AVRG		0.00106		939.26	18	.99	20	
TCMX	B	13403	14707	9004.7	10218	11515	13681	AVRG		8.27E-5		12088	18	.99	20	
Decachlorobiphenyl	B	20838	24063	14107	14591	15279	17300	LNLR	2.02068	5.94E-5		17696	0.992	.99	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aroclor-1016 Peak # 1	A	10.000	49	25.000	60	100.00	-3	250.00	-5	500.00	-5	750.00	3
Aroclor-1016 Peak # 2	A	10.000	56	25.000	67	100.00	-1	250.00	-7	500.00	-5	750.00	3
Aroclor-1016 Peak # 3	A	10.000	86	25.000	70	100.00	-3	250.00	-7	500.00	-6	750.00	4
Aroclor-1016 Peak # 4	A	10.000	70	25.000	64	100.00	-8	250.00	-2	500.00	-7	750.00	3
Aroclor-1016 Peak # 5	A	10.000	81	25.000	69	100.00	-5	250.00	-6	500.00	-6	750.00	3
Aroclor-1260 Peak # 1	A	10.000	5	25.000	58	100.00	-2	250.00	-3	500.00	-5	750.00	3
Aroclor-1260 Peak # 2	A	10.000	31	25.000	66	100.00	-1	250.00	-5	500.00	-6	750.00	3
Aroclor-1260 Peak # 3	A	10.000	59	25.000	65	100.00	-4	250.00	-5	500.00	-5	750.00	3
Aroclor-1260 Peak # 4	A	10.000	28	25.000	64	100.00	-2	250.00	-4	500.00	-6	750.00	3
Aroclor-1260 Peak # 5	A	10.000	75	25.000	85	100.00	-1	250.00	-8	500.00	-9	750.00	5
TCMX	A	2.0000	45	5.0000	64	20.000	-2	50.000	-6	100.00	-5	150.00	3
Decachlorobiphenyl	A	2.0000	-47	5.0000	60	20.000	0	50.000	-1	100.00	-5	150.00	2
Aroclor-1016 Peak # 1	B	10.000	13	25.000	33	100.00	-20	250.00	-18	500.00	-10	750.00	2
Aroclor-1016 Peak # 2	B	10.000	-1	25.000	37	100.00	-16	250.00	-14	500.00	-10	750.00	5
Aroclor-1016 Peak # 3	B	10.000	14	25.000	32	100.00	-20	250.00	-16	500.00	-11	750.00	1
Aroclor-1016 Peak # 4	B	10.000	19	25.000	28	100.00	-21	250.00	-18	500.00	-10	750.00	2
Aroclor-1016 Peak # 5	B	10.000	14	25.000	27	100.00	-22	250.00	-16	500.00	-10	750.00	7
Aroclor-1260 Peak # 1	B	10.000	29	25.000	48	100.00	-11	250.00	-4	500.00	1		
Aroclor-1260 Peak # 2	B	10.000	9	25.000	28	100.00	-20	250.00	-15	500.00	-9	750.00	6
Aroclor-1260 Peak # 3	B	10.000	38	25.000	48	100.00	-11	250.00	-5	500.00	2		
Aroclor-1260 Peak # 4	B	10.000	11	25.000	25	100.00	-24	250.00	-16	500.00	-9	750.00	13
Aroclor-1260 Peak # 5	B	10.000	15	25.000	20	100.00	-23	250.00	-16	500.00	-7	750.00	11
TCMX	B	2.0000	11	5.0000	22	20.000	-26	50.000	-15	100.00	-5	150.00	13
Decachlorobiphenyl	B	2.0000	125	5.0000	83	20.000	-6	50.000	-9	100.00	-7	150.00	4

MA 07/25/13 : Corrected automatically drawn baseline in all levels.

Analyst: MA

Date: 07/25/13

Reviewer: EAH

Date: 07/25/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor; LMR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16  
Calnum : 233295617001

Name : 1660\_205  
Cal Date : 24-JUL-2013

ICV 233295617021 (205\_021 24-JUL-2013) stds: S22309

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aroclor-1016	A	250.0	267.6	pg/ul	7	15	
Aroclor-1260	A	250.0	271.4	pg/ul	9	15	
Aroclor-1016	B	250.0	231.5	pg/ul	-7	15	
Aroclor-1260	B	250.0	249.1	pg/ul	0	15	

Analyst: MA

Date: 07/25/13

Reviewer: EAH

Date: 07/25/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 PCBS Soil: EPA 8082

Inst : GC16  
 Calnum : 233298598006  
 Units : pg/u1

Name : 2154\_207A  
 Date : 26-JUL-2013 12:09  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	207_003	233298598003	AR1254_250	26-JUL-2013 12:09	S22505

Analyte	Ch	L1	Type	a0	a1	a2	Avg	r <sup>2</sup> %RSD	MnR <sup>2</sup>	MxRSD	Flg
Aroclor-1221 Peak # 1	A	151.69	AVRG	0.00659	0.00659		151.69	0	.99	20	
Aroclor-1221 Peak # 2	A	1180.9	AVRG	8.47E-4	8.47E-4		1180.9	0	.99	20	
Aroclor-1221 Peak # 3	A	729.91	AVRG	0.00137	0.00137		729.91	0	.99	20	
Aroclor-1221 Peak # 4	A	2867.6	AVRG	3.49E-4	3.49E-4		2867.6	0	.99	20	
Aroclor-1221 Peak # 5	A	438.18	AVRG	0.00228	0.00228		438.18	0	.99	20	
Aroclor-1254 Peak # 1	A	3389.0	AVRG	2.95E-4	2.95E-4		3389.0	0	.99	20	
Aroclor-1254 Peak # 2	A	4056.5	AVRG	2.47E-4	2.47E-4		4056.5	0	.99	20	
Aroclor-1254 Peak # 3	A	3939.0	AVRG	2.54E-4	2.54E-4		3939.0	0	.99	20	
Aroclor-1254 Peak # 4	A	5825.9	AVRG	1.72E-4	1.72E-4		5825.9	0	.99	20	
Aroclor-1254 Peak # 5	A	4431.6	AVRG	2.26E-4	2.26E-4		4431.6	0	.99	20	
Aroclor-1221 Peak # 1	B	17.816	AVRG	0.05613	0.05613		17.816	0	.99	20	
Aroclor-1221 Peak # 2	B	129.56	AVRG	0.00772	0.00772		129.56	0	.99	20	
Aroclor-1221 Peak # 3	B	87.848	AVRG	0.01138	0.01138		87.848	0	.99	20	
Aroclor-1221 Peak # 4	B	345.34	AVRG	0.00290	0.00290		345.34	0	.99	20	
Aroclor-1221 Peak # 5	B	65.628	AVRG	0.01524	0.01524		65.628	0	.99	20	
Aroclor-1254 Peak # 1	B	602.81	AVRG	0.00166	0.00166		602.81	0	.99	20	
Aroclor-1254 Peak # 2	B	707.00	AVRG	0.00141	0.00141		707.00	0	.99	20	
Aroclor-1254 Peak # 3	B	439.27	AVRG	0.00228	0.00228		439.27	0	.99	20	
Aroclor-1254 Peak # 4	B	853.24	AVRG	0.00117	0.00117		853.24	0	.99	20	
Aroclor-1254 Peak # 5	B	783.52	AVRG	0.00128	0.00128		783.52	0	.99	20	

Spiked Amounts / Drifts	Ch	L1	%D
Aroclor-1221 Peak # 1	A	250.00	0
Aroclor-1221 Peak # 2	A	250.00	0
Aroclor-1221 Peak # 3	A	250.00	0
Aroclor-1221 Peak # 4	A	250.00	0
Aroclor-1221 Peak # 5	A	250.00	0
Aroclor-1254 Peak # 1	A	250.00	0
Aroclor-1254 Peak # 2	A	250.00	0
Aroclor-1254 Peak # 3	A	250.00	0
Aroclor-1254 Peak # 4	A	250.00	0
Aroclor-1254 Peak # 5	A	250.00	0
Aroclor-1221 Peak # 1	B	250.00	0
Aroclor-1221 Peak # 2	B	250.00	0
Aroclor-1221 Peak # 3	B	250.00	0
Aroclor-1221 Peak # 4	B	250.00	0
Aroclor-1221 Peak # 5	B	250.00	0
Aroclor-1254 Peak # 1	B	250.00	0
Aroclor-1254 Peak # 2	B	250.00	0
Aroclor-1254 Peak # 3	B	250.00	0
Aroclor-1254 Peak # 4	B	250.00	0
Aroclor-1254 Peak # 5	B	250.00	0

MA 07/30/13 : Corrected automatically drawn baseline in all levels.

MA 07/30/13 : Method should read as 2154\_207A

Analyst: MA

Date: 07/30/13

Reviewer: EAH

Date: 07/30/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06                      Run Name : PCB100\_20                      IDF : 1.0  
 Seqnum : 203333166002          File : 231\_002                      Time : 19-AUG-2013 09:14  
 Cal : 203310428001              Caldate : 03-AUG-2013  
 Standards: S22814

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			100.0	110.8	pg/uL	11	15	
Aroclor-1260	A			100.0	112.6	pg/uL	13	15	
TCMX	A	12914	11853	20.00	21.23	pg/uL	6	15	
Decachlorobiphenyl	A	16882	16454	20.00	23.97	pg/uL	<b>20</b>	15	c+
Aroclor-1016	B			100.0	116.4	pg/uL	<b>16</b>	15	c+ ***
Aroclor-1260	B			100.0	136.6	pg/uL	<b>37</b>	15	c+ ***
TCMX	B	85437	91615	20.00	25.24	pg/uL	<b>26</b>	15	c+
Decachlorobiphenyl	B	119477	147387	20.00	29.58	pg/uL	<b>48</b>	15	c+

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/20/13                      Reviewer: TFB                      Date: 08/20/13

+ = high bias    c = CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06                      Run Name : PCB250\_50                      IDF : 1.0  
 Seqnum : 203333166005              File : 231\_005                      Time : 19-AUG-2013 16:19  
 Cal : 203310428001              Caldate : 03-AUG-2013  
 Standards: S22538

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			250.0	257.0	pg/uL	3	15	
Aroclor-1260	A			250.0	250.8	pg/uL	0	15	
TCMX	A	12914	11448	50.00	52.07	pg/uL	4	15	
Decachlorobiphenyl	A	16882	12029	50.00	45.69	pg/uL	-9	15	
Aroclor-1016	B			250.0	275.1	pg/uL	10	15	
Aroclor-1260	B			250.0	261.0	pg/uL	4	15	
TCMX	B	85437	82777	50.00	56.76	pg/uL	14	15	
Decachlorobiphenyl	B	119477	103568	50.00	51.67	pg/uL	3	15	

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/20/13                      Reviewer: TFB                      Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06                      Run Name : RES1016\_250                      IDF : 1.0  
 Seqnum : 203333166007              File : 231\_007                      Time : 19-AUG-2013 19:28  
 Cal : 203310428001              Caldate : 03-AUG-2013  
 Standards: S23074

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			250.0	212.6	pg/uL	-15	15	
TCMX	A	12914	10097	50.00	45.85	pg/uL	-8	15	
Decachlorobiphenyl	A	16882	8680.4	50.00	32.34	pg/uL	<b>-35</b>	15	c-
Aroclor-1016	B			250.0	269.0	pg/uL	8	15	
TCMX	B	85437	84975	50.00	58.26	pg/uL	<b>17</b>	15	c+
Decachlorobiphenyl	B	119477	132661	50.00	66.08	pg/uL	<b>32</b>	15	c+

Analyst: MA                      Date: 08/20/13                      Reviewer: TFB                      Date: 08/20/13

+=high bias    -=low bias    c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06                      Run Name : PCB100\_20                      IDF : 1.0  
 Seqnum : 203333166020              File : 231\_020                      Time : 20-AUG-2013 01:26  
 Cal : 203310428001              Caldate : 03-AUG-2013  
 Standards: S22814

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			100.0	92.95	pg/uL	-7	15	
Aroclor-1260	A			100.0	95.58	pg/uL	-4	15	
TCMX	A	12914	10772	20.00	19.24	pg/uL	-4	15	
Decachlorobiphenyl	A	16882	12273	20.00	17.30	pg/uL	-13	15	
Aroclor-1016	B			100.0	103.8	pg/uL	4	15	
Aroclor-1260	B			100.0	93.88	pg/uL	-6	15	
TCMX	B	85437	74183	20.00	20.47	pg/uL	2	15	
Decachlorobiphenyl	B	119477	92017	20.00	18.62	pg/uL	-7	15	

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/20/13                      Reviewer: TFB                      Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06                      Run Name : PCB250\_50                      IDF : 1.0  
 Seqnum : 203334626002          File : 232\_002                      Time : 20-AUG-2013 09:34  
 Cal : 203310428001              Caldate : 03-AUG-2013  
 Standards: S22538

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			250.0	276.2	pg/uL	10	15	
Aroclor-1260	A			250.0	261.0	pg/uL	4	15	
TCMX	A	12914	12248	50.00	55.74	pg/uL	11	15	
Decachlorobiphenyl	A	16882	13005	50.00	49.58	pg/uL	-1	15	
Aroclor-1016	B			250.0	290.9	pg/uL	<b>16</b>	15	c+ ***
Aroclor-1260	B			250.0	265.8	pg/uL	6	15	
TCMX	B	85437	88273	50.00	60.51	pg/uL	<b>21</b>	15	c+
Decachlorobiphenyl	B	119477	108831	50.00	54.28	pg/uL	9	15	

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/20/13                      Reviewer: TFB                      Date: 08/20/13

+ = high bias    c = CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06                      Run Name : PCB100\_20                      IDF : 1.0  
 Seqnum : 203334626011          File : 232\_011                      Time : 20-AUG-2013 15:21  
 Cal : 203310428001              Caldate : 03-AUG-2013  
 Standards: S22814

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			100.0	105.7	pg/uL	6	15	
Aroclor-1260	A			100.0	94.36	pg/uL	-6	15	
TCMX	A	12914	11541	20.00	20.65	pg/uL	3	15	
Decachlorobiphenyl	A	16882	7969.0	20.00	10.44	pg/uL	<b>-48</b>	15	c-
Aroclor-1016	B			100.0	137.9	pg/uL	<b>38</b>	15	c+ ***
Aroclor-1260	B			100.0	103.4	pg/uL	3	15	
TCMX	B	85437	94398	20.00	26.00	pg/uL	<b>30</b>	15	c+
Decachlorobiphenyl	B	119477	51017	20.00	10.49	pg/uL	<b>-48</b>	15	c-

TFB 08/20/13 : run not used

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/20/13                      Reviewer: TFB                      Date: 08/21/13

+ = high bias    - = low bias    c = CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06 Run Name : AR2154\_250 IDF : 1.0  
 Seqnum : 203334626012 File : 232\_012 Time : 20-AUG-2013 17:41  
 Cal : 203327421001 Caldate : 15-AUG-2013  
 Standards: S22505

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1221	A	250.0	246.8	pg/uL	-1	15	
Aroclor-1254	A	250.0	269.4	pg/uL	8	15	
Aroclor-1221	B	250.0	317.8	pg/uL	<b>27</b>	15	c+ ***
Aroclor-1254	B	250.0	307.8	pg/uL	<b>23</b>	15	c+ ***

MA 08/21/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/21/13 Reviewer: EAH Date: 08/21/13

+=high bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06                      Run Name : PCB250\_50                      IDF : 1.0  
 Seqnum : 203334626024          File : 232\_024                      Time : 20-AUG-2013 23:12  
 Cal : 203310428001              Caldate : 03-AUG-2013  
 Standards: S22538

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			250.0	247.6	pg/uL	-1	15	
Aroclor-1260	A			250.0	230.6	pg/uL	-8	15	
TCMX	A	12914	11311	50.00	51.43	pg/uL	3	15	
Decachlorobiphenyl	A	16882	10060	50.00	37.83	pg/uL	<b>-24</b>	15	c-
Aroclor-1016	B			250.0	251.9	pg/uL	1	15	
Aroclor-1260	B			250.0	238.9	pg/uL	-4	15	
TCMX	B	85437	78658	50.00	53.94	pg/uL	8	15	
Decachlorobiphenyl	B	119477	80145	50.00	40.08	pg/uL	<b>-20</b>	15	c-

MA 08/21/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/21/13                      Reviewer: TFB                      Date: 08/21/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC06 Run Name : AR2154\_250 IDF : 1.0  
 Seqnum : 203334626026 File : 232\_026 Time : 21-AUG-2013 00:07  
 Cal : 203327421001 Caldate : 15-AUG-2013  
 Standards: S22505

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1221	A	250.0	227.7	pg/uL	-9	15	
Aroclor-1254	A	250.0	224.9	pg/uL	-10	15	
Aroclor-1221	B	250.0	189.9	pg/uL	<b>-24</b>	15	c- ***
Aroclor-1254	B	250.0	239.7	pg/uL	-4	15	

MA 08/21/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/21/13 Reviewer: EAH Date: 08/21/13

--=low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16                      Run Name : PCB100\_20                      IDF : 1.0  
 Seqnum : 233328736016          File : 228\_016                      Time : 16-AUG-2013 17:35  
 Cal : 233295617001              Caldate : 24-JUL-2013  
 Standards: S22814

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			100.0	110.1	pg/ul	10	15	
Aroclor-1260	A			100.0	109.8	pg/ul	10	15	
TCMX	A	70838	65859	20.00	22.02	pg/ul	10	15	
Decachlorobiphenyl	A	68643	49550	20.00	17.39	pg/ul	-13	15	
Aroclor-1016	B			100.0	91.49	pg/ul	-9	15	
Aroclor-1260	B			100.0	95.59	pg/ul	-4	15	
TCMX	B	12088	12050	20.00	19.94	pg/ul	0	15	
Decachlorobiphenyl	B	17696	11809	20.00	16.06	pg/ul	<b>-20</b>	15	c-

TKB 08/16/13 : Corrected automatically drawn baseline.

Analyst: TKB                      Date: 08/16/13                      Reviewer: TFB                      Date: 08/21/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16                      Run Name : AR1254\_250                      IDF : 1.0  
 Seqnum : 233328736017              File : 228\_017                      Time : 16-AUG-2013 18:08  
 Cal : 233298598006              Caldate : 26-JUL-2013  
 Standards: S22505

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1221	A	250.0	264.2	pg/ul	6	15	?v
Aroclor-1254	A	250.0	216.5	pg/ul	-13	15	?v
Aroclor-1221	B	250.0	254.4	pg/ul	2	15	?v
Aroclor-1254	B	250.0	283.5	pg/ul	13	15	?v

MA 08/19/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/21/13

?=missing v=ICV out

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16                      Run Name : PCB250\_50                      IDF : 1.0  
 Seqnum : 233328736031          File : 228\_031                      Time : 17-AUG-2013 00:46  
 Cal : 233295617001              Caldate : 24-JUL-2013  
 Standards: S22538

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			250.0	255.7	pg/ul	2	15	
Aroclor-1260	A			250.0	258.5	pg/ul	3	15	
TCMX	A	70838	62824	50.00	52.85	pg/ul	6	15	
Decachlorobiphenyl	A	68643	36247	50.00	34.32	pg/ul	<b>-31</b>	15	c-
Aroclor-1016	B			250.0	246.3	pg/ul	-1	15	
Aroclor-1260	B			250.0	258.2	pg/ul	3	15	
TCMX	B	12088	12850	50.00	53.15	pg/ul	6	15	
Decachlorobiphenyl	B	17696	11445	50.00	36.04	pg/ul	<b>-28</b>	15	c-

MA 08/19/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/19/13                      Reviewer: TFB                      Date: 08/21/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16 Run Name : AR1254\_250 IDF : 1.0  
 Seqnum : 233328736033 File : 228\_033 Time : 17-AUG-2013 01:43  
 Cal : 233298598006 Caldate : 26-JUL-2013  
 Standards: S22505

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1221	A	250.0	242.7	pg/ul	-3	15	?v
Aroclor-1254	A	250.0	222.7	pg/ul	-11	15	?v
Aroclor-1221	B	250.0	299.1	pg/ul	<b>20</b>	15	?v c+ ***
Aroclor-1254	B	250.0	328.7	pg/ul	<b>31</b>	15	?v c+ ***

MA 08/19/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/19/13 Reviewer: EAH Date: 08/21/13

+ = high bias ? = missing c = CCV v = ICV out

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16                      Run Name : PCB100\_20                      IDF : 1.0  
 Seqnum : 233328736045          File : 228\_045                      Time : 17-AUG-2013 07:25  
 Cal : 233295617001              Caldate : 24-JUL-2013  
 Standards: S22814

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aroclor-1016	A			100.0	110.6	pg/ul	11	15	
Aroclor-1260	A			100.0	107.5	pg/ul	7	15	
TCMX	A	70838	69963	20.00	23.41	pg/ul	<b>17</b>	15	c+
Decachlorobiphenyl	A	68643	36452	20.00	11.99	pg/ul	<b>-40</b>	15	c-
Aroclor-1016	B			100.0	95.68	pg/ul	-4	15	
Aroclor-1260	B			100.0	91.71	pg/ul	-8	15	
TCMX	B	12088	12335	20.00	20.41	pg/ul	2	15	
Decachlorobiphenyl	B	17696	9680.6	20.00	13.53	pg/ul	<b>-32</b>	15	c-

MA 08/19/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/19/13                      Reviewer: TFB                      Date: 08/21/13

+ = high bias    - = low bias    c = CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16                      Run Name : AR1254\_250                      IDF : 1.0  
 Seqnum : 233328736047              File : 228\_047                      Time : 17-AUG-2013 08:21  
 Cal : 233298598006              Caldate : 26-JUL-2013  
 Standards: S22505

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1221	A	250.0	227.5	pg/ul	-9	15	?v
Aroclor-1254	A	250.0	233.7	pg/ul	-7	15	?v
Aroclor-1221	B	250.0	263.9	pg/ul	6	15	?v
Aroclor-1254	B	250.0	304.2	pg/ul	<b>22</b>	15	?v c+ ***

MA 08/19/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/19/13                      Reviewer: EAH                      Date: 08/21/13

+ = high bias    ? = missing    c = CCV    v = ICV out

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16                      Run Name : PCB250\_50                      IDF : 1.0  
 Seqnum : 233328736050          File : 228\_050                      Time : 17-AUG-2013 09:47  
 Cal : 233295617001              Caldate : 24-JUL-2013  
 Standards: S22538

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aroclor-1016	A			250.0	271.4	pg/ul	9	15	
Aroclor-1260	A			250.0	253.0	pg/ul	1	15	
TCMX	A	70838	65568	50.00	55.17	pg/ul	10	15	
Decachlorobiphenyl	A	68643	32984	50.00	30.96	pg/ul	<b>-38</b>	15	c-
Aroclor-1016	B			250.0	248.1	pg/ul	-1	15	
Aroclor-1260	B			250.0	245.0	pg/ul	-2	15	
TCMX	B	12088	13154	50.00	54.41	pg/ul	9	15	
Decachlorobiphenyl	B	17696	9032.0	50.00	28.87	pg/ul	<b>-42</b>	15	c-

MA 08/19/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/19/13                      Reviewer: TFB                      Date: 08/21/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16                      Run Name : PCB100\_20                      IDF : 1.0  
 Seqnum : 233333165002              File : 231\_002                      Time : 19-AUG-2013 09:13  
 Cal : 233295617001              Caldate : 24-JUL-2013  
 Standards: S22814

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aroclor-1016	A			100.0	108.8	pg/ul	9	15	
Aroclor-1260	A			100.0	109.4	pg/ul	9	15	
TCMX	A	70838	67208	20.00	22.47	pg/ul	12	15	
Decachlorobiphenyl	A	68643	43369	20.00	14.84	pg/ul	<b>-26</b>	15	c-
Aroclor-1016	B			100.0	97.85	pg/ul	-2	15	
Aroclor-1260	B			100.0	91.77	pg/ul	-8	15	
TCMX	B	12088	12349	20.00	20.43	pg/ul	2	15	
Decachlorobiphenyl	B	17696	9347.2	20.00	13.13	pg/ul	<b>-34</b>	15	c-

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/20/13                      Reviewer: EAH                      Date: 08/21/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16 Run Name : AR1254\_250 IDF : 1.0  
Seqnum : 233333165003 File : 231\_003 Time : 19-AUG-2013 13:44  
Cal : 233298598006 Caldate : 26-JUL-2013  
Standards: S22505

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1221	A	250.0	240.3	pg/ul	-4	15	?v
Aroclor-1254	A	250.0	269.5	pg/ul	8	15	?v
Aroclor-1221	B	250.0	261.3	pg/ul	5	15	?v
Aroclor-1254	B	250.0	278.7	pg/ul	11	15	?v

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/20/13 Reviewer: EAH Date: 08/21/13

?=missing v=ICV out

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16                      Run Name : PCB250\_50                      IDF : 1.0  
 Seqnum : 233333165012          File : 231\_012                      Time : 19-AUG-2013 21:46  
 Cal : 233295617001              Caldate : 24-JUL-2013  
 Standards: S22538

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aroclor-1016	A			250.0	267.2	pg/ul	7	15	
Aroclor-1260	A			250.0	243.0	pg/ul	-3	15	
TCMX	A	70838	63060	50.00	53.05	pg/ul	6	15	
Decachlorobiphenyl	A	68643	27682	50.00	25.49	pg/ul	<b>-49</b>	15	c-
Aroclor-1016	B			250.0	236.6	pg/ul	-5	15	
Aroclor-1260	B			250.0	205.2	pg/ul	<b>-18</b>	15	c- ***
TCMX	B	12088	12325	50.00	50.98	pg/ul	2	15	
Decachlorobiphenyl	B	17696	7259.9	50.00	23.60	pg/ul	<b>-53</b>	15	c-

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/20/13                      Reviewer: TFB                      Date: 08/20/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16 Run Name : AR1254\_250 IDF : 1.0  
Seqnum : 233333165013 File : 231\_013 Time : 19-AUG-2013 22:14  
Cal : 233298598006 Caldate : 26-JUL-2013  
Standards: S22505

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1221	A	250.0	236.9	pg/ul	-5	15	?v
Aroclor-1254	A	250.0	214.0	pg/ul	-14	15	?v
Aroclor-1221	B	250.0	269.7	pg/ul	8	15	?v
Aroclor-1254	B	250.0	282.2	pg/ul	13	15	?v

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/20/13 Reviewer: EAH Date: 08/21/13

?=missing v=ICV out

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16                      Run Name : PCB100\_20                      IDF : 1.0  
 Seqnum : 233333165021          File : 231\_021                      Time : 20-AUG-2013 02:01  
 Cal : 233295617001              Caldate : 24-JUL-2013  
 Standards: S22814

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aroclor-1016	A			100.0	115.1	pg/ul	15	15	
Aroclor-1260	A			100.0	88.45	pg/ul	-12	15	
TCMX	A	70838	68779	20.00	23.01	pg/ul	15	15	
Decachlorobiphenyl	A	68643	20622	20.00	5.461	pg/ul	<b>-73</b>	15	c-
Aroclor-1016	B			100.0	90.87	pg/ul	-9	15	
Aroclor-1260	B			100.0	72.70	pg/ul	<b>-27</b>	15	c- ***
TCMX	B	12088	11764	20.00	19.46	pg/ul	-3	15	
Decachlorobiphenyl	B	17696	6148.3	20.00	9.331	pg/ul	<b>-53</b>	15	c-

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/20/13                      Reviewer: TFB                      Date: 08/20/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 PCBS Soil  
EPA 8082

Inst : GC16                      Run Name : AR1254\_250                      IDF : 1.0  
 Seqnum : 233333165022              File : 231\_022                      Time : 20-AUG-2013 02:29  
 Cal : 233298598006              Caldate : 26-JUL-2013  
 Standards: S22505

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1221	A	250.0	226.1	pg/ul	-10	15	?v
Aroclor-1254	A	250.0	214.8	pg/ul	-14	15	?v
Aroclor-1221	B	250.0	258.9	pg/ul	4	15	?v
Aroclor-1254	B	250.0	279.8	pg/ul	12	15	?v

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA                      Date: 08/20/13                      Reviewer: EAH                      Date: 08/21/13

?=missing v=ICV out

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 203310428

Instrument : GC06  
 Method : EPA 8082

Begun : 08/03/13 13:48  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	215_001	X	HEX			08/03/13 13:48	1.0	
002	215_002	CCV	PCB250_50			08/03/13 14:15	1.0	1
003	215_003	LOD	216647-037	Soil	200792	08/03/13 16:15	1.0	
004	215_004	SAMPLE	216647-038	Soil	200792	08/03/13 16:43	1.0	
005	215_005	CCV	PCB100_20			08/03/13 17:49	1.0	2
007	215_007	X	HEX			08/03/13 18:23	1.0	
008	215_008	X	HEX			08/03/13 18:51	1.0	
009	215_009	IB	CAL			08/03/13 19:19	1.0	
010	215_010	ICAL	PCB10_2			08/03/13 19:46	1.0	3
011	215_011	ICAL	PCB25_5			08/03/13 20:14	1.0	4
012	215_012	ICAL	PCB100_20			08/03/13 20:41	1.0	2
013	215_013	ICAL	PCB250_50			08/03/13 21:09	1.0	1
014	215_014	ICAL	PCB500_100			08/03/13 21:36	1.0	5
015	215_015	ICAL	PCB750_150			08/03/13 22:04	1.0	6
016	215_016	ICAL	PCB1000_200			08/03/13 22:31	1.0	7
017	215_017	X	HEX			08/03/13 22:59	1.0	
018	215_018	ICV	ULTRA_1660			08/03/13 23:27	1.0	8
019	215_019	X	ICV			08/03/13 23:54	1.0	8

MA 08/06/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.





CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 203334626

Instrument : GC06  
 Method : EPA 8082

Begun : 08/20/13 09:06  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	232_001	X	HEX			08/20/13 09:06	1.0	
002	232_002	CCV	PCB250_50			08/20/13 09:34	1.0	1
003	232_003	CCV	AR2154_250			08/20/13 11:21	1.0	2
004	232_004	BLANK	QC702714	Soil	201896	08/20/13 11:49	1.0	
005	232_005	LCS	QC702715	Soil	201896	08/20/13 12:17	1.0	
006	232_006	SAMPLE	248030-021	Soil	201896	08/20/13 12:44	1.0	
007	232_007	MSS	248123-001	Soil	201896	08/20/13 13:12	1.0	
008	232_008	MSS	248030-034	Soil	201867	08/20/13 13:51	1.0	
009	232_009	MS	QC702596	Soil	201867	08/20/13 14:19	1.0	
010	232_010	MSD	QC702597	Soil	201867	08/20/13 14:46	1.0	
011	232_011	CCV	PCB100_20			08/20/13 15:21	1.0	3
012	232_012	CCV	AR2154_250			08/20/13 17:41	1.0	2
013	232_013	CCV	PCB1268_250			08/20/13 18:09	1.0	4
014	232_014	MS	QC702716	Soil	201896	08/20/13 18:36	1.0	
015	232_015	MSD	QC702717	Soil	201896	08/20/13 19:04	1.0	
016	232_016	SAMPLE	248030-021	Soil	201896	08/20/13 19:31	1.0	
017	232_017	SAMPLE	248030-033	Soil	201867	08/20/13 19:59	1.0	
018	232_018	SAMPLE	248030-043	Soil	201867	08/20/13 20:26	5.0	
019	232_019	MSS	248039-009	Soil	201867	08/20/13 20:54	1.0	
020	232_020	SAMPLE	248030-035	Soil	201867	08/20/13 21:22	1.0	2:PCB1016#4=1200
021	232_021	SAMPLE	248085-001	Miscell.	201896	08/20/13 21:49	1.0	6:PCB1260#1=1100
022	232_022	SAMPLE	248085-002	Miscell.	201896	08/20/13 22:17	1.0	1:PCB1221#3=42000
023	232_023	SAMPLE	248085-003	Miscell.	201896	08/20/13 22:44	1.0	
024	232_024	CCV	PCB250_50			08/20/13 23:12	1.0	1
025	232_025	CCV	PCB250_50			08/20/13 23:39	1.0	1
026	232_026	CCV	AR2154_250			08/21/13 00:07	1.0	2
027	232_027	CCV	PCB1268_250			08/21/13 00:35	1.0	4
028	232_028	SAMPLE	248133-003	Soil	201896	08/21/13 01:02	1.0	
029	232_029	SAMPLE	248133-004	Soil	201896	08/21/13 01:30	1.0	
030	232_030	SAMPLE	248133-005	Soil	201896	08/21/13 01:57	1.0	
031	232_031	SAMPLE	248133-006	Soil	201896	08/21/13 02:25	1.0	
032	232_032	SAMPLE	248143-001	Soil	201896	08/21/13 02:52	1.0	
033	232_033	SAMPLE	248149-005	Soil	201896	08/21/13 03:20	1.0	
034	232_034	CCV	PCB100_20			08/21/13 03:48	1.0	3
035	232_035	X	CCV			08/21/13 04:15	1.0	3
036	232_036	CCV	AR2154_250			08/21/13 04:43	1.0	2

MA 08/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 36.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 233295617

Instrument : GC16  
 Method : EPA 8082

Begun : 07/24/13 06:57  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	205_001	X	HEX			07/24/13 06:57	1.0	
002	205_002	CCV	PCB250_50			07/24/13 07:25	1.0	1
003	205_003	CCV	PCB100_20			07/24/13 08:17	1.0	2
004	205_004	X	PRIMER			07/24/13 10:13	1.0	
005	205_005	X	PRIMER			07/24/13 10:42	1.0	
006	205_006	X	PRIMER			07/24/13 11:10	1.0	
007	205_007	X	PRIMER			07/24/13 11:38	1.0	
008	205_008	X	HEX			07/24/13 12:06	1.0	
009	205_009	X	HEX			07/24/13 12:35	1.0	
010	205_010	X	HEX			07/24/13 13:03	1.0	
011	205_011	X	HEX			07/24/13 13:32	1.0	
012	205_012	IB	CAL			07/24/13 14:00	1.0	
013	205_013	ICAL	PCB10_2			07/24/13 14:28	1.0	3
014	205_014	ICAL	PCB25_5			07/24/13 14:57	1.0	4
015	205_015	ICAL	PCB100_20			07/24/13 15:25	1.0	2
016	205_016	ICAL	PCB250_50			07/24/13 15:54	1.0	1
017	205_017	ICAL	PCB500_100			07/24/13 16:22	1.0	5
018	205_018	ICAL	PCB750_150			07/24/13 16:50	1.0	6
019	205_019	ICAL	PCB1000_200			07/24/13 17:19	1.0	7
020	205_020	X	HEX			07/24/13 17:47	1.0	
021	205_021	ICV	ULTRA_1660			07/24/13 18:16	1.0	8
022	205_022	X	ICV			07/24/13 18:44	1.0	8
023	205_023	X	HEX			07/24/13 19:13	1.0	
024	205_024	X	HEX			07/24/13 19:41	1.0	
025	205_025	IB	CAL			07/24/13 20:10	1.0	
026	205_026	ICAL	AR1242_10			07/24/13 20:38	1.0	9
027	205_027	ICAL	AR1242_100			07/24/13 21:07	1.0	10
028	205_028	ICAL	AR1242_100			07/24/13 21:35	1.0	10
029	205_029	ICAL	AR1242_250			07/24/13 22:03	1.0	11
030	205_030	ICAL	AR1242_250			07/24/13 22:32	1.0	11
031	205_031	ICAL	AR1242_500			07/24/13 23:00	1.0	12
032	205_032	ICAL	AR1242_1000			07/24/13 23:29	1.0	13
033	205_033	X	HEX			07/24/13 23:57	1.0	
034	205_034	ICV	ULTRA_1242			07/25/13 00:26	1.0	14
035	205_035	X	ICV			07/25/13 00:54	1.0	14
036	205_036	X	HEX			07/25/13 01:23	1.0	
037	205_037	CCV	PCB100_20			07/25/13 01:51	1.0	2
038	205_038	CCV	AR1242_100			07/25/13 02:20	1.0	10
039	205_039	SAMPLE	246924-009	Water	200611	07/25/13 02:48	1.0	
040	205_040	SAMPLE	247160-075	Soil	200876	07/25/13 03:17	1.0	
041	205_041	SAMPLE	247160-076	Soil	200876	07/25/13 03:45	1.0	
042	205_042	SAMPLE	247160-078	Soil	200876	07/25/13 04:13	1.0	
043	205_043	SAMPLE	247160-079	Soil	200876	07/25/13 04:42	1.0	
044	205_044	SAMPLE	247160-080	Soil	200876	07/25/13 05:10	1.0	
045	205_045	SAMPLE	247160-081	Soil	200876	07/25/13 05:39	1.0	
046	205_046	SAMPLE	247160-087	Soil	200876	07/25/13 06:07	1.0	
047	205_047	SAMPLE	247160-088	Soil	200876	07/25/13 06:36	1.0	
048	205_048	SAMPLE	247160-089	Soil	200876	07/25/13 07:04	1.0	
049	205_049	CCV	PCB250_50			07/25/13 07:32	1.0	1
050	205_050	X	CCV			07/25/13 08:01	1.0	1
051	205_051	CCV	AR1242_250			07/25/13 08:29	1.0	11
052	205_052	CCV	AR1254_250			07/25/13 15:41	1.0	15

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 233295617

Instrument : GC16  
 Method : EPA 8082

Begun : 07/24/13 06:57  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
053	205_053	SAMPLE	247160-082	Soil	200876	07/25/13 16:09	1.0	
054	205_054	SAMPLE	247160-083	Soil	200876	07/25/13 16:37	1.0	
055	205_055	SAMPLE	247160-084	Soil	200876	07/25/13 17:06	1.0	
056	205_056	SAMPLE	247160-085	Soil	200876	07/25/13 17:34	1.0	
057	205_057	SAMPLE	247160-090	Soil	200920	07/25/13 18:02	1.0	
058	205_058	SAMPLE	247160-092	Soil	200920	07/25/13 18:30	1.0	
059	205_059	SAMPLE	247160-093	Soil	200920	07/25/13 18:58	1.0	
060	205_060	CCV	PCB100_20			07/25/13 19:26	1.0	2
061	205_061	X	CCV			07/25/13 19:55	1.0	2
062	205_062	CCV	AR1254_250			07/25/13 20:23	1.0	15

MA 07/26/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 62.

Standards used: 1=S22538 2=S22814 3=S22289 4=S22295 5=S22292 6=S22293 7=S22294 8=S22309 9=S22619 10=S22620 11=S22621  
 12=S22622 13=S22623 14=S22067 15=S22505

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 233298598

Instrument : GC16  
 Method : EPA 8082

Begun : 07/26/13 08:38  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	207_001	X	HEX			07/26/13 08:38	1.0	
002	207_002	CCV	PCB100_20			07/26/13 09:06	1.0	1
003	207_003	ICAL	AR1254_250			07/26/13 12:09	1.0	2
004	207_004	ICAL	AR1232_250			07/26/13 12:37	1.0	3
005	207_005	ICAL	AR1248_250			07/26/13 13:05	1.0	4
006	207_006	ICAL	AR1262_250			07/26/13 13:34	1.0	5
007	207_007	LOD	209773-036	Water	200801	07/26/13 14:02	1.0	
008	207_008	LOD	209773-037	Water	200801	07/26/13 14:31	1.0	
009	207_009	LOD	203380-037	Soil	200707	07/26/13 14:59	1.0	
010	207_010	LOD	203380-038	Soil	200707	07/26/13 15:28	1.0	
011	207_011	LOD	216648-024	Water	200801	07/26/13 15:56	1.0	
012	207_012	LOD	209774-024	Water	200801	07/26/13 16:24	1.0	
013	207_013	LOD	209775-025	Soil	200792	07/26/13 16:53	1.0	
014	207_014	LOD	209776-037	Water	200801	07/26/13 17:21	1.0	
015	207_015	LOD	209776-038	Water	200801	07/26/13 17:50	1.0	
016	207_016	LOD	209157-026	Soil	200707	07/26/13 18:18	1.0	
017	207_017	LOD	209156-037	Water	200801	07/26/13 18:46	1.0	
018	207_018	LOD	209156-038	Water	200801	07/26/13 19:15	1.0	
019	207_019	LOD	239921-012	Soil	200792	07/26/13 19:43	1.0	
020	207_020	CCV	PCB250_50			07/26/13 20:12	1.0	6
021	207_021	CCV	AR1254_250			07/26/13 20:40	1.0	2
022	207_022	CCV	AR1232_250			07/26/13 21:08	1.0	3
023	207_023	CCV	AR1248_250			07/26/13 21:37	1.0	4
024	207_024	CCV	AR1262_250			07/26/13 22:05	1.0	5

MA 07/30/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 24.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 233328736

Instrument : GC16  
 Method : EPA 8082

Begun : 08/16/13 06:56  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	228_001	X	HEX			08/16/13 06:56	1.0		
002	228_002	CCV	PCB100_20			08/16/13 07:25	1.0	1	
003	228_003	CCV	AR1248_250			08/16/13 08:41	1.0	2	
004	228_004	LOQ	246745-010	Soil	200519	08/16/13 09:09	1.0		
005	228_005	LOQ	246745-005	Water	200611	08/16/13 09:38	1.0		
006	228_006	BLANK	QC702192	Soil	201777	08/16/13 10:06	1.0		
007	228_007	LCS	QC702193	Soil	201777	08/16/13 10:35	1.0		
008	228_008	MSS	247939-001	Soil	201777	08/16/13 11:03	1.0		
009	228_009	MS	QC702194	Soil	201777	08/16/13 11:32	1.0		
010	228_010	MSD	QC702195	Soil	201777	08/16/13 12:00	1.0		
011	228_011	SAMPLE	247848-025	Oil	201654	08/16/13 12:29	1.0		
012	228_012	CCV	PCB250_50			08/16/13 12:57	1.0	3	
013	228_013	CCV	AR1248_250			08/16/13 13:25	1.0	2	
014	228_014	LOQ	246745-006	Soil	200519	08/16/13 16:38	1.0		
015	228_015	LOQ	246745-001	Water	200611	08/16/13 17:06	1.0		
016	228_016	CCV	PCB100_20			08/16/13 17:35	1.0	1	
017	228_017	CCV	AR1254_250			08/16/13 18:08	1.0	4	
018	228_018	BLANK	QC702253	Soil	201793	08/16/13 18:36	1.0		
019	228_019	LCS	QC702254	Soil	201793	08/16/13 19:05	1.0		
020	228_020	SAMPLE	248030-002	Soil	201793	08/16/13 19:33	5.0		
021	228_021	SAMPLE	248030-003	Soil	201793	08/16/13 20:02	1.0		
022	228_022	SAMPLE	248030-004	Soil	201793	08/16/13 20:30	1.0		
023	228_023	MSS	248030-005	Soil	201793	08/16/13 20:59	1.0		
024	228_024	SAMPLE	248030-009	Soil	201793	08/16/13 21:27	1.0		
025	228_025	SAMPLE	248030-011	Soil	201793	08/16/13 21:56	1.0		
026	228_026	SAMPLE	248030-012	Soil	201793	08/16/13 22:24	1.0		
027	228_027	SAMPLE	248030-014	Soil	201793	08/16/13 22:53	1.0		
028	228_028	SAMPLE	248030-015	Soil	201793	08/16/13 23:21	1.0		
029	228_029	SAMPLE	248030-016	Soil	201793	08/16/13 23:49	1.0		
030	228_030	BLANK	QC702192	Soil	201777	08/17/13 00:18	1.0		
031	228_031	CCV	PCB250_50			08/17/13 00:46	1.0	3	
032	228_032	X	CCV			08/17/13 01:15	1.0	3	
033	228_033	CCV	AR1254_250			08/17/13 01:43	1.0	4	
034	228_034	SAMPLE	248030-017	Soil	201793	08/17/13 02:12	1.0		
035	228_035	SAMPLE	248030-021	Soil	201793	08/17/13 02:40	1.0		
036	228_036	SAMPLE	248030-022	Soil	201793	08/17/13 03:09	1.0		
037	228_037	SAMPLE	248030-023	Soil	201793	08/17/13 03:37	1.0		
038	228_038	SAMPLE	248030-024	Soil	201793	08/17/13 04:05	1.0		
039	228_039	SAMPLE	248030-025	Soil	201793	08/17/13 04:34	20.0		
040	228_040	SAMPLE	248030-026	Soil	201793	08/17/13 05:02	1.0		
041	228_041	SAMPLE	248030-027	Soil	201793	08/17/13 05:31	1.0		12:PCB1254#1=5700
042	228_042	SAMPLE	248030-028	Soil	201793	08/17/13 05:59	1.0		
043	228_043	SAMPLE	248030-029	Soil	201793	08/17/13 06:28	1.0		
044	228_044	BLANK	QC702253	Soil	201793	08/17/13 06:56	1.0		
045	228_045	CCV	PCB100_20			08/17/13 07:25	1.0	1	
046	228_046	X	CCV			08/17/13 07:53	1.0	1	
047	228_047	CCV	AR1254_250			08/17/13 08:21	1.0	4	
048	228_048	MS	QC702255	Soil	201793	08/17/13 08:50	1.0		
049	228_049	MSD	QC702256	Soil	201793	08/17/13 09:18	1.0		
050	228_050	CCV	PCB250_50			08/17/13 09:47	1.0	3	
051	228_051	X	CCV			08/17/13 10:15	1.0	3	



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 233333165

Instrument : GC16  
 Method : EPA 8082

Begun : 08/19/13 08:45  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	231_001	X	HEX			08/19/13 08:45	1.0		
002	231_002	CCV	PCB100_20			08/19/13 09:13	1.0	1	
003	231_003	CCV	AR1254_250			08/19/13 13:44	1.0	2	
004	231_004	SAMPLE	248030-021	Soil	201793	08/19/13 14:13	1.0		
005	231_005	SAMPLE	248030-027	Soil	201793	08/19/13 14:41	10.0		
006	231_006	MSS	248030-034	Soil	201867	08/19/13 18:57	1.0		
007	231_007	SAMPLE	248030-036	Soil	201867	08/19/13 19:25	1.0		
008	231_008	SAMPLE	248030-037	Soil	201867	08/19/13 19:53	1.0		
009	231_009	SAMPLE	248030-039	Soil	201867	08/19/13 20:22	1.0		
010	231_010	SAMPLE	248030-040	Soil	201867	08/19/13 20:50	1.0		
011	231_011	X	CCV			08/19/13 21:18	1.0	3	
012	231_012	CCV	PCB250_50			08/19/13 21:46	1.0	3	
013	231_013	CCV	AR1254_250			08/19/13 22:14	1.0	2	
014	231_014	SAMPLE	248030-041	Soil	201867	08/19/13 22:43	1.0		
015	231_015	SAMPLE	248030-042	Soil	201867	08/19/13 23:11	1.0		
016	231_016	SAMPLE	248030-043	Soil	201867	08/19/13 23:39	1.0		3:PCB1260#1=1600
017	231_017	SAMPLE	248030-044	Soil	201867	08/20/13 00:08	1.0		
018	231_018	MS	QC702596	Soil	201867	08/20/13 00:36	1.0		
019	231_019	MSD	QC702597	Soil	201867	08/20/13 01:04	1.0		
020	231_020	X	CCV			08/20/13 01:33	1.0	1	
021	231_021	CCV	PCB100_20			08/20/13 02:01	1.0	1	
022	231_022	CCV	AR1254_250			08/20/13 02:29	1.0	2	

MA 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 22.

SAMPLE PREPARATION SUMMARY

Batch # : 201793  
 Started By : MB3  
 Method : 3550B  
 Spike #1 ID : S22742

Prep Date : 16-AUG-2013 11:45  
 SOP Version : PCB\_3550\_rv11  
 Spike #2 ID : S22713

Analysis : PCB  
 Finished By : MB3  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-002		Soil	30.23	25	1	0.827		1				PCB	
248030-003		Soil	30.46	25	1	0.8207		1				PCB	
248030-004		Soil	30.06	25	1	0.8317		1				PCB	
248030-005		Soil	30.04	25	1	0.8322		1				PCB	mss
248030-009		Soil	30.17	25	1	0.8286		1				PCB	
248030-011		Soil	29.73	25	1	0.8409		1				PCB	
248030-012		Soil	29.94	25	1	0.835		1				PCB	
248030-014		Soil	29.83	25	1	0.8381		1				PCB	
248030-015		Soil	30	25	1	0.8333		1				PCB	
248030-016		Soil	30.4	25	1	0.8224		1				PCB	
248030-017		Soil	29.77	25	1	0.8398		1				PCB	
248030-021		Soil	29.73	25	1	0.8409		1				(rebatched)	
248030-022		Soil	30.16	25	1	0.8289		1				PCB	
248030-023		Soil	30.4	25	1	0.8224		1				PCB	
248030-024		Soil	30.05	25	1	0.8319		1				PCB	
248030-025		Soil	29.77	25	1	0.8398		1				PCB	
248030-026		Soil	29.98	25	1	0.8339		1				PCB	
248030-027		Soil	29.86	25	1	0.8372		1				PCB	
248030-028		Soil	29.92	25	1	0.8356		1				PCB	
248030-029		Soil	29.75	25	1	0.8403		1				PCB	
QC702253	BLANK	Soil	30.23	25	1	0.827		1				PCB	
QC702254	LCS	Soil	30.3	25	1	0.8251		1	1			PCB	
QC702255	MS	Soil	30.24	25	1	0.8267		1	1			PCB	
QC702256	MSD	Soil	30.11	25	1	0.8303		1	1			PCB	

Analyst: MA

Date: 08/21/13

Reviewer: TFB

Date: 08/21/13

PCB (8082) Soil Prep Log

Curtis & Tompkins, Ltd.

MS Batch No: 201793  
 LIMS Analysis: PCB  
 Date Extracted: 8/16/13

EPA 3550b Sonication  
 Other \_\_\_\_\_

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Sample #	Container ID	Sample Wt (g)	Final Vol (mL)	Comments
248030-002	I	30.23	<input type="checkbox"/> 25.0 <input type="checkbox"/>	
3	H	30.46	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
4	B	30.06	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
5	↓	30.01	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	MSS
9	A	30.17	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
11	E	29.73	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
12	↓	29.94	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
14	I	29.83	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
15	H	30.00	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
16	B	30.40	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
17	F	29.77	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
21	↓	29.73	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
22	A	30.16	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
23	I	30.40	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
24	↓	30.05	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
25	B	29.77	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
26	I	29.98	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
27	↓	29.86	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
28	A	29.92	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
29	B	29.75	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
MB QC702253		30.23	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
LCS ↓ 4		30.30	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
MS ↓ 3	B	30.24	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
MSD ↓ 6	↓	30.11	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
			<input type="checkbox"/> 25.0 <input type="checkbox"/>	MA8-19-13

Solvent-rinsed granular Na<sub>2</sub>SO<sub>4</sub> weighed out for QC samples dried with CH<sub>2</sub>Cl<sub>2</sub>-rinsed  granular Na<sub>2</sub>SO<sub>4</sub>  powder  
 1.0 mL of surrogate solution was added to all samples  
 1.0 mL of matrix spiking solution was added to all spikes  
 1:1 CH<sub>2</sub>Cl<sub>2</sub> (lot# EM52089):Acetone (lot# EM53032) was added to all  
 Solvent added at (time) \_\_\_\_\_  
 sonicated 3 times w/ ≥100mL  soxhlet extractors on at \_\_\_\_\_  
 Soxhlets off at: \_\_\_\_\_  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed <sup>granular</sup> powdered Na<sub>2</sub>SO<sub>4</sub>  
 Solvent exchanged with Hexane, Lot# \_\_\_\_\_  
 Concentrated to final volume at temperature (degrees C) \_\_\_\_\_  
 EPA 3665A Clean-up: vortexed w/ H<sub>2</sub>SO<sub>4</sub> Lot# \_\_\_\_\_  
 Centrifuged for 1 min; 5mL transferred to labelled vial  
 Relinquished to PCB group \_\_\_\_\_

Mfg & Lot # / LIMS # / Time	Initials / Date
EMVLIIB	MB3 8/16/13
↓	
S22742C	
S22713C	
↓	
EM53063	
100	
FSJ30041	
↓	

Michael Baschall 8/16/13  
 Extraction Chemist / Date

Continued from page 1  
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MA 8-19-13  
 Reviewed by / Date

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PROJECT

DATE

Continued from page

Sample ID	Weight(g)	Analysis	Batch#	Comments
248030-002 I	30.23	PCB	201793	
003 H	30.46			
004 B	30.06			
005 V	30.04			MSS
009 A	30.17			
011 E	29.73			
012 V	29.94			
014 I	29.83			
015 H	30.00			
016 B	30.40			
017 E	29.77			
021 V	29.73			
022 A	30.16			
023 I	30.40			
024 V	30.05			MB3 8/16/13
025 B	29.787			
026 I	29.98			
027 V	29.86			
028 A	29.92			
029 B	29.75			
MB	30.23			EMVLI1B
LCS	30.30			↓
MS	30.24			248030-005B
MSD	30.11			↓

MB3 8/16/13

Continued to page

SIGNATURE

DATE

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

SAMPLE PREPARATION SUMMARY

Batch # : 201867		Analysis : 8081
Started By : EL	Prep Date : 19-AUG-2013 11:50	Finished By : EL
Method : 3550B	SOP Version : 8081_3550_rv14	Units : g
Spike #1 ID : S22742	Spike #2 ID : S22713	Spike #3 ID : S22845

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-030		Soil	30.31	20	1	0.6598	.8					PCB	
248030-031		Soil	30.36	20	1	0.6588	.8					PCB	
248030-032		Soil	30.18	20	1	0.6627	.8					PCB	
248030-033		Soil	30.11	20	1	0.6642	.8					PCB	
248030-034		Soil	30.35	20	1	0.659	.8					PCB	MSS1
248030-035		Soil	30.16	20	1	0.6631	.8					PCB	
248030-036		Soil	30.06	20	1	0.6653	.8					PCB	
248030-037		Soil	30.08	20	1	0.6649	.8					PCB	
248030-039		Soil	30.04	20	1	0.6658	.8					PCB	
248030-040		Soil	30.1	20	1	0.6645	.8					PCB	
248030-041		Soil	30.22	20	1	0.6618	.8					PCB	
248030-042		Soil	30.16	20	1	0.6631	.8					PCB	
248030-043		Soil	30.3	20	1	0.6601	.8					PCB	
248030-044		Soil	30.18	20	1	0.6627	.8					PCB	
248039-009		Soil	30.03	20	1	0.666	.8					8081, PCB	MSS2
248074-009		Soil	30.03	20	1	0.666	.8					8081, PCB	
248074-010		Soil	30.29	20	1	0.6603	.8					8081, PCB	
248097-001		Soil	30.06	20	1	0.6653	.8					PCB	
248097-002		Soil	30.31	20	1	0.6598	.8					PCB	
248097-003		Soil	30.17	20	1	0.6629	.8					PCB	
QC702594	BLANK	Soil	30.15	20	1	0.6633	.8					PCB	
QC702595	LCS	Soil	30.16	20	1	0.6631	.8	1				PCB	
QC702596	MS	Soil	30.21	20	1	0.662	.8	1				PCB	
QC702597	MSD	Soil	30.27	20	1	0.6607	.8	1				PCB	
QC702598	LCS	Soil	30.32	20	1	0.6596	.8			.4		8081	
QC702599	MS	Soil	30.22	20	1	0.6618	.8			.4		8081	
QC702600	MSD	Soil	30.12	20	1	0.664	.8			.4		8081	

MAW 08/20/13 : Matrix spikes QC702599, QC702600 (batch 201867) were not reported because the parent sample required a dilution that would have diluted out the spikes.

MAW 08/20/13 : Ready for review for 8081,

MAW: 08/20/13      MA: 08/20/13      TFB: 08/20/13

**PCB (8082) Soil Prep Log**

Curtis & Tompkins, Ltd.

LIMS Batch No: 201807  
 LIMS Analysis: PCB (P/P)  
 Date Extracted: 8/19/13

EPA 3550b Sonication  
 Other \_\_\_\_\_

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D.

Sample #	Container ID	Sample Wt (g)	Final Vol (mL)	Comments
248030-030	B	30.31	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-031	↓	30.36	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-032	↓	30.18	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-033	A	30.11	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-034	D	30.35	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	MSS
-035	↓	30.16	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-036	↓	30.06	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-037	A	30.08	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-039	D	30.04	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-040	A	30.10	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-041	B	30.22	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-042	A	30.16	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-043	D	30.30	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
-044	A	30.18	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
248039-009	COMP	30.03	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
248074-009	↓	30.03	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
↓ -010	↓	30.29	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
248097-001	F	30.06	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
↓ -002	↓	30.31	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
↓ -003	↓	30.17	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
MB QC702594	NA	30.15	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
CCS ↓ 5	↓	30.16	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
MS ↓ 6	D	30.21	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
MSD ↓ 7	↓	30.27	<input type="checkbox"/> 25.0 <input checked="" type="checkbox"/> 20.0	
			<input type="checkbox"/> 25.0 <input type="checkbox"/>	MA 8 20 13

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	Mfg & Lot # / LIMS # / Time	Initials / Date
Solvent-rinsed granular Na <sub>2</sub> SO <sub>4</sub> weighed out for QC samples dried with CH <sub>2</sub> Cl <sub>2</sub> -rinsed <input checked="" type="checkbox"/> granular Na <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> powder	GMVLI18	EL 8/19/13
0.8 mL of surrogate solution was added to all samples	↓	
1.0 mL of matrix spiking solution was added to all spikes	8/19/13 GM 522742C	
1:1 CH <sub>2</sub> Cl <sub>2</sub> (lot# <u>GM53123</u> ):Acetone (lot# <u>GM52216</u> ) was added to all	522731D	
Solvent added at (time)	1150	
<input checked="" type="checkbox"/> Sonicated 3 times w/ ≥100mL <input type="checkbox"/> soxhlet extractors on at:	✓	
Soxhlets off at:	NA	
Extracts filtered through baked, CH <sub>2</sub> Cl <sub>2</sub> rinsed powdered Na <sub>2</sub> SO <sub>4</sub>	GMVRL2C504	
Solvent exchanged with Hexane, Lot#	GM53063	
Concentrated to final volume at temperature (degrees C)	100°	
EPA 3665A Clean-up: vortexed w/ H <sub>2</sub> SO <sub>4</sub> Lot#	FS130041	
Centrifuged for 1 min; 5mL transferred to labelled vial	✓	
Relinquished to PCB group	✓	↓

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EL 8/19/13  
 Extraction Chemist / Date

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MA 8 20 13  
 Reviewed by / Date

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TITLE SOIL AMOUNT PROJECT DAT

Continued from page

Sample ID	Weight (g)	Analysis	Batch #	Comments
248030-030	B 30.31	PCB	201807	
-031	↓ 30.36			
-032	↓ 30.18			
-033	A 30.11			
-034	D 30.35			
-035	↓ 30.16			
-036	↓ 30.06			
-037	A 30.08			
-039	D 30.04			
-040	A 30.10			
-041	B 30.22			
-042	A 30.16			
-043	D 30.30			
-044	A 30.18			
248039-009	Comp 30.03	PIP		
248074-009	↓ 30.03	↓		Comp (74-001-002-003-004-005) ca. 50g ea
-010	↓ 30.29			↓ -005, -006, -007, -008 ↓
248097-001	F 30.06	PCB		
-002	↓ 30.31	↓		
-003	↓ 30.17	↓		
MIS	30.15	PIP		EMV L11B
LCS	30.16	PCB		↓
MS	30.21	↓		248030-034D
MSD	30.27	↓		↓
LCS	30.32	PCB		EMV L11B
MS	30.22	↓		248039-009
MSD	30.12	↓		↓

8/19/13

Continued to page

SIGNATURE	DATE
DISCLOSED TO AND UNDERSTOOD BY	DATE
PROPRIETARY INFORMATION	

SAMPLE PREPARATION SUMMARY

Batch # : 201896  
 Started By : CPK  
 Method : 3550B  
 Spike #1 ID : S22742

Prep Date : 19-AUG-2013 19:45  
 Spike #2 ID : S22713

Analysis : PCB  
 Finished By : CPK  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-021		Soil	29.61	25	1	0.8443		1				PCB	
248085-001		Miscell.	30.3	25	1	0.8251		1				PCB	Prepped 20-AUG-2013 11:40
248085-002		Miscell.	30.05	25	1	0.8319		1				PCB	Prepped 20-AUG-2013 11:40
248085-003		Miscell.	30.04	25	1	0.8322		1				PCB	Prepped 20-AUG-2013 11:40
248097-004		Soil	30.45	25	1	0.821		1				PCB	Prepped 20-AUG-2013 11:40
248097-005		Soil	30.42	25	1	0.8218		1				PCB	Prepped 20-AUG-2013 11:40
248097-006		Soil	30.1	25	1	0.8306		1				PCB	Prepped 20-AUG-2013 11:40
248097-007		Soil	30.21	25	1	0.8275		1				PCB	Prepped 20-AUG-2013 11:40
248097-008		Soil	30.07	25	1	0.8314		1				PCB	Prepped 20-AUG-2013 11:40
248111-007		Soil	30.01	25	1	0.8331		1				PCB	See comment 1 below
248123-001		Soil	29.71	25	1	0.8415		1				PCB	
248133-003		Soil	30	25	1	0.8333		1				PCB	Prepped 20-AUG-2013 11:40
248133-004		Soil	30.4	25	1	0.8224		1				PCB	Prepped 20-AUG-2013 11:40
248133-005		Soil	30.38	25	1	0.8229		1				PCB	Prepped 20-AUG-2013 11:40
248133-006		Soil	30.02	25	1	0.8328		1				PCB	Prepped 20-AUG-2013 11:40
248143-001		Soil	30.23	25	1	0.827		1				PCB	Prepped 20-AUG-2013 11:40
248149-005		Soil	30.11	25	1	0.8303		1				PCB	Prepped 20-AUG-2013 11:40
248150-001		Miscell.	30.29	25	1	0.8254		1				PCB	Prepped 20-AUG-2013 11:40
248151-001		Soil	30.26	25	1	0.8262		1				PCB	Prepped 20-AUG-2013 11:40
248151-002		Soil	30.08	25	1	0.8311		1				(rebatched)	Prepped 20-AUG-2013 11:40
QC702714	BLANK	Soil	29.72	25	1	0.8412		1					
QC702715	LCS	Soil	29.9	25	1	0.8361		1	1				
QC702716	MS	Soil	29.79	25	1	0.8392		1	1				
QC702717	MSD	Soil	29.9	25	1	0.8361		1	1				

Comment 1: Prepped 20-AUG-2013 11:40; QC-PE

Analyst: MA Date: 08/21/13 Reviewer: TFB Date: 08/21/13

PCB (8082) Soil Prep Log

Curtis & Tompkins, Ltd.

MS Batch No: 701896  
 LIMS Analysis: PCB  
 Date Extracted: 8/19/13

EPA 3550b Sonication  
 Other \_\_\_\_\_

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Sample #	Container ID	Sample Wt (g)	Final Vol (mL)	Comments
248030-021	E	29.61	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
248123-001	B	29.71	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
MB QC 702714	NA	29.72	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
LC5 ↓ 5	↓	29.90	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
MS ↓ 6	B	29.79	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
MSD ↓ 7	↓	29.90	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
248085-001	B	30.30	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	Added 8/20/13 @ 1140
↓ -002	↓	30.05	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -003	↓	30.04	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
10 248097-004	F	30.45	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -005	↓	30.42	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -006	↓	30.10	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -007	↓	30.21	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -008	↓	30.07	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
15 248111-007	A	30.01	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	QC-PE
248133-003	B	30.00	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -004	↓	30.40	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -005	↓	30.38	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -006	↓	30.02	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
20 248143-001	C	30.23	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
248149-005	comp	30.11	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
248150-001	E	30.29	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
248151-001	↓	30.26	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -002	↓	30.08	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
			<input type="checkbox"/> 25.0 <input type="checkbox"/>	MA 8-21-13

Solvent-rinsed granular Na<sub>2</sub>SO<sub>4</sub> weighed out for QC samples dried with CH<sub>2</sub>Cl<sub>2</sub>-rinsed  granular Na<sub>2</sub>SO<sub>4</sub>  powder  
1.0 mL of surrogate solution was added to all samples  
1.0 mL of matrix spiking solution was added to all spikes  
 1:1 CH<sub>2</sub>Cl<sub>2</sub> (lot# EM53123):Acetone (lot# EM52216) was added to all  
 Solvent added at (time)  
 sonicated 3 times w/ ≥100mL  soxhlet extractors on at:  
 Soxhlets off at:  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 Solvent exchanged with Hexane, Lot#  
 Concentrated to final volume at temperature (degrees C)  
 EPA 3665A Clean-up: vortexed w/ H<sub>2</sub>SO<sub>4</sub> Lot#  
 Centrifuged for 1 min; 5mL transferred to labelled vial  
 Relinquished to PCB group

Mfg & Lot # / LIMS # / Time	Initials / Date
EMVLIIB	CPK 8/19/13
S22 242C	
S22 2907E S22713D	
1945 / 1140	
NA	
EMVLIIB	
EM53067	
100°	
FS170041	
✓	
✓	

  
8/19/13  
 Extraction Chemist / Date

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MA 8-21-13  
 Reviewed by / Date

TITLE Soil Aliquot

PROJECT

DATE

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Sample ID	Weight (g)	Analysis	Batch #	Comments
248024-002 D	49.64	TTHM	201079	
↓ -W3 C	49.88			Rocky sample
↓ -W4 D	50.21			
↓ -W5 ↓	49.70			
↓ -W6 ↓	49.93			
248028-W1 B	49.68			
↓ -W2 ↓	49.77			
248030-W1 A	49.82			
↓ -W2 I	50.02			
↓ -W3 G	49.76			
↓ -W4 B	49.82			
↓ -W5 A	49.81			MSS
248112-W1 B	50.23			
↓ -W2 ↓	49.88			
248124-W1 B	50.19			
MB	50.76			EMVLIIB
LCS	49.89			↓
MS	50.22			248030-W5
MSD	<del>49.89</del> 49.58			↓ 8/15/13 CAP
247997-008 F	50.24	TTHM	201079	
248123-001 B	50.47			
248132-W1 A	49.96			
248070-030 E	29.61	PLB	201896	
248123-001 B	29.71			MSS
MB	29.72			EMVLIIB
LCS	29.90			↓
MS	29.79			248123-001
MSD	29.90			↓

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Sample ID	Weight	Analysis	Batch#	Comments
248030-006	49.56	D		
007	50.39	↓		
008	50.12	↓		
009	49.69	A		
010	50.24	B		
011	50.11	F		
012	49.70	↓		
013	49.97	B		
014	49.69	H		
015	49.90	↓		
016	49.00	B		
017	49.86	E		
018	50.17	H		MSS
019	49.81	B		
020	50.18	↓		
021	49.88	E		
022	49.70	A		
023	49.74	↓		
024	50.43	↓		
025	50.25	B		
	49.90			
	50.07			
	50.43	H		
	49.79	↓		
<p>MB CS MS MSD</p> <p>EMVLIB ↓ 248030-08H ↓</p> <p>MB3 8/20/13 201896</p>				
248085-001B	30.30	PCB		WET
↓ -002 ↓	30.05			↓
↓ -003 ↓	30.04			
248097-004F	30.45			
↓ -005 ↓	30.42			
↓ -006 ↓	30.10			
↓ -007 ↓	30.21			
↓ -008 ↓	30.07			
248111-007A	30.01			
248133-003B	30.00			
↓ -004 ↓	30.40			
↓ -005 ↓	30.38			
↓ -006 ↓	30.02			
248143-001C	30.23			
248149-005comp	30.11			
248150-001E	30.29			
248151-001E	30.26			
↓ -002 ↓	30.08			
<p>Aliased 247707-005B ↓ -006B -007B -008B</p> <p>Compd -001B, -002B, -003B, -004B @ 50g each</p> <p>ROCKY LEK 8/20/13</p>				

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PROPRIETARY INFORMATION

REPORTING SUMMARY FOR 248030 PCBS Soil

Sample ID	Analyte	Inst ID	Ch	Date & Time
248030-002	Aroclor-1016	GC16	B	08/16/13 19:33
248030-002	Aroclor-1221	GC16	B	08/16/13 19:33
248030-002	Aroclor-1232	GC16	B	08/16/13 19:33
248030-002	Aroclor-1242	GC16	B	08/16/13 19:33
248030-002	Aroclor-1248	GC16	B	08/16/13 19:33
248030-002	Aroclor-1254	GC16	B	08/16/13 19:33
248030-002	Aroclor-1260	GC16	B	08/16/13 19:33
248030-002	TCMX	GC16	B	08/16/13 19:33
248030-002	Decachlorobiphenyl	GC16	B	08/16/13 19:33
248030-003	Aroclor-1016	GC16	A	08/16/13 20:02
248030-003	Aroclor-1221	GC16	A	08/16/13 20:02
248030-003	Aroclor-1232	GC16	A	08/16/13 20:02
248030-003	Aroclor-1242	GC16	A	08/16/13 20:02
248030-003	Aroclor-1248	GC16	A	08/16/13 20:02
248030-003	Aroclor-1254	GC16	A	08/16/13 20:02
248030-003	Aroclor-1260	GC16	A	08/16/13 20:02
248030-003	TCMX	GC16	A	08/16/13 20:02
248030-003	Decachlorobiphenyl	GC16	A	08/16/13 20:02
248030-004	Aroclor-1016	GC16	A	08/16/13 20:30
248030-004	Aroclor-1221	GC16	A	08/16/13 20:30
248030-004	Aroclor-1232	GC16	A	08/16/13 20:30
248030-004	Aroclor-1242	GC16	A	08/16/13 20:30
248030-004	Aroclor-1248	GC16	A	08/16/13 20:30
248030-004	Aroclor-1254	GC16	A	08/16/13 20:30
248030-004	Aroclor-1260	GC16	A	08/16/13 20:30
248030-004	TCMX	GC16	A	08/16/13 20:30
248030-004	Decachlorobiphenyl	GC16	A	08/16/13 20:30
248030-005	Aroclor-1016	GC16	A	08/16/13 20:59
248030-005	Aroclor-1221	GC16	A	08/16/13 20:59
248030-005	Aroclor-1232	GC16	A	08/16/13 20:59
248030-005	Aroclor-1242	GC16	A	08/16/13 20:59
248030-005	Aroclor-1248	GC16	A	08/16/13 20:59
248030-005	Aroclor-1254	GC16	A	08/16/13 20:59
248030-005	Aroclor-1260	GC16	A	08/16/13 20:59
248030-005	TCMX	GC16	A	08/16/13 20:59
248030-005	Decachlorobiphenyl	GC16	A	08/16/13 20:59
248030-009	Aroclor-1016	GC16	A	08/16/13 21:27
248030-009	Aroclor-1221	GC16	A	08/16/13 21:27
248030-009	Aroclor-1232	GC16	A	08/16/13 21:27
248030-009	Aroclor-1242	GC16	A	08/16/13 21:27
248030-009	Aroclor-1248	GC16	A	08/16/13 21:27
248030-009	Aroclor-1254	GC16	A	08/16/13 21:27
248030-009	Aroclor-1260	GC16	B	08/16/13 21:27
248030-009	TCMX	GC16	A	08/16/13 21:27
248030-009	Decachlorobiphenyl	GC16	A	08/16/13 21:27
248030-011	Aroclor-1016	GC16	A	08/16/13 21:56
248030-011	Aroclor-1221	GC16	A	08/16/13 21:56
248030-011	Aroclor-1232	GC16	A	08/16/13 21:56
248030-011	Aroclor-1242	GC16	A	08/16/13 21:56

REPORTING SUMMARY FOR 248030 PCBS Soil

Sample ID	Analyte	Inst ID	Ch	Date & Time
248030-011	Aroclor-1248	GC16	A	08/16/13 21:56
248030-011	Aroclor-1254	GC16	A	08/16/13 21:56
248030-011	Aroclor-1260	GC16	B	08/16/13 21:56
248030-011	TCMX	GC16	B	08/16/13 21:56
248030-011	Decachlorobiphenyl	GC16	B	08/16/13 21:56
248030-012	Aroclor-1016	GC16	A	08/16/13 22:24
248030-012	Aroclor-1221	GC16	A	08/16/13 22:24
248030-012	Aroclor-1232	GC16	A	08/16/13 22:24
248030-012	Aroclor-1242	GC16	A	08/16/13 22:24
248030-012	Aroclor-1248	GC16	A	08/16/13 22:24
248030-012	Aroclor-1254	GC16	A	08/16/13 22:24
248030-012	Aroclor-1260	GC16	A	08/16/13 22:24
248030-012	TCMX	GC16	A	08/16/13 22:24
248030-012	Decachlorobiphenyl	GC16	A	08/16/13 22:24
248030-014	Aroclor-1016	GC16	A	08/16/13 22:53
248030-014	Aroclor-1221	GC16	A	08/16/13 22:53
248030-014	Aroclor-1232	GC16	A	08/16/13 22:53
248030-014	Aroclor-1242	GC16	A	08/16/13 22:53
248030-014	Aroclor-1248	GC16	A	08/16/13 22:53
248030-014	Aroclor-1254	GC16	A	08/16/13 22:53
248030-014	Aroclor-1260	GC16	B	08/16/13 22:53
248030-014	TCMX	GC16	B	08/16/13 22:53
248030-014	Decachlorobiphenyl	GC16	A	08/16/13 22:53
248030-015	Aroclor-1016	GC16	A	08/16/13 23:21
248030-015	Aroclor-1221	GC16	A	08/16/13 23:21
248030-015	Aroclor-1232	GC16	A	08/16/13 23:21
248030-015	Aroclor-1242	GC16	A	08/16/13 23:21
248030-015	Aroclor-1248	GC16	A	08/16/13 23:21
248030-015	Aroclor-1254	GC16	A	08/16/13 23:21
248030-015	Aroclor-1260	GC16	A	08/16/13 23:21
248030-015	TCMX	GC16	B	08/16/13 23:21
248030-015	Decachlorobiphenyl	GC16	A	08/16/13 23:21
248030-016	Aroclor-1016	GC16	A	08/16/13 23:49
248030-016	Aroclor-1221	GC16	A	08/16/13 23:49
248030-016	Aroclor-1232	GC16	A	08/16/13 23:49
248030-016	Aroclor-1242	GC16	A	08/16/13 23:49
248030-016	Aroclor-1248	GC16	A	08/16/13 23:49
248030-016	Aroclor-1254	GC16	A	08/16/13 23:49
248030-016	Aroclor-1260	GC16	A	08/16/13 23:49
248030-016	TCMX	GC16	A	08/16/13 23:49
248030-016	Decachlorobiphenyl	GC16	A	08/16/13 23:49
248030-017	Aroclor-1016	GC16	A	08/17/13 02:12
248030-017	Aroclor-1221	GC16	A	08/17/13 02:12
248030-017	Aroclor-1232	GC16	A	08/17/13 02:12
248030-017	Aroclor-1242	GC16	A	08/17/13 02:12
248030-017	Aroclor-1248	GC16	A	08/17/13 02:12
248030-017	Aroclor-1254	GC16	A	08/17/13 02:12
248030-017	Aroclor-1260	GC16	A	08/17/13 02:12
248030-017	TCMX	GC16	B	08/17/13 02:12

REPORTING SUMMARY FOR 248030 PCBS Soil

Sample ID	Analyte	Inst ID	Ch	Date & Time
248030-017	Decachlorobiphenyl	GC16	B	08/17/13 02:12
248030-021	Aroclor-1016	GC06	A	08/20/13 12:44
248030-021	Aroclor-1221	GC06	A	08/20/13 12:44
248030-021	Aroclor-1232	GC06	A	08/20/13 12:44
248030-021	Aroclor-1242	GC06	A	08/20/13 12:44
248030-021	Aroclor-1248	GC06	A	08/20/13 12:44
248030-021	Aroclor-1254	GC06	A	08/20/13 12:44
248030-021	Aroclor-1260	GC06	B	08/20/13 12:44
248030-021	TCMX	GC06	A	08/20/13 12:44
248030-021	Decachlorobiphenyl	GC06	A	08/20/13 12:44
248030-022	Aroclor-1016	GC16	A	08/17/13 03:09
248030-022	Aroclor-1221	GC16	A	08/17/13 03:09
248030-022	Aroclor-1232	GC16	A	08/17/13 03:09
248030-022	Aroclor-1242	GC16	A	08/17/13 03:09
248030-022	Aroclor-1248	GC16	A	08/17/13 03:09
248030-022	Aroclor-1254	GC16	A	08/17/13 03:09
248030-022	Aroclor-1260	GC16	B	08/17/13 03:09
248030-022	TCMX	GC16	B	08/17/13 03:09
248030-022	Decachlorobiphenyl	GC16	B	08/17/13 03:09
248030-023	Aroclor-1016	GC16	A	08/17/13 03:37
248030-023	Aroclor-1221	GC16	A	08/17/13 03:37
248030-023	Aroclor-1232	GC16	A	08/17/13 03:37
248030-023	Aroclor-1242	GC16	A	08/17/13 03:37
248030-023	Aroclor-1248	GC16	A	08/17/13 03:37
248030-023	Aroclor-1254	GC16	A	08/17/13 03:37
248030-023	Aroclor-1260	GC16	A	08/17/13 03:37
248030-023	TCMX	GC16	B	08/17/13 03:37
248030-023	Decachlorobiphenyl	GC16	B	08/17/13 03:37
248030-024	Aroclor-1016	GC16	A	08/17/13 04:05
248030-024	Aroclor-1221	GC16	A	08/17/13 04:05
248030-024	Aroclor-1232	GC16	A	08/17/13 04:05
248030-024	Aroclor-1242	GC16	A	08/17/13 04:05
248030-024	Aroclor-1248	GC16	A	08/17/13 04:05
248030-024	Aroclor-1254	GC16	A	08/17/13 04:05
248030-024	Aroclor-1260	GC16	A	08/17/13 04:05
248030-024	TCMX	GC16	B	08/17/13 04:05
248030-024	Decachlorobiphenyl	GC16	B	08/17/13 04:05
248030-025	Aroclor-1016	GC16	A	08/17/13 04:34
248030-025	Aroclor-1221	GC16	A	08/17/13 04:34
248030-025	Aroclor-1232	GC16	A	08/17/13 04:34
248030-025	Aroclor-1242	GC16	A	08/17/13 04:34
248030-025	Aroclor-1248	GC16	A	08/17/13 04:34
248030-025	Aroclor-1254	GC16	A	08/17/13 04:34
248030-025	Aroclor-1260	GC16	A	08/17/13 04:34
248030-025	TCMX	GC16	B	08/17/13 04:34
248030-025	Decachlorobiphenyl	GC16	B	08/17/13 04:34
248030-026	Aroclor-1016	GC16	A	08/17/13 05:02
248030-026	Aroclor-1221	GC16	A	08/17/13 05:02

REPORTING SUMMARY FOR 248030 PCBS Soil

Sample ID	Analyte	Inst ID	Ch	Date & Time
248030-026	Aroclor-1232	GC16	A	08/17/13 05:02
248030-026	Aroclor-1242	GC16	A	08/17/13 05:02
248030-026	Aroclor-1248	GC16	A	08/17/13 05:02
248030-026	Aroclor-1254	GC16	A	08/17/13 05:02
248030-026	Aroclor-1260	GC16	A	08/17/13 05:02
248030-026	TCMX	GC16	B	08/17/13 05:02
248030-026	Decachlorobiphenyl	GC16	B	08/17/13 05:02
248030-027	Aroclor-1016	GC16	A	08/19/13 14:41
248030-027	Aroclor-1221	GC16	A	08/19/13 14:41
248030-027	Aroclor-1232	GC16	A	08/19/13 14:41
248030-027	Aroclor-1242	GC16	A	08/19/13 14:41
248030-027	Aroclor-1248	GC16	A	08/19/13 14:41
248030-027	Aroclor-1254	GC16	B	08/19/13 14:41
248030-027	Aroclor-1260	GC16	A	08/19/13 14:41
248030-027	TCMX	GC16	A	08/19/13 14:41
248030-027	Decachlorobiphenyl	GC16	A	08/19/13 14:41
248030-028	Aroclor-1016	GC16	A	08/17/13 05:59
248030-028	Aroclor-1221	GC16	A	08/17/13 05:59
248030-028	Aroclor-1232	GC16	A	08/17/13 05:59
248030-028	Aroclor-1242	GC16	A	08/17/13 05:59
248030-028	Aroclor-1248	GC16	A	08/17/13 05:59
248030-028	Aroclor-1254	GC16	A	08/17/13 05:59
248030-028	Aroclor-1260	GC16	A	08/17/13 05:59
248030-028	TCMX	GC16	B	08/17/13 05:59
248030-028	Decachlorobiphenyl	GC16	B	08/17/13 05:59
248030-029	Aroclor-1016	GC16	A	08/17/13 06:28
248030-029	Aroclor-1221	GC16	A	08/17/13 06:28
248030-029	Aroclor-1232	GC16	A	08/17/13 06:28
248030-029	Aroclor-1242	GC16	A	08/17/13 06:28
248030-029	Aroclor-1248	GC16	A	08/17/13 06:28
248030-029	Aroclor-1254	GC16	A	08/17/13 06:28
248030-029	Aroclor-1260	GC16	B	08/17/13 06:28
248030-029	TCMX	GC16	B	08/17/13 06:28
248030-029	Decachlorobiphenyl	GC16	B	08/17/13 06:28
248030-030	Aroclor-1016	GC06	A	08/20/13 00:03
248030-030	Aroclor-1221	GC06	A	08/20/13 00:03
248030-030	Aroclor-1232	GC06	A	08/20/13 00:03
248030-030	Aroclor-1242	GC06	A	08/20/13 00:03
248030-030	Aroclor-1248	GC06	A	08/20/13 00:03
248030-030	Aroclor-1254	GC06	A	08/20/13 00:03
248030-030	Aroclor-1260	GC06	B	08/20/13 00:03
248030-030	TCMX	GC06	A	08/20/13 00:03
248030-030	Decachlorobiphenyl	GC06	A	08/20/13 00:03
248030-031	Aroclor-1016	GC06	A	08/20/13 00:31
248030-031	Aroclor-1221	GC06	A	08/20/13 00:31
248030-031	Aroclor-1232	GC06	A	08/20/13 00:31
248030-031	Aroclor-1242	GC06	A	08/20/13 00:31
248030-031	Aroclor-1248	GC06	A	08/20/13 00:31
248030-031	Aroclor-1254	GC06	A	08/20/13 00:31

REPORTING SUMMARY FOR 248030 PCBS Soil

Sample ID	Analyte	Inst ID	Ch	Date & Time
248030-031	Aroclor-1260	GC06	B	08/20/13 00:31
248030-031	TCMX	GC06	A	08/20/13 00:31
248030-031	Decachlorobiphenyl	GC06	A	08/20/13 00:31
248030-032	Aroclor-1016	GC06	A	08/20/13 00:58
248030-032	Aroclor-1221	GC06	A	08/20/13 00:58
248030-032	Aroclor-1232	GC06	A	08/20/13 00:58
248030-032	Aroclor-1242	GC06	A	08/20/13 00:58
248030-032	Aroclor-1248	GC06	A	08/20/13 00:58
248030-032	Aroclor-1254	GC06	A	08/20/13 00:58
248030-032	Aroclor-1260	GC06	A	08/20/13 00:58
248030-032	TCMX	GC06	A	08/20/13 00:58
248030-032	Decachlorobiphenyl	GC06	A	08/20/13 00:58
248030-033	Aroclor-1016	GC06	A	08/20/13 19:59
248030-033	Aroclor-1221	GC06	A	08/20/13 19:59
248030-033	Aroclor-1232	GC06	A	08/20/13 19:59
248030-033	Aroclor-1242	GC06	A	08/20/13 19:59
248030-033	Aroclor-1248	GC06	A	08/20/13 19:59
248030-033	Aroclor-1254	GC06	A	08/20/13 19:59
248030-033	Aroclor-1260	GC06	A	08/20/13 19:59
248030-033	TCMX	GC06	A	08/20/13 19:59
248030-033	Decachlorobiphenyl	GC06	A	08/20/13 19:59
248030-034	Aroclor-1016	GC16	A	08/19/13 18:57
248030-034	Aroclor-1221	GC16	A	08/19/13 18:57
248030-034	Aroclor-1232	GC16	A	08/19/13 18:57
248030-034	Aroclor-1242	GC16	A	08/19/13 18:57
248030-034	Aroclor-1248	GC16	A	08/19/13 18:57
248030-034	Aroclor-1254	GC16	A	08/19/13 18:57
248030-034	Aroclor-1260	GC16	A	08/19/13 18:57
248030-034	TCMX	GC16	A	08/19/13 18:57
248030-034	Decachlorobiphenyl	GC16	A	08/19/13 18:57
248030-035	Aroclor-1016	GC06	A	08/20/13 21:22
248030-035	Aroclor-1221	GC06	A	08/20/13 21:22
248030-035	Aroclor-1232	GC06	A	08/20/13 21:22
248030-035	Aroclor-1242	GC06	A	08/20/13 21:22
248030-035	Aroclor-1248	GC06	A	08/20/13 21:22
248030-035	Aroclor-1254	GC06	A	08/20/13 21:22
248030-035	Aroclor-1260	GC06	A	08/20/13 21:22
248030-035	TCMX	GC06	A	08/20/13 21:22
248030-035	Decachlorobiphenyl	GC06	A	08/20/13 21:22
248030-036	Aroclor-1016	GC16	A	08/19/13 19:25
248030-036	Aroclor-1221	GC16	A	08/19/13 19:25
248030-036	Aroclor-1232	GC16	A	08/19/13 19:25
248030-036	Aroclor-1242	GC16	A	08/19/13 19:25
248030-036	Aroclor-1248	GC16	A	08/19/13 19:25
248030-036	Aroclor-1254	GC16	A	08/19/13 19:25
248030-036	Aroclor-1260	GC16	A	08/19/13 19:25
248030-036	TCMX	GC16	B	08/19/13 19:25
248030-036	Decachlorobiphenyl	GC16	B	08/19/13 19:25

REPORTING SUMMARY FOR 248030 PCBS Soil

Sample ID	Analyte	Inst ID	Ch	Date & Time
248030-037	Aroclor-1016	GC16	A	08/19/13 19:53
248030-037	Aroclor-1221	GC16	A	08/19/13 19:53
248030-037	Aroclor-1232	GC16	A	08/19/13 19:53
248030-037	Aroclor-1242	GC16	A	08/19/13 19:53
248030-037	Aroclor-1248	GC16	A	08/19/13 19:53
248030-037	Aroclor-1254	GC16	A	08/19/13 19:53
248030-037	Aroclor-1260	GC16	A	08/19/13 19:53
248030-037	TCMX	GC16	A	08/19/13 19:53
248030-037	Decachlorobiphenyl	GC16	A	08/19/13 19:53
248030-039	Aroclor-1016	GC16	A	08/19/13 20:22
248030-039	Aroclor-1221	GC16	A	08/19/13 20:22
248030-039	Aroclor-1232	GC16	A	08/19/13 20:22
248030-039	Aroclor-1242	GC16	A	08/19/13 20:22
248030-039	Aroclor-1248	GC16	A	08/19/13 20:22
248030-039	Aroclor-1254	GC16	A	08/19/13 20:22
248030-039	Aroclor-1260	GC16	A	08/19/13 20:22
248030-039	TCMX	GC16	A	08/19/13 20:22
248030-039	Decachlorobiphenyl	GC16	A	08/19/13 20:22
248030-040	Aroclor-1016	GC16	A	08/19/13 20:50
248030-040	Aroclor-1221	GC16	A	08/19/13 20:50
248030-040	Aroclor-1232	GC16	A	08/19/13 20:50
248030-040	Aroclor-1242	GC16	A	08/19/13 20:50
248030-040	Aroclor-1248	GC16	A	08/19/13 20:50
248030-040	Aroclor-1254	GC16	B	08/19/13 20:50
248030-040	Aroclor-1260	GC16	A	08/19/13 20:50
248030-040	TCMX	GC16	A	08/19/13 20:50
248030-040	Decachlorobiphenyl	GC16	A	08/19/13 20:50
248030-041	Aroclor-1016	GC16	A	08/19/13 22:43
248030-041	Aroclor-1221	GC16	A	08/19/13 22:43
248030-041	Aroclor-1232	GC16	A	08/19/13 22:43
248030-041	Aroclor-1242	GC16	A	08/19/13 22:43
248030-041	Aroclor-1248	GC16	A	08/19/13 22:43
248030-041	Aroclor-1254	GC16	B	08/19/13 22:43
248030-041	Aroclor-1260	GC16	A	08/19/13 22:43
248030-041	TCMX	GC16	A	08/19/13 22:43
248030-041	Decachlorobiphenyl	GC16	A	08/19/13 22:43
248030-042	Aroclor-1016	GC16	A	08/19/13 23:11
248030-042	Aroclor-1221	GC16	A	08/19/13 23:11
248030-042	Aroclor-1232	GC16	A	08/19/13 23:11
248030-042	Aroclor-1242	GC16	A	08/19/13 23:11
248030-042	Aroclor-1248	GC16	A	08/19/13 23:11
248030-042	Aroclor-1254	GC16	A	08/19/13 23:11
248030-042	Aroclor-1260	GC16	A	08/19/13 23:11
248030-042	TCMX	GC16	B	08/19/13 23:11
248030-042	Decachlorobiphenyl	GC16	B	08/19/13 23:11
248030-043	Aroclor-1016	GC06	A	08/20/13 20:26
248030-043	Aroclor-1221	GC06	A	08/20/13 20:26
248030-043	Aroclor-1232	GC06	A	08/20/13 20:26
248030-043	Aroclor-1242	GC06	A	08/20/13 20:26

REPORTING SUMMARY FOR 248030 PCBS Soil

Sample ID	Analyte	Inst ID	Ch	Date & Time
248030-043	Aroclor-1248	GC06	A	08/20/13 20:26
248030-043	Aroclor-1254	GC16	B	08/19/13 23:39
248030-043	Aroclor-1260	GC06	B	08/20/13 20:26
248030-043	TCMX	GC06	A	08/20/13 20:26
248030-043	Decachlorobiphenyl	GC06	A	08/20/13 20:26
248030-044	Aroclor-1016	GC16	A	08/20/13 00:08
248030-044	Aroclor-1221	GC16	A	08/20/13 00:08
248030-044	Aroclor-1232	GC16	A	08/20/13 00:08
248030-044	Aroclor-1242	GC16	A	08/20/13 00:08
248030-044	Aroclor-1248	GC16	A	08/20/13 00:08
248030-044	Aroclor-1254	GC16	B	08/20/13 00:08
248030-044	Aroclor-1260	GC16	A	08/20/13 00:08
248030-044	TCMX	GC16	A	08/20/13 00:08
248030-044	Decachlorobiphenyl	GC16	A	08/20/13 00:08
QC702253	Aroclor-1016	GC16	A	08/16/13 18:36
QC702253	Aroclor-1221	GC16	A	08/16/13 18:36
QC702253	Aroclor-1232	GC16	A	08/16/13 18:36
QC702253	Aroclor-1242	GC16	A	08/16/13 18:36
QC702253	Aroclor-1248	GC16	A	08/16/13 18:36
QC702253	Aroclor-1254	GC16	A	08/16/13 18:36
QC702253	Aroclor-1260	GC16	A	08/16/13 18:36
QC702253	TCMX	GC16	A	08/16/13 18:36
QC702253	Decachlorobiphenyl	GC16	A	08/16/13 18:36
QC702594	Aroclor-1016	GC06	A	08/19/13 20:23
QC702594	Aroclor-1221	GC06	A	08/19/13 20:23
QC702594	Aroclor-1232	GC06	A	08/19/13 20:23
QC702594	Aroclor-1242	GC06	A	08/19/13 20:23
QC702594	Aroclor-1248	GC06	A	08/19/13 20:23
QC702594	Aroclor-1254	GC06	A	08/19/13 20:23
QC702594	Aroclor-1260	GC06	A	08/19/13 20:23
QC702594	TCMX	GC06	A	08/19/13 20:23
QC702594	Decachlorobiphenyl	GC06	A	08/19/13 20:23
QC702714	Aroclor-1016	GC06	A	08/20/13 11:49
QC702714	Aroclor-1221	GC06	A	08/20/13 11:49
QC702714	Aroclor-1232	GC06	A	08/20/13 11:49
QC702714	Aroclor-1242	GC06	A	08/20/13 11:49
QC702714	Aroclor-1248	GC06	A	08/20/13 11:49
QC702714	Aroclor-1254	GC06	A	08/20/13 11:49
QC702714	Aroclor-1260	GC06	A	08/20/13 11:49
QC702714	TCMX	GC06	A	08/20/13 11:49
QC702714	Decachlorobiphenyl	GC06	A	08/20/13 11:49
QC702254	Aroclor-1016	GC16	A	08/16/13 19:05
QC702254	Aroclor-1260	GC16	A	08/16/13 19:05
QC702254	TCMX	GC16	A	08/16/13 19:05
QC702254	Decachlorobiphenyl	GC16	A	08/16/13 19:05
QC702255	Aroclor-1016	GC16	A	08/17/13 08:50
QC702255	Aroclor-1260	GC16	A	08/17/13 08:50
QC702255	TCMX	GC16	B	08/17/13 08:50

REPORTING SUMMARY FOR 248030 PCBS Soil

Sample ID	Analyte	Inst ID	Ch	Date & Time
QC702255	Decachlorobiphenyl	GC16	B	08/17/13 08:50
QC702256	Aroclor-1016	GC16	A	08/17/13 09:18
QC702256	Aroclor-1260	GC16	A	08/17/13 09:18
QC702256	TCMX	GC16	B	08/17/13 09:18
QC702256	Decachlorobiphenyl	GC16	B	08/17/13 09:18
QC702595	Aroclor-1016	GC06	A	08/19/13 20:50
QC702595	Aroclor-1260	GC06	A	08/19/13 20:50
QC702595	TCMX	GC06	A	08/19/13 20:50
QC702595	Decachlorobiphenyl	GC06	A	08/19/13 20:50
QC702596	Aroclor-1016	GC16	B	08/20/13 00:36
QC702596	Aroclor-1260	GC16	A	08/20/13 00:36
QC702596	TCMX	GC16	B	08/20/13 00:36
QC702596	Decachlorobiphenyl	GC16	B	08/20/13 00:36
QC702597	Aroclor-1016	GC16	B	08/20/13 01:04
QC702597	Aroclor-1260	GC16	A	08/20/13 01:04
QC702597	TCMX	GC16	B	08/20/13 01:04
QC702597	Decachlorobiphenyl	GC16	B	08/20/13 01:04
QC702715	Aroclor-1016	GC06	A	08/20/13 12:17
QC702715	Aroclor-1260	GC06	A	08/20/13 12:17
QC702715	TCMX	GC06	A	08/20/13 12:17
QC702715	Decachlorobiphenyl	GC06	A	08/20/13 12:17
QC702716	Aroclor-1016	GC06	A	08/20/13 18:36
QC702716	Aroclor-1260	GC06	A	08/20/13 18:36
QC702716	TCMX	GC06	A	08/20/13 18:36
QC702716	Decachlorobiphenyl	GC06	A	08/20/13 18:36
QC702717	Aroclor-1016	GC06	A	08/20/13 19:04
QC702717	Aroclor-1260	GC06	A	08/20/13 19:04
QC702717	TCMX	GC06	A	08/20/13 19:04
QC702717	Decachlorobiphenyl	GC06	A	08/20/13 19:04

Laboratory Job Number 248030

ANALYTICAL REPORT

Dissolved Gases by GC/FID

Matrix: Water

Dissolved Gases			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	RSK-175
Analyte:	Methane	Batch#:	201819
Field ID:	IA-40	Chemist:	MAC
Matrix:	Water	Sampled:	08/15/13
Units:	mg/L	Received:	08/15/13
Diln Fac:	1.000	Analyzed:	08/19/13

Type	Lab ID	Result	RL
SAMPLE	248030-038	ND	0.005
BLANK	QC702389	ND	0.005

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Dissolved Gases			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	RSK-175
Analyte:	Methane	Batch#:	201819
Matrix:	Water	Chemist:	MAC
Units:	mg/L	Analyzed:	08/19/13
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC702387	0.6544	0.5926	91	80-121		
BSD	QC702388	0.6544	0.6766	103	80-121	13	20

RPD= Relative Percent Difference

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 GASES Water: RSK-175

Inst : GC24  
 Calnum : 812459944003  
 Units : ug/ml

Name : rsk\_319  
 Date : 14-NOV-2012 14:00  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	319-014	812459944014	14-NOV-2012 14:00	S20886 (2500X)	
L2	319-015	812459944015	14-NOV-2012 14:15	S20886 (1000X)	
L3	319-016	812459944016	14-NOV-2012 14:31	S20886 (500X)	
L4	319-017	812459944017	14-NOV-2012 14:47	S20886 (200X)	
L5	319-018	812459944018	14-NOV-2012 15:11	S20886 (20X)	
L6	319-019	812459944019	14-NOV-2012 15:27	S20886 (10X)	
L7	319-020	812459944020	14-NOV-2012 15:43	S20886 (5X)	
L8	319-021	812459944021	14-NOV-2012 15:58	S20886 (2X)	
L9	319-022	812459944022	14-NOV-2012 16:13	S16495 (20X)	

Analyte	Ch	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
Methane	B	1.8E+6	1.7E+6	1.8E+6	1.1E+6	1.7E+6	1.8E+6	1.8E+6	2.0E+6	1.5E+6	AVRG	5.96E-7	5.96E-7		1.7E+6	16	0.995	30		
Ethene	B	1.5E+6	1.5E+6	1.6E+6	1.0E+6	1.7E+6	1.7E+6	1.8E+6	2.0E+6		AVRG	6.21E-7	6.21E-7		1.6E+6	17	0.995	30		
Ethane	B	1.6E+6	1.6E+6	1.7E+6	1.1E+6	1.7E+6	1.8E+6	1.8E+6	2.0E+6		AVRG	6.09E-7	6.09E-7		1.6E+6	16	0.995	30		

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Methane	B	0.0026	5	0.0065	0	0.0131	5	0.0327	-36	0.3272	2	0.6544	6	1.3088	6	3.2720	21	32.478	-9
Ethene	B	0.0046	-6	0.0115	-4	0.0229	2	0.0573	-36	0.5725	4	1.1450	8	2.2900	9	5.7250	23		
Ethane	B	0.0049	-4	0.0123	-3	0.0245	5	0.0614	-35	0.6135	3	1.2270	7	2.4540	7	6.1350	20		

Analyst: MAC

Date: 11/14/12

Reviewer: LW

Date: 11/15/12

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 GASES Water  
RSK-175

Inst : GC24  
Calnum : 812459944003

Name : rsk\_319  
Cal Date : 14-NOV-2012

ICV 812459944024 (319-024 14-NOV-2012) stds: S16500 (10X)

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Methane	B	0.6544	0.6807	ug/ml	4	20	
Ethene	B	1.145	1.219	ug/ml	6	20	
Ethane	B	1.227	1.280	ug/ml	4	20	

Analyst: MAC

Date: 11/14/12

Reviewer: LW

Date: 11/15/12



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 GASES Water  
RSK-175

Inst : GC24  
 Seqnum : 813333276015  
 Cal : 812459944003  
 Standards: S20147 (5X)

IDF : 1.0  
 Time : 19-AUG-2013 15:12

File : 231-015  
 Caldate : 14-NOV-2012

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Methane	B	1.7E+6	1.6E+6	1.309	1.227	ug/ml	-6	20	
Ethene	B	1.6E+6	1.6E+6	2.290	2.221	ug/ml	-3	20	
Ethane	B	1.6E+6	1.6E+6	2.454	2.326	ug/ml	-5	20	

Analyst: MAC      Date: 08/20/13      Reviewer: CB      Date: 08/23/13



## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 812459944

Instrument : GC24  
 Method : RSK-175

Begun : 11/14/12 09:44  
 SOP Version : rsk-175\_rv4

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	319-001	IB	CALIB			11/14/12 09:44	1.0	
002	319-002	ICAL				11/14/12 09:59	1.0	1
003	319-003	ICAL				11/14/12 10:14	1.0	1
004	319-004	ICAL				11/14/12 10:29	1.0	1
005	319-005	ICAL				11/14/12 11:01	1.0	1
006	319-006	ICAL				11/14/12 11:16	1.0	1
007	319-007	ICAL				11/14/12 11:31	1.0	1
008	319-008	ICAL				11/14/12 11:47	1.0	1
009	319-009	ICAL				11/14/12 12:02	1.0	1
010	319-010	ICAL				11/14/12 12:18	1.0	2
011	319-011	X	IB			11/14/12 12:33	1.0	
012	319-012	ICV				11/14/12 12:48	1.0	3
013	319-013	IB	CALIB			11/14/12 13:45	1.0	
014	319-014	ICAL				11/14/12 14:00	1.0	1
015	319-015	ICAL				11/14/12 14:15	1.0	1
016	319-016	ICAL				11/14/12 14:31	1.0	1
017	319-017	ICAL				11/14/12 14:47	1.0	1
018	319-018	ICAL				11/14/12 15:11	1.0	1
019	319-019	ICAL				11/14/12 15:27	1.0	1
020	319-020	ICAL				11/14/12 15:43	1.0	1
021	319-021	ICAL				11/14/12 15:58	1.0	1
022	319-022	ICAL				11/14/12 16:13	1.0	2
023	319-023	X	IB			11/14/12 16:29	1.0	
024	319-024	ICV				11/14/12 16:44	1.0	3
025	319-025	CCV				11/14/12 17:37	1.0	1
026	319-026	CCV/LCS	QC666148	Water	192864	11/14/12 17:52	1.0	1
027	319-027	BLANK	QC666076	Water	192864	11/14/12 18:17	1.0	
028	319-028	MSS	241043-003	Water	192864	11/14/12 18:35	1.0	
029	319-029	MS	QC666077	Water	192864	11/14/12 18:50	1.0	1
030	319-030	MSD	QC666078	Water	192864	11/14/12 19:06	1.0	1
031	319-031	SAMPLE	241083-009	Water	192864	11/14/12 19:21	1.0	
032	319-032	SAMPLE	241123-002	Water	192864	11/14/12 19:36	1.0	
033	319-033	SAMPLE	241123-003	Water	192864	11/14/12 19:52	1.0	
034	319-034	SAMPLE	241123-004	Water	192864	11/14/12 20:07	1.0	
035	319-035	SAMPLE	241123-005	Water	192864	11/14/12 20:22	1.0	
036	319-036	SAMPLE	241123-006	Water	192864	11/14/12 20:38	1.0	
037	319-037	SAMPLE	241159-001	Water	192864	11/14/12 20:53	1.0	
038	319-038	X	IB			11/14/12 21:09	1.0	
039	319-039	CCV				11/14/12 21:24	1.0	1
040	319-040	X	IB			11/14/12 21:39	1.0	
041	319-041	SAMPLE	241159-003	Water	192864	11/14/12 21:55	1.0	
042	319-042	SAMPLE	241159-004	Water	192864	11/14/12 22:10	1.0	
043	319-043	X	IB			11/14/12 22:26	1.0	
044	319-044	CCV				11/14/12 22:41	1.0	1

LW 11/15/12 : Reviewed through file 24

DJA 11/15/12 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 44.

Analyst: MAC Date: 11/14/12 Reviewer: LW Date: 11/15/12

Standards used: 1=S20886 2=S16495 3=S16500

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 813333276

Instrument : GC24  
 Method : RSK-175

Begun : 08/19/13 10:36  
 SOP Version : rsk-175\_rv4

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	231-001	CCV/BS	QC702387	Water	201819	08/19/13 10:36	1.0	1	
002	231-002	BSD	QC702388	Water	201819	08/19/13 10:51	1.0	1	
003	231-003	BLANK	QC702389	Water	201819	08/19/13 11:20	1.0		
004	231-004	SAMPLE	247941-002	Water	201819	08/19/13 11:53	1.0		
005	231-005	SAMPLE	247941-003	Water	201819	08/19/13 12:07	1.0		
006	231-006	SAMPLE	247941-004	Water	201819	08/19/13 12:22	1.0		headspace <= 1 mL, pH > 2
007	231-007	SAMPLE	247941-005	Water	201819	08/19/13 12:37	1.0		headspace <= 1 mL, pH > 2
008	231-008	SAMPLE	247881-002	Water	201819	08/19/13 13:24	1.0		
009	231-009	SAMPLE	247881-003	Water	201819	08/19/13 13:39	1.0		
010	231-010	SAMPLE	247881-004	Water	201819	08/19/13 13:54	1.0		
011	231-011	SAMPLE	247985-002	Water	201819	08/19/13 14:09	1.0		
012	231-012	SAMPLE	247985-003	Water	201819	08/19/13 14:25	1.0		
013	231-013	SAMPLE	247985-004	Water	201819	08/19/13 14:41	1.0		
014	231-014	X	IB			08/19/13 14:56	1.0		
015	231-015	CCV				08/19/13 15:12	1.0	1	
016	231-016	X	IB			08/19/13 15:27	1.0		
017	231-017	SAMPLE	247985-005	Water	201819	08/19/13 15:43	1.0		
018	231-018	SAMPLE	248036-002	Water	201819	08/19/13 15:58	1.0		
019	231-019	SAMPLE	248036-003	Water	201819	08/19/13 16:14	1.0		
020	231-020	SAMPLE	248036-004	Water	201819	08/19/13 16:29	1.0		pH > 2
021	231-021	SAMPLE	247906-001	Water	201819	08/19/13 16:45	1.0		
022	231-022	SAMPLE	247906-002	Water	201819	08/19/13 17:00	1.0		
023	231-023	SAMPLE	248030-038	Water	201819	08/19/13 17:16	1.0		
024	231-024	SAMPLE	248071-001	Water	201819	08/19/13 17:31	1.0		
025	231-025	SAMPLE	248071-002	Water	201819	08/19/13 17:47	1.0		
026	231-026	SAMPLE	248072-001	Water	201819	08/19/13 18:02	1.0		
027	231-027	X	IB			08/19/13 18:18	1.0		
028	231-028	CCV				08/19/13 18:33	1.0	1	

MAC 08/20/13 : Matrix spikes were not performed for this analysis in batch 201819 due to insufficient sample amount.

MAC 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 28.

Analyst: MAC Date: 08/20/13 Reviewer: CB Date: 08/23/13

Standards used: 1=S20147

Laboratory Job Number 248030

ANALYTICAL REPORT

Metals

Matrix: Water

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-40	Diln Fac:	1.000
Lab ID:	248030-038	Sampled:	08/15/13
Matrix:	Water	Received:	08/15/13
Units:	ug/L		

Analyte	Result	RL	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	ND	10	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Arsenic	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Barium	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Beryllium	ND	2.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Cadmium	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Chromium	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Cobalt	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Copper	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Lead	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Mercury	ND	0.20	201962	CRT	08/21/13	08/21/13	METHOD	EPA 7470A
Molybdenum	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Nickel	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Selenium	ND	10	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Silver	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Thallium	ND	10	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Vanadium	ND	5.0	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B
Zinc	ND	20	201943	JDB	08/20/13	08/24/13	EPA 3010A	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3010A
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Type:	BLANK	Batch#:	201943
Lab ID:	QC702903	Chemist:	JDB
Matrix:	Water	Prepared:	08/20/13
Units:	ug/L	Analyzed:	08/23/13
Diln Fac:	1.000		

Analyte	Result	RL
Antimony	ND	10
Arsenic	ND	5.0
Barium	ND	5.0
Beryllium	ND	2.0
Cadmium	ND	5.0
Chromium	ND	5.0
Cobalt	ND	5.0
Copper	ND	5.0
Lead	ND	5.0
Molybdenum	ND	5.0
Nickel	ND	5.0
Selenium	ND	10
Silver	ND	5.0
Thallium	ND	10
Vanadium	ND	5.0
Zinc	ND	20

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3010A
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Matrix:	Water	Chemist:	JDB
Units:	ug/L	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/23/13
Batch#:	201943		

Type: BS Lab ID: QC702904

Analyte	Spiked	Result	%REC	Limits
Antimony	500.0	523.8	105	75-120
Arsenic	100.0	105.5	105	78-120
Barium	2,000	2,049	102	80-120
Beryllium	50.00	54.58	109	80-120
Cadmium	50.00	56.49	113	80-120
Chromium	200.0	206.1	103	80-120
Cobalt	500.0	509.9	102	79-120
Copper	250.0	264.0	106	77-120
Lead	100.0	105.3	105	78-120
Molybdenum	400.0	423.9	106	80-120
Nickel	500.0	521.9	104	80-120
Selenium	100.0	106.2	106	75-120
Silver	50.00	52.92	106	77-120
Thallium	100.0	107.8	108	79-120
Vanadium	500.0	526.3	105	80-120
Zinc	500.0	534.7	107	80-120

Type: BSD Lab ID: QC702905

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	500.0	515.9	103	75-120	2	20
Arsenic	100.0	105.3	105	78-120	0	22
Barium	2,000	2,015	101	80-120	2	20
Beryllium	50.00	54.28	109	80-120	1	20
Cadmium	50.00	55.65	111	80-120	2	20
Chromium	200.0	205.1	103	80-120	0	20
Cobalt	500.0	508.7	102	79-120	0	20
Copper	250.0	260.6	104	77-120	1	20
Lead	100.0	103.3	103	78-120	2	20
Molybdenum	400.0	417.8	104	80-120	1	20
Nickel	500.0	519.4	104	80-120	0	20
Selenium	100.0	102.9	103	75-120	3	25
Silver	50.00	52.77	106	77-120	0	20
Thallium	100.0	107.6	108	79-120	0	23
Vanadium	500.0	523.4	105	80-120	1	20
Zinc	500.0	533.0	107	80-120	0	20

RPD= Relative Percent Difference

**Batch QC Report**

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3010A
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Chemist:	JDB
MSS Lab ID:	248102-001	Sampled:	08/16/13
Matrix:	Water	Received:	08/16/13
Units:	ug/L	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/23/13
Batch#:	201943		

Type: MS Lab ID: QC702906

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	<2.572	500.0	533.7	107	74-120
Arsenic	3.903	100.0	110.5	107	74-130
Barium	51.61	2,000	2,140	104	75-120
Beryllium	0.2600	50.00	55.77	111	80-123
Cadmium	<0.2578	50.00	51.81	104	72-121
Chromium	1.237	200.0	209.1	104	74-120
Cobalt	<0.1425	500.0	517.1	103	73-120
Copper	<1.566	250.0	270.2	108	73-121
Lead	6.866	100.0	111.1	104	68-120
Molybdenum	5.619	400.0	431.7	107	78-120
Nickel	<0.9209	500.0	522.8	105	73-120
Selenium	<3.205	100.0	106.3	106	67-129
Silver	0.4894	50.00	53.35	106	62-124
Thallium	<2.337	100.0	108.2	108	67-120
Vanadium	3.028	500.0	534.7	106	80-120
Zinc	5.475	500.0	548.9	109	72-123

Type: MSD Lab ID: QC702907

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	500.0	536.6	107	74-120	1	20
Arsenic	100.0	111.9	108	74-130	1	23
Barium	2,000	2,155	105	75-120	1	23
Beryllium	50.00	56.72	113	80-123	2	20
Cadmium	50.00	52.37	105	72-121	1	20
Chromium	200.0	212.0	105	74-120	1	20
Cobalt	500.0	520.4	104	73-120	1	20
Copper	250.0	270.3	108	73-121	0	21
Lead	100.0	111.6	105	68-120	0	24
Molybdenum	400.0	435.7	108	78-120	1	20
Nickel	500.0	526.2	105	73-120	1	20
Selenium	100.0	105.7	106	67-129	1	39
Silver	50.00	54.01	107	62-124	1	20
Thallium	100.0	108.3	108	67-120	0	24
Vanadium	500.0	540.6	108	80-120	1	20
Zinc	500.0	553.6	110	72-123	1	20

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3010A
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	201943
MSS Lab ID:	248102-001	Chemist:	JDB
Lab ID:	QC702908	Sampled:	08/16/13
Matrix:	Water	Received:	08/16/13
Units:	ug/L	Analyzed:	08/24/13

Analyte	MSS Result	MSS RL	Result	RL	% Diff	Lim
Antimony	ND	10.00	ND	50.00	NC	10
Arsenic	3.903	5.000	ND	25.00	NC	10
Barium	51.61	5.000	47.78	25.00	7	10
Beryllium	0.2600	2.000	ND	10.00	NC	10
Cadmium	ND	5.000	ND	25.00	NC	10
Chromium	1.237	5.000	ND	25.00	NC	10
Cobalt	ND	5.000	ND	25.00	NC	10
Copper	ND	5.000	ND	25.00	NC	10
Lead	6.866	5.000	ND	25.00	NC	10
Molybdenum	5.619	5.000	4.349 J	25.00	NC	10
Nickel	ND	5.000	ND	25.00	NC	10
Selenium	ND	10.00	ND	50.00	NC	10
Silver	0.4894	5.000	ND	25.00	NC	10
Thallium	ND	10.00	ND	50.00	NC	10
Vanadium	3.028	5.000	ND	25.00	NC	10
Zinc	5.475	20.00	ND	100.0	NC	10

J= Estimated value  
 NC= Not Calculated  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3010A
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
Type:	Post Digest Spike	Batch#:	201943
MSS Lab ID:	248102-001	Chemist:	JDB
Lab ID:	QC702909	Sampled:	08/16/13
Matrix:	Water	Received:	08/16/13
Units:	ug/L	Analyzed:	08/24/13

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	<2.572	500.0	503.4	101	75-125
Arsenic	3.903	100.0	102.0	98	75-125
Barium	51.61	2,000	2,058	100	75-125
Beryllium	0.2600	50.00	51.26	102	75-125
Cadmium	<0.2578	50.00	48.02	96	75-125
Chromium	1.237	200.0	200.9	100	75-125
Cobalt	<0.1425	500.0	488.4	98	75-125
Copper	<1.566	250.0	262.0	105	75-125
Lead	6.866	100.0	107.2	100	75-125
Molybdenum	5.619	400.0	415.5	102	75-125
Nickel	<0.9209	500.0	491.2	98	75-125
Selenium	<3.205	100.0	99.26	99	75-125
Silver	0.4894	50.00	25.21	49 *	75-125
Thallium	<2.337	100.0	100.5	101	75-125
Vanadium	3.028	500.0	502.8	100	75-125
Zinc	5.475	500.0	513.3	102	75-125

\*= Value outside of QC limits; see narrative

**Batch QC Report**

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3010A
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Chemist:	JDB
MSS Lab ID:	248104-001	Sampled:	08/16/13
Matrix:	Water	Received:	08/16/13
Units:	ug/L	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/23/13
Batch#:	201943		

Type: MS Lab ID: QC702910

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	<2.572	500.0	530.6	106	74-120
Arsenic	2.834	100.0	89.20	86	74-130
Barium	52.35	2,000	2,129	104	75-120
Beryllium	<0.3432	50.00	42.41	85	80-123
Cadmium	<0.2854	50.00	44.01	88	72-121
Chromium	<0.6859	200.0	208.0	104	74-120
Cobalt	<0.1425	500.0	512.5	102	73-120
Copper	<1.566	250.0	263.5	105	73-121
Lead	1.475	100.0	105.6	104	68-120
Molybdenum	4.785	400.0	340.1	84	78-120
Nickel	<0.9209	500.0	528.3	106	73-120
Selenium	<3.205	100.0	102.9	103	67-129
Silver	<0.4706	50.00	53.52	107	62-124
Thallium	<2.337	100.0	107.4	107	67-120
Vanadium	1.717	500.0	532.0	106	80-120
Zinc	6.704	500.0	554.8	110	72-123

Type: MSD Lab ID: QC702911

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	500.0	551.8	110	74-120	4	20
Arsenic	100.0	91.62	89	74-130	3	23
Barium	2,000	2,189	107	75-120	3	23
Beryllium	50.00	44.47	89	80-123	5	20
Cadmium	50.00	45.83	92	72-121	4	20
Chromium	200.0	213.6	107	74-120	3	20
Cobalt	500.0	526.6	105	73-120	3	20
Copper	250.0	271.7	109	73-121	3	21
Lead	100.0	109.8	108	68-120	4	24
Molybdenum	400.0	353.8	87	78-120	4	20
Nickel	500.0	533.5	107	73-120	1	20
Selenium	100.0	108.2	108	67-129	5	39
Silver	50.00	54.77	110	62-124	2	20
Thallium	100.0	111.8	112	67-120	4	24
Vanadium	500.0	546.0	109	80-120	3	20
Zinc	500.0	569.9	113	72-123	3	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	201962
Lab ID:	QC702987	Chemist:	CRT
Matrix:	Filtrate	Prepared:	08/21/13
Units:	ug/L	Analyzed:	08/21/13

Result	RL
ND	0.20

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	201962
Matrix:	Filtrate	Chemist:	CRT
Units:	ug/L	Prepared:	08/21/13
Diln Fac:	1.000	Analyzed:	08/21/13

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC702988	2.500	2.458	98	80-120		
BSD	QC702989	2.500	2.424	97	80-120	1	20

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	201962
Field ID:	ZZZZZZZZZZ	Chemist:	CRT
MSS Lab ID:	247973-001	Sampled:	08/14/13
Matrix:	Filtrate	Received:	08/14/13
Units:	ug/L	Prepared:	08/21/13
Diln Fac:	1.000	Analyzed:	08/21/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC702990	<0.02014	2.500	2.437	97	62-124		
MSD	QC702991		2.500	2.402	96	62-124	1	35

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	5.000
Field ID:	IA-40	Batch#:	201962
Type:	Serial Dilution	Chemist:	CRT
MSS Lab ID:	248030-038	Sampled:	08/15/13
Lab ID:	QC703001	Received:	08/15/13
Matrix:	Water	Analyzed:	08/21/13
Units:	ug/L		

MSS Result	MSS RL	Result	RL	% Diff	Lim
ND	0.2000	ND	1.000	NC	10

NC= Not Calculated  
 ND= Not Detected  
 RL= Reporting Limit

REPORTING SUMMARY FOR 248030 METALS Water  
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	S B	A S	B A	B E	C D	C R	C O	C U	P B	H G	M O	N I	S E	A G	T L	V	Z N
248030-038	MET34	08/21/13	15:20	1.0									+							
248030-038	MET08	08/24/13	16:34	1.0	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
QC702903	MET08	08/23/13	11:38	1.0	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
QC702904	MET08	08/23/13	11:43	1.0	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
QC702905	MET08	08/23/13	11:47	1.0	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
QC702906	MET08	08/23/13	11:55	1.0	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
QC702907	MET08	08/23/13	11:59	1.0	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
QC702908	MET08	08/24/13	16:08	5.0	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
QC702909	MET08	08/24/13	16:29	1.0	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
QC702910	MET08	08/23/13	12:08	1.0	+		+		+	+	+	+				+	+	+	+	
QC702910	MET09	08/23/13	13:24	1.0		+		+						+						
QC702910	MET08	08/23/13	14:17	1.0											+					+
QC702911	MET08	08/23/13	12:30	1.0	+		+		+	+	+	+				+	+	+	+	
QC702911	MET09	08/23/13	13:28	1.0		+		+						+						
QC702911	MET08	08/23/13	14:21	1.0											+					+
QC702987	MET34	08/21/13	14:48	1.0										+						
QC702988	MET34	08/21/13	14:50	1.0										+						
QC702989	MET34	08/21/13	14:51	1.0										+						
QC702990	MET34	08/21/13	14:55	1.0										+						
QC702991	MET34	08/21/13	15:00	1.0										+						
QC703001	MET34	08/21/13	15:22	5.0										+						

ICP Data

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83339003

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/23/13 10:03  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	met08_sn_6010	ICALBLK				08/23/13 10:03	1.0	
002	met08_sn_6010	ICAL	CRI5.1			08/23/13 10:08	1.0	1
003	met08_sn_6010	ICAL	CS100			08/23/13 10:13	1.0	2
004	met08_sn_6010	ICAL	CS1K			08/23/13 10:17	1.0	3
005	met08_sn_6010	ICAL	CS10K			08/23/13 10:21	1.0	4
006	met08_sn_6010	ICAL	CS100K			08/23/13 10:27	1.0	5
007	met08_sn_6010	ICV				08/23/13 10:32	1.0	6
008	met08_sn_6010	ICB				08/23/13 10:38	1.0	
009	met08_sn_6010	ICSA				08/23/13 10:43	1.0	7
010	met08_sn_6010	ICSAB				08/23/13 11:28	1.0	8
011	met08_sn_6010	CRI				08/23/13 11:34	1.0	9
012	met08_sn_6010	BLANK	QC702903	Water	201943	08/23/13 11:38	1.0	
013	met08_sn_6010	BS	QC702904	Water	201943	08/23/13 11:43	1.0	
014	met08_sn_6010	BSD	QC702905	Water	201943	08/23/13 11:47	1.0	
015	met08_sn_6010	MSS	248102-001	Water	201943	08/23/13 11:51	1.0	
016	met08_sn_6010	MS	QC702906	Water	201943	08/23/13 11:55	1.0	
017	met08_sn_6010	MSD	QC702907	Water	201943	08/23/13 11:59	1.0	
018	met08_sn_6010	MSS	248104-001	Water	201943	08/23/13 12:03	1.0	
019	met08_sn_6010	MS	QC702910	Water	201943	08/23/13 12:08	1.0	1:NA=110000
020	met08_sn_6010	X				08/23/13 12:12	1.0	10
021	met08_sn_6010	CCV				08/23/13 12:20	1.0	10
022	met08_sn_6010	CCB				08/23/13 12:25	1.0	
023	met08_sn_6010	MSD	QC702911	Water	201943	08/23/13 12:30	1.0	1:NA=110000
024	met08_sn_6010	SAMPLE	248163-001	Water	201943	08/23/13 12:34	1.0	3:K=250000
025	met08_sn_6010	SAMPLE	248259-001	Water	201974	08/23/13 12:41	1.0	
026	met08_sn_6010	CCV				08/23/13 12:47	1.0	10
027	met08_sn_6010	CCB				08/23/13 12:52	1.0	
028	met08_sn_6010	ICSAB				08/23/13 12:58	1.0	8
								5:MG=560000

JDB 08/23/13 : CCV run 020 was removed and reran with fresh CCV

JDB 08/23/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 28.

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83339003

Date : 08/23/13  
 Sequence : MET08 08/23/13

Reference : met08\_sn\_6010  
 Analyzed : 08/23/13 10:08

#	Type	Sample ID	Y	A
		ICAL STD	2698502	
		LOWER LIMIT	809551	
		UPPER LIMIT	5397004	
008	ICB		2770355	
009	ICSA		2244395	
010	ICSAB		2160069	
012	BLANK	QC702903	2740580	
013	BS	QC702904	2547406	
014	BSD	QC702905	2566836	
015	MSS	248102-001	2523620	
016	MS	QC702906	2473514	
017	MSD	QC702907	2450046	
018	MSS	248104-001	2491424	
019	MS	QC702910	2469216	
021	CCV		2465802	
022	CCB		2637809	
023	MSD	QC702911	2407465	
024	SAMPLE	248163-001	2300531	
025	SAMPLE	248259-001	2296506	
026	CCV		2440041	
027	CCB		2589657	
028	ICSAB		2112990	

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS Water: EPA 6010B

Inst : MET08  
 Calnum : 83339003001  
 Units : ug/L  
 Date : 23-AUG-2013 10:03  
 X Axis : R  
 Reviewer : ---

Level	File	Seqnum	Sample ID	Analyzed	Std
L1	met08_sn_6010	83339003002	CR15.1	23-AUG-2013 10:08	S22714
L2	met08_sn_6010	83339003003	CS100	23-AUG-2013 10:13	S22716
L3	met08_sn_6010	83339003004	CS1K	23-AUG-2013 10:17	S22715
L4	met08_sn_6010	83339003005	CS10K	23-AUG-2013 10:21	S22717
L5	met08_sn_6010	83339003006	CS100K	23-AUG-2013 10:27	S22718

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	42.330	37.368	37.661	38.329		LOR0	0.00000	0.02609		38.922	1.000	0.995	
Arsenic	A	25.800	22.126	22.457	22.790		LOR0	0.00000	0.04389		23.293	1.000	0.995	
Barium	A	490.94	482.76	473.28	466.60		LOR0	0.00000	0.00214		478.39	1.000	0.995	
Beryllium	A	5942.5	5587.3	5540.8			LOR0	0.00000	1.80E-4		5690.2	1.000	0.995	
Cadmium	A	250.72	267.16	263.89	259.46		LOR0	0.00000	0.00385		260.31	1.000	0.995	
Chromium	A	105.66	109.29	107.20	108.01		LOR0	0.00000	0.00926		107.54	1.000	0.995	
Cobalt	A	144.88	141.50	142.68	143.52		LOR0	0.00000	0.00697		143.14	1.000	0.995	
Copper	A	100.84	126.77	129.03	133.87		LOR0	0.00000	0.00747		122.63	1.000	0.995	
Lead	A	77.040	66.997	67.089	66.521		LOR0	0.00000	0.01503		69.412	1.000	0.995	
Molybdenum	A	41.840	41.911	42.117	42.330		LOR0	0.00000	0.02363		42.049	1.000	0.995	
Nickel	A	49.780	56.722	57.005	57.396		LOR0	0.00000	0.01742		55.226	1.000	0.995	
Selenium	A	35.700	31.881	32.031	32.629		LOR0	0.00000	0.03065		33.060	1.000	0.995	
Silver	A	892.08	867.89	862.28	878.97		LOR0	0.00000	0.00114		875.30	1.000	0.995	
Thallium	A	20.320	21.052	21.347	20.966		LOR0	0.00000	0.04769		20.921	1.000	0.995	
Vanadium	A	174.42	185.85	183.87	188.06		LOR0	0.00000	0.00532		183.05	1.000	0.995	
Zinc	A	97.670	92.962	85.498	86.241		LOR0	0.00000	0.01160		90.593	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	10	100.00	-2	1000.0	-2	10000	0		
Arsenic	A	5.0000	13	100.00	-3	1000.0	-1	10000	0		
Barium	A	5.0000	5	100.00	3	1000.0	1	10000	0		
Beryllium	A	2.0000	7	100.00	1	1000.0	0				
Cadmium	A	5.0000	-3	100.00	3	1000.0	2	10000	0		
Chromium	A	5.0000	-2	100.00	1	1000.0	-1	10000	0		
Cobalt	A	5.0000	1	100.00	-1	1000.0	-1	10000	0		
Copper	A	5.0000	-25	100.00	-5	1000.0	-4	10000	0		
Lead	A	5.0000	16	100.00	1	1000.0	1	10000	0		
Molybdenum	A	5.0000	-1	100.00	-1	1000.0	0	10000	0		
Nickel	A	5.0000	-13	100.00	-1	1000.0	-1	10000	0		
Selenium	A	10.000	9	100.00	-2	1000.0	-2	10000	0		
Silver	A	5.0000	2	100.00	-1	1000.0	-2	2000.0	0		
Thallium	A	10.000	-3	100.00	0	1000.0	2	10000	0		
Vanadium	A	5.0000	-7	100.00	-1	1000.0	-2	10000	0		
Zinc	A	20.000	13	100.00	8	1000.0	-1	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
Calnum : 83339003001

Cal Date : 23-AUG-2013

ICV 83339003007 (23-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	5131	ug/L	3	10	
Arsenic	A	5000	5063	ug/L	1	10	
Barium	A	5000	5122	ug/L	2	10	
Beryllium	A	500.0	515.3	ug/L	3	10	
Cadmium	A	5000	5263	ug/L	5	10	
Chromium	A	5000	5107	ug/L	2	10	
Cobalt	A	5000	5132	ug/L	3	10	
Copper	A	5000	5013	ug/L	0	10	
Lead	A	5000	5068	ug/L	1	10	
Molybdenum	A	5000	5214	ug/L	4	10	
Nickel	A	5000	5172	ug/L	3	10	
Selenium	A	5000	5167	ug/L	3	10	
Silver	A	1000	1005	ug/L	1	10	
Thallium	A	5000	5060	ug/L	1	10	
Vanadium	A	5000	5065	ug/L	1	10	
Zinc	A	5000	5155	ug/L	3	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83339003008 File : met08\_sn\_6010 Time : 23-AUG-2013 10:38  
 Cal : 83339003001 Caldate : 23-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.6743]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	[0.7913]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2698502	2770355	2.66

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83339003009  
 Cal : 83339003001  
 Standards: S22719  
 File : met08\_sn\_6010  
 Caldate : 23-AUG-2013  
 IDF : 1.0  
 Time : 23-AUG-2013 10:43

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[-4.177]	10.00	ug/L	
Arsenic	A	[4.083]	5.000	ug/L	!a+
Barium	A	[0.5298]	5.000	ug/L	!a+
Beryllium	A	[0.4028]	2.000	ug/L	!a+
Cadmium	A	[-2.001]	5.000	ug/L	!a-
Cobalt	A	[-1.542]	5.000	ug/L	!a-
Lead	A	[-0.4580]	5.000	ug/L	
Molybdenum	A	[-0.1238]	5.000	ug/L	
Selenium	A	[-6.660]	10.00	ug/L	!a-
Silver	A	[0.3374]	5.000	ug/L	
Thallium	A	[1.473]	10.00	ug/L	
Zinc	A	[11.75]	20.00	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19600	ug/L	98
Copper	A	20000	20830	ug/L	104
Manganese	A	20000	18680	ug/L	93
Nickel	A	20000	18460	ug/L	92
Vanadium	A	20000	19860	ug/L	99
Aluminum	R	500000	507000	ug/L	101
Calcium	R	500000	482100	ug/L	96
Iron	R	200000	190500	ug/L	95
Magnesium	R	500000	496600	ug/L	99
Titanium	R	20000	21260	ug/L	106

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2698502	2244395	-16.83

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83339003010  
 Cal : 83339003001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 23-AUG-2013  
 IDF : 1.0  
 Time : 23-AUG-2013 11:28

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	532.1	ug/L	6	20	
Arsenic	A	500.0	537.6	ug/L	8	20	
Barium	A	500.0	543.7	ug/L	9	20	
Beryllium	A	500.0	546.4	ug/L	9	20	
Cadmium	A	1000	1056	ug/L	6	20	
Chromium	A	500.0	525.7	ug/L	5	20	
Cobalt	A	500.0	493.5	ug/L	-1	20	
Copper	A	500.0	573.7	ug/L	15	20	
Lead	A	1000	1002	ug/L	0	20	
Molybdenum	A	500.0	532.8	ug/L	7	20	
Nickel	A	1000	984.8	ug/L	-2	20	
Selenium	A	500.0	549.9	ug/L	10	20	
Silver	A	1000	1138	ug/L	14	20	
Thallium	A	500.0	481.6	ug/L	-4	20	
Vanadium	A	500.0	552.4	ug/L	10	20	
Zinc	A	1000	1017	ug/L	2	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2698502	2160069	-19.95

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83339003021  
 Cal : 83339003001  
 Standards: S22722

File : met08\_sn\_6010  
 Caldate : 23-AUG-2013

IDF : 1.0  
 Time : 23-AUG-2013 12:20

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	38.922	40.804	5000	5324	ug/L	6	10	
Arsenic	A	23.293	23.882	5000	5240	ug/L	5	10	
Barium	A	478.39	488.89	5000	5238	ug/L	5	10	
Beryllium	A	5690.2	5966.7	500.0	538.4	ug/L	8	10	
Cadmium	A	260.31	280.74	5000	5409	ug/L	8	10	
Chromium	A	107.54	113.21	5000	5241	ug/L	5	10	
Cobalt	A	143.14	151.23	5000	5259	ug/L	5	10	
Copper	A	122.63	139.43	5000	5210	ug/L	4	10	
Lead	A	69.412	68.973	5000	5184	ug/L	4	10	
Molybdenum	A	42.049	45.209	5000	5340	ug/L	7	10	
Nickel	A	55.226	60.567	5000	5277	ug/L	6	10	
Selenium	A	33.060	34.853	5000	5342	ug/L	7	10	
Silver	A	875.30	903.09	1000	1031	ug/L	3	10	
Thallium	A	20.921	21.943	5000	5232	ug/L	5	10	
Vanadium	A	183.05	195.48	5000	5198	ug/L	4	10	
Zinc	A	90.593	91.112	5000	5283	ug/L	6	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2698502	2465802	-8.62

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83339003022 File : met08\_sn\_6010 Time : 23-AUG-2013 12:25  
 Cal : 83339003001 Caldate : 23-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.5357]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	[0.8129]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2698502	2637809	-2.25

!=warning ib=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83339003026  
 Cal : 83339003001  
 Standards: S22722

File : met08\_sn\_6010  
 Caldate : 23-AUG-2013

IDF : 1.0  
 Time : 23-AUG-2013 12:47

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	38.922	41.553	5000	5421	ug/L	8	10	
Arsenic	A	23.293	24.479	5000	5371	ug/L	7	10	
Barium	A	478.39	510.28	5000	5467	ug/L	9	10	
Beryllium	A	5690.2	6125.4	500.0	552.7	ug/L	<b>11</b>	10	c+ ***
Cadmium	A	260.31	292.97	5000	5645	ug/L	<b>13</b>	10	c+ ***
Chromium	A	107.54	118.08	5000	5467	ug/L	9	10	
Cobalt	A	143.14	158.68	5000	5518	ug/L	10	10	
Copper	A	122.63	145.53	5000	5437	ug/L	9	10	
Lead	A	69.412	72.153	5000	5423	ug/L	8	10	
Molybdenum	A	42.049	47.174	5000	5572	ug/L	<b>11</b>	10	c+ ***
Nickel	A	55.226	63.585	5000	5540	ug/L	<b>11</b>	10	c+ ***
Selenium	A	33.060	35.474	5000	5437	ug/L	9	10	
Silver	A	875.30	940.90	1000	1075	ug/L	7	10	
Thallium	A	20.921	22.417	5000	5345	ug/L	7	10	
Vanadium	A	183.05	203.27	5000	5405	ug/L	8	10	
Zinc	A	90.593	95.376	5000	5530	ug/L	<b>11</b>	10	c+ ***

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2698502	2440041	-9.58

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83339003027 File : met08\_sn\_6010 Time : 23-AUG-2013 12:52  
 Cal : 83339003001 Caldate : 23-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.5868]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	[0.8306]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2698502	2589657	-4.03

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83339003028  
 Cal : 83339003001  
 Standards: S22720

File : met08\_sn\_6010  
 Caldate : 23-AUG-2013

IDF : 1.0  
 Time : 23-AUG-2013 12:58

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	557.5	ug/L	11	20	
Arsenic	A	500.0	564.3	ug/L	13	20	
Barium	A	500.0	569.0	ug/L	14	20	
Beryllium	A	500.0	576.7	ug/L	15	20	
Cadmium	A	1000	1111	ug/L	11	20	
Chromium	A	500.0	549.9	ug/L	10	20	
Cobalt	A	500.0	520.3	ug/L	4	20	
Copper	A	500.0	584.9	ug/L	17	20	
Lead	A	1000	1052	ug/L	5	20	
Molybdenum	A	500.0	555.2	ug/L	11	20	
Nickel	A	1000	1034	ug/L	3	20	
Selenium	A	500.0	571.7	ug/L	14	20	
Silver	A	1000	1184	ug/L	18	20	
Thallium	A	500.0	485.9	ug/L	-3	20	
Vanadium	A	500.0	574.3	ug/L	15	20	
Zinc	A	1000	1077	ug/L	8	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2698502	2112990	-21.70

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 93339022

Instrument : MET09 Begun : 08/23/13 10:22  
 Method : EPA 6010B SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	met09_sn	ICALBLK				08/23/13 10:22	1.0	
002	met09_sn	ICAL	CRI5.1			08/23/13 10:27	1.0	1
003	met09_sn	ICAL	CS100			08/23/13 10:33	1.0	2
004	met09_sn	ICAL	CS1K			08/23/13 10:37	1.0	3
005	met09_sn	ICAL	CS10K			08/23/13 10:40	1.0	4
006	met09_sn	ICAL	CS100K			08/23/13 10:46	1.0	5
007	met09_sn	ICV				08/23/13 10:52	1.0	6
008	met09_sn	ICB				08/23/13 10:59	1.0	
009	met09_sn	ICSA				08/23/13 11:04	1.0	7 9:MG=510000
010	met09_sn	ICSAB				08/23/13 11:45	1.0	8 4:MG=520000
011	met09_sn	CRI				08/23/13 11:51	1.0	9
012	met09_sn	BLANK	QC703391	Miscell.	202056	08/23/13 11:55	1.0	
013	met09_sn	BS	QC703392	Miscell.	202056	08/23/13 12:00	1.0	
014	met09_sn	BSD	QC703393	Miscell.	202056	08/23/13 12:04	1.0	
015	met09_sn	MSS	248150-003	Miscell.	202056	08/23/13 12:07	1.0	3:CA=1100000
016	met09_sn	MS	QC703394	Miscell.	202056	08/23/13 12:10	1.0	
017	met09_sn	MSD	QC703395	Miscell.	202056	08/23/13 12:14	1.0	
018	met09_sn	SAMPLE	248235-001	Soil	202056	08/23/13 12:17	1.0	2:FE=240000
019	met09_sn	SAMPLE	248235-002	Soil	202056	08/23/13 12:24	1.0	2:FE=270000
020	met09_sn	CCV				08/23/13 12:27	1.0	10
021	met09_sn	CCB				08/23/13 12:34	1.0	
022	met09_sn	SAMPLE	248235-003	Soil	202056	08/23/13 12:39	1.0	2:FE=240000
023	met09_sn	SAMPLE	248235-004	Soil	202056	08/23/13 12:42	1.0	2:FE=230000
024	met09_sn	SAMPLE	248235-005	Soil	202056	08/23/13 12:46	1.0	1:FE=230000
025	met09_sn	SAMPLE	248235-006	Soil	202056	08/23/13 12:51	1.0	1:FE=270000
026	met09_sn	CCV				08/23/13 12:55	1.0	10
027	met09_sn	CCB				08/23/13 13:01	1.0	
028	met09_sn	ICSAB				08/23/13 13:06	1.0	8 4:MG=490000
029	met09_sn	SAMPLE	248259-001	Water	201974	08/23/13 13:12	1.0	
030	met09_sn	MSS	248104-001	Water	201943	08/23/13 13:19	1.0	
031	met09_sn	MS	QC702910	Water	201943	08/23/13 13:24	1.0	
032	met09_sn	MSD	QC702911	Water	201943	08/23/13 13:28	1.0	
033	met09_sn	SAMPLE	248163-001	Water	201943	08/23/13 13:33	1.0	2:K=190000
034	met09_sn	CCV				08/23/13 13:40	1.0	10
035	met09_sn	CCB				08/23/13 13:46	1.0	
036	met09_sn	ICSAB				08/23/13 13:51	1.0	8 4:MG=430000
037	met09_sn	X				08/23/13 13:56	1.0	8 4:MG=440000

JDB 08/23/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 36.

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 93339022

Date : 08/23/13  
 Sequence : MET09 08/23/13

Reference : met09\_sn  
 Analyzed : 08/23/13 10:27

#	Type	Sample ID	Y	A
		ICAL STD	4189766	
		LOWER LIMIT	1256930	
		UPPER LIMIT	8379532	
008	ICB		4146960	
009	ICSA		3430893	
010	ICSAB		3407496	
012	BLANK	QC703391	4348467	
013	BS	QC703392	4047542	
014	BSD	QC703393	4000794	
016	MS	QC703394	3735660	
017	MSD	QC703395	3400387	
018	SAMPLE	248235-001	4169681	
019	SAMPLE	248235-002	4253035	
020	CCV		4208257	
021	CCB		4531077	
022	SAMPLE	248235-003	4332458	
023	SAMPLE	248235-004	5130502	
024	SAMPLE	248235-005	4516689	
025	SAMPLE	248235-006	4669635	
026	CCV		4248323	
027	CCB		4546079	
028	ICSAB		3733701	
029	SAMPLE	248259-001	3814954	
030	MSS	248104-001	4485272	
031	MS	QC702910	4664596	
032	MSD	QC702911	4506083	
033	SAMPLE	248163-001	5240376	
034	CCV		4233596	
035	CCB		4770277	
036	ICSAB		4155248	

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS Water: EPA 6010B

Inst : MET09  
 Calnum : 93339022001  
 Units : ug/L  
 Date : 23-AUG-2013 10:22  
 X Axis : R  
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	met09_sn 93339022002		CRI5.1	23-AUG-2013 10:27	S22714
L2	met09_sn 93339022003		CS100	23-AUG-2013 10:33	S22716
L3	met09_sn 93339022004		CS1K	23-AUG-2013 10:37	S22715
L4	met09_sn 93339022005		CS10K	23-AUG-2013 10:40	S22717
L5	met09_sn 93339022006		CS100K	23-AUG-2013 10:46	S22718

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	12.120	13.553	13.802	13.529		LOR0	0.00000	0.07390		13.251	1.000	0.995	
Arsenic	A	6.5600	6.7790	6.7847	6.6326		LOR0	0.00000	0.15074		6.6891	1.000	0.995	
Barium	A	95.220	92.749	93.897	87.523		LOR0	0.00000	0.01142		92.347	1.000	0.995	
Beryllium	A	5896.0	5900.0	5951.0			LOR0	0.00000	1.68E-4		5915.7	1.000	0.995	
Cadmium	A	128.10	136.45	137.00	126.07		LOR0	0.00000	0.00792		131.90	1.000	0.995	
Chromium	A	283.30	241.07	238.23	226.09		LOR0	0.00000	0.00442		247.17	1.000	0.995	
Cobalt	A	62.020	61.805	63.809	60.574		LOR0	0.00000	0.01650		62.052	1.000	0.995	
Copper	A	277.38	269.24	274.97	265.01		LOR0	0.00000	0.00377		271.65	1.000	0.995	
Lead	A	40.220	47.489	48.285	45.526		LOR0	0.00000	0.02195		45.380	1.000	0.995	
Molybdenum	A	34.380	35.211	35.237	33.582		LOR0	0.00000	0.02976		34.602	1.000	0.995	
Nickel	A	102.74	101.66	105.54	100.09		LOR0	0.00000	0.00999		102.51	1.000	0.995	
Selenium	A	12.080	9.7010	9.5713	9.4643		LOR0	0.00000	0.10565		10.204	1.000	0.995	
Silver	A	590.40	607.53	613.64	600.31		LOR0	0.00000	0.00166		602.97	1.000	0.995	
Thallium	A	7.0400	7.3670	7.3835	6.9147		LOR0	0.00000	0.14452		7.1763	1.000	0.995	
Vanadium	A	295.88	282.29	281.00	271.86		LOR0	0.00000	0.00368		282.76	1.000	0.995	
Zinc	A	58.595	56.134	55.818	53.784		LOR0	0.00000	0.01859		56.083	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	-10	100.00	0	1000.0	2	10000	0		
Arsenic	A	5.0000	-1	100.00	2	1000.0	2	10000	0		
Barium	A	5.0000	9	100.00	6	1000.0	7	10000	0		
Beryllium	A	2.0000	-1	100.00	-1	1000.0	0				
Cadmium	A	5.0000	2	100.00	8	1000.0	9	10000	0		
Chromium	A	5.0000	<b>25</b>	100.00	7	1000.0	5	10000	0		
Cobalt	A	5.0000	2	100.00	2	1000.0	5	10000	0		
Copper	A	5.0000	5	100.00	2	1000.0	4	10000	0		
Lead	A	5.0000	-12	100.00	4	1000.0	6	10000	0		
Molybdenum	A	5.0000	2	100.00	5	1000.0	5	10000	0		
Nickel	A	5.0000	3	100.00	2	1000.0	5	10000	0		
Selenium	A	10.000	<b>28</b>	100.00	2	1000.0	1	10000	0		
Silver	A	5.0000	-2	100.00	1	1000.0	2	2000.0	0		
Thallium	A	10.000	2	100.00	6	1000.0	7	10000	0		
Vanadium	A	5.0000	9	100.00	4	1000.0	3	10000	0		
Zinc	A	20.000	9	100.00	4	1000.0	4	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Water  
EPA 6010B

Inst : MET09  
Calnum : 93339022001

Cal Date : 23-AUG-2013

ICV 93339022007 (23-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	5156	ug/L	3	10	
Arsenic	A	5000	5090	ug/L	2	10	
Barium	A	5000	5111	ug/L	2	10	
Beryllium	A	500.0	503.1	ug/L	1	10	
Cadmium	A	5000	5235	ug/L	5	10	
Chromium	A	5000	5098	ug/L	2	10	
Cobalt	A	5000	5058	ug/L	1	10	
Copper	A	5000	4906	ug/L	-2	10	
Lead	A	5000	5059	ug/L	1	10	
Molybdenum	A	5000	5259	ug/L	5	10	
Nickel	A	5000	5104	ug/L	2	10	
Selenium	A	5000	5145	ug/L	3	10	
Silver	A	1000	981.8	ug/L	-2	10	
Thallium	A	5000	5112	ug/L	2	10	
Vanadium	A	5000	5049	ug/L	1	10	
Zinc	A	5000	5086	ug/L	2	10	

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248030 METALS Water  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 93339022009 File : met09\_sn Time : 23-AUG-2013 11:04  
 Cal : 93339022001 Caldate : 23-AUG-2013  
 Standards: S22719

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[-8.795]	10.00	ug/L	!a-
Arsenic	A	[-1.626]	5.000	ug/L	
Barium	A	[-0.6308]	5.000	ug/L	
Beryllium	A	[-0.6982]	2.000	ug/L	!a-
Cadmium	A	[-2.690]	5.000	ug/L	!a-
Cobalt	A	[2.396]	5.000	ug/L	!a+
Lead	A	[-0.5100]	5.000	ug/L	
Molybdenum	A	[-2.593]	5.000	ug/L	!a-
Selenium	A	[-3.676]	10.00	ug/L	!a-
Silver	A	[-3.392]	5.000	ug/L	!a-
Thallium	A	[-5.891]	10.00	ug/L	!a-
Zinc	A	[0.6318]	20.00	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19400	ug/L	97
Copper	A	20000	20280	ug/L	101
Manganese	A	20000	18740	ug/L	94
Nickel	A	20000	17950	ug/L	90
Vanadium	A	20000	20010	ug/L	100
Calcium	R	500000	489700	ug/L	98
Iron	R	200000	191800	ug/L	96
Magnesium	R	500000	511900	ug/L	102
Titanium	R	20000	21630	ug/L	108

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	4189766	3430893	-18.11

!=warning +=high bias -=low bias a=ICSA

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 6010B

Inst : MET09  
Seqnum : 93339022026  
Cal : 93339022001  
Standards: S22722

File : met09\_sn  
Caldate : 23-AUG-2013

IDF : 1.0  
Time : 23-AUG-2013 12:55

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	13.251	13.113	5000	4845	ug/L	-3	10	r ***
Arsenic	A	6.6891	6.3632	5000	4796	ug/L	-4	10	r ***
Barium	A	92.347	85.378	5000	4874	ug/L	-3	10	r ***
Beryllium	A	5915.7	5714.7	500.0	480.2	ug/L	-4	10	r ***
Cadmium	A	131.90	126.46	5000	5011	ug/L	0	10	r ***
Chromium	A	247.17	220.01	5000	4863	ug/L	-3	10	r ***
Cobalt	A	62.052	58.898	5000	4849	ug/L	-3	10	r ***
Copper	A	271.65	245.96	5000	4639	ug/L	-7	10	r ***
Lead	A	45.380	43.316	5000	4754	ug/L	-5	10	r ***
Molybdenum	A	34.602	33.333	5000	4961	ug/L	-1	10	r ***
Nickel	A	102.51	97.643	5000	4875	ug/L	-3	10	r ***
Selenium	A	10.204	9.2217	5000	4871	ug/L	-3	10	r ***
Silver	A	602.97	571.05	1000	947.0	ug/L	-5	10	r ***
Thallium	A	7.1763	6.6600	5000	4813	ug/L	-4	10	r ***
Vanadium	A	282.76	261.81	5000	4813	ug/L	-4	10	r ***
Zinc	A	56.083	52.330	5000	4863	ug/L	-3	10	r ***

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	4189766	4248323	1.40

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 6010B

Inst : MET09  
 Seqnum : 93339022027  
 Cal : 93339022001

File : met09\_sn  
 Caldate : 23-AUG-2013

IDF : 1.0  
 Time : 23-AUG-2013 13:01

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	1.449	ug/L	
Arsenic	A	ND	5.000	3.108	ug/L	
Barium	A	ND	5.000	1.970	ug/L	
Beryllium	A	ND	2.000	0.6865	ug/L	
Cadmium	A	ND	5.000	0.5708	ug/L	
Chromium	A	ND	5.000	1.252	ug/L	
Cobalt	A	[0.6520]	5.000	0.3602	ug/L	!ib
Copper	A	ND	5.000	2.282	ug/L	
Lead	A	ND	5.000	2.493	ug/L	
Molybdenum	A	[1.200]	5.000	0.6113	ug/L	!ib
Nickel	A	ND	5.000	1.880	ug/L	
Selenium	A	ND	10.00	2.693	ug/L	
Silver	A	ND	5.000	1.790	ug/L	
Thallium	A	ND	10.00	2.804	ug/L	
Vanadium	A	ND	5.000	1.070	ug/L	
Zinc	A	ND	20.00	2.385	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	4189766	4546079	8.50

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Water  
EPA 6010B

Inst : MET09  
Seqnum : 93339022028  
Cal : 93339022001  
Standards: S22720

File : met09\_sn  
Caldate : 23-AUG-2013

IDF : 1.0  
Time : 23-AUG-2013 13:06

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	482.3	ug/L	-4	20	
Arsenic	A	500.0	491.6	ug/L	-2	20	
Barium	A	500.0	479.7	ug/L	-4	20	
Beryllium	A	500.0	474.7	ug/L	-5	20	
Cadmium	A	1000	952.6	ug/L	-5	20	
Chromium	A	500.0	475.2	ug/L	-5	20	
Cobalt	A	500.0	429.8	ug/L	-14	20	
Copper	A	500.0	506.4	ug/L	1	20	
Lead	A	1000	874.6	ug/L	-13	20	
Molybdenum	A	500.0	472.1	ug/L	-6	20	
Nickel	A	1000	871.6	ug/L	-13	20	
Selenium	A	500.0	465.6	ug/L	-7	20	
Silver	A	1000	1047	ug/L	5	20	
Thallium	A	500.0	420.9	ug/L	-16	20	
Vanadium	A	500.0	494.2	ug/L	-1	20	
Zinc	A	1000	901.8	ug/L	-10	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	4189766	3733701	-10.89

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 6010B

Inst : MET09  
Seqnum : 93339022034  
Cal : 93339022001  
Standards: S22722

File : met09\_sn  
Caldate : 23-AUG-2013

IDF : 1.0  
Time : 23-AUG-2013 13:40

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	13.251	12.632	5000	4668	ug/L	-7	10	r ***
Arsenic	A	6.6891	6.0917	5000	4591	ug/L	-8	10	r ***
Barium	A	92.347	84.334	5000	4814	ug/L	-4	10	r ***
Beryllium	A	5915.7	5641.5	500.0	474.0	ug/L	-5	10	r ***
Cadmium	A	131.90	123.23	5000	4883	ug/L	-2	10	r ***
Chromium	A	247.17	217.73	5000	4813	ug/L	-4	10	r ***
Cobalt	A	62.052	58.358	5000	4805	ug/L	-4	10	r ***
Copper	A	271.65	248.67	5000	4690	ug/L	-6	10	r ***
Lead	A	45.380	41.439	5000	4548	ug/L	-9	10	r ***
Molybdenum	A	34.602	31.931	5000	4752	ug/L	-5	10	r ***
Nickel	A	102.51	96.519	5000	4819	ug/L	-4	10	r ***
Selenium	A	10.204	8.8630	5000	4682	ug/L	-6	10	r ***
Silver	A	602.97	569.32	1000	944.2	ug/L	-6	10	r ***
Thallium	A	7.1763	6.4020	5000	4626	ug/L	-7	10	r ***
Vanadium	A	282.76	259.56	5000	4772	ug/L	-5	10	r ***
Zinc	A	56.083	51.075	5000	4746	ug/L	-5	10	r ***

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	4189766	4233596	1.05

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 6010B

Inst : MET09  
 Seqnum : 93339022035  
 Cal : 93339022001  
 File : met09\_sn  
 Caldate : 23-AUG-2013  
 IDF : 1.0  
 Time : 23-AUG-2013 13:46

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	1.449	ug/L	
Arsenic	A	ND	5.000	3.108	ug/L	
Barium	A	ND	5.000	1.970	ug/L	
Beryllium	A	ND	2.000	0.6865	ug/L	
Cadmium	A	ND	5.000	0.5708	ug/L	
Chromium	A	ND	5.000	1.252	ug/L	
Cobalt	A	[0.8030]	5.000	0.3602	ug/L	!ib
Copper	A	ND	5.000	2.282	ug/L	
Lead	A	ND	5.000	2.493	ug/L	
Molybdenum	A	[1.480]	5.000	0.6113	ug/L	!ib
Nickel	A	ND	5.000	1.880	ug/L	
Selenium	A	ND	10.00	2.693	ug/L	
Silver	A	ND	5.000	1.790	ug/L	
Thallium	A	ND	10.00	2.804	ug/L	
Vanadium	A	ND	5.000	1.070	ug/L	
Zinc	A	ND	20.00	2.385	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	4189766	4770277	13.86

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Water  
EPA 6010B

Inst : MET09  
Seqnum : 93339022036  
Cal : 93339022001  
Standards: S22720

File : met09\_sn  
Caldate : 23-AUG-2013

IDF : 1.0  
Time : 23-AUG-2013 13:51

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	424.9	ug/L	-15	20	
Arsenic	A	500.0	430.3	ug/L	-14	20	
Barium	A	500.0	423.2	ug/L	-15	20	
Beryllium	A	500.0	417.0	ug/L	-17	20	
Cadmium	A	1000	828.3	ug/L	-17	20	
Chromium	A	500.0	418.2	ug/L	-16	20	
Cobalt	A	500.0	379.9	ug/L	<b>-24</b>	20	ab- ***
Copper	A	500.0	447.0	ug/L	-11	20	
Lead	A	1000	769.6	ug/L	<b>-23</b>	20	ab- ***
Molybdenum	A	500.0	415.9	ug/L	-17	20	
Nickel	A	1000	762.7	ug/L	<b>-24</b>	20	ab- ***
Selenium	A	500.0	411.5	ug/L	-18	20	
Silver	A	1000	924.8	ug/L	-8	20	
Thallium	A	500.0	370.3	ug/L	<b>-26</b>	20	ab- ***
Vanadium	A	500.0	435.8	ug/L	-13	20	
Zinc	A	1000	787.2	ug/L	<b>-21</b>	20	ab- ***

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	4189766	4155248	-0.82

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83339182

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/23/13 13:02  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met08_sn_6010	ICALBLK				08/23/13 13:02	1.0		
002	met08_sn_6010	ICAL	CRI5.1			08/23/13 13:07	1.0	1	
003	met08_sn_6010	ICAL	CS100			08/23/13 13:11	1.0	2	
004	met08_sn_6010	ICAL	CS1K			08/23/13 13:15	1.0	3	
005	met08_sn_6010	ICAL	CS10K			08/23/13 13:20	1.0	4	
006	met08_sn_6010	ICAL	CS100K			08/23/13 13:25	1.0	5	
007	met08_sn_6010	ICV				08/23/13 13:30	1.0	6	
008	met08_sn_6010	ICB				08/23/13 13:36	1.0		
009	met08_sn_6010	ICSA				08/23/13 13:41	1.0	7	10:AL=510000
010	met08_sn_6010	ICSAB				08/23/13 13:47	1.0	8	5:AL=510000
011	met08_sn_6010	CRI				08/23/13 13:53	1.0	9	
012	met08_sn_6010	BLANK	QC702883	Soil	201938	08/23/13 13:57	1.0		
013	met08_sn_6010	BS	QC702884	Soil	201938	08/23/13 14:02	1.0		
014	met08_sn_6010	SAMPLE	248259-001	Water	201974	08/23/13 14:07	1.0		
015	met08_sn_6010	MSS	248104-001	Water	201943	08/23/13 14:13	1.0		
016	met08_sn_6010	MS	QC702910	Water	201943	08/23/13 14:17	1.0		1:NA=110000
017	met08_sn_6010	MSD	QC702911	Water	201943	08/23/13 14:21	1.0		1:NA=110000
018	met08_sn_6010	SAMPLE	248163-001	Water	201943	08/23/13 14:25	1.0		3:K=250000
019	met08_sn_6010	X				08/23/13 14:31	1.0	10	
020	met08_sn_6010	CCV				08/23/13 14:37	1.0	10	
021	met08_sn_6010	CCB				08/23/13 14:43	1.0		
022	met08_sn_6010	ICSAB				08/23/13 14:48	1.0	8	5:AL=540000
023	met08_sn_6010	BSD	QC702885	Soil	201938	08/23/13 14:52	1.0		
024	met08_sn_6010	MSS	248046-001	Soil	201938	08/23/13 14:56	1.0		2:FE=270000
025	met08_sn_6010	MS	QC702886	Soil	201938	08/23/13 15:00	1.0		2:FE=370000
026	met08_sn_6010	MSD	QC702887	Soil	201938	08/23/13 15:03	1.0		2:FE=370000
027	met08_sn_6010	SAMPLE	248022-001	Soil	201938	08/23/13 15:06	1.0		4:FE=290000
028	met08_sn_6010	SAMPLE	248022-002	Soil	201938	08/23/13 15:09	1.0		4:FE=360000
029	met08_sn_6010	CCV				08/23/13 15:13	1.0	10	
030	met08_sn_6010	CCB				08/23/13 15:18	1.0		
031	met08_sn_6010	ICSAB				08/23/13 15:23	1.0	8	5:AL=560000
032	met08_sn_6010	SAMPLE	248022-001	Soil	201938	08/23/13 15:33	1.0		4:FE=300000
033	met08_sn_6010	SAMPLE	248022-002	Soil	201938	08/23/13 15:36	1.0		5:FE=380000
034	met08_sn_6010	SAMPLE	247928-001	Soil	201839	08/23/13 15:44	1.0		2:FE=200000
035	met08_sn_6010	SAMPLE	247928-002	Soil	201839	08/23/13 15:47	1.0		2:FE=210000
036	met08_sn_6010	SAMPLE	247928-003	Soil	201839	08/23/13 15:50	1.0		1:FE=190000
037	met08_sn_6010	SAMPLE	247928-004	Soil	201839	08/23/13 15:57	1.0		1:FE=170000
038	met08_sn_6010	SAMPLE	247928-005	Soil	201839	08/23/13 16:01	1.0		2:FE=250000
039	met08_sn_6010	SAMPLE	247928-006	Soil	201839	08/23/13 16:04	1.0		1:FE=200000
040	met08_sn_6010	SAMPLE	247928-007	Soil	201839	08/23/13 16:07	1.0		2:FE=260000
041	met08_sn_6010	SAMPLE	247928-008	Soil	201839	08/23/13 16:10	1.0		1:FE=180000
042	met08_sn_6010	CCV				08/23/13 16:13	1.0	10	
043	met08_sn_6010	CCB				08/23/13 16:19	1.0		
044	met08_sn_6010	ICSAB				08/23/13 16:24	1.0	8	5:AL=560000
045	met08_sn_6010	X		WET Leachate	202016	08/23/13 16:38	10.0		
046	met08_sn_6010	X	QC703235	WET Leachate	202016	08/23/13 16:43	1.0		
047	met08_sn_6010	X				08/23/13 16:48	1.0	8	5:AL=570000
048	met08_sn_6010	ICSAB				08/23/13 17:02	1.0	8	5:AL=560000
049	met08_sn_6010	BLANK	QC703234	WET Leachate	202016	08/23/13 17:07	10.0		1:NA=210000
050	met08_sn_6010	BS	QC703235	WET Leachate	202016	08/23/13 17:12	1.0		
051	met08_sn_6010	BSD	QC703236	WET Leachate	202016	08/23/13 17:16	1.0		
052	met08_sn_6010	MSS	248037-001	WET Leachate	202016	08/23/13 17:21	10.0		2:FE=300000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83339182

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/23/13 13:02  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	met08_sn_6010	MS	QC703237	WET Leachate	202016	08/23/13 17:25	10.0		
054	met08_sn_6010	MSD	QC703238	WET Leachate	202016	08/23/13 17:28	10.0		
055	met08_sn_6010	SER	QC703239	WET Leachate	202016	08/23/13 17:31	50.0		
056	met08_sn_6010	PDS	QC703240	WET Leachate	202016	08/23/13 17:35	10.0	11 12	
057	met08_sn_6010	SAMPLE	248037-002	WET Leachate	202016	08/23/13 17:39	10.0		2:FE=310000
058	met08_sn_6010	CCV				08/23/13 17:43	1.0	10	
059	met08_sn_6010	X				08/23/13 17:50	1.0	10	
060	met08_sn_6010	CCB				08/23/13 17:55	1.0		
061	met08_sn_6010	ICSAB				08/23/13 18:00	1.0	8	5:AL=560000

JDB 08/23/13 : CCV repoured and reran, initial run # 020 removed

JDB 08/23/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 61.

Standards used: 1=S22714 2=S22716 3=S22715 4=S22717 5=S22718 6=S22721 7=S22719 8=S22720 9=S22723 10=S22722 11=S22594  
 12=S22595

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83339182

Date : 08/23/13  
 Sequence : MET08 08/23/13

Reference : met08\_sn\_6010  
 Analyzed : 08/23/13 13:07

#	Type	Sample ID	Y A
		ICAL STD	2509293
		LOWER LIMIT	752788
		UPPER LIMIT	5018585
008	ICB		2517582
009	ICSA		2019521
010	ICSAB		1984927
012	BLANK	QC702883	2440930
013	BS	QC702884	2225773
014	SAMPLE	248259-001	2120889
015	MSS	248104-001	2318663
016	MS	QC702910	2236701
017	MSD	QC702911	2190763
018	SAMPLE	248163-001	2131245
020	CCV		2173171
021	CCB		2328787
022	ICSAB		1900540
023	BSD	QC702885	2165094
024	MSS	248046-001	2213342
025	MS	QC702886	2168769
026	MSD	QC702887	2175971
027	SAMPLE	248022-001	2145389
028	SAMPLE	248022-002	2166900
029	CCV		2154487
030	CCB		2303444
031	ICSAB		1829737
032	SAMPLE	248022-001	2066376
033	SAMPLE	248022-002	2098074
034	SAMPLE	247928-001	2181235
035	SAMPLE	247928-002	2176389
036	SAMPLE	247928-003	2178149
037	SAMPLE	247928-004	2166201
038	SAMPLE	247928-005	2161407
039	SAMPLE	247928-006	2121464
040	SAMPLE	247928-007	2183662
041	SAMPLE	247928-008	2124749
042	CCV		2094789
043	CCB		2265743
044	ICSAB		1803098
048	ICSAB		1788711
049	BLANK	QC703234	1984167
050	BS	QC703235	2093012
051	BSD	QC703236	2085497
052	MSS	248037-001	2001598
053	MS	QC703237	1997693
054	MSD	QC703238	1993875
055	SER	QC703239	2077090
056	PDS	QC703240	1955805
057	SAMPLE	248037-002	1940411
058	CCV		2030091
060	CCB		2211420
061	ICSAB		1770718

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS Water: EPA 6010B

Inst : MET08  
 Calnum : 83339182001  
 Units : ug/L

Date : 23-AUG-2013 13:02  
 X Axis : R

Reviewer : ---

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	met08_sn_6010_83339182002		CR15.1	23-AUG-2013 13:07	S22714
L2	met08_sn_6010_83339182003		CS100	23-AUG-2013 13:11	S22716
L3	met08_sn_6010_83339182004		CS1K	23-AUG-2013 13:15	S22715
L4	met08_sn_6010_83339182005		CS10K	23-AUG-2013 13:20	S22717
L5	met08_sn_6010_83339182006		CS100K	23-AUG-2013 13:25	S22718

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	35.430	37.786	38.914	39.797		LOR0	0.00000	0.02513		37.982	1.000	0.995	
Arsenic	A	17.880	22.566	23.334	23.952		LOR0	0.00000	0.04176		21.933	1.000	0.995	
Barium	A	475.24	492.93	497.15	482.14		LOR0	0.00000	0.00207		486.86	1.000	0.995	
Beryllium	A	5965.1	5730.3	5731.5			LOR0	0.00000	1.74E-4		5808.9	1.000	0.995	
Cadmium	A	257.08	277.42	281.70	271.43		LOR0	0.00000	0.00368		271.91	1.000	0.995	
Chromium	A	101.70	112.55	112.99	111.79		LOR0	0.00000	0.00894		109.76	1.000	0.995	
Cobalt	A	149.46	149.17	151.27	149.09		LOR0	0.00000	0.00671		149.75	1.000	0.995	
Copper	A	120.14	135.96	139.74	139.27		LOR0	0.00000	0.00718		133.78	1.000	0.995	
Lead	A	81.760	68.919	69.926	69.415		LOR0	0.00000	0.01441		72.505	1.000	0.995	
Molybdenum	A	40.820	43.130	43.777	43.779		LOR0	0.00000	0.02284		42.876	1.000	0.995	
Nickel	A	43.660	59.386	60.467	59.641		LOR0	0.00000	0.01676		55.788	1.000	0.995	
Selenium	A	35.150	33.236	33.257	34.517		LOR0	0.00000	0.02898		34.040	1.000	0.995	
Silver	A	865.16	890.75	899.10	906.09		LOR0	0.00000	0.00111		890.28	1.000	0.995	
Thallium	A	13.740	21.405	22.047	21.812		LOR0	0.00000	0.04584		19.751	1.000	0.995	
Vanadium	A	157.90	189.49	193.42	193.87		LOR0	0.00000	0.00516		183.67	1.000	0.995	
Zinc	A	97.130	97.938	91.305	90.513		LOR0	0.00000	0.01105		94.222	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	-11	100.00	-5	1000.0	-2	10000	0		
Arsenic	A	5.0000	<b>-25</b>	100.00	-6	1000.0	-3	10000	0		
Barium	A	5.0000	-1	100.00	2	1000.0	3	10000	0		
Beryllium	A	2.0000	4	100.00	0	1000.0	0				
Cadmium	A	5.0000	-5	100.00	2	1000.0	4	10000	0		
Chromium	A	5.0000	-9	100.00	1	1000.0	1	10000	0		
Cobalt	A	5.0000	0	100.00	0	1000.0	1	10000	0		
Copper	A	5.0000	-14	100.00	-2	1000.0	0	10000	0		
Lead	A	5.0000	18	100.00	-1	1000.0	1	10000	0		
Molybdenum	A	5.0000	-7	100.00	-1	1000.0	0	10000	0		
Nickel	A	5.0000	<b>-27</b>	100.00	0	1000.0	1	10000	0		
Selenium	A	10.000	2	100.00	-4	1000.0	-4	10000	0		
Silver	A	5.0000	-4	100.00	-2	1000.0	-1	2000.0	0		
Thallium	A	10.000	<b>-37</b>	100.00	-2	1000.0	1	10000	0		
Vanadium	A	5.0000	-19	100.00	-2	1000.0	0	10000	0		
Zinc	A	20.000	7	100.00	8	1000.0	1	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
Calnum : 83339182001

Cal Date : 23-AUG-2013

ICV 83339182007 (23-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	5117	ug/L	2	10	
Arsenic	A	5000	5007	ug/L	0	10	
Barium	A	5000	5079	ug/L	2	10	
Beryllium	A	500.0	517.9	ug/L	4	10	
Cadmium	A	5000	5174	ug/L	3	10	
Chromium	A	5000	5069	ug/L	1	10	
Cobalt	A	5000	5094	ug/L	2	10	
Copper	A	5000	4932	ug/L	-1	10	
Lead	A	5000	4978	ug/L	0	10	
Molybdenum	A	5000	5158	ug/L	3	10	
Nickel	A	5000	5114	ug/L	2	10	
Selenium	A	5000	5104	ug/L	2	10	
Silver	A	1000	994.9	ug/L	-1	10	
Thallium	A	5000	5045	ug/L	1	10	
Vanadium	A	5000	5020	ug/L	0	10	
Zinc	A	5000	5066	ug/L	1	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83339182008 File : met08\_sn\_6010 Time : 23-AUG-2013 13:36  
 Cal : 83339182001 Caldate : 23-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.6312]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	2517582	0.33

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83339182009  
 Cal : 83339182001  
 Standards: S22719  
 File : met08\_sn\_6010  
 Caldate : 23-AUG-2013  
 IDF : 1.0  
 Time : 23-AUG-2013 13:41

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[-1.279]	10.00	ug/L	
Arsenic	A	[2.335]	5.000	ug/L	!a+
Barium	A	[0.2034]	5.000	ug/L	
Beryllium	A	[0.3349]	2.000	ug/L	!a+
Cadmium	A	[-2.250]	5.000	ug/L	!a-
Cobalt	A	[-2.104]	5.000	ug/L	!a-
Lead	A	[-2.747]	5.000	ug/L	!a-
Molybdenum	A	[-0.5179]	5.000	ug/L	
Selenium	A	[7.274]	10.00	ug/L	!a+
Silver	A	[0.05956]	5.000	ug/L	
Thallium	A	[-0.2035]	10.00	ug/L	
Zinc	A	[11.34]	20.00	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19800	ug/L	99
Copper	A	20000	21050	ug/L	105
Manganese	A	20000	19250	ug/L	96
Nickel	A	20000	18620	ug/L	93
Vanadium	A	20000	20070	ug/L	100
Aluminum	R	500000	509800	ug/L	102
Calcium	R	500000	492700	ug/L	99
Iron	R	200000	194500	ug/L	97
Magnesium	R	500000	507200	ug/L	101
Titanium	R	20000	21700	ug/L	109

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	2019521	-19.52

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83339182010  
 Cal : 83339182001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 23-AUG-2013  
 IDF : 1.0  
 Time : 23-AUG-2013 13:47

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	534.2	ug/L	7	20	
Arsenic	A	500.0	546.3	ug/L	9	20	
Barium	A	500.0	548.8	ug/L	10	20	
Beryllium	A	500.0	555.4	ug/L	11	20	
Cadmium	A	1000	1052	ug/L	5	20	
Chromium	A	500.0	527.4	ug/L	5	20	
Cobalt	A	500.0	495.8	ug/L	-1	20	
Copper	A	500.0	549.3	ug/L	10	20	
Lead	A	1000	996.2	ug/L	0	20	
Molybdenum	A	500.0	529.8	ug/L	6	20	
Nickel	A	1000	985.6	ug/L	-1	20	
Selenium	A	500.0	541.7	ug/L	8	20	
Silver	A	1000	1137	ug/L	14	20	
Thallium	A	500.0	460.3	ug/L	-8	20	
Vanadium	A	500.0	551.1	ug/L	10	20	
Zinc	A	1000	1022	ug/L	2	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	1984927	-20.90

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83339182020  
 Cal : 83339182001  
 Standards: S22722

File : met08\_sn\_6010  
 Caldate : 23-AUG-2013

IDF : 1.0  
 Time : 23-AUG-2013 14:37

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.982	44.064	5000	5537	ug/L	11	10	c+ ***
Arsenic	A	21.933	26.009	5000	5431	ug/L	9	10	
Barium	A	486.86	530.66	5000	5502	ug/L	10	10	
Beryllium	A	5808.9	6570.2	500.0	573.2	ug/L	15	10	c+ ***
Cadmium	A	271.91	304.12	5000	5600	ug/L	12	10	c+ ***
Chromium	A	109.76	122.15	5000	5463	ug/L	9	10	
Cobalt	A	149.75	165.33	5000	5533	ug/L	11	10	c+ ***
Copper	A	133.78	149.34	5000	5361	ug/L	7	10	
Lead	A	72.505	74.787	5000	5387	ug/L	8	10	
Molybdenum	A	42.876	48.794	5000	5573	ug/L	11	10	c+ ***
Nickel	A	55.788	65.907	5000	5525	ug/L	10	10	
Selenium	A	34.040	38.131	5000	5526	ug/L	11	10	c+ ***
Silver	A	890.28	972.47	1000	1075	ug/L	7	10	
Thallium	A	19.751	23.918	5000	5482	ug/L	10	10	
Vanadium	A	183.67	209.36	5000	5400	ug/L	8	10	
Zinc	A	94.222	99.492	5000	5495	ug/L	10	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	2173171	-13.40

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83339182021 File : met08\_sn\_6010 Time : 23-AUG-2013 14:43  
 Cal : 83339182001 Caldate : 23-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.6566]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	2328787	-7.19

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83339182022  
 Cal : 83339182001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 23-AUG-2013  
 IDF : 1.0  
 Time : 23-AUG-2013 14:48

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	536.8	ug/L	7	20	
Arsenic	A	500.0	557.8	ug/L	12	20	
Barium	A	500.0	566.0	ug/L	13	20	
Beryllium	A	500.0	574.8	ug/L	15	20	
Cadmium	A	1000	1074	ug/L	7	20	
Chromium	A	500.0	545.3	ug/L	9	20	
Cobalt	A	500.0	501.2	ug/L	0	20	
Copper	A	500.0	570.0	ug/L	14	20	
Lead	A	1000	1007	ug/L	1	20	
Molybdenum	A	500.0	541.9	ug/L	8	20	
Nickel	A	1000	1015	ug/L	1	20	
Selenium	A	500.0	540.0	ug/L	8	20	
Silver	A	1000	1174	ug/L	17	20	
Thallium	A	500.0	490.6	ug/L	-2	20	
Vanadium	A	500.0	571.0	ug/L	14	20	
Zinc	A	1000	1043	ug/L	4	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	1900540	-24.26

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83340490

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/24/13 10:50  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met08_sn_6010	ICALBLK				08/24/13 10:50	1.0		
002	met08_sn_6010	ICAL	CRI5.1			08/24/13 10:55	1.0	1	
003	met08_sn_6010	ICAL	CS100			08/24/13 11:00	1.0	2	
004	met08_sn_6010	ICAL	CS1K			08/24/13 11:04	1.0	3	
005	met08_sn_6010	ICAL	CS10K			08/24/13 11:08	1.0	4	
006	met08_sn_6010	ICAL	CS100K			08/24/13 11:14	1.0	5	
007	met08_sn_6010	ICV				08/24/13 11:19	1.0	6	
008	met08_sn_6010	ICB				08/24/13 11:25	1.0		
009	met08_sn_6010	ICSA				08/24/13 11:30	1.0	7	10:MG=500000
010	met08_sn_6010	ICSAB				08/24/13 12:02	1.0	8	5:MG=490000
011	met08_sn_6010	CRI				08/24/13 12:07	1.0	9	
012	met08_sn_6010	BLANK	QC703111	Filtrate	201989	08/24/13 12:11	1.0		
013	met08_sn_6010	BS	QC703112	Filtrate	201989	08/24/13 12:17	1.0		
014	met08_sn_6010	BSD	QC703113	Filtrate	201989	08/24/13 12:21	1.0		
015	met08_sn_6010	MSS	248105-003	Filtrate	201989	08/24/13 12:25	1.0		1:MG=150000
016	met08_sn_6010	MS	QC703114	Filtrate	201989	08/24/13 12:31	1.0		
017	met08_sn_6010	MSD	QC703115	Filtrate	201989	08/24/13 12:38	1.0		
018	met08_sn_6010	SAMPLE	248105-001	Filtrate	201989	08/24/13 12:44	1.0		1:MG=380000
019	met08_sn_6010	SAMPLE	248105-002	Filtrate	201989	08/24/13 12:50	1.0		2:MG=360000
020	met08_sn_6010	CCV				08/24/13 12:56	1.0	10	
021	met08_sn_6010	CCB				08/24/13 13:02	1.0		
022	met08_sn_6010	SAMPLE	248105-004	Filtrate	201989	08/24/13 13:07	1.0		2:MG=160000
023	met08_sn_6010	SAMPLE	248105-005	Filtrate	201989	08/24/13 13:13	1.0		2:MG=160000
024	met08_sn_6010	SAMPLE	248105-006	Filtrate	201989	08/24/13 13:20	1.0		1:NA=460000
025	met08_sn_6010	SAMPLE	248105-007	Filtrate	201989	08/24/13 13:25	1.0		1:CA=100000
026	met08_sn_6010	SAMPLE	248105-008	Filtrate	201989	08/24/13 13:31	1.0		2:MG=540000
027	met08_sn_6010	SAMPLE	248105-009	Filtrate	201989	08/24/13 13:37	1.0		2:MG=130000
028	met08_sn_6010	SAMPLE	248105-010	Filtrate	201989	08/24/13 13:44	1.0		1:CA=150000
029	met08_sn_6010	SAMPLE	248105-011	Filtrate	201989	08/24/13 13:50	1.0		1:CA=100000
030	met08_sn_6010	SAMPLE	248105-012	Filtrate	201989	08/24/13 13:56	1.0		2:NA=190000
031	met08_sn_6010	SAMPLE	248105-013	Filtrate	201989	08/24/13 14:00	1.0		2:MG=170000
032	met08_sn_6010	ICSAB				08/24/13 14:05	1.0	8	5:MG=490000
033	met08_sn_6010	CCV				08/24/13 14:11	1.0	10	
034	met08_sn_6010	CCB				08/24/13 14:16	1.0		
035	met08_sn_6010	SAMPLE	248105-014	Filtrate	201989	08/24/13 14:21	1.0		1:MG=140000
036	met08_sn_6010	SAMPLE	248105-015	Filtrate	201989	08/24/13 14:28	1.0		3:NA=450000
037	met08_sn_6010	SAMPLE	248105-016	Filtrate	201989	08/24/13 14:32	1.0		4:CA=480000
038	met08_sn_6010	SAMPLE	248105-017	Filtrate	201989	08/24/13 14:37	1.0		1:MG=330000
039	met08_sn_6010	SAMPLE	248105-018	Filtrate	201989	08/24/13 14:44	1.0		2:MG=350000
040	met08_sn_6010	SAMPLE	248105-019	Filtrate	201989	08/24/13 14:50	1.0		
041	met08_sn_6010	SAMPLE	248105-020	Filtrate	201989	08/24/13 14:55	1.0		
042	met08_sn_6010	BLANK	QC703116	Filtrate	201990	08/24/13 15:00	1.0		
043	met08_sn_6010	BS	QC703117	Filtrate	201990	08/24/13 15:05	1.0		
044	met08_sn_6010	BSD	QC703118	Filtrate	201990	08/24/13 15:09	1.0		
045	met08_sn_6010	CCV				08/24/13 15:13	1.0	10	
046	met08_sn_6010	CCB				08/24/13 15:19	1.0		
047	met08_sn_6010	MSS	248105-021	Filtrate	201990	08/24/13 15:24	1.0		
048	met08_sn_6010	MS	QC703119	Filtrate	201990	08/24/13 15:29	1.0		
049	met08_sn_6010	MSD	QC703120	Filtrate	201990	08/24/13 15:33	1.0		
050	met08_sn_6010	SAMPLE	248095-001	Filtrate	201990	08/24/13 15:37	1.0		1:NA=130000
051	met08_sn_6010	SAMPLE	248095-002	Filtrate	201990	08/24/13 15:43	1.0		
052	met08_sn_6010	SAMPLE	248095-003	Filtrate	201990	08/24/13 15:48	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83340490

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/24/13 10:50  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
053	met08_sn_6010	SAMPLE	248095-004	Filtrate	201990	08/24/13 15:53	1.0	
054	met08_sn_6010	SAMPLE	248095-005	Filtrate	201990	08/24/13 15:58	1.0	
055	met08_sn_6010	SAMPLE	248095-006	Filtrate	201990	08/24/13 16:03	1.0	
056	met08_sn_6010	SER	QC702908	Water	201943	08/24/13 16:08	5.0	
057	met08_sn_6010	ICSAB				08/24/13 16:13	1.0	8 5:AL=490000
058	met08_sn_6010	CCV				08/24/13 16:19	1.0	10
059	met08_sn_6010	CCB				08/24/13 16:24	1.0	
060	met08_sn_6010	PDS	QC702909	Water	201943	08/24/13 16:29	1.0	11 12
061	met08_sn_6010	SAMPLE	248030-038	Water	201943	08/24/13 16:34	1.0	
062	met08_sn_6010	SAMPLE	248083-001	Water	201943	08/24/13 16:39	1.0	
063	met08_sn_6010	SAMPLE	248102-002	Water	201943	08/24/13 16:44	1.0	
064	met08_sn_6010	SAMPLE	248102-003	Water	201943	08/24/13 16:49	1.0	
065	met08_sn_6010	SAMPLE	248102-004	Water	201943	08/24/13 16:54	1.0	
066	met08_sn_6010	SAMPLE	248102-005	Water	201943	08/24/13 16:59	1.0	
067	met08_sn_6010	SAMPLE	248103-001	Water	201943	08/24/13 17:04	1.0	1:CA=120000
068	met08_sn_6010	SAMPLE	248103-002	Water	201943	08/24/13 17:11	1.0	1:NA=460000
069	met08_sn_6010	SAMPLE	248146-001	Water	201943	08/24/13 17:16	1.0	
070	met08_sn_6010	CCV				08/24/13 17:22	1.0	10
071	met08_sn_6010	CCB				08/24/13 17:27	1.0	
072	met08_sn_6010	SAMPLE	248146-002	Water	201943	08/24/13 17:32	1.0	1:NA=380000
073	met08_sn_6010	SAMPLE	248146-003	Water	201943	08/24/13 17:37	1.0	
074	met08_sn_6010	SAMPLE	248146-004	Water	201943	08/24/13 17:43	1.0	
075	met08_sn_6010	CCV				08/24/13 17:49	1.0	10
076	met08_sn_6010	CCB				08/24/13 17:55	1.0	
077	met08_sn_6010	X				08/24/13 17:58	1.0	
078	met08_sn_6010	ICSAB				08/24/13 18:04	1.0	8 5:MG=490000

NT 08/26/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 78.

Standards used: 1=S22714 2=S22716 3=S22715 4=S22717 5=S22718 6=S22721 7=S22719 8=S22720 9=S22723 10=S22722 11=S21652  
 12=S21653

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83340490

Date : 08/24/13  
 Sequence : MET08 08/24/13

Reference : met08\_sn\_6010  
 Analyzed : 08/24/13 10:55

#	Type	Sample ID	Y A
		ICAL STD	3003237
		LOWER LIMIT	900971
		UPPER LIMIT	6006473
008	ICB		3074784
009	ICSA		2500075
010	ICSAB		2515368
012	BLANK	QC703111	3129498
013	BS	QC703112	2982739
014	BSD	QC703113	3014219
015	MSS	248105-003	2654270
016	MS	QC703114	2664268
017	MSD	QC703115	2541703
018	SAMPLE	248105-001	2449757
019	SAMPLE	248105-002	2526743
020	CCV		2878298
021	CCB		3105093
022	SAMPLE	248105-004	2914101
023	SAMPLE	248105-005	2712478
024	SAMPLE	248105-006	2756385
025	SAMPLE	248105-007	2757061
026	SAMPLE	248105-008	2646600
027	SAMPLE	248105-009	2741358
028	SAMPLE	248105-010	2783653
029	SAMPLE	248105-011	2800565
030	SAMPLE	248105-012	2697593
031	SAMPLE	248105-013	2518796
032	ICSAB		2557251
033	CCV		2862000
034	CCB		3115653
035	SAMPLE	248105-014	2597734
036	SAMPLE	248105-015	2737371
037	SAMPLE	248105-016	2967438
038	SAMPLE	248105-017	2305108
039	SAMPLE	248105-018	2547192
040	SAMPLE	248105-019	3138948
041	SAMPLE	248105-020	3124500
042	BLANK	QC703116	3100256
043	BS	QC703117	2933868
044	BSD	QC703118	3005345
045	CCV		2864627
046	CCB		3114898
047	MSS	248105-021	3170071
048	MS	QC703119	3001861
049	MSD	QC703120	3045995
050	SAMPLE	248095-001	2914654
051	SAMPLE	248095-002	2884617
052	SAMPLE	248095-003	2909690
053	SAMPLE	248095-004	2899944
054	SAMPLE	248095-005	3103364
055	SAMPLE	248095-006	2924481
056	SER	QC702908	3000008

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83340490

Date : 08/24/13  
 Sequence : MET08 08/24/13

Reference : met08\_sn\_6010  
 Analyzed : 08/24/13 10:55

#	Type	Sample ID	Y	A
057	ICSAB		2547578	
058	CCV		2858337	
059	CCB		3142676	
060	PDS	QC702909	2906449	
061	SAMPLE	248030-038	3131931	
062	SAMPLE	248083-001	3141142	
063	SAMPLE	248102-002	2938173	
064	SAMPLE	248102-003	2969826	
065	SAMPLE	248102-004	2913809	
066	SAMPLE	248102-005	2995805	
067	SAMPLE	248103-001	2590740	
068	SAMPLE	248103-002	2656016	
070	CCV		2900966	
071	CCB		3035571	
075	CCV		2938563	
076	CCB		3120385	
078	ICSAB		2545557	

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS Water: EPA 6010B

Inst : MET08  
 Calnum : 83340490001  
 Units : ug/L  
 Date : 24-AUG-2013 10:50  
 X Axis : R  
 Reviewer : ---

Level	File	Seqnum	Sample ID	Analyzed	Std
L1	met08_sn_6010_83340490002		CR15.1	24-AUG-2013 10:55	S22714
L2	met08_sn_6010_83340490003		CS100	24-AUG-2013 11:00	S22716
L3	met08_sn_6010_83340490004		CS1K	24-AUG-2013 11:04	S22715
L4	met08_sn_6010_83340490005		CS10K	24-AUG-2013 11:08	S22717
L5	met08_sn_6010_83340490006		CS100K	24-AUG-2013 11:14	S22718

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	39.240	37.378	37.610	38.628		LORO	0.00000	0.02589		38.214	1.000	0.995	
Arsenic	A	19.660	22.458	22.599	23.302		LORO	0.00000	0.04293		22.005	1.000	0.995	
Barium	A	486.82	487.91	482.76	467.19		LORO	0.00000	0.00214		481.17	1.000	0.995	
Beryllium	A	5875.2	5600.6	5628.3			LORO	0.00000	1.78E-4		5701.4	1.000	0.995	
Cadmium	A	264.16	266.54	268.21	257.60		LORO	0.00000	0.00388		264.13	1.000	0.995	
Chromium	A	119.10	110.24	109.22	107.92		LORO	0.00000	0.00927		111.62	1.000	0.995	
Cobalt	A	150.56	144.73	146.09	143.77		LORO	0.00000	0.00695		146.29	1.000	0.995	
Copper	A	116.46	124.56	127.77	128.01		LORO	0.00000	0.00781		124.20	1.000	0.995	
Lead	A	62.640	66.005	66.907	66.189		LORO	0.00000	0.01511		65.435	1.000	0.995	
Molybdenum	A	43.980	41.987	41.952	41.919		LORO	0.00000	0.02386		42.459	1.000	0.995	
Nickel	A	60.500	58.076	58.336	57.312		LORO	0.00000	0.01745		58.556	1.000	0.995	
Selenium	A	37.450	32.289	32.455	33.638		LORO	0.00000	0.02974		33.958	1.000	0.995	
Silver	A	900.90	868.73	871.42	872.80		LORO	0.00000	0.00115		878.46	1.000	0.995	
Thallium	A	22.380	21.474	21.685	21.538		LORO	0.00000	0.04643		21.769	1.000	0.995	
Vanadium	A	187.70	186.53	186.06	186.43		LORO	0.00000	0.00536		186.68	1.000	0.995	
Zinc	A	91.630	93.841	87.531	86.600		LORO	0.00000	0.01155		89.901	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	2	100.00	-3	1000.0	-3	10000	0		
Arsenic	A	5.0000	-16	100.00	-4	1000.0	-3	10000	0		
Barium	A	5.0000	4	100.00	4	1000.0	3	10000	0		
Beryllium	A	2.0000	4	100.00	0	1000.0	0				
Cadmium	A	5.0000	3	100.00	3	1000.0	4	10000	0		
Chromium	A	5.0000	10	100.00	2	1000.0	1	10000	0		
Cobalt	A	5.0000	5	100.00	1	1000.0	2	10000	0		
Copper	A	5.0000	-9	100.00	-3	1000.0	0	10000	0		
Lead	A	5.0000	-5	100.00	0	1000.0	1	10000	0		
Molybdenum	A	5.0000	5	100.00	0	1000.0	0	10000	0		
Nickel	A	5.0000	6	100.00	1	1000.0	2	10000	0		
Selenium	A	10.000	11	100.00	-4	1000.0	-3	10000	0		
Silver	A	5.0000	3	100.00	0	1000.0	0	2000.0	0		
Thallium	A	10.000	4	100.00	0	1000.0	1	10000	0		
Vanadium	A	5.0000	1	100.00	0	1000.0	0	10000	0		
Zinc	A	20.000	6	100.00	8	1000.0	1	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
Calnum : 83340490001

Cal Date : 24-AUG-2013

ICV 83340490007 (24-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	4993	ug/L	0	10	
Arsenic	A	5000	4872	ug/L	-3	10	
Barium	A	5000	5023	ug/L	0	10	
Beryllium	A	500.0	510.3	ug/L	2	10	
Cadmium	A	5000	5122	ug/L	2	10	
Chromium	A	5000	4992	ug/L	0	10	
Cobalt	A	5000	5023	ug/L	0	10	
Copper	A	5000	4921	ug/L	-2	10	
Lead	A	5000	4921	ug/L	-2	10	
Molybdenum	A	5000	5109	ug/L	2	10	
Nickel	A	5000	5043	ug/L	1	10	
Selenium	A	5000	4915	ug/L	-2	10	
Silver	A	1000	980.8	ug/L	-2	10	
Thallium	A	5000	4915	ug/L	-2	10	
Vanadium	A	5000	4950	ug/L	-1	10	
Zinc	A	5000	5004	ug/L	0	10	

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248030 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83340490009 File : met08\_sn\_6010 Time : 24-AUG-2013 11:30  
 Cal : 83340490001 Caldate : 24-AUG-2013  
 Standards: S22719

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[2.705]	10.00	ug/L	
Arsenic	A	[-0.2532]	5.000	ug/L	
Barium	A	[0.06471]	5.000	ug/L	
Beryllium	A	[0.4307]	2.000	ug/L	!a+
Cadmium	A	[-1.970]	5.000	ug/L	!a-
Cobalt	A	[-0.5402]	5.000	ug/L	!a-
Lead	A	[1.352]	5.000	ug/L	
Molybdenum	A	[0.2078]	5.000	ug/L	
Selenium	A	[1.813]	10.00	ug/L	
Silver	A	[0.3406]	5.000	ug/L	
Thallium	A	[6.738]	10.00	ug/L	!a+
Zinc	A	[10.17]	20.00	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19300	ug/L	97
Copper	A	20000	21030	ug/L	105
Manganese	A	20000	18510	ug/L	93
Nickel	A	20000	18240	ug/L	91
Vanadium	A	20000	19580	ug/L	98
Aluminum	R	500000	496100	ug/L	99
Calcium	R	500000	482600	ug/L	97
Iron	R	200000	192200	ug/L	96
Magnesium	R	500000	502100	ug/L	100
Titanium	R	20000	21040	ug/L	105

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3003237	2500075	-16.75

!=warning +=high bias -=low bias a=ICSA

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83340490032  
 Cal : 83340490001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 24-AUG-2013  
 IDF : 1.0  
 Time : 24-AUG-2013 14:05

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	496.2	ug/L	-1	20	
Arsenic	A	500.0	492.1	ug/L	-2	20	
Barium	A	500.0	510.7	ug/L	2	20	
Beryllium	A	500.0	510.6	ug/L	2	20	
Cadmium	A	1000	1010	ug/L	1	20	
Chromium	A	500.0	495.2	ug/L	-1	20	
Cobalt	A	500.0	468.3	ug/L	-6	20	
Copper	A	500.0	546.6	ug/L	9	20	
Lead	A	1000	952.5	ug/L	-5	20	
Molybdenum	A	500.0	506.8	ug/L	1	20	
Nickel	A	1000	939.0	ug/L	-6	20	
Selenium	A	500.0	527.3	ug/L	5	20	
Silver	A	1000	1063	ug/L	6	20	
Thallium	A	500.0	444.5	ug/L	-11	20	
Vanadium	A	500.0	518.8	ug/L	4	20	
Zinc	A	1000	971.9	ug/L	-3	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3003237	2557251	-14.85

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83340490045  
 Cal : 83340490001  
 Standards: S22722

File : met08\_sn\_6010  
 Caldate : 24-AUG-2013

IDF : 1.0  
 Time : 24-AUG-2013 15:13

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	38.214	37.508	5000	4856	ug/L	-3	10	
Arsenic	A	22.005	22.190	5000	4763	ug/L	-5	10	
Barium	A	481.17	455.28	5000	4871	ug/L	-3	10	
Beryllium	A	5701.4	5526.8	500.0	491.0	ug/L	-2	10	
Cadmium	A	264.13	259.19	5000	5029	ug/L	1	10	
Chromium	A	111.62	104.30	5000	4832	ug/L	-3	10	
Cobalt	A	146.29	139.97	5000	4858	ug/L	-3	10	
Copper	A	124.20	126.22	5000	4930	ug/L	-1	10	
Lead	A	65.435	63.536	5000	4799	ug/L	-4	10	
Molybdenum	A	42.459	41.793	5000	4985	ug/L	0	10	
Nickel	A	58.556	56.102	5000	4894	ug/L	-2	10	
Selenium	A	33.958	32.252	5000	4796	ug/L	-4	10	
Silver	A	878.46	831.31	1000	952.8	ug/L	-5	10	
Thallium	A	21.769	20.449	5000	4747	ug/L	-5	10	
Vanadium	A	186.68	180.48	5000	4841	ug/L	-3	10	
Zinc	A	89.901	84.207	5000	4861	ug/L	-3	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3003237	2864627	-4.62

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
Seqnum : 83340490046  
Cal : 83340490001

File : met08\_sn\_6010  
Caldate : 24-AUG-2013

IDF : 1.0  
Time : 24-AUG-2013 15:19

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	[0.4056]	5.000	0.2850	ug/L	!ib
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	[0.7968]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3003237	3114898	3.72

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83340490057  
 Cal : 83340490001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 24-AUG-2013  
 IDF : 1.0  
 Time : 24-AUG-2013 16:13

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	466.6	ug/L	-7	20	
Arsenic	A	500.0	468.9	ug/L	-6	20	
Barium	A	500.0	497.8	ug/L	0	20	
Beryllium	A	500.0	499.3	ug/L	0	20	
Cadmium	A	1000	977.4	ug/L	-2	20	
Chromium	A	500.0	482.0	ug/L	-4	20	
Cobalt	A	500.0	450.0	ug/L	-10	20	
Copper	A	500.0	539.7	ug/L	8	20	
Lead	A	1000	911.7	ug/L	-9	20	
Molybdenum	A	500.0	488.4	ug/L	-2	20	
Nickel	A	1000	907.4	ug/L	-9	20	
Selenium	A	500.0	464.7	ug/L	-7	20	
Silver	A	1000	1043	ug/L	4	20	
Thallium	A	500.0	436.5	ug/L	-13	20	
Vanadium	A	500.0	508.1	ug/L	2	20	
Zinc	A	1000	938.3	ug/L	-6	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3003237	2547578	-15.17

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
Seqnum : 83340490058  
Cal : 83340490001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 24-AUG-2013

IDF : 1.0  
Time : 24-AUG-2013 16:19

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	38.214	38.191	5000	4945	ug/L	-1	10	
Arsenic	A	22.005	22.440	5000	4816	ug/L	-4	10	
Barium	A	481.17	457.97	5000	4900	ug/L	-2	10	
Beryllium	A	5701.4	5599.0	500.0	497.4	ug/L	-1	10	
Cadmium	A	264.13	260.73	5000	5059	ug/L	1	10	
Chromium	A	111.62	105.34	5000	4880	ug/L	-2	10	
Cobalt	A	146.29	141.13	5000	4898	ug/L	-2	10	
Copper	A	124.20	128.18	5000	5007	ug/L	0	10	
Lead	A	65.435	64.037	5000	4837	ug/L	-3	10	
Molybdenum	A	42.459	42.132	5000	5025	ug/L	1	10	
Nickel	A	58.556	56.566	5000	4934	ug/L	-1	10	
Selenium	A	33.958	32.656	5000	4856	ug/L	-3	10	
Silver	A	878.46	840.97	1000	963.8	ug/L	-4	10	
Thallium	A	21.769	20.768	5000	4821	ug/L	-4	10	
Vanadium	A	186.68	181.92	5000	4879	ug/L	-2	10	
Zinc	A	89.901	84.832	5000	4897	ug/L	-2	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3003237	2858337	-4.82

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83340490059 File : met08\_sn\_6010 Time : 24-AUG-2013 16:24  
 Cal : 83340490001 Caldate : 24-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	[0.3381]	5.000	0.2850	ug/L	!ib
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3003237	3142676	4.64

!=warning ib=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83340490070  
 Cal : 83340490001  
 Standards: S22722

File : met08\_sn\_6010  
 Caldate : 24-AUG-2013

IDF : 1.0  
 Time : 24-AUG-2013 17:22

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	38.214	37.063	5000	4799	ug/L	-4	10	
Arsenic	A	22.005	21.931	5000	4707	ug/L	-6	10	
Barium	A	481.17	450.53	5000	4820	ug/L	-4	10	
Beryllium	A	5701.4	5504.7	500.0	489.0	ug/L	-2	10	
Cadmium	A	264.13	256.68	5000	4980	ug/L	0	10	
Chromium	A	111.62	103.94	5000	4815	ug/L	-4	10	
Cobalt	A	146.29	139.20	5000	4831	ug/L	-3	10	
Copper	A	124.20	126.59	5000	4944	ug/L	-1	10	
Lead	A	65.435	63.074	5000	4764	ug/L	-5	10	
Molybdenum	A	42.459	41.454	5000	4945	ug/L	-1	10	
Nickel	A	58.556	55.715	5000	4860	ug/L	-3	10	
Selenium	A	33.958	31.834	5000	4733	ug/L	-5	10	
Silver	A	878.46	827.40	1000	948.3	ug/L	-5	10	
Thallium	A	21.769	20.241	5000	4699	ug/L	-6	10	
Vanadium	A	186.68	179.07	5000	4803	ug/L	-4	10	
Zinc	A	89.901	83.563	5000	4824	ug/L	-4	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3003237	2900966	-3.41

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83340490071 File : met08\_sn\_6010 Time : 24-AUG-2013 17:27  
 Cal : 83340490001 Caldate : 24-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	[0.3798]	5.000	0.2850	ug/L	!ib
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3003237	3035571	1.08

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Water  
EPA 6010B

Inst : MET08  
 Seqnum : 83340490078  
 Cal : 83340490001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 24-AUG-2013  
 IDF : 1.0  
 Time : 24-AUG-2013 18:04

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	484.2	ug/L	-3	20	
Arsenic	A	500.0	486.0	ug/L	-3	20	
Barium	A	500.0	507.9	ug/L	2	20	
Beryllium	A	500.0	510.1	ug/L	2	20	
Cadmium	A	1000	992.7	ug/L	-1	20	
Chromium	A	500.0	491.2	ug/L	-2	20	
Cobalt	A	500.0	460.9	ug/L	-8	20	
Copper	A	500.0	535.8	ug/L	7	20	
Lead	A	1000	931.2	ug/L	-7	20	
Molybdenum	A	500.0	496.8	ug/L	-1	20	
Nickel	A	1000	922.4	ug/L	-8	20	
Selenium	A	500.0	508.7	ug/L	2	20	
Silver	A	1000	1056	ug/L	6	20	
Thallium	A	500.0	455.0	ug/L	-9	20	
Vanadium	A	500.0	515.3	ug/L	3	20	
Zinc	A	1000	957.5	ug/L	-4	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3003237	2545557	-15.24

SAMPLE PREPARATION SUMMARY

Batch # : 201943  
 Started By : VV  
 Method : 3010A  
 Spike #1 ID : S21652

Prep Date : 20-AUG-2013 21:00  
 SOP Version : 3010A\_icp\_rv15  
 Spike #2 ID : S21653

Analysis : ICAP  
 Finished By : VV  
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-038		Water	50	50	1	1.0						T22/ICP	
248083-001		Water	50	50	1	1.0						PB	
248102-001		Water	50	50	1	1.0						T22/ICP	
248102-002		Water	50	50	1	1.0						T22/ICP	
248102-003		Water	50	50	1	1.0						T22/ICP	
248102-004		Water	50	50	1	1.0						T22/ICP	
248102-005		Water	50	50	1	1.0						T22/ICP	
248103-001		Water	50	50	1	1.0						PB	
248103-002		Water	50	50	1	1.0						PB	
248104-001		Water	50	50	1	1.0						PB	
248146-001		Water	50	50	1	1.0						CA, K, MG, NA	
248146-002		Water	50	50	1	1.0						CA, K, MG, NA	
248146-003		Water	50	50	1	1.0						CA, K, MG, NA	
248146-004		Water	50	50	1	1.0						CA, K, MG, NA	
248163-001		Water	50	50	1	1.0						T22/ICP	
QC702903	BLANK	Water	50	50	1	1.0							
QC702904	BS	Water	50	50	1	1.0		.5	.5				
QC702905	BSD	Water	50	50	1	1.0		.5	.5				
QC702906	MS	Water	50	50	1	1.0		.5	.5				
QC702907	MSD	Water	50	50	1	1.0		.5	.5				
QC702908	SER	Water	50	50	1	1.0							
QC702909	PDS	Water	50	50	1	1.0							
QC702910	MS	Water	50	50	1	1.0		.5	.5				
QC702911	MSD	Water	50	50	1	1.0		.5	.5				

Analyst: JDB

Date: 08/23/13

Reviewer: PRW

Date: 08/23/13

Water Digestion for ICP

Curtis & Tompkins, Ltd.

LIMS Batch #: 201943  
 Digested by: \_\_\_\_\_  
 Date Digested: 8/20/13

Digestion Method  
 EPA 3010a for ICP  
 EPA 200.7  
 \_\_\_\_\_

BK3476  
 Page 3

Lvl.	Sample #	Container ID	Volume Sample(mL)	Final Volume (mL)	Filtered? (y/n)	ID II	Comments
	BIK 702903		50 <input type="checkbox"/>	50 <input type="checkbox"/>	NO	/	
	*BS 4		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
	*BSD 9 S		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
	*248102-001 MS		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
	* ↓ 001 MSB		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
	*248104-001 MS		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
	* ↓ - 001 MSB		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
III	248030-038	H	50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
II	248083-001	B	50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
III	248102-001	K	50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
	- 002	E	50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
	- 003		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
	- 004		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
	- 005		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
III	248103-001	E	50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
	- 002		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
III	248104-001	K	50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
II	248146-001	E	50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	P.H verified ±2.
	- 002		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
20	- 003		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	P.H verified ±2.
	- 004		50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
II	248163-001	E	50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
			50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
			50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	
			50 <input type="checkbox"/>	50 <input type="checkbox"/>	/	/	

Digestion tubes, lot #  
0.5 mL of spike solution (Std1) was added to all spikes  
0.5 mL of spike solution (Std2) was added to all spikes  
 Digestion Temperature (°C), Block and Probe Location  
**digestion begun at (time)**  
 Concentrated HNO3  
 1:1 HCl  
**digestion ended at (time)**  
 filtered thru' Whatman # 541  
 Relinquished to ICP group

Reagent ID or LIMS #	Initials / Date
161909-261	VV 8-20-13
321652	
521653 *	
95°C A19	
9PM	
3390-JTB	
40272-082013	VV 8-21-13
2:30AM	
JOP	

W.M.V. 8-20-13  
 Prep Chemist / Date

Continued from page 8  
 Continued on page 8

Reviewed Online / See LIMS

**Mercury Data**

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1053336342

Instrument : MET34  
 Method : EPA 7470A

Begun : 08/21/13 13:42  
 SOP Version : hg\_water\_rv16

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	201962	ICALBLK	CAL BLANK			08/21/13 13:42	1.0	
002	201962	ICAL	CAL 1			08/21/13 13:44	1.0	1
003	201962	ICAL	CAL 2			08/21/13 13:45	1.0	1
004	201962	ICAL	CAL 3			08/21/13 13:47	1.0	1
005	201962	ICAL	CAL 4			08/21/13 13:49	1.0	1
006	201962	ICAL	CAL 5			08/21/13 13:50	1.0	1
007	201962	ICV				08/21/13 13:55	1.0	2
008	201962	ICB				08/21/13 13:57	1.0	
009	201962	BLANK	QC702982	Filtrate	201961	08/21/13 13:59	1.0	
010	201962	BS	QC702983	Filtrate	201961	08/21/13 14:00	1.0	
011	201962	BSD	QC702984	Filtrate	201961	08/21/13 14:02	1.0	
012	201962	MSS	248105-003	Filtrate	201961	08/21/13 14:04	1.0	
013	201962	MS	QC702985	Filtrate	201961	08/21/13 14:05	1.0	
014	201962	MSD	QC702986	Filtrate	201961	08/21/13 14:07	1.0	
015	201962	SAMPLE	248105-001	Filtrate	201961	08/21/13 14:09	1.0	
016	201962	SAMPLE	248105-002	Filtrate	201961	08/21/13 14:10	1.0	
017	201962	SAMPLE	248105-004	Filtrate	201961	08/21/13 14:12	1.0	
018	201962	SAMPLE	248105-005	Filtrate	201961	08/21/13 14:14	1.0	
019	201962	CCV				08/21/13 14:16	1.0	3
020	201962	CCB				08/21/13 14:17	1.0	
021	201962	SAMPLE	248105-006	Filtrate	201961	08/21/13 14:19	1.0	
022	201962	SAMPLE	248105-007	Filtrate	201961	08/21/13 14:21	1.0	
023	201962	SAMPLE	248105-008	Filtrate	201961	08/21/13 14:22	1.0	
024	201962	SAMPLE	248105-009	Filtrate	201961	08/21/13 14:24	1.0	
025	201962	SAMPLE	248105-010	Filtrate	201961	08/21/13 14:26	1.0	
026	201962	SAMPLE	248105-011	Filtrate	201961	08/21/13 14:28	1.0	
027	201962	SAMPLE	248105-012	Filtrate	201961	08/21/13 14:29	1.0	
028	201962	SAMPLE	248105-013	Filtrate	201961	08/21/13 14:31	1.0	
029	201962	SAMPLE	248105-014	Filtrate	201961	08/21/13 14:33	1.0	
030	201962	SAMPLE	248105-015	Filtrate	201961	08/21/13 14:34	1.0	
031	201962	CCV				08/21/13 14:36	1.0	3
032	201962	CCB				08/21/13 14:38	1.0	
033	201962	SAMPLE	248105-016	Filtrate	201961	08/21/13 14:39	1.0	
034	201962	SAMPLE	248105-017	Filtrate	201961	08/21/13 14:41	1.0	
035	201962	SAMPLE	248105-018	Filtrate	201961	08/21/13 14:43	1.0	
036	201962	SAMPLE	248105-019	Filtrate	201961	08/21/13 14:44	1.0	
037	201962	SAMPLE	248105-020	Filtrate	201961	08/21/13 14:46	1.0	
038	201962	BLANK	QC702987	Filtrate	201962	08/21/13 14:48	1.0	
039	201962	BS	QC702988	Filtrate	201962	08/21/13 14:50	1.0	
040	201962	BSD	QC702989	Filtrate	201962	08/21/13 14:51	1.0	
041	201962	MSS	247973-001	Filtrate	201962	08/21/13 14:53	1.0	
042	201962	MS	QC702990	Filtrate	201962	08/21/13 14:55	1.0	
043	201962	CCV				08/21/13 14:56	1.0	3
044	201962	CCB				08/21/13 14:58	1.0	
045	201962	MSD	QC702991	Filtrate	201962	08/21/13 15:00	1.0	
046	201962	SAMPLE	248095-001	Filtrate	201962	08/21/13 15:01	1.0	
047	201962	SAMPLE	248095-002	Filtrate	201962	08/21/13 15:03	1.0	
048	201962	SAMPLE	248095-003	Filtrate	201962	08/21/13 15:05	1.0	
049	201962	SAMPLE	248095-004	Filtrate	201962	08/21/13 15:07	1.0	
050	201962	SAMPLE	248095-005	Filtrate	201962	08/21/13 15:08	1.0	
051	201962	SAMPLE	248095-006	Filtrate	201962	08/21/13 15:10	1.0	
052	201962	SAMPLE	248106-001	Water	201962	08/21/13 15:12	5.0	



CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS Water: EPA 7470A

Inst : MET34  
 Calnum : 1053336342001  
 Units : ug/L  
 Date : 21-AUG-2013 13:42  
 X Axis : R  
 Reviewer : ---  
 Type : WATER

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	201962	1053336342002	CAL 1	21-AUG-2013 13:44	S23091 (500X)
L2	201962	1053336342003	CAL 2	21-AUG-2013 13:45	S23091 (200X)
L3	201962	1053336342004	CAL 3	21-AUG-2013 13:47	S23091 (50X)
L4	201962	1053336342005	CAL 4	21-AUG-2013 13:49	S23091 (20X)
L5	201962	1053336342006	CAL 5	21-AUG-2013 13:50	S23091 (10X)

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	Mnr^2	Flg
Mercury	4400.0	4568.0	4299.5	4309.6	4391.4	LINR	-1.1E-5	2.29E-4		4393.7	1.000	1.000	.99	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D
Mercury	0.2000	0.5000	4	2.0000	-2	5.0000	-1	10.000	0

Instrument amount = a0 + response \* a1 + response^2 \* a2; LINR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Water  
EPA 7470A

Inst : MET34

Calnum : 1053336342001

Cal Date : 21-AUG-2013

Type : WATER

ICV 1053336342007 (21-AUG-2013) stds: S23093

Analyte	Spiked	Quant	Units	%D	Max	Flags
Mercury	5.000	5.021	ug/L	0	10	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 7470A

Inst : MET34  
 Seqnum : 1053336342031 File : 201962  
 Cal : 1053336342001 Caldate : 21-AUG-2013  
 Standards: S23094

IDF : 1.0  
 Time : 21-AUG-2013 14:36  
 Caltype : WATER

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	4393.7	4378.8	5.000	5.006	ug/L	0	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 7470A

Inst : MET34  
Seqnum : 1053336342032 File : 201962  
Cal : 1053336342001 Caldate : 21-AUG-2013

IDF : 1.0  
Time : 21-AUG-2013 14:38  
Caltype : WATER

Analyte	Quant	IQL	MDL	Units	Flags
Mercury	ND	0.2000	0.02014	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 7470A

Inst : MET34  
 Seqnum : 1053336342043      File : 201962  
 Cal : 1053336342001      Caldate : 21-AUG-2013  
 Standards: S23094

IDF : 1.0  
 Time : 21-AUG-2013 14:56  
 Caltype : WATER

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	4393.7	4397.4	5.000	5.027	ug/L	1	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 7470A

Inst : MET34  
Seqnum : 1053336342044 File : 201962  
Cal : 1053336342001 Caldate : 21-AUG-2013

IDF : 1.0  
Time : 21-AUG-2013 14:58  
Caltype : WATER

Analyte	Quant	IQL	MDL	Units	Flags
Mercury	ND	0.2000	0.02014	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 7470A

Inst : MET34  
 Seqnum : 1053336342055 File : 201962 IDF : 1.0  
 Cal : 1053336342001 Caldate : 21-AUG-2013 Time : 21-AUG-2013 15:17  
 Standards: S23094 Caltype : WATER

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	4393.7	4505.4	5.000	5.151	ug/L	3	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Water  
EPA 7470A

Inst : MET34  
Seqnum : 1053336342056 File : 201962  
Cal : 1053336342001 Caldate : 21-AUG-2013

IDF : 1.0  
Time : 21-AUG-2013 15:19  
Caltype : WATER

Analyte	Quant	IQL	MDL	Units	Flags
Mercury	ND	0.2000	0.02014	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Water  
EPA 7470A

Inst : MET34  
 Seqnum : 1053336342059      File : 201962  
 Cal : 1053336342001      Caldate : 21-AUG-2013  
 Standards: S23094

IDF : 1.0  
 Time : 21-AUG-2013 15:24  
 Caltype : WATER

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	4393.7	4467.0	5.000	5.107	ug/L	2	20	



SAMPLE PREPARATION SUMMARY

Batch # : 201962  
 Started By : CRT  
 Method : METHOD  
 Spike #1 ID : S23091

Prep Date : 21-AUG-2013 09:55

Analysis : HG  
 Finished By : CRT  
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
247973-001		Filtrate	50	50	1	1.0						T22/HG	MSS
248030-038		Water	50	50	1	1.0						T22/HG	
248095-001		Filtrate	50	50	1	1.0						T22/HG	
248095-002		Filtrate	50	50	1	1.0						T22/HG	
248095-003		Filtrate	50	50	1	1.0						T22/HG	
248095-004		Filtrate	50	50	1	1.0						T22/HG	
248095-005		Filtrate	50	50	1	1.0						T22/HG	
248095-006		Filtrate	50	50	1	1.0						T22/HG	
248105-021		Filtrate	50	50	1	1.0						T22/HG	
248106-001		Water	50	50	1	1.0						T22/HG-200	
248113-001		Water	50	50	1	1.0						T22/HG-200	
QC702987	BLANK	Filtrate	50	50	1	1.0							
QC702988	BS	Filtrate	50	50	1	1.0		1.25					
QC702989	BSD	Filtrate	50	50	1	1.0		1.25					
QC702990	MS	Filtrate	50	50	1	1.0		1.25					
QC702991	MSD	Filtrate	50	50	1	1.0		1.25					
QC703001	SER	Water	50	50	1	1.0							

Analyst: CRT

Date: 08/21/13

Reviewer: PRW

Date: 08/21/13



Laboratory Job Number 248030

ANALYTICAL REPORT

Metals

Matrix: Soil

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-01	Basis:	dry
Lab ID:	248030-001	Diln Fac:	1.000
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13

Moisture: 2%

Analyte	Result	RL	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	2.3	0.52	201938	JDB	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Arsenic	7.1	0.26	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Barium	160	0.26	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.23	0.10	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cadmium	1.5	0.26	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Chromium	150	0.26	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cobalt	34	0.26	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Copper	150	0.26	201938	JDB	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Lead	260	0.26	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.70	0.018	201872	CRT	08/19/13	08/19/13	METHOD	EPA 7471A
Molybdenum	12	0.26	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Nickel	470	0.26	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.52	201938	JDB	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.26	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.52	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Vanadium	47	0.26	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Zinc	460	1.0	201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-08A	Basis:	dry
Lab ID:	248030-002	Diln Fac:	1.000
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13

Moisture: 5%

Analyte	Result	RL	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.57	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.7	0.28	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Barium	110	0.28	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.28	0.11	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.34	0.28	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Chromium	48	0.28	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cobalt	15	0.28	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Copper	140	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Lead	180	0.28	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.37	0.018	201872	CRT	08/19/13	08/19/13	METHOD	EPA 7471A
Molybdenum	ND	0.28	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Nickel	140	0.28	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.57	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.28	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.57	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Vanadium	47	0.28	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Zinc	180	1.1	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-08B	Basis:	dry
Lab ID:	248030-003	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg		

Moisture: 13%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.60	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Arsenic	1.9	0.30	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Barium	64	0.30	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.36	0.12	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.30	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Chromium	110	0.30	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cobalt	26	0.30	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Copper	16	0.31	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Lead	4.9	0.30	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.15	0.018	1.000		201872	CRT	08/19/13	08/19/13	METHOD	EPA 7471A
Molybdenum	ND	0.30	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Nickel	740	30	100.0		201936	NT	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Selenium	ND	0.60	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.30	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.60	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Vanadium	41	0.30	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Zinc	36	1.2	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-11A	Basis:	dry
Lab ID:	248030-004	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg		

Moisture: 11%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.56	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Arsenic	2.0	0.28	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Barium	24	0.28	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Beryllium	ND	0.11	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.38	0.28	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Chromium	830	28	100.0		201938	JDB	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Cobalt	93	0.28	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Copper	20	0.29	1.000		201938	JDB	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Lead	24	0.28	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.11	0.019	1.000		201872	CRT	08/19/13	08/19/13	METHOD	EPA 7471A
Molybdenum	ND	0.28	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Nickel	2,300	28	100.0		201938	JDB	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Selenium	ND	0.56	1.000		201938	JDB	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.28	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.56	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Vanadium	32	0.28	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Zinc	46	1.1	1.000		201938	JDB	08/20/13	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-11B	Basis:	dry
Lab ID:	248030-005	Diln Fac:	1.000
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13

Moisture: 18%

Analyte	Result	RL	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.68	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.5	0.34	201936	NT	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Barium	110	0.34	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.38	0.14	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.34	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Chromium	140	0.34	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cobalt	49	0.34	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Copper	30	0.35	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Lead	19	0.34	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.20	0.021	201872	CRT	08/19/13	08/19/13	METHOD	EPA 7471A
Molybdenum	ND	0.34	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Nickel	540	0.34	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.68	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.34	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.68	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Vanadium	45	0.34	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Zinc	88	1.4	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-2A	Basis:	dry
Lab ID:	248030-006	Diln Fac:	1.000
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13

Moisture: 10%

Analyte	Result	RL	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.58	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Arsenic	2.6	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Barium	120	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.32	0.12	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.38	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Chromium	140	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cobalt	31	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Copper	63	0.30	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Lead	230	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.28	0.019	201872	CRT	08/19/13	08/19/13	METHOD	EPA 7471A
Molybdenum	ND	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Nickel	560	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.58	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.58	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Vanadium	42	0.29	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Zinc	170	1.2	201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-2B	Basis:	dry
Lab ID:	248030-007	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg		

Moisture: 10%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.51	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Arsenic	2.3	0.25	1.000		201936	NT	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Barium	69	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.34	0.10	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Chromium	110	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cobalt	23	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Copper	13	0.26	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Lead	5.2	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.028	0.017	1.000		201872	CRT	08/19/13	08/19/13	METHOD	EPA 7471A
Molybdenum	ND	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Nickel	710	25	100.0		201936	NT	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Selenium	ND	0.51	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Vanadium	47	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Zinc	38	1.0	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-35B	Basis:	dry
Lab ID:	248030-008	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg		

Moisture: 12%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	ND	0.55	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.1	0.28	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Barium	76	0.28	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.35	0.11	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.28	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Chromium	110	0.28	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cobalt	34	0.28	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Copper	14	0.29	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Lead	6.4	0.28	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.043	0.020	1.000		201872	CRT	08/19/13	08/19/13	METHOD	EPA 7471A
Molybdenum	ND	0.28	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Nickel	740	28	100.0		201936	NT	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Selenium	ND	0.55	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.28	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.55	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Vanadium	57	0.28	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Zinc	39	1.1	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-03	Basis:	dry
Lab ID:	248030-009	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg		

Moisture: 8%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	1.5	0.51	1.000		201936	NT	08/20/13	08/27/13	EPA 3050B	EPA 6010B
Arsenic	7.5	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Barium	170	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.27	0.10	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.53	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Chromium	74	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Cobalt	13	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Copper	200	0.26	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Lead	300	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Mercury	1.4	0.18	10.00		201872	CRT	08/19/13	08/19/13	METHOD	EPA 7471A
Molybdenum	1.3	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Nickel	120	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.51	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Vanadium	44	0.25	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B
Zinc	350	1.0	1.000		201936	NT	08/20/13	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-04	Basis:	dry
Lab ID:	248030-010	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 5%

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	1.6	0.52	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	7.0	0.26	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	940	26	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Beryllium	0.28	0.10	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	3.9	0.26	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	220	0.26	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	40	0.26	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	290	0.27	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	4,600	26	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Mercury	1.7	0.18	10.00	201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	0.50	0.26	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	700	26	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Selenium	0.79	0.52	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.26	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.52	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	50	0.26	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	1,100	100	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-10A	Basis:	dry
Lab ID:	248030-011	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 8%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	2.3	0.57	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	6.2	0.29	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	260	0.29	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.32	0.11	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.29	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	54	0.29	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	11	0.29	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	100	0.30	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	170	0.29	1.000		201936	NT	08/27/13	EPA 3050B	EPA 6010B
Mercury	1.3	0.18	10.00		201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.29	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	72	0.29	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.57	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.29	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.57	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	34	0.29	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	340	1.1	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-10B	Basis:	dry
Lab ID:	248030-012	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 14%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.63	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	1.4	0.31	1.000		201936	NT	08/27/13	EPA 3050B	EPA 6010B
Barium	100	0.31	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.36	0.13	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.31	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	140	0.31	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	61	0.31	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	15	0.32	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	6.7	0.31	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Mercury	ND	0.020	1.000		201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.31	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	760	31	100.0		201936	NT	08/27/13	EPA 3050B	EPA 6010B
Selenium	ND	0.63	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.31	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.63	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	47	0.31	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	43	1.3	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-37	Basis:	dry
Lab ID:	248030-013	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 4%

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	2.0	0.54	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	9.0	0.27	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	740	27	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Beryllium	0.29	0.11	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	5.7	0.27	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	190	0.27	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	40	0.27	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	310	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	1,900	27	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Mercury	13	1.8	100.0	201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	0.51	0.27	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	670	27	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Selenium	ND	0.54	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.27	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.54	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	48	0.27	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	1,000	110	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-14A	Basis:	dry
Lab ID:	248030-014	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 9%

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	1.6	0.56	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	16	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	990	28	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Beryllium	0.34	0.11	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	1.6	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	65	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	23	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	1,100	29	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Lead	1,000	28	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Mercury	5.1	1.9	100.0	201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	0.59	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	70	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Selenium	0.94	0.56	1.000	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.56	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	57	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	810	110	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-14B	Basis:	dry
Lab ID:	248030-015	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 15%

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	11	0.56	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	21	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	1,400	28	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Beryllium	0.24	0.11	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	1.9	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	140	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	28	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	2,600	29	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Lead	3,300	28	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Mercury	0.65	0.20	10.00	201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	390	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.56	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.56	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	36	0.28	1.000	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	1,100	110	100.0	201936	NT	08/27/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-7	Diln Fac:	1.000
Lab ID:	248030-016	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 7%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.51	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.7	0.25	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	310	0.25	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.71	0.10	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.35	0.25	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	39	0.25	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	24	0.25	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	170	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	85	0.25	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Mercury	0.72	0.018	201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	2.6	0.25	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	45	0.25	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.51	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	57	0.25	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	170	1.0	201936	NT	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-6	Diln Fac:	1.000
Lab ID:	248030-017	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 6%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.55	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	1.9	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	77	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.28	0.11	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	69	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	9.5	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	16	0.28	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	42	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.064	0.018	201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	58	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.55	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.55	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	51	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	79	1.1	201936	NT	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-5	Chemist:	JDB
Lab ID:	248030-018	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 2%

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Prep	Analysis
Antimony	2.7	0.55	1.000	201937	08/27/13	EPA 3050B	EPA 6010B
Arsenic	4.8	0.28	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Barium	170	0.28	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.24	0.11	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Cadmium	1.1	0.28	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Chromium	79	0.28	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Cobalt	11	0.28	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Copper	190	0.29	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Lead	150	0.28	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.55	0.016	1.000	201903	08/20/13	METHOD	EPA 7471A
Molybdenum	4.9	0.28	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Nickel	110	0.28	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.55	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.28	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.55	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Vanadium	42	0.28	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Zinc	780	110	100.0	201937	08/27/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-9	Basis:	dry
Lab ID:	248030-019	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 3%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.51	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.8	0.26	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	150	0.26	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.28	0.10	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.81	0.26	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	160	0.26	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	39	0.26	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	130	0.26	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	320	0.26	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.77	0.017	1.000		201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	0.63	0.26	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	640	26	100.0		201936	NT	08/27/13	EPA 3050B	EPA 6010B
Selenium	ND	0.51	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.26	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	45	0.26	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	310	1.0	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-34	Basis:	dry
Lab ID:	248030-020	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 3%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.56	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.9	0.28	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	170	0.28	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.28	0.11	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.87	0.28	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	120	0.28	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	34	0.28	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	140	0.29	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	400	0.28	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.92	0.16	10.00		201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	0.87	0.28	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	480	0.28	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Selenium	0.99	0.56	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.28	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.56	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	43	0.28	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	320	1.1	1.000		201936	NT	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-15	Diln Fac:	1.000
Lab ID:	248030-021	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 8%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.52	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.9	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	76	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.44	0.10	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	170	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	25	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	95	0.27	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	69	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.39	0.019	201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	400	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Selenium	1.8	0.52	201936	NT	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.52	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	50	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	120	1.0	201936	NT	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-24A	Diln Fac:	1.000
Lab ID:	248030-022	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 5%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.51	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	7.1	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	66	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.74	0.10	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	44	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	14	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	51	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	19	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.11	0.017	201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	64	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.51	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	49	0.26	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	68	1.0	201936	NT	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-24B	Diln Fac:	1.000
Lab ID:	248030-023	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 10%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.58	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.8	0.29	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Barium	130	0.29	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.47	0.12	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.29	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Chromium	110	0.29	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Cobalt	20	0.29	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Copper	72	0.30	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Lead	97	0.29	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.18	0.019	201903	JDB	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.29	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Nickel	250	0.29	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.58	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.29	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.58	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Vanadium	48	0.29	201936	NT	08/26/13	EPA 3050B	EPA 6010B
Zinc	130	1.2	201936	NT	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-39B	Diln Fac:	1.000
Lab ID:	248030-024	Chemist:	JDB
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/20/13

Moisture: 10%

Analyte	Result	RL	Batch#	Analyzed	Prep	Analysis
Antimony	2.0	0.57	201937	08/27/13	EPA 3050B	EPA 6010B
Arsenic	5.9	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Barium	160	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.43	0.11	201937	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.32	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Chromium	150	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Cobalt	30	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Copper	93	0.30	201937	08/26/13	EPA 3050B	EPA 6010B
Lead	140	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.21	0.019	201903	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Nickel	350	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Selenium	1.4	0.57	201937	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.57	201937	08/26/13	EPA 3050B	EPA 6010B
Vanadium	56	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Zinc	190	1.1	201937	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-12	Chemist:	JDB
Lab ID:	248030-025	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 1%

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Prep	Analysis
Antimony	ND	0.51	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Arsenic	6.0	0.26	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Barium	890	26	100.0	201937	08/27/13	EPA 3050B	EPA 6010B
Beryllium	0.16	0.10	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.62	0.26	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Chromium	51	0.26	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Cobalt	7.1	0.26	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Copper	110	0.26	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Lead	4,200	26	100.0	201937	08/27/13	EPA 3050B	EPA 6010B
Mercury	0.18	0.017	1.000	201903	08/20/13	METHOD	EPA 7471A
Molybdenum	11	0.26	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Nickel	56	0.26	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.51	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.26	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Vanadium	27	0.26	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Zinc	420	1.0	1.000	201937	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-16	Diln Fac:	1.000
Lab ID:	248030-026	Chemist:	JDB
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/20/13

Moisture: 0%

Analyte	Result	RL	Batch#	Analyzed	Prep	Analysis
Antimony	ND	0.52	201937	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.4	0.26	201937	08/26/13	EPA 3050B	EPA 6010B
Barium	88	0.26	201937	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.22	0.10	201937	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.26	201937	08/26/13	EPA 3050B	EPA 6010B
Chromium	51	0.26	201937	08/26/13	EPA 3050B	EPA 6010B
Cobalt	7.5	0.26	201937	08/26/13	EPA 3050B	EPA 6010B
Copper	31	0.27	201937	08/26/13	EPA 3050B	EPA 6010B
Lead	150	0.26	201937	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.41	0.017	201903	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.26	201937	08/26/13	EPA 3050B	EPA 6010B
Nickel	37	0.26	201937	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.52	201937	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.26	201937	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.52	201937	08/26/13	EPA 3050B	EPA 6010B
Vanadium	51	0.26	201937	08/26/13	EPA 3050B	EPA 6010B
Zinc	120	1.0	201937	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-17	Chemist:	JDB
Lab ID:	248030-027	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 7%

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Prep	Analysis
Antimony	6.9	0.58	1.000	201937	08/27/13	EPA 3050B	EPA 6010B
Arsenic	52	0.29	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Barium	350	0.29	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.27	0.12	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Cadmium	1.4	0.29	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Chromium	110	0.29	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Cobalt	20	0.29	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Copper	2,600	30	100.0	201937	08/27/13	EPA 3050B	EPA 6010B
Lead	800	29	100.0	201937	08/27/13	EPA 3050B	EPA 6010B
Mercury	19	1.8	100.0	201903	08/20/13	METHOD	EPA 7471A
Molybdenum	9.0	0.29	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Nickel	160	0.29	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Selenium	3.2	0.58	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.29	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.58	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Vanadium	43	0.29	1.000	201937	08/26/13	EPA 3050B	EPA 6010B
Zinc	1,400	120	100.0	201937	08/27/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

### California Title 22 Metals

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-18	Diln Fac:	1.000
Lab ID:	248030-028	Chemist:	JDB
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/20/13

Moisture: 10%

Analyte	Result	RL	Batch#	Analyzed	Prep	Analysis
Antimony	ND	0.57	201937	08/26/13	EPA 3050B	EPA 6010B
Arsenic	6.0	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Barium	98	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.52	0.11	201937	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Chromium	85	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Cobalt	22	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Copper	79	0.30	201937	08/26/13	EPA 3050B	EPA 6010B
Lead	80	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.090	0.018	201903	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Nickel	240	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Selenium	1.4	0.57	201937	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.57	201937	08/26/13	EPA 3050B	EPA 6010B
Vanadium	40	0.29	201937	08/26/13	EPA 3050B	EPA 6010B
Zinc	150	1.1	201937	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

### California Title 22 Metals

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-23D	Diln Fac:	1.000
Lab ID:	248030-029	Chemist:	JDB
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/20/13

Moisture: 25%

Analyte	Result	RL	Batch#	Analyzed	Prep	Analysis
Antimony	ND	0.71	201937	08/26/13	EPA 3050B	EPA 6010B
Arsenic	5.7	0.35	201937	08/26/13	EPA 3050B	EPA 6010B
Barium	170	0.35	201937	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.29	0.14	201937	08/26/13	EPA 3050B	EPA 6010B
Cadmium	1.2	0.35	201937	08/26/13	EPA 3050B	EPA 6010B
Chromium	90	0.35	201937	08/26/13	EPA 3050B	EPA 6010B
Cobalt	17	0.35	201937	08/26/13	EPA 3050B	EPA 6010B
Copper	270	0.37	201937	08/26/13	EPA 3050B	EPA 6010B
Lead	64	0.35	201937	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.27	0.024	201903	08/20/13	METHOD	EPA 7471A
Molybdenum	3.6	0.35	201937	08/26/13	EPA 3050B	EPA 6010B
Nickel	110	0.35	201937	08/26/13	EPA 3050B	EPA 6010B
Selenium	1.0	0.71	201937	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.35	201937	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.71	201937	08/26/13	EPA 3050B	EPA 6010B
Vanadium	58	0.35	201937	08/26/13	EPA 3050B	EPA 6010B
Zinc	160	1.4	201937	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-38D	Diln Fac:	1.000
Lab ID:	248030-030	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 31%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.77	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	7.0	0.39	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	88	0.39	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.32	0.15	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.39	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	150	0.39	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	17	0.39	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	230	0.40	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	120	0.39	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.51	0.026	201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	1.6	0.39	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	190	0.39	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.77	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.39	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.77	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	55	0.39	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	150	1.5	201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-25D	Diln Fac:	1.000
Lab ID:	248030-031	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 55%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	1.2	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	10	0.62	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	70	0.62	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.67	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.62	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	120	0.62	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	17	0.62	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	160	0.64	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	80	0.62	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.68	0.037	201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	1.9	0.62	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	130	0.62	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	1.2	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.62	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	1.2	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	78	0.62	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	200	2.5	201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-32D	Diln Fac:	1.000
Lab ID:	248030-032	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 53%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	1.1	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	11	0.57	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	69	0.57	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.62	0.23	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.57	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	130	0.57	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	16	0.57	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	170	0.59	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	88	0.57	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.75	0.036	201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.57	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Nickel	150	0.57	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	1.1	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.57	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	1.1	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	74	0.57	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	200	2.3	201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-26	Basis:	dry
Lab ID:	248030-033	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 16%

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.59	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.0	0.29	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	150	0.29	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.51	0.12	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.29	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	280	0.29	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	45	0.29	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	36	0.31	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	7.6	0.29	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.036	0.020	1.000	201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.29	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	860	29	100.0	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Selenium	0.73	0.59	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.29	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.59	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	83	0.29	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	56	1.2	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-33A	Diln Fac:	1.000
Lab ID:	248030-034	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 5%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.54	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	1.4	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	81	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.22	0.11	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	130	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	28	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	25	0.28	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	18	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.033	0.017	201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	460	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	1.3	0.54	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.54	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	60	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	42	1.1	201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-33B	Basis:	dry
Lab ID:	248030-035	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 10%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	2.9	0.56	1.000		201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Arsenic	3.3	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	190	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.31	0.11	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	1.8	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	70	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	13	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	96	0.29	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	500	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	2.0	0.17	10.00		201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	140	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.56	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.56	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	48	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	520	1.1	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-29A	Basis:	dry
Lab ID:	248030-036	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 6%

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.48	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	3.4	0.24	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	110	0.24	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.42	0.097	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.24	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	180	0.24	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	35	0.24	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	32	0.25	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	11	0.24	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.026	0.018	1.000	201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.24	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	660	24	100.0	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Selenium	0.89	0.48	1.000	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.24	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.48	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	52	0.24	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	46	0.97	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-29B	Basis:	dry
Lab ID:	248030-037	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 8%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.53	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	2.8	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	130	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.23	0.11	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.51	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	41	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	8.1	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	31	0.28	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	200	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	1.3	0.19	10.00		201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	31	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.53	1.000		201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.53	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	51	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	290	1.1	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-20	Diln Fac:	1.000
Lab ID:	248030-039	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 1%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.54	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	5.3	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	140	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.32	0.11	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.53	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	59	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	12	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	81	0.28	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	100	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.18	0.016	201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	1.4	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	88	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.54	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.54	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	47	0.27	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	210	1.1	201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

**California Title 22 Metals**

Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-22	Basis:	dry
Lab ID:	248030-040	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 1%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	1.0	0.55	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	13	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	140	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.37	0.11	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	1.1	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	160	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	31	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	870	28	100.0		201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Lead	140	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.19	0.017	1.000		201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	46	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	300	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	2.9	0.55	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.55	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	50	0.27	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	430	1.1	1.000		201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-27	Diln Fac:	1.000
Lab ID:	248030-041	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 1%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.51	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	13	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	200	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.40	0.10	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.89	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	170	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	29	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	350	0.26	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	230	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.28	0.017	201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	11	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	340	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	2.0	0.51	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	57	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	470	1.0	201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-28	Basis:	dry
Lab ID:	248030-042	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 1%

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	4.9	0.51	1.000	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Arsenic	55	0.25	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	260	0.25	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.25	0.10	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	1.9	0.25	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	210	0.25	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	23	0.25	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	680	26	100.0	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Lead	500	0.25	1.000	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Mercury	0.46	0.017	1.000	201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	33	0.25	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	190	0.25	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	4.5	0.51	1.000	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	45	0.25	1.000	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	1,100	100	100.0	201937	JDB	08/27/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-30	Diln Fac:	1.000
Lab ID:	248030-043	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry		

Moisture: 0%

Analyte	Result	RL	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.51	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	2.8	0.25	201937	JDB	08/27/13	EPA 3050B	EPA 6010B
Barium	82	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.17	0.10	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.28	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	76	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	10	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	58	0.26	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Lead	100	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	0.16	0.016	201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	2.8	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	92	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	ND	0.51	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.51	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	36	0.25	201937	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	150	1.0	201937	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248030	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-31	Basis:	dry
Lab ID:	248030-044	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13

Moisture: 0%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Analyzed	Prep	Analysis
Antimony	ND	0.46	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Arsenic	7.4	0.23	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Barium	140	0.23	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Beryllium	0.29	0.093	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Cadmium	0.78	0.23	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Chromium	110	0.23	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Cobalt	17	0.23	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Copper	260	0.23	1.000		201938	JDB	08/27/13	EPA 3050B	EPA 6010B
Lead	150	0.23	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Mercury	1.0	0.18	10.00		201904	CRT	08/20/13	METHOD	EPA 7471A
Molybdenum	3.9	0.23	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Nickel	140	0.23	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Selenium	1.5	0.46	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Silver	ND	0.23	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Thallium	ND	0.46	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Vanadium	48	0.23	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B
Zinc	220	0.93	1.000		201938	JDB	08/26/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	201872
Lab ID:	QC702617	Chemist:	CRT
Matrix:	Soil	Prepared:	08/19/13
Units:	mg/Kg	Analyzed:	08/19/13

Result	RL
ND	0.017

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	201872
Matrix:	Soil	Chemist:	CRT
Units:	mg/Kg	Prepared:	08/19/13
Diln Fac:	1.000	Analyzed:	08/19/13

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC702618	0.2083	0.1950	94	80-120		
BSD	QC702619	0.2083	0.2108	101	80-120	8	20

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	201872
Field ID:	IA-11B	Chemist:	CRT
MSS Lab ID:	248030-005	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/19/13
Basis:	dry	Analyzed:	08/19/13
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	Moisture	RPD	Lim
MS	QC702620	0.1974	0.2459	0.4544	105	75-125	18%		
MSD	QC702621		0.2382	0.4468	105	75-125	18%	0	50

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Basis:	as received
Field ID:	ZZZZZZZZZZ	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	201872
MSS Lab ID:	248037-001	Chemist:	CRT
Lab ID:	QC702622	Sampled:	08/15/13
Matrix:	Miscell.	Received:	08/15/13
Units:	mg/Kg	Analyzed:	08/19/13

MSS Result	MSS RL	Result	RL	% Diff	Lim
ND	0.01563	ND	0.07813	NC	10

NC= Not Calculated  
 ND= Not Detected  
 RL= Reporting Limit

Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	201903
Lab ID:	QC702750	Chemist:	JDB
Matrix:	Soil	Prepared:	08/20/13
Units:	mg/Kg	Analyzed:	08/20/13

Result	RL
ND	0.017

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	201903
Matrix:	Soil	Chemist:	JDB
Units:	mg/Kg	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/20/13

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC702751	0.2083	0.2146	103	80-120		
BSD	QC702752	0.2083	0.2129	102	80-120	1	20

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	201903
Field ID:	IA-5	Chemist:	JDB
MSS Lab ID:	248030-018	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry	Analyzed:	08/20/13
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	Moisture	RPD	Lim
MS	QC702753	0.5534	0.2238	0.7561	91	75-125	2%		
MSD	QC702754		0.2162	0.7382	85	75-125	2%	1	50

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Basis:	dry
Field ID:	IA-5	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	201903
MSS Lab ID:	248030-018	Chemist:	JDB
Lab ID:	QC702755	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Analyzed:	08/20/13

MSS Result	MSS RL	Result	RL	Moisture %	Diff	Lim
0.5534	0.01594	0.5285	0.07972	2%	5	10

RL= Reporting Limit

Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	201904
Lab ID:	QC702756	Chemist:	CRT
Matrix:	Soil	Prepared:	08/20/13
Units:	mg/Kg	Analyzed:	08/20/13

Result	RL
ND	0.017

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	201904
Matrix:	Soil	Chemist:	CRT
Units:	mg/Kg	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/20/13

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC702757	0.2083	0.2200	106	80-120		
BSD	QC702758	0.2083	0.2183	105	80-120	1	20

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	201904
Field ID:	IA-30	Chemist:	CRT
MSS Lab ID:	248030-043	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry	Analyzed:	08/20/13
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	Moisture	RPD	Lim
MS	QC702759	0.1555	0.1984	0.3270	86	75-125	0%		
MSD	QC702760		0.2155	0.3095	71 *	75-125	0%	10	50

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Basis:	dry
Field ID:	ZZZZZZZZZZ	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	201904
MSS Lab ID:	248029-005	Chemist:	CRT
Lab ID:	QC702761	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Analyzed:	08/20/13

MSS Result	MSS RL	Result	RL	Moisture %	Diff	Lim
0.08682	0.02157	ND	0.1079	24%	NC	10

NC= Not Calculated  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Type:	BLANK	Batch#:	201936
Lab ID:	QC702869	Chemist:	NT
Matrix:	Soil	Prepared:	08/20/13
Units:	mg/Kg	Analyzed:	08/26/13
Diln Fac:	1.000		

Analyte	Result	RL
Antimony	ND	0.50
Arsenic	ND	0.25
Barium	ND	0.25
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.25
Cobalt	ND	0.25
Copper	ND	0.26
Lead	ND	0.25
Molybdenum	ND	0.25
Nickel	ND	0.25
Selenium	ND	0.50
Silver	ND	0.25
Thallium	ND	0.50
Vanadium	ND	0.25
Zinc	ND	1.0

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Matrix:	Soil	Chemist:	NT
Units:	mg/Kg	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/26/13
Batch#:	201936		

Type: BS Lab ID: QC702870

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	106.9	107	80-120
Arsenic	50.00	53.90	108	80-120
Barium	100.0	108.8	109	80-120
Beryllium	2.500	2.712	108	80-120
Cadmium	10.00	11.21	112	80-120
Chromium	100.0	105.0	105	80-120
Cobalt	25.00	26.63	107	80-120
Copper	12.50	13.03	104	80-120
Lead	100.0	104.4	104	80-120
Molybdenum	20.00	21.32	107	80-120
Nickel	25.00	27.02	108	80-120
Selenium	50.00	53.67	107	80-120
Silver	10.00	9.183	92	80-120
Thallium	50.00	52.77	106	80-120
Vanadium	25.00	26.28	105	80-120
Zinc	25.00	27.40	110	80-120

Type: BSD Lab ID: QC702871

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	105.0	105	80-120	2	20
Arsenic	50.00	53.38	107	80-120	1	20
Barium	100.0	105.8	106	80-120	3	20
Beryllium	2.500	2.668	107	80-120	2	20
Cadmium	10.00	11.13	111	80-120	1	20
Chromium	100.0	103.2	103	80-120	2	20
Cobalt	25.00	26.31	105	80-120	1	20
Copper	12.50	12.97	104	80-120	0	20
Lead	100.0	103.4	103	80-120	1	22
Molybdenum	20.00	20.95	105	80-120	2	20
Nickel	25.00	26.62	106	80-120	1	20
Selenium	50.00	53.18	106	80-120	1	20
Silver	10.00	9.031	90	80-120	2	20
Thallium	50.00	52.14	104	80-120	1	20
Vanadium	25.00	25.83	103	80-120	2	20
Zinc	25.00	27.12	108	80-120	1	20

RPD= Relative Percent Difference



## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	IA-11B	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	201936
MSS Lab ID:	248030-005	Chemist:	NT
Lab ID:	QC702874	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Analyzed:	08/26/13
Basis:	dry		

Moisture: 18%

Analyte	MSS Result	MSS RL	Result	RL	% Diff	Lim
Antimony	ND	0.6775	ND	3.388	NC	10
Arsenic	3.501	0.3388	2.956	1.694	NC	10
Barium	109.8	0.3388	116.9	1.694	6	10
Beryllium	0.3798	0.1355	0.4270 J	0.6775	NC	10
Cadmium	0.09933	0.3388	0.1849 J	1.694	NC	10
Chromium	138.8	0.3388	146.3	1.694	5	10
Cobalt	48.65	0.3388	52.32	1.694	8	10
Copper	30.32	0.3513	30.96	1.757	2	10
Lead	19.23	0.3388	21.49	1.694	12 *	10
Molybdenum	ND	0.3388	ND	1.694	NC	10
Nickel	538.6	0.3388	581.9	1.694	8	10
Selenium	ND	0.6775	ND	3.388	NC	10
Silver	ND	0.3388	ND	1.694	NC	10
Thallium	ND	0.6775	ND	3.388	NC	10
Vanadium	44.67	0.3388	46.95	1.694	5	10
Zinc	87.61	1.355	93.70	6.775	7	10

\*= Value outside of QC limits; see narrative

J= Estimated value

NC= Not Calculated

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	IA-11B	Diln Fac:	1.000
Type:	Post Digest Spike	Batch#:	201936
MSS Lab ID:	248030-005	Chemist:	NT
Lab ID:	QC702875	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Analyzed:	08/27/13
Basis:	dry		

Moisture: 18%

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	<0.2153	135.5	134.4	99	75-125
Arsenic	3.501	67.75	69.79	98	75-125
Barium	109.8	135.5	234.3	92	75-125
Beryllium	0.3798	3.388	3.776	100	75-125
Cadmium	0.09933	13.55	13.48	99	75-125
Chromium	138.8	135.5	262.2	91	75-125
Cobalt	48.65	33.88	77.53	85	75-125
Copper	30.32	16.94	46.19	94	75-125
Lead	19.23	135.5	140.9	90	75-125
Molybdenum	<0.07608	27.10	25.78	95	75-125
Nickel	538.6	33.88	539.1	2 NM	75-125
Selenium	<0.1982	67.75	67.78	100	75-125
Silver	<0.1013	13.55	9.524	70 *	75-125
Thallium	<0.2209	67.75	61.77	91	75-125
Vanadium	44.67	33.88	76.47	94	75-125
Zinc	87.61	33.88	114.9	81	75-125

\*= Value outside of QC limits; see narrative

NM= Not Meaningful: Sample concentration &gt; 4X spike concentration

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Type:	BLANK	Batch#:	201937
Lab ID:	QC702876	Chemist:	JDB
Matrix:	Soil	Prepared:	08/20/13
Units:	mg/Kg	Analyzed:	08/26/13
Diln Fac:	1.000		

Analyte	Result	RL
Antimony	ND	0.50
Arsenic	ND	0.25
Barium	ND	0.25
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.25
Cobalt	ND	0.25
Copper	ND	0.26
Lead	ND	0.25
Molybdenum	ND	0.25
Nickel	ND	0.25
Selenium	ND	0.50
Silver	ND	0.25
Thallium	ND	0.50
Vanadium	ND	0.25
Zinc	ND	1.0

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Matrix:	Soil	Chemist:	JDB
Units:	mg/Kg	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/26/13
Batch#:	201937		

Type: BS Lab ID: QC702877

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	102.0	102	80-120
Arsenic	50.00	51.69	103	80-120
Barium	100.0	103.2	103	80-120
Beryllium	2.500	2.592	104	80-120
Cadmium	10.00	10.77	108	80-120
Chromium	100.0	100.8	101	80-120
Cobalt	25.00	25.52	102	80-120
Copper	12.50	12.56	100	80-120
Lead	100.0	100.2	100	80-120
Molybdenum	20.00	20.46	102	80-120
Nickel	25.00	25.83	103	80-120
Selenium	50.00	50.98	102	80-120
Silver	10.00	8.830	88	80-120
Thallium	50.00	50.36	101	80-120
Vanadium	25.00	25.26	101	80-120
Zinc	25.00	26.25	105	80-120

Type: BSD Lab ID: QC702878

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	101.4	101	80-120	1	20
Arsenic	50.00	51.84	104	80-120	0	20
Barium	100.0	103.1	103	80-120	0	20
Beryllium	2.500	2.651	106	80-120	2	20
Cadmium	10.00	10.86	109	80-120	1	20
Chromium	100.0	102.7	103	80-120	2	20
Cobalt	25.00	25.81	103	80-120	1	20
Copper	12.50	12.73	102	80-120	1	20
Lead	100.0	101.2	101	80-120	1	22
Molybdenum	20.00	20.38	102	80-120	0	20
Nickel	25.00	26.13	105	80-120	1	20
Selenium	50.00	51.16	102	80-120	0	20
Silver	10.00	9.049	90	80-120	2	20
Thallium	50.00	50.81	102	80-120	1	20
Vanadium	25.00	25.73	103	80-120	2	20
Zinc	25.00	26.46	106	80-120	1	20

RPD= Relative Percent Difference



**Batch QC Report**

<b>California Title 22 Metals</b>			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	IA-5	Basis:	dry
Type:	Serial Dilution	Batch#:	201937
MSS Lab ID:	248030-018	Chemist:	JDB
Lab ID:	QC702881	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg		

Moisture: 2%

Analyte	MSS Result	MSS RL	Result	RL	% Diff	Lim	Diln	Fac	Analyzed
Antimony	2.702	0.5546	1.652 J	2.773	NC	10	5.000		08/26/13
Arsenic	4.758	0.2773	4.550	1.386	4	10	5.000		08/26/13
Barium	174.4	0.2773	185.5	1.386	6	10	5.000		08/26/13
Beryllium	0.2426	0.1109	0.2838 J	0.5546	NC	10	5.000		08/26/13
Cadmium	1.119	0.2773	1.274 J	1.386	14 *	10	5.000		08/26/13
Chromium	78.76	0.2773	83.94	1.386	7	10	5.000		08/26/13
Cobalt	11.04	0.2773	12.18	1.386	10	10	5.000		08/26/13
Copper	191.5	0.2876	192.0	1.438	0	10	5.000		08/26/13
Lead	151.3	0.2773	167.7	1.386	11 *	10	5.000		08/26/13
Molybdenum	4.868	0.2773	5.289	1.386	9	10	5.000		08/26/13
Nickel	109.5	0.2773	118.7	1.386	8	10	5.000		08/26/13
Selenium	ND	0.5546	ND	2.773	NC	10	5.000		08/26/13
Silver	ND	0.2773	ND	1.386	NC	10	5.000		08/26/13
Thallium	ND	0.5546	ND	2.773	NC	10	5.000		08/26/13
Vanadium	41.70	0.2773	43.48	1.386	4	10	5.000		08/26/13
Zinc	781.9	110.9	836.1	554.6	7	10	500.0		08/27/13

\*= Value outside of QC limits; see narrative

J= Estimated value

NC= Not Calculated

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>California Title 22 Metals</b>			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	IA-5	Basis:	dry
Type:	Post Digest Spike	Batch#:	201937
MSS Lab ID:	248030-018	Chemist:	JDB
Lab ID:	QC702882	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg		

Moisture: 2%

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln	Fac	Analyzed
Antimony	2.702	110.9	113.1	100	75-125	1.000		08/26/13
Arsenic	4.758	55.46	60.45	100	75-125	1.000		08/26/13
Barium	174.4	110.9	276.6	92	75-125	1.000		08/26/13
Beryllium	0.2426	2.773	3.073	102	75-125	1.000		08/26/13
Cadmium	1.119	11.09	11.89	97	75-125	1.000		08/26/13
Chromium	78.76	110.9	182.9	94	75-125	1.000		08/26/13
Cobalt	11.04	27.73	36.78	93	75-125	1.000		08/26/13
Copper	191.5	13.86	199.0	54 NM	75-125	1.000		08/26/13
Lead	151.3	110.9	249.1	88	75-125	1.000		08/26/13
Molybdenum	4.868	22.18	26.16	96	75-125	1.000		08/26/13
Nickel	109.5	27.73	132.1	82	75-125	1.000		08/26/13
Selenium	<0.1622	55.46	55.61	100	75-125	1.000		08/26/13
Silver	<0.08291	11.09	8.971	81	75-125	1.000		08/26/13
Thallium	<0.1808	55.46	49.06	88	75-125	1.000		08/26/13
Vanadium	41.70	27.73	67.81	94	75-125	1.000		08/26/13
Zinc	781.9	2,773	3,649	103	75-125	100.0		08/27/13

NM= Not Meaningful: Sample concentration &gt; 4X spike concentration

## Batch QC Report

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Type:	BLANK	Batch#:	201938
Lab ID:	QC702883	Chemist:	JDB
Matrix:	Soil	Prepared:	08/20/13
Units:	mg/Kg	Analyzed:	08/23/13
Diln Fac:	1.000		

Analyte	Result	RL
Antimony	ND	0.50
Arsenic	ND	0.25
Barium	ND	0.25
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.25
Cobalt	ND	0.25
Copper	ND	0.26
Lead	ND	0.25
Molybdenum	ND	0.25
Nickel	ND	0.25
Selenium	ND	0.50
Silver	ND	0.25
Thallium	ND	0.50
Vanadium	ND	0.25
Zinc	ND	1.0

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

California Title 22 Metals			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	201938
Units:	mg/Kg	Chemist:	JDB
Diln Fac:	1.000	Prepared:	08/20/13

Type: BS Lab ID: QC702884

Analyte	Spiked	Result	%REC	Limits	Analyzed
Antimony	100.0	109.9	110	80-120	08/26/13
Arsenic	50.00	55.33	111	80-120	08/23/13
Barium	100.0	112.3	112	80-120	08/23/13
Beryllium	2.500	2.709	108	80-120	08/26/13
Cadmium	10.00	11.22	112	80-120	08/26/13
Chromium	100.0	109.2	109	80-120	08/23/13
Cobalt	25.00	27.40	110	80-120	08/26/13
Copper	12.50	13.24	106	80-120	08/23/13
Lead	100.0	107.4	107	80-120	08/23/13
Molybdenum	20.00	22.48	112	80-120	08/26/13
Nickel	25.00	27.72	111	80-120	08/23/13
Selenium	50.00	54.85	110	80-120	08/26/13
Silver	10.00	9.251	93	80-120	08/26/13
Thallium	50.00	53.95	108	80-120	08/23/13
Vanadium	25.00	27.06	108	80-120	08/23/13
Zinc	25.00	28.11	112	80-120	08/23/13

Type: BSD Lab ID: QC702885

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Antimony	100.0	104.2	104	80-120	5	20	08/26/13
Arsenic	50.00	56.06	112	80-120	1	20	08/23/13
Barium	100.0	114.5	114	80-120	2	20	08/23/13
Beryllium	2.500	2.632	105	80-120	3	20	08/26/13
Cadmium	10.00	10.74	107	80-120	4	20	08/26/13
Chromium	100.0	112.5	112	80-120	3	20	08/23/13
Cobalt	25.00	26.25	105	80-120	4	20	08/26/13
Copper	12.50	13.71	110	80-120	3	20	08/23/13
Lead	100.0	109.3	109	80-120	2	22	08/23/13
Molybdenum	20.00	21.36	107	80-120	5	20	08/26/13
Nickel	25.00	28.51	114	80-120	3	20	08/23/13
Selenium	50.00	52.69	105	80-120	4	20	08/26/13
Silver	10.00	9.086	91	80-120	2	20	08/26/13
Thallium	50.00	55.36	111	80-120	3	20	08/23/13
Vanadium	25.00	28.00	112	80-120	3	20	08/23/13
Zinc	25.00	28.40	114	80-120	1	20	08/23/13

RPD= Relative Percent Difference



**Batch QC Report**

<b>California Title 22 Metals</b>			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Basis:	dry
Type:	Serial Dilution	Diln Fac:	5.000
MSS Lab ID:	248046-001	Batch#:	201938
Lab ID:	QC702888	Chemist:	JDB
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13

Moisture: 5%

Analyte	MSS Result	MSS RL	Result	RL	% Diff	Lim	Analyzed
Antimony	ND	0.5211	ND	2.606	NC	10	08/26/13
Arsenic	3.207	0.2606	2.993	1.303	NC	10	08/27/13
Barium	37.32	0.2606	40.40	1.303	8	10	08/26/13
Beryllium	0.1500	0.1042	0.1773 J	0.5211	NC	10	08/26/13
Cadmium	0.5910	0.2606	0.6610 J	1.303	NC	10	08/26/13
Chromium	45.68	0.2606	49.79	1.303	9	10	08/26/13
Cobalt	5.695	0.2606	6.381	1.303	12 *	10	08/26/13
Copper	23.59	0.2702	22.98	1.303	3	10	08/27/13
Lead	20.59	0.2606	20.52	1.303	0	10	08/26/13
Molybdenum	0.3905	0.2606	0.7699 J	1.303	NC	10	08/26/13
Nickel	25.49	0.2606	27.98	1.303	10	10	08/26/13
Selenium	ND	0.5211	ND	2.606	NC	10	08/26/13
Silver	ND	0.2606	0.2596 J	1.303	NC	10	08/26/13
Thallium	ND	0.5211	ND	2.606	NC	10	08/26/13
Vanadium	31.99	0.2606	34.13	1.303	7	10	08/26/13
Zinc	54.04	1.042	54.22	5.211	0	10	08/26/13

\*= Value outside of QC limits; see narrative

J= Estimated value

NC= Not Calculated

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

<b>California Title 22 Metals</b>			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Basis:	dry
Type:	Post Digest Spike	Diln Fac:	1.000
MSS Lab ID:	248046-001	Batch#:	201938
Lab ID:	QC702889	Chemist:	JDB
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13

Moisture: 5%

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analyzed
Antimony	<0.1558	104.2	103.8	100	75-125	08/26/13
Arsenic	3.064	52.11	55.13	100	75-125	08/26/13
Barium	37.32	104.2	139.2	98	75-125	08/26/13
Beryllium	0.1500	2.606	2.745	100	75-125	08/26/13
Cadmium	0.5910	10.42	10.92	99	75-125	08/26/13
Chromium	45.68	104.2	146.8	97	75-125	08/26/13
Cobalt	5.695	26.06	30.50	95	75-125	08/26/13
Copper	23.59	13.03	33.70	78	75-125	08/27/13
Lead	20.59	104.2	113.6	89	75-125	08/26/13
Molybdenum	0.3905	20.84	21.16	100	75-125	08/26/13
Nickel	25.49	26.06	49.48	92	75-125	08/26/13
Selenium	<0.1665	52.11	52.33	100	75-125	08/26/13
Silver	<0.04155	10.42	8.825	85	75-125	08/26/13
Thallium	<0.1464	52.11	48.95	94	75-125	08/26/13
Vanadium	31.99	26.06	56.77	95	75-125	08/26/13
Zinc	54.04	26.06	77.24	89	75-125	08/26/13

REPORTING SUMMARY FOR 248030 METALS Soil  
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Lab ID	Inst ID	Analyzed	IDF	S	A	B	B	C	C	C	C	P	H	M	N	S	A	T	V	Z	
				B	S	A	E	D	R	O	U	B	G	O	I	E	G	L		N	
248030-001	MET14	08/19/13 14:18	1.0										+								
248030-001	MET09	08/26/13 19:36	1.0		+	+	+	+	+	+	+	+		+	+		+	+	+	+	
248030-001	MET09	08/27/13 10:24	1.0	+							+					+					
248030-002	MET14	08/19/13 14:20	1.0										+								
248030-002	MET08	08/26/13 13:53	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	
248030-003	MET14	08/19/13 14:23	1.0										+								
248030-003	MET08	08/26/13 13:56	1.0	+	+	+	+	+	+	+	+	+		+		+	+	+	+	+	
248030-003	MET08	08/27/13 08:22	100.0												+						
248030-004	MET14	08/19/13 14:25	1.0										+								
248030-004	MET09	08/26/13 19:42	1.0	+	+	+	+	+		+		+		+			+	+	+	+	
248030-004	MET09	08/27/13 10:48	1.0													+					
248030-004	MET09	08/27/13 10:52	100.0						+						+						
248030-004	MET08	08/27/13 12:28	1.0								+										
248030-005	MET14	08/19/13 14:12	1.0										+								
248030-005	MET08	08/26/13 13:19	1.0	+		+	+	+	+	+	+	+		+	+	+	+	+	+	+	
248030-005	MET08	08/27/13 08:09	1.0		+																
248030-006	MET14	08/19/13 14:32	1.0										+								
248030-006	MET08	08/26/13 13:59	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	
248030-007	MET14	08/19/13 14:35	1.0										+								
248030-007	MET08	08/26/13 14:03	1.0	+		+	+	+	+	+	+	+		+		+	+	+	+	+	
248030-007	MET08	08/27/13 08:26	1.0		+																
248030-007	MET08	08/27/13 08:30	100.0												+						
248030-008	MET14	08/19/13 14:37	1.0										+								
248030-008	MET08	08/26/13 14:06	1.0	+	+	+	+	+	+	+	+	+		+		+	+	+	+	+	
248030-008	MET08	08/27/13 08:34	100.0												+						
248030-009	MET14	08/19/13 14:39	1.0										+								
248030-009	MET14	08/19/13 15:26	10.0										+								
248030-009	MET08	08/26/13 14:09	1.0		+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	
248030-009	MET08	08/27/13 08:49	1.0	+																	
248030-010	MET34	08/20/13 12:27	1.0										+								
248030-010	MET34	08/20/13 13:07	10.0										+								
248030-010	MET08	08/26/13 14:15	1.0	+	+		+	+	+	+	+			+		+	+	+	+		
248030-010	MET08	08/27/13 08:54	1.0									+			+						+
248030-010	MET08	08/27/13 08:59	100.0			+															
248030-011	MET34	08/20/13 12:29	1.0										+								
248030-011	MET34	08/20/13 13:09	10.0										+								
248030-011	MET08	08/26/13 14:20	1.0	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+	
248030-011	MET09	08/27/13 18:51	1.0									+									
248030-012	MET34	08/20/13 12:30	1.0										+								
248030-012	MET08	08/26/13 14:23	1.0	+		+	+	+	+	+	+	+		+		+	+	+	+	+	
248030-012	MET08	08/27/13 09:04	1.0		+																
248030-012	MET08	08/27/13 09:07	100.0												+						

REPORTING SUMMARY FOR 248030 METALS Soil  
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Lab ID	Inst ID	Analyzed	IDF	S B	A S	B A	B E	C D	C R	C O	C U	P B	H G	M O	N I	S E	A G	T L	V	Z N	
248030-013	MET34	08/20/13 12:36	1.0																		
248030-013	MET34	08/20/13 13:10	100.0										+								
248030-013	MET08	08/26/13 14:37	1.0	+	+		+	+	+	+	+			+		+	+	+	+		
248030-013	MET08	08/27/13 09:11	100.0			+						+			+						+
248030-014	MET34	08/20/13 12:37	1.0																		
248030-014	MET34	08/20/13 13:12	100.0										+								
248030-014	MET08	08/26/13 14:43	1.0	+	+		+	+	+	+				+	+		+	+	+		
248030-014	MET08	08/27/13 09:15	1.0													+					
248030-014	MET08	08/27/13 09:21	100.0			+					+	+									+
248030-015	MET34	08/20/13 12:39	1.0																		
248030-015	MET34	08/20/13 13:17	10.0										+								
248030-015	MET08	08/26/13 14:48	1.0	+	+		+	+	+	+				+	+	+	+	+	+		
248030-015	MET08	08/27/13 09:25	100.0			+					+	+									+
248030-016	MET34	08/20/13 12:40	1.0																		
248030-016	MET08	08/26/13 14:54	1.0	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+
248030-016	MET09	08/27/13 18:54	1.0									+									
248030-017	MET34	08/20/13 12:42	1.0																		
248030-017	MET08	08/26/13 14:57	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
248030-018	MET34	08/20/13 12:20	1.0																		
248030-018	MET08	08/26/13 15:50	1.0			+	+	+	+	+	+	+		+	+	+	+	+	+		
248030-018	MET08	08/27/13 09:58	1.0	+																	
248030-018	MET08	08/27/13 10:04	100.0																		+
248030-019	MET34	08/20/13 12:44	1.0																		
248030-019	MET08	08/26/13 15:00	1.0	+	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+
248030-019	MET08	08/27/13 09:29	100.0													+					
248030-020	MET34	08/20/13 12:45	1.0																		
248030-020	MET34	08/20/13 13:19	10.0																		
248030-020	MET08	08/26/13 15:06	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
248030-020	MET08	08/27/13 09:49	1.0																		
248030-021	MET34	08/20/13 12:47	1.0																		
248030-021	MET08	08/26/13 15:11	1.0	+	+	+	+	+	+	+	+	+		+	+		+	+	+	+	+
248030-021	MET08	08/27/13 09:55	1.0														+				
248030-022	MET34	08/20/13 12:49	1.0																		
248030-022	MET08	08/26/13 15:15	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
248030-023	MET34	08/20/13 12:51	1.0																		
248030-023	MET08	08/26/13 15:18	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
248030-024	MET34	08/20/13 12:57	1.0																		
248030-024	MET08	08/26/13 16:15	1.0			+	+	+	+	+	+	+		+	+		+	+	+	+	+
248030-024	MET08	08/27/13 10:16	1.0	+													+				
248030-025	MET34	08/20/13 12:58	1.0																		

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Lab ID	Inst ID	Analyzed	IDF	S	A	B	B	C	C	C	C	P	H	M	N	S	A	T	V	Z	
				B	S	A	E	D	R	O	U	B	G	O	I	E	G	L		N	
248030-025	MET08	08/26/13 16:19	1.0	+	+		+	+	+	+	+			+	+	+	+	+	+	+	
248030-025	MET08	08/27/13 10:19	100.0			+						+									
248030-026	MET34	08/20/13 13:00	1.0										+								
248030-026	MET08	08/26/13 16:35	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
248030-027	MET34	08/20/13 13:02	1.0																		
248030-027	MET34	08/20/13 13:20	100.0										+								
248030-027	MET08	08/26/13 16:38	1.0		+	+	+	+	+	+				+	+	+	+	+	+		
248030-027	MET08	08/27/13 10:24	1.0	+																	
248030-027	MET08	08/27/13 10:29	100.0								+	+									+
248030-028	MET34	08/20/13 13:03	1.0										+								
248030-028	MET08	08/26/13 16:43	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
248030-028	MET08	08/27/13 11:40	1.0																		
248030-029	MET34	08/20/13 13:05	1.0										+								
248030-029	MET08	08/26/13 16:47	1.0	+	+	+	+	+	+	+	+	+		+	+		+	+	+	+	+
248030-029	MET08	08/27/13 11:44	1.0													+					
248030-030	MET14	08/20/13 11:41	1.0										+								
248030-030	MET08	08/26/13 16:50	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
248030-031	MET14	08/20/13 11:43	1.0										+								
248030-031	MET08	08/26/13 16:54	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
248030-032	MET14	08/20/13 11:45	1.0										+								
248030-032	MET08	08/26/13 16:57	1.0	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+
248030-032	MET08	08/27/13 11:47	1.0											+							
248030-033	MET14	08/20/13 11:47	1.0										+								
248030-033	MET08	08/26/13 17:00	1.0	+	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+
248030-033	MET08	08/27/13 11:50	1.0																		
248030-033	MET08	08/27/13 11:54	100.0												+						
248030-034	MET14	08/20/13 11:54	1.0										+								
248030-034	MET08	08/26/13 17:03	1.0	+	+	+	+	+	+	+	+	+		+	+		+	+	+	+	+
248030-034	MET08	08/27/13 11:58	1.0													+					
248030-035	MET14	08/20/13 11:57	1.0																		
248030-035	MET14	08/20/13 12:44	10.0										+								
248030-035	MET08	08/26/13 17:07	1.0		+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
248030-035	MET08	08/27/13 12:01	1.0	+																	
248030-036	MET14	08/20/13 11:59	1.0										+								
248030-036	MET08	08/26/13 17:28	1.0	+	+	+	+	+	+	+	+	+		+			+	+	+	+	+
248030-036	MET08	08/27/13 12:07	1.0													+					
248030-036	MET08	08/27/13 12:10	100.0												+						
248030-037	MET14	08/20/13 12:01	1.0																		
248030-037	MET14	08/20/13 12:47	10.0										+								
248030-037	MET08	08/26/13 17:32	1.0	+	+	+	+	+	+	+	+	+		+	+		+	+	+	+	+
248030-037	MET08	08/27/13 12:14	1.0													+					

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Lab ID	Inst ID	Analyzed	IDF	S B	A S	B A	B E	C D	C R	C O	C U	P B	H G	M O	N I	S E	A G	T L	V	Z N
248030-039	MET14	08/20/13 12:03	1.0										+							
248030-039	MET08	08/26/13 17:35	1.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
248030-040	MET14	08/20/13 12:06	1.0										+							
248030-040	MET08	08/26/13 17:38	1.0	+	+	+	+	+	+	+		+		+	+	+	+	+	+	+
248030-040	MET08	08/27/13 12:40	1.0																	
248030-040	MET08	08/27/13 12:46	100.0								+									
248030-041	MET14	08/20/13 12:08	1.0										+							
248030-041	MET08	08/26/13 17:44	1.0	+	+	+	+	+	+	+	+	+		+	+		+	+	+	+
248030-041	MET08	08/27/13 12:50	1.0													+				
248030-042	MET14	08/20/13 12:10	1.0										+							
248030-042	MET08	08/26/13 17:49	1.0		+	+	+	+	+	+				+	+		+	+	+	
248030-042	MET08	08/27/13 12:55	1.0	+								+				+				
248030-042	MET08	08/27/13 13:01	100.0								+									+
248030-043	MET14	08/20/13 11:35	1.0										+							
248030-043	MET08	08/26/13 17:55	1.0	+		+	+	+	+	+	+	+		+	+	+	+	+	+	+
248030-043	MET08	08/27/13 13:05	1.0		+															
248030-044	MET14	08/20/13 12:12	1.0																	
248030-044	MET14	08/20/13 12:49	10.0										+							
248030-044	MET09	08/26/13 19:46	1.0	+	+	+	+	+	+	+		+		+	+	+	+	+	+	+
248030-044	MET09	08/27/13 10:30	1.0								+									
QC702617	MET14	08/19/13 14:05	1.0										+							
QC702618	MET14	08/19/13 14:07	1.0										+							
QC702619	MET14	08/19/13 14:09	1.0										+							
QC702620	MET14	08/19/13 14:14	1.0										+							
QC702621	MET14	08/19/13 14:16	1.0										+							
QC702622	MET14	08/19/13 14:43	50.0																	
QC702622	MET14	08/19/13 15:21	5.0										+							
QC702750	MET34	08/20/13 11:32	1.0										+							
QC702751	MET34	08/20/13 12:17	1.0										+							
QC702752	MET34	08/20/13 12:18	1.0										+							
QC702753	MET34	08/20/13 12:22	1.0										+							
QC702754	MET34	08/20/13 12:23	1.0										+							
QC702755	MET34	08/20/13 12:25	5.0										+							
QC702756	MET14	08/20/13 11:27	1.0										+							

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Lab ID	Inst ID	Analyzed	IDF	S	A	B	B	C	C	C	C	P	H	M	N	S	A	T	V	Z		
				B	S	A	E	D	R	O	U	B	G	O	I	E	G	L		N		
QC702757	MET14	08/20/13 11:30	1.0											+								
QC702758	MET14	08/20/13 11:32	1.0											+								
QC702759	MET14	08/20/13 11:37	1.0											+								
QC702760	MET14	08/20/13 11:39	1.0											+								
QC702761	MET14	08/20/13 12:22	5.0											+								
QC702869	MET08	08/26/13 13:06	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702870	MET08	08/26/13 13:11	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702871	MET08	08/26/13 13:15	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702872	MET08	08/26/13 13:23	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702872	MET08	08/27/13 08:12	1.0																			
QC702873	MET08	08/26/13 13:26	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702873	MET08	08/27/13 08:15	1.0																			
QC702874	MET08	08/26/13 13:29	5.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702875	MET08	08/26/13 13:49	1.0																			
QC702875	MET08	08/27/13 08:19	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702876	MET08	08/26/13 15:37	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702877	MET08	08/26/13 15:41	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702878	MET08	08/26/13 15:46	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702879	MET08	08/26/13 15:55	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702880	MET08	08/26/13 16:00	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702881	MET08	08/26/13 16:06	5.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702881	MET08	08/27/13 10:08	500.0																			+
QC702882	MET08	08/26/13 16:10	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702882	MET08	08/27/13 10:12	100.0																			+
QC702883	MET08	08/23/13 13:57	1.0	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
QC702883	MET09	08/26/13 18:55	1.0																			
QC702884	MET08	08/23/13 14:02	1.0		+	+			+		+	+			+			+	+	+		
QC702884	MET09	08/26/13 19:00	1.0	+			+	+		+					+		+	+				
QC702885	MET08	08/23/13 14:52	1.0		+	+			+		+	+			+			+	+	+		
QC702885	MET09	08/26/13 19:03	1.0	+			+	+		+					+		+	+				

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Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	S B	A S	B A	B E	C D	C R	C O	C U	P B	H G	M O	N I	S E	A G	T L	V	Z N
QC702886	MET08	08/23/13 15:00	1.0		+	+			+		+	+			+			+	+	+
QC702886	MET09	08/26/13 19:10	1.0	+			+	+		+					+		+			
QC702887	MET08	08/23/13 15:03	1.0		+	+			+		+	+			+			+	+	+
QC702887	MET09	08/26/13 19:14	1.0	+			+	+		+					+		+			
QC702888	MET09	08/26/13 19:17	5.0	+		+	+	+	+	+		+		+	+	+	+	+	+	+
QC702888	MET09	08/27/13 10:16	5.0		+						+									
QC702889	MET09	08/26/13 19:21	1.0	+	+	+	+	+	+	+		+		+	+	+	+	+	+	+
QC702889	MET09	08/27/13 10:20	1.0								+									

ICP Data

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83339182

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/23/13 13:02  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met08_sn_6010	ICALBLK				08/23/13 13:02	1.0		
002	met08_sn_6010	ICAL	CRI5.1			08/23/13 13:07	1.0	1	
003	met08_sn_6010	ICAL	CS100			08/23/13 13:11	1.0	2	
004	met08_sn_6010	ICAL	CS1K			08/23/13 13:15	1.0	3	
005	met08_sn_6010	ICAL	CS10K			08/23/13 13:20	1.0	4	
006	met08_sn_6010	ICAL	CS100K			08/23/13 13:25	1.0	5	
007	met08_sn_6010	ICV				08/23/13 13:30	1.0	6	
008	met08_sn_6010	ICB				08/23/13 13:36	1.0		
009	met08_sn_6010	ICSA				08/23/13 13:41	1.0	7	10:AL=510000
010	met08_sn_6010	ICSAB				08/23/13 13:47	1.0	8	5:AL=510000
011	met08_sn_6010	CRI				08/23/13 13:53	1.0	9	
012	met08_sn_6010	BLANK	QC702883	Soil	201938	08/23/13 13:57	1.0		
013	met08_sn_6010	BS	QC702884	Soil	201938	08/23/13 14:02	1.0		
014	met08_sn_6010	SAMPLE	248259-001	Water	201974	08/23/13 14:07	1.0		
015	met08_sn_6010	MSS	248104-001	Water	201943	08/23/13 14:13	1.0		
016	met08_sn_6010	MS	QC702910	Water	201943	08/23/13 14:17	1.0		1:NA=110000
017	met08_sn_6010	MSD	QC702911	Water	201943	08/23/13 14:21	1.0		1:NA=110000
018	met08_sn_6010	SAMPLE	248163-001	Water	201943	08/23/13 14:25	1.0		3:K=250000
019	met08_sn_6010	X				08/23/13 14:31	1.0	10	
020	met08_sn_6010	CCV				08/23/13 14:37	1.0	10	
021	met08_sn_6010	CCB				08/23/13 14:43	1.0		
022	met08_sn_6010	ICSAB				08/23/13 14:48	1.0	8	5:AL=540000
023	met08_sn_6010	BSD	QC702885	Soil	201938	08/23/13 14:52	1.0		
024	met08_sn_6010	MSS	248046-001	Soil	201938	08/23/13 14:56	1.0		2:FE=270000
025	met08_sn_6010	MS	QC702886	Soil	201938	08/23/13 15:00	1.0		2:FE=370000
026	met08_sn_6010	MSD	QC702887	Soil	201938	08/23/13 15:03	1.0		2:FE=370000
027	met08_sn_6010	SAMPLE	248022-001	Soil	201938	08/23/13 15:06	1.0		4:FE=290000
028	met08_sn_6010	SAMPLE	248022-002	Soil	201938	08/23/13 15:09	1.0		4:FE=360000
029	met08_sn_6010	CCV				08/23/13 15:13	1.0	10	
030	met08_sn_6010	CCB				08/23/13 15:18	1.0		
031	met08_sn_6010	ICSAB				08/23/13 15:23	1.0	8	5:AL=560000
032	met08_sn_6010	SAMPLE	248022-001	Soil	201938	08/23/13 15:33	1.0		4:FE=300000
033	met08_sn_6010	SAMPLE	248022-002	Soil	201938	08/23/13 15:36	1.0		5:FE=380000
034	met08_sn_6010	SAMPLE	247928-001	Soil	201839	08/23/13 15:44	1.0		2:FE=200000
035	met08_sn_6010	SAMPLE	247928-002	Soil	201839	08/23/13 15:47	1.0		2:FE=210000
036	met08_sn_6010	SAMPLE	247928-003	Soil	201839	08/23/13 15:50	1.0		1:FE=190000
037	met08_sn_6010	SAMPLE	247928-004	Soil	201839	08/23/13 15:57	1.0		1:FE=170000
038	met08_sn_6010	SAMPLE	247928-005	Soil	201839	08/23/13 16:01	1.0		2:FE=250000
039	met08_sn_6010	SAMPLE	247928-006	Soil	201839	08/23/13 16:04	1.0		1:FE=200000
040	met08_sn_6010	SAMPLE	247928-007	Soil	201839	08/23/13 16:07	1.0		2:FE=260000
041	met08_sn_6010	SAMPLE	247928-008	Soil	201839	08/23/13 16:10	1.0		1:FE=180000
042	met08_sn_6010	CCV				08/23/13 16:13	1.0	10	
043	met08_sn_6010	CCB				08/23/13 16:19	1.0		
044	met08_sn_6010	ICSAB				08/23/13 16:24	1.0	8	5:AL=560000
045	met08_sn_6010	X		WET Leachate	202016	08/23/13 16:38	10.0		
046	met08_sn_6010	X	QC703235	WET Leachate	202016	08/23/13 16:43	1.0		
047	met08_sn_6010	X				08/23/13 16:48	1.0	8	5:AL=570000
048	met08_sn_6010	ICSAB				08/23/13 17:02	1.0	8	5:AL=560000
049	met08_sn_6010	BLANK	QC703234	WET Leachate	202016	08/23/13 17:07	10.0		1:NA=210000
050	met08_sn_6010	BS	QC703235	WET Leachate	202016	08/23/13 17:12	1.0		
051	met08_sn_6010	BSD	QC703236	WET Leachate	202016	08/23/13 17:16	1.0		
052	met08_sn_6010	MSS	248037-001	WET Leachate	202016	08/23/13 17:21	10.0		2:FE=300000



CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83339182

Date : 08/23/13  
 Sequence : MET08 08/23/13

Reference : met08\_sn\_6010  
 Analyzed : 08/23/13 13:07

#	Type	Sample ID	Y A
		ICAL STD	2509293
		LOWER LIMIT	752788
		UPPER LIMIT	5018585
008	ICB		2517582
009	ICSA		2019521
010	ICSAB		1984927
012	BLANK	QC702883	2440930
013	BS	QC702884	2225773
014	SAMPLE	248259-001	2120889
015	MSS	248104-001	2318663
016	MS	QC702910	2236701
017	MSD	QC702911	2190763
018	SAMPLE	248163-001	2131245
020	CCV		2173171
021	CCB		2328787
022	ICSAB		1900540
023	BSD	QC702885	2165094
024	MSS	248046-001	2213342
025	MS	QC702886	2168769
026	MSD	QC702887	2175971
027	SAMPLE	248022-001	2145389
028	SAMPLE	248022-002	2166900
029	CCV		2154487
030	CCB		2303444
031	ICSAB		1829737
032	SAMPLE	248022-001	2066376
033	SAMPLE	248022-002	2098074
034	SAMPLE	247928-001	2181235
035	SAMPLE	247928-002	2176389
036	SAMPLE	247928-003	2178149
037	SAMPLE	247928-004	2166201
038	SAMPLE	247928-005	2161407
039	SAMPLE	247928-006	2121464
040	SAMPLE	247928-007	2183662
041	SAMPLE	247928-008	2124749
042	CCV		2094789
043	CCB		2265743
044	ICSAB		1803098
048	ICSAB		1788711
049	BLANK	QC703234	1984167
050	BS	QC703235	2093012
051	BSD	QC703236	2085497
052	MSS	248037-001	2001598
053	MS	QC703237	1997693
054	MSD	QC703238	1993875
055	SER	QC703239	2077090
056	PDS	QC703240	1955805
057	SAMPLE	248037-002	1940411
058	CCV		2030091
060	CCB		2211420
061	ICSAB		1770718

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS SOIL: EPA 6010B

Inst : MET08  
 Calnum : 83339182001  
 Units : ug/L

Date : 23-AUG-2013 13:02  
 X Axis : R

Reviewer : ---

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	met08_sn_6010_83339182002		CR15.1	23-AUG-2013 13:07	S22714
L2	met08_sn_6010_83339182003		CS100	23-AUG-2013 13:11	S22716
L3	met08_sn_6010_83339182004		CS1K	23-AUG-2013 13:15	S22715
L4	met08_sn_6010_83339182005		CS10K	23-AUG-2013 13:20	S22717
L5	met08_sn_6010_83339182006		CS100K	23-AUG-2013 13:25	S22718

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	35.430	37.786	38.914	39.797		LOR0	0.00000	0.02513		37.982	1.000	0.995	
Arsenic	A	17.880	22.566	23.334	23.952		LOR0	0.00000	0.04176		21.933	1.000	0.995	
Barium	A	475.24	492.93	497.15	482.14		LOR0	0.00000	0.00207		486.86	1.000	0.995	
Beryllium	A	5965.1	5730.3	5731.5			LOR0	0.00000	1.74E-4		5808.9	1.000	0.995	
Cadmium	A	257.08	277.42	281.70	271.43		LOR0	0.00000	0.00368		271.91	1.000	0.995	
Chromium	A	101.70	112.55	112.99	111.79		LOR0	0.00000	0.00894		109.76	1.000	0.995	
Cobalt	A	149.46	149.17	151.27	149.09		LOR0	0.00000	0.00671		149.75	1.000	0.995	
Copper	A	120.14	135.96	139.74	139.27		LOR0	0.00000	0.00718		133.78	1.000	0.995	
Lead	A	81.760	68.919	69.926	69.415		LOR0	0.00000	0.01441		72.505	1.000	0.995	
Molybdenum	A	40.820	43.130	43.777	43.779		LOR0	0.00000	0.02284		42.876	1.000	0.995	
Nickel	A	43.660	59.386	60.467	59.641		LOR0	0.00000	0.01676		55.788	1.000	0.995	
Selenium	A	35.150	33.236	33.257	34.517		LOR0	0.00000	0.02898		34.040	1.000	0.995	
Silver	A	865.16	890.75	899.10	906.09		LOR0	0.00000	0.00111		890.28	1.000	0.995	
Thallium	A	13.740	21.405	22.047	21.812		LOR0	0.00000	0.04584		19.751	1.000	0.995	
Vanadium	A	157.90	189.49	193.42	193.87		LOR0	0.00000	0.00516		183.67	1.000	0.995	
Zinc	A	97.130	97.938	91.305	90.513		LOR0	0.00000	0.01105		94.222	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	-11	100.00	-5	1000.0	-2	10000	0		
Arsenic	A	5.0000	<b>-25</b>	100.00	-6	1000.0	-3	10000	0		
Barium	A	5.0000	-1	100.00	2	1000.0	3	10000	0		
Beryllium	A	2.0000	4	100.00	0	1000.0	0				
Cadmium	A	5.0000	-5	100.00	2	1000.0	4	10000	0		
Chromium	A	5.0000	-9	100.00	1	1000.0	1	10000	0		
Cobalt	A	5.0000	0	100.00	0	1000.0	1	10000	0		
Copper	A	5.0000	-14	100.00	-2	1000.0	0	10000	0		
Lead	A	5.0000	18	100.00	-1	1000.0	1	10000	0		
Molybdenum	A	5.0000	-7	100.00	-1	1000.0	0	10000	0		
Nickel	A	5.0000	<b>-27</b>	100.00	0	1000.0	1	10000	0		
Selenium	A	10.000	2	100.00	-4	1000.0	-4	10000	0		
Silver	A	5.0000	-4	100.00	-2	1000.0	-1	2000.0	0		
Thallium	A	10.000	<b>-37</b>	100.00	-2	1000.0	1	10000	0		
Vanadium	A	5.0000	-19	100.00	-2	1000.0	0	10000	0		
Zinc	A	20.000	7	100.00	8	1000.0	1	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Calnum : 83339182001

Cal Date : 23-AUG-2013

ICV 83339182007 (23-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	5117	ug/L	2	10	
Arsenic	A	5000	5007	ug/L	0	10	
Barium	A	5000	5079	ug/L	2	10	
Beryllium	A	500.0	517.9	ug/L	4	10	
Cadmium	A	5000	5174	ug/L	3	10	
Chromium	A	5000	5069	ug/L	1	10	
Cobalt	A	5000	5094	ug/L	2	10	
Copper	A	5000	4932	ug/L	-1	10	
Lead	A	5000	4978	ug/L	0	10	
Molybdenum	A	5000	5158	ug/L	3	10	
Nickel	A	5000	5114	ug/L	2	10	
Selenium	A	5000	5104	ug/L	2	10	
Silver	A	1000	994.9	ug/L	-1	10	
Thallium	A	5000	5045	ug/L	1	10	
Vanadium	A	5000	5020	ug/L	0	10	
Zinc	A	5000	5066	ug/L	1	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83339182008 File : met08\_sn\_6010 Time : 23-AUG-2013 13:36  
 Cal : 83339182001 Caldate : 23-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.6312]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	2517582	0.33

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83339182009 File : met08\_sn\_6010 Time : 23-AUG-2013 13:41  
 Cal : 83339182001 Caldate : 23-AUG-2013  
 Standards: S22719

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[-1.279]	10.00	ug/L	
Arsenic	A	[2.335]	5.000	ug/L	!a+
Barium	A	[0.2034]	5.000	ug/L	
Beryllium	A	[0.3349]	2.000	ug/L	!a+
Cadmium	A	[-2.250]	5.000	ug/L	!a-
Cobalt	A	[-2.104]	5.000	ug/L	!a-
Lead	A	[-2.747]	5.000	ug/L	!a-
Molybdenum	A	[-0.5179]	5.000	ug/L	
Selenium	A	[7.274]	10.00	ug/L	!a+
Silver	A	[0.05956]	5.000	ug/L	
Thallium	A	[-0.2035]	10.00	ug/L	
Zinc	A	[11.34]	20.00	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19800	ug/L	99
Copper	A	20000	21050	ug/L	105
Manganese	A	20000	19250	ug/L	96
Nickel	A	20000	18620	ug/L	93
Vanadium	A	20000	20070	ug/L	100
Aluminum	R	500000	509800	ug/L	102
Calcium	R	500000	492700	ug/L	99
Iron	R	200000	194500	ug/L	97
Magnesium	R	500000	507200	ug/L	101
Titanium	R	20000	21700	ug/L	109

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	2019521	-19.52

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83339182010  
 Cal : 83339182001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 23-AUG-2013  
 IDF : 1.0  
 Time : 23-AUG-2013 13:47

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	534.2	ug/L	7	20	
Arsenic	A	500.0	546.3	ug/L	9	20	
Barium	A	500.0	548.8	ug/L	10	20	
Beryllium	A	500.0	555.4	ug/L	11	20	
Cadmium	A	1000	1052	ug/L	5	20	
Chromium	A	500.0	527.4	ug/L	5	20	
Cobalt	A	500.0	495.8	ug/L	-1	20	
Copper	A	500.0	549.3	ug/L	10	20	
Lead	A	1000	996.2	ug/L	0	20	
Molybdenum	A	500.0	529.8	ug/L	6	20	
Nickel	A	1000	985.6	ug/L	-1	20	
Selenium	A	500.0	541.7	ug/L	8	20	
Silver	A	1000	1137	ug/L	14	20	
Thallium	A	500.0	460.3	ug/L	-8	20	
Vanadium	A	500.0	551.1	ug/L	10	20	
Zinc	A	1000	1022	ug/L	2	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	1984927	-20.90

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83339182020  
Cal : 83339182001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 23-AUG-2013

IDF : 1.0  
Time : 23-AUG-2013 14:37

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.982	44.064	5000	5537	ug/L	11	10	c+ ***
Arsenic	A	21.933	26.009	5000	5431	ug/L	9	10	
Barium	A	486.86	530.66	5000	5502	ug/L	10	10	
Beryllium	A	5808.9	6570.2	500.0	573.2	ug/L	15	10	c+ ***
Cadmium	A	271.91	304.12	5000	5600	ug/L	12	10	c+ ***
Chromium	A	109.76	122.15	5000	5463	ug/L	9	10	
Cobalt	A	149.75	165.33	5000	5533	ug/L	11	10	c+ ***
Copper	A	133.78	149.34	5000	5361	ug/L	7	10	
Lead	A	72.505	74.787	5000	5387	ug/L	8	10	
Molybdenum	A	42.876	48.794	5000	5573	ug/L	11	10	c+ ***
Nickel	A	55.788	65.907	5000	5525	ug/L	10	10	
Selenium	A	34.040	38.131	5000	5526	ug/L	11	10	c+ ***
Silver	A	890.28	972.47	1000	1075	ug/L	7	10	
Thallium	A	19.751	23.918	5000	5482	ug/L	10	10	
Vanadium	A	183.67	209.36	5000	5400	ug/L	8	10	
Zinc	A	94.222	99.492	5000	5495	ug/L	10	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	2173171	-13.40

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83339182021 File : met08\_sn\_6010 Time : 23-AUG-2013 14:43  
 Cal : 83339182001 Caldate : 23-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.6566]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	2328787	-7.19

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83339182022  
 Cal : 83339182001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 23-AUG-2013  
 IDF : 1.0  
 Time : 23-AUG-2013 14:48

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	536.8	ug/L	7	20	
Arsenic	A	500.0	557.8	ug/L	12	20	
Barium	A	500.0	566.0	ug/L	13	20	
Beryllium	A	500.0	574.8	ug/L	15	20	
Cadmium	A	1000	1074	ug/L	7	20	
Chromium	A	500.0	545.3	ug/L	9	20	
Cobalt	A	500.0	501.2	ug/L	0	20	
Copper	A	500.0	570.0	ug/L	14	20	
Lead	A	1000	1007	ug/L	1	20	
Molybdenum	A	500.0	541.9	ug/L	8	20	
Nickel	A	1000	1015	ug/L	1	20	
Selenium	A	500.0	540.0	ug/L	8	20	
Silver	A	1000	1174	ug/L	17	20	
Thallium	A	500.0	490.6	ug/L	-2	20	
Vanadium	A	500.0	571.0	ug/L	14	20	
Zinc	A	1000	1043	ug/L	4	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	1900540	-24.26

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83339182029  
Cal : 83339182001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 23-AUG-2013

IDF : 1.0  
Time : 23-AUG-2013 15:13

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.982	43.619	5000	5481	ug/L	10	10	
Arsenic	A	21.933	25.813	5000	5390	ug/L	8	10	
Barium	A	486.86	529.46	5000	5489	ug/L	10	10	
Beryllium	A	5808.9	6470.4	500.0	564.5	ug/L	13	10	c+ ***
Cadmium	A	271.91	305.73	5000	5630	ug/L	13	10	c+ ***
Chromium	A	109.76	121.97	5000	5455	ug/L	9	10	
Cobalt	A	149.75	164.16	5000	5494	ug/L	10	10	
Copper	A	133.78	151.95	5000	5455	ug/L	9	10	
Lead	A	72.505	74.848	5000	5391	ug/L	8	10	
Molybdenum	A	42.876	48.815	5000	5575	ug/L	12	10	c+ ***
Nickel	A	55.788	65.700	5000	5507	ug/L	10	10	
Selenium	A	34.040	37.651	5000	5456	ug/L	9	10	
Silver	A	890.28	969.89	1000	1072	ug/L	7	10	
Thallium	A	19.751	23.551	5000	5398	ug/L	8	10	
Vanadium	A	183.67	210.41	5000	5427	ug/L	9	10	
Zinc	A	94.222	98.966	5000	5466	ug/L	9	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	2154487	-14.14

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83339182030 File : met08\_sn\_6010 Time : 23-AUG-2013 15:18  
 Cal : 83339182001 Caldate : 23-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	2303444	-8.20

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83339182031 File : met08\_sn\_6010 Time : 23-AUG-2013 15:23  
 Cal : 83339182001 Caldate : 23-AUG-2013  
 Standards: S22720

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	558.6	ug/L	12	20	
Arsenic	A	500.0	570.3	ug/L	14	20	
Barium	A	500.0	583.0	ug/L	17	20	
Beryllium	A	500.0	587.7	ug/L	18	20	
Cadmium	A	1000	1124	ug/L	12	20	
Chromium	A	500.0	561.9	ug/L	12	20	
Cobalt	A	500.0	522.7	ug/L	5	20	
Copper	A	500.0	600.7	ug/L	20	20	
Lead	A	1000	1051	ug/L	5	20	
Molybdenum	A	500.0	565.6	ug/L	13	20	
Nickel	A	1000	1049	ug/L	5	20	
Selenium	A	500.0	573.8	ug/L	15	20	
Silver	A	1000	1215	ug/L	<b>21</b>	20	ab+ ***
Thallium	A	500.0	514.2	ug/L	3	20	
Vanadium	A	500.0	588.8	ug/L	18	20	
Zinc	A	1000	1085	ug/L	9	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	2509293	1829737	-27.08

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83343127

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/26/13 06:47  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met08_sn_6010	ICALBLK				08/26/13 06:47	1.0		
002	met08_sn_6010	ICAL	CRI5.1			08/26/13 06:52	1.0	1	
003	met08_sn_6010	ICAL	CS100			08/26/13 06:57	1.0	2	
004	met08_sn_6010	ICAL	CS1K			08/26/13 07:02	1.0	3	
005	met08_sn_6010	ICAL	CS10K			08/26/13 07:06	1.0	4	
006	met08_sn_6010	ICAL	CS100K			08/26/13 07:11	1.0	5	
007	met08_sn_6010	ICV				08/26/13 07:16	1.0	6	
008	met08_sn_6010	ICB				08/26/13 07:22	1.0		
009	met08_sn_6010	ICSA				08/26/13 07:27	1.0	7	10:AL=510000
010	met08_sn_6010	ICSAB				08/26/13 07:49	1.0	8	5:AL=510000
011	met08_sn_6010	XCRI				08/26/13 07:55	1.0	9	
012	met08_sn_6010	CRI				08/26/13 08:04	1.0	9	
013	met08_sn_6010	BLANK	QC703379	Water	202054	08/26/13 08:08	1.0		
014	met08_sn_6010	LCS	QC703380	Water	202054	08/26/13 08:13	1.0		
015	met08_sn_6010	MSS	248209-006	Water	202054	08/26/13 08:17	1.0		3:MG=370000
016	met08_sn_6010	MS	QC703382	Water	202054	08/26/13 08:23	1.0		3:MG=410000
017	met08_sn_6010	MSD	QC703383	Water	202054	08/26/13 08:30	1.0		3:MG=400000
018	met08_sn_6010	SER	QC703384	Water	202054	08/26/13 08:36	5.0		
019	met08_sn_6010	PDS	QC703385	Water	202054	08/26/13 08:42	1.0	10 11	
020	met08_sn_6010	SAMPLE	248293-001	Water	202054	08/26/13 08:48	1.0		2:CA=140000
021	met08_sn_6010	CCV				08/26/13 08:53	1.0	12	
022	met08_sn_6010	CCB				08/26/13 08:58	1.0		
023	met08_sn_6010	SAMPLE	248295-001	Water	202054	08/26/13 09:03	1.0		
024	met08_sn_6010	SAMPLE	248226-013	Water	202054	08/26/13 09:08	1.0		3:MG=530000
025	met08_sn_6010	SAMPLE	248287-002	Water	202054	08/26/13 09:15	1.0		
026	met08_sn_6010	MSS	248150-003	Miscell.	202056	08/26/13 09:19	1.0		3:CA=1200000
027	met08_sn_6010	MS	QC703394	Miscell.	202056	08/26/13 09:22	1.0		2:CA=1800000
028	met08_sn_6010	MSD	QC703395	Miscell.	202056	08/26/13 09:25	1.0		1:CA=1300000
029	met08_sn_6010	SER	QC703396	Miscell.	202056	08/26/13 09:29	5.0		
030	met08_sn_6010	PDS	QC703397	Miscell.	202056	08/26/13 09:33	1.0	13 14	1:CA=1200000
031	met08_sn_6010	SAMPLE	248260-001	Soil	202056	08/26/13 09:36	1.0		1:FE=180000
032	met08_sn_6010	SAMPLE	248297-001	Soil	202056	08/26/13 09:40	1.0		3:FE=410000
033	met08_sn_6010	ICSAB				08/26/13 09:43	1.0	8	5:AL=510000
034	met08_sn_6010	CCV				08/26/13 09:48	1.0	12	
035	met08_sn_6010	CCB				08/26/13 09:54	1.0		
036	met08_sn_6010	BLANK	QC703664	Wipe	202120	08/26/13 10:02	1.0		
037	met08_sn_6010	BS	QC703665	Wipe	202120	08/26/13 10:07	1.0		
038	met08_sn_6010	BSD	QC703666	Wipe	202120	08/26/13 10:11	1.0		
039	met08_sn_6010	SAMPLE	248135-001	Wipe	202120	08/26/13 10:16	1.0		
040	met08_sn_6010	SAMPLE	248136-001	Wipe	202120	08/26/13 10:21	1.0		
041	met08_sn_6010	SAMPLE	248137-001	Wipe	202120	08/26/13 10:26	1.0		
042	met08_sn_6010	SAMPLE	248138-001	Wipe	202120	08/26/13 10:31	1.0		
043	met08_sn_6010	SAMPLE	248139-001	Wipe	202120	08/26/13 10:35	1.0		
044	met08_sn_6010	BLANK	QC703651	Soil	202117	08/26/13 10:39	1.0		
045	met08_sn_6010	BS	QC703652	Soil	202117	08/26/13 10:44	1.0		
046	met08_sn_6010	CCV				08/26/13 10:49	1.0	12	
047	met08_sn_6010	CCB				08/26/13 10:54	1.0		
048	met08_sn_6010	BSD	QC703653	Soil	202117	08/26/13 10:59	1.0		
049	met08_sn_6010	MSS	248337-001	Soil	202117	08/26/13 11:03	1.0		4:CA=300000
050	met08_sn_6010	MS	QC703654	Soil	202117	08/26/13 11:07	1.0		1:CA=330000
051	met08_sn_6010	MSD	QC703655	Soil	202117	08/26/13 11:10	1.0		
052	met08_sn_6010	SAMPLE	248135-001	Miscell.	202117	08/26/13 11:13	10.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83343127

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/26/13 06:47  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
053	met08_sn_6010	SAMPLE	248138-001	Miscell.	202117	08/26/13 11:18	10.0	
054	met08_sn_6010	SAMPLE	248150-001	Miscell.	202056	08/26/13 11:22	1.0	4:CA=2500000
055	met08_sn_6010	SAMPLE	248150-002	Miscell.	202056	08/26/13 11:28	1.0	4:FE=4600000
056	met08_sn_6010	SAMPLE	248151-001	Soil	202056	08/26/13 11:33	1.0	4:CA=3300000
057	met08_sn_6010	SAMPLE	248151-002	Soil	202056	08/26/13 11:37	1.0	4:CA=5600000
058	met08_sn_6010	ICSAB				08/26/13 11:40	1.0	8 5:MG=5000000
059	met08_sn_6010	CCV				08/26/13 11:45	1.0	12
060	met08_sn_6010	CCB				08/26/13 11:51	1.0	
061	met08_sn_6010	BLANK	QC703234	WET Leachate	202016	08/26/13 11:56	10.0	1:NA=1800000
062	met08_sn_6010	BS	QC703235	WET Leachate	202016	08/26/13 12:01	1.0	
063	met08_sn_6010	BSD	QC703236	WET Leachate	202016	08/26/13 12:05	1.0	
064	met08_sn_6010	MS	QC703237	WET Leachate	202016	08/26/13 12:09	10.0	
065	met08_sn_6010	MSD	QC703238	WET Leachate	202016	08/26/13 12:13	10.0	
066	met08_sn_6010	SER	QC703239	WET Leachate	202016	08/26/13 12:16	50.0	
067	met08_sn_6010	PDS	QC703240	WET Leachate	202016	08/26/13 12:20	10.0	13 14
068	met08_sn_6010	MSS	248209-006	Water	202054	08/26/13 12:23	100.0	
069	met08_sn_6010	MS	QC702922	Miscell.	201945	08/26/13 12:27	1.0	8:FE=7400000
070	met08_sn_6010	MSD	QC702923	Miscell.	201945	08/26/13 12:33	1.0	9:FE=2100000
071	met08_sn_6010	CCV				08/26/13 12:38	1.0	12
072	met08_sn_6010	XCCB				08/26/13 12:44	1.0	
073	met08_sn_6010	CCB				08/26/13 12:47	1.0	
074	met08_sn_6010	ICSAB				08/26/13 12:52	1.0	8 5:MG=5200000
075	met08_sn_6010	SAMPLE	247961-002	Miscell.	201889	08/26/13 12:57	100.0	
076	met08_sn_6010	SAMPLE	248150-001	Miscell.	202056	08/26/13 13:02	100.0	
077	met08_sn_6010	BLANK	QC702869	Soil	201936	08/26/13 13:06	1.0	
078	met08_sn_6010	BS	QC702870	Soil	201936	08/26/13 13:11	1.0	
079	met08_sn_6010	BSD	QC702871	Soil	201936	08/26/13 13:15	1.0	
080	met08_sn_6010	MSS	248030-005	Soil	201936	08/26/13 13:19	1.0	3:FE=4400000
081	met08_sn_6010	MS	QC702872	Soil	201936	08/26/13 13:23	1.0	3:FE=5800000
082	met08_sn_6010	MSD	QC702873	Soil	201936	08/26/13 13:26	1.0	3:FE=5900000
083	met08_sn_6010	SER	QC702874	Soil	201936	08/26/13 13:29	5.0	
084	met08_sn_6010	ICSAB				08/26/13 13:33	1.0	8 5:AL=5100000
085	met08_sn_6010	CCV				08/26/13 13:39	1.0	12
086	met08_sn_6010	CCB				08/26/13 13:44	1.0	
087	met08_sn_6010	PDS	QC702875	Soil	201936	08/26/13 13:49	1.0	13 14
088	met08_sn_6010	SAMPLE	248030-002	Soil	201936	08/26/13 13:53	1.0	4:FE=4200000
089	met08_sn_6010	SAMPLE	248030-003	Soil	201936	08/26/13 13:56	1.0	4:FE=4700000
090	met08_sn_6010	SAMPLE	248030-006	Soil	201936	08/26/13 13:59	1.0	3:FE=5400000
091	met08_sn_6010	SAMPLE	248030-007	Soil	201936	08/26/13 14:03	1.0	5:FE=5700000
092	met08_sn_6010	SAMPLE	248030-008	Soil	201936	08/26/13 14:06	1.0	5:FE=5700000
093	met08_sn_6010	SAMPLE	248030-009	Soil	201936	08/26/13 14:09	1.0	5:CA=5200000
094	met08_sn_6010	SAMPLE	248030-010	Soil	201936	08/26/13 14:15	1.0	9:FE=6700000
095	met08_sn_6010	SAMPLE	248030-011	Soil	201936	08/26/13 14:20	1.0	5:CA=7400000
096	met08_sn_6010	SAMPLE	248030-012	Soil	201936	08/26/13 14:23	1.0	5:FE=5400000
097	met08_sn_6010	CCV				08/26/13 14:27	1.0	12
098	met08_sn_6010	CCB				08/26/13 14:32	1.0	
099	met08_sn_6010	SAMPLE	248030-013	Soil	201936	08/26/13 14:37	1.0	9:FE=6400000
100	met08_sn_6010	SAMPLE	248030-014	Soil	201936	08/26/13 14:43	1.0	8:CA=9600000
101	met08_sn_6010	SAMPLE	248030-015	Soil	201936	08/26/13 14:48	1.0	8:FE=4600000
102	met08_sn_6010	SAMPLE	248030-016	Soil	201936	08/26/13 14:54	1.0	6:FE=5700000
103	met08_sn_6010	SAMPLE	248030-017	Soil	201936	08/26/13 14:57	1.0	3:FE=3900000
104	met08_sn_6010	SAMPLE	248030-019	Soil	201936	08/26/13 15:00	1.0	6:FE=6300000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83343127

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/26/13 06:47  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	met08_sn_6010	SAMPLE	248030-020	Soil	201936	08/26/13 15:06	1.0		5:FE=530000
106	met08_sn_6010	SAMPLE	248030-021	Soil	201936	08/26/13 15:11	1.0		5:MG=690000
107	met08_sn_6010	SAMPLE	248030-022	Soil	201936	08/26/13 15:15	1.0		5:FE=650000
108	met08_sn_6010	SAMPLE	248030-023	Soil	201936	08/26/13 15:18	1.0		4:FE=450000
109	met08_sn_6010	ICSAB				08/26/13 15:21	1.0	8	5:AL=510000
110	met08_sn_6010	CCV				08/26/13 15:27	1.0	12	
111	met08_sn_6010	CCB				08/26/13 15:32	1.0		
112	met08_sn_6010	BLANK	QC702876	Soil	201937	08/26/13 15:37	1.0		
113	met08_sn_6010	BS	QC702877	Soil	201937	08/26/13 15:41	1.0		
114	met08_sn_6010	BSD	QC702878	Soil	201937	08/26/13 15:46	1.0		
115	met08_sn_6010	MSS	248030-018	Soil	201937	08/26/13 15:50	1.0		5:FE=430000
116	met08_sn_6010	MS	QC702879	Soil	201937	08/26/13 15:55	1.0		6:FE=430000
117	met08_sn_6010	MSD	QC702880	Soil	201937	08/26/13 16:00	1.0		6:FE=540000
118	met08_sn_6010	SER	QC702881	Soil	201937	08/26/13 16:06	5.0		
119	met08_sn_6010	PDS	QC702882	Soil	201937	08/26/13 16:10	1.0	13 14	1:FE=440000
120	met08_sn_6010	SAMPLE	248030-024	Soil	201937	08/26/13 16:15	1.0		6:MG=550000
121	met08_sn_6010	SAMPLE	248030-025	Soil	201937	08/26/13 16:19	1.0		5:FE=410000
122	met08_sn_6010	CCV				08/26/13 16:24	1.0	12	
123	met08_sn_6010	CCB				08/26/13 16:30	1.0		
124	met08_sn_6010	SAMPLE	248030-026	Soil	201937	08/26/13 16:35	1.0		4:FE=360000
125	met08_sn_6010	SAMPLE	248030-027	Soil	201937	08/26/13 16:38	1.0		9:FE=1100000
126	met08_sn_6010	SAMPLE	248030-028	Soil	201937	08/26/13 16:43	1.0		5:FE=540000
127	met08_sn_6010	SAMPLE	248030-029	Soil	201937	08/26/13 16:47	1.0		5:FE=510000
128	met08_sn_6010	SAMPLE	248030-030	Soil	201937	08/26/13 16:50	1.0		4:FE=460000
129	met08_sn_6010	SAMPLE	248030-031	Soil	201937	08/26/13 16:54	1.0		4:FE=340000
130	met08_sn_6010	SAMPLE	248030-032	Soil	201937	08/26/13 16:57	1.0		4:FE=370000
131	met08_sn_6010	SAMPLE	248030-033	Soil	201937	08/26/13 17:00	1.0		7:MG=1000000
132	met08_sn_6010	SAMPLE	248030-034	Soil	201937	08/26/13 17:03	1.0		4:MG=750000
133	met08_sn_6010	SAMPLE	248030-035	Soil	201937	08/26/13 17:07	1.0		5:CA=490000
134	met08_sn_6010	ICSAB				08/26/13 17:12	1.0	8	5:MG=530000
135	met08_sn_6010	CCV				08/26/13 17:18	1.0	12	
136	met08_sn_6010	CCB				08/26/13 17:23	1.0		
137	met08_sn_6010	SAMPLE	248030-036	Soil	201937	08/26/13 17:28	1.0		5:MG=1100000
138	met08_sn_6010	SAMPLE	248030-037	Soil	201937	08/26/13 17:32	1.0		4:FE=470000
139	met08_sn_6010	SAMPLE	248030-039	Soil	201937	08/26/13 17:35	1.0		5:FE=500000
140	met08_sn_6010	SAMPLE	248030-040	Soil	201937	08/26/13 17:38	1.0		7:FE=1100000
141	met08_sn_6010	SAMPLE	248030-041	Soil	201937	08/26/13 17:44	1.0		6:FE=890000
142	met08_sn_6010	SAMPLE	248030-042	Soil	201937	08/26/13 17:49	1.0		8:FE=1700000
143	met08_sn_6010	SAMPLE	248030-043	Soil	201937	08/26/13 17:55	1.0		5:FE=400000
144	met08_sn_6010	CCV				08/26/13 17:58	1.0	12	
145	met08_sn_6010	CCB				08/26/13 18:03	1.0		
146	met08_sn_6010	X				08/26/13 18:08	1.0	8	
147	met08_sn_6010	BLANK	QC703135	Soil	201993	08/26/13 20:53	1.0		
148	met08_sn_6010	ICSAB				08/26/13 20:58	1.0	8	5:MG=530000
149	met08_sn_6010	BS	QC703136	Soil	201993	08/26/13 21:03	1.0		
150	met08_sn_6010	BSD	QC703137	Soil	201993	08/26/13 21:07	1.0		
151	met08_sn_6010	MSS	248243-001	Soil	201993	08/26/13 21:12	1.0		2:FE=210000
152	met08_sn_6010	MS	QC703138	Soil	201993	08/26/13 21:15	1.0		2:FE=190000
153	met08_sn_6010	MSD	QC703139	Soil	201993	08/26/13 21:18	1.0		1:FE=200000
154	met08_sn_6010	SER	QC703140	Soil	201993	08/26/13 21:21	5.0		
155	met08_sn_6010	PDS	QC703141	Soil	201993	08/26/13 21:25	1.0	13 14	1:FE=220000
156	met08_sn_6010	CCV				08/26/13 21:29	1.0	12	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83343127

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/26/13 06:47  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
157	met08_sn_6010	CCB				08/26/13 21:34	1.0		
158	met08_sn_6010	SAMPLE	247946-007	Miscell.	201993	08/26/13 21:39	1.0		3:CA=160000
159	met08_sn_6010	SAMPLE	247946-008	Miscell.	201993	08/26/13 21:45	1.0		2:CA=140000
160	met08_sn_6010	SAMPLE	248152-001	Soil	201993	08/26/13 21:52	1.0		6:FE=760000
161	met08_sn_6010	SAMPLE	248152-002	Soil	201993	08/26/13 21:55	1.0		6:FE=750000
162	met08_sn_6010	SAMPLE	248152-003	Soil	201993	08/26/13 21:59	1.0		6:FE=680000
163	met08_sn_6010	SAMPLE	248152-004	Soil	201993	08/26/13 22:02	1.0		6:CA=790000
164	met08_sn_6010	SAMPLE	248152-005	Soil	201993	08/26/13 22:05	1.0		5:FE=750000
165	met08_sn_6010	SAMPLE	248152-006	Soil	201993	08/26/13 22:09	1.0		5:FE=700000
166	met08_sn_6010	SAMPLE	248154-001	Soil	201993	08/26/13 22:12	1.0		3:FE=410000
167	met08_sn_6010	SAMPLE	248154-003	Soil	201993	08/26/13 22:15	1.0		2:FE=380000
168	met08_sn_6010	ICSAB				08/26/13 22:19	1.0	8	5:MG=540000
169	met08_sn_6010	CCV				08/26/13 22:24	1.0	12	
170	met08_sn_6010	CCB				08/26/13 22:29	1.0		
171	met08_sn_6010	SAMPLE	248154-006	Soil	201993	08/26/13 22:35	1.0		2:FE=330000
172	met08_sn_6010	SAMPLE	248154-007	Soil	201993	08/26/13 22:38	1.0		2:FE=280000
173	met08_sn_6010	SAMPLE	248154-008	Soil	201993	08/26/13 22:41	1.0		3:FE=320000
174	met08_sn_6010	SAMPLE	248154-009	Soil	201993	08/26/13 22:47	1.0		2:FE=310000
175	met08_sn_6010	SAMPLE	248154-010	Soil	201993	08/26/13 22:50	1.0		4:FE=370000
176	met08_sn_6010	SAMPLE	248154-011	Soil	201993	08/26/13 22:53	1.0		3:FE=350000
177	met08_sn_6010	SAMPLE	248154-013	Soil	201993	08/26/13 22:56	1.0		4:FE=440000
178	met08_sn_6010	SAMPLE	248154-014	Soil	201993	08/26/13 23:00	1.0		2:FE=340000
179	met08_sn_6010	CCV				08/26/13 23:03	1.0	12	
180	met08_sn_6010	CCB				08/26/13 23:08	1.0		
181	met08_sn_6010	ICSAB				08/26/13 23:14	1.0	8	5:MG=520000

NT 08/27/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 181.

Standards used: 1=S22714 2=S22716 3=S22715 4=S22717 5=S22718 6=S22721 7=S22719 8=S22720 9=S22723 10=S21652 11=S21653  
 12=S22722 13=S22594 14=S22595

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83343127

Date : 08/26/13  
 Sequence : MET08 08/26/13

Reference : met08\_sn\_6010  
 Analyzed : 08/26/13 06:52

#	Type	Sample ID	Y A
		ICAL STD	3171532
		LOWER LIMIT	951459
		UPPER LIMIT	6343063
008	ICB		3218904
009	ICSA		2684508
010	ICSAB		2634231
013	BLANK	QC703379	3255985
014	LCS	QC703380	3126344
015	MSS	248209-006	2455821
016	MS	QC703382	2437289
017	MSD	QC703383	2453221
018	SER	QC703384	2820379
019	PDS	QC703385	2510993
020	SAMPLE	248293-001	3006471
021	CCV		3025864
022	CCB		3156637
023	SAMPLE	248295-001	3109590
024	SAMPLE	248226-013	2336224
025	SAMPLE	248287-002	3087392
027	MS	QC703394	2659630
028	MSD	QC703395	2746537
029	SER	QC703396	2915600
030	PDS	QC703397	2715194
031	SAMPLE	248260-001	3120322
032	SAMPLE	248297-001	3153735
033	ICSAB		2661213
034	CCV		3084420
035	CCB		3233464
036	BLANK	QC703664	3109745
037	BS	QC703665	3069445
038	BSD	QC703666	3089832
039	SAMPLE	248135-001	3133674
040	SAMPLE	248136-001	3087451
041	SAMPLE	248137-001	3103535
042	SAMPLE	248138-001	3090952
043	SAMPLE	248139-001	3063003
044	BLANK	QC703651	3210085
045	BS	QC703652	3072750
046	CCV		3055755
047	CCB		3222202
048	BSD	QC703653	3031307
049	MSS	248337-001	2927696
050	MS	QC703654	2913751
051	MSD	QC703655	2949660
052	SAMPLE	248135-001	3204818
053	SAMPLE	248138-001	3108938
058	ICSAB		2662531
059	CCV		3046484
060	CCB		3191540
061	BLANK	QC703234	2949748
062	BS	QC703235	3048201

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83343127

Date : 08/26/13  
 Sequence : MET08 08/26/13

Reference : met08\_sn\_6010  
 Analyzed : 08/26/13 06:52

#	Type	Sample ID	Y A
063	BSD	QC703236	3073904
064	MS	QC703237	2927070
065	MSD	QC703238	2941174
066	SER	QC703239	3067222
067	PDS	QC703240	2883720
068	MSS	248209-006	3058822
069	MS	QC702922	2833405
070	MSD	QC702923	2697860
071	CCV		3054846
073	CCB		3167906
074	ICSAB		2622712
075	SAMPLE	247961-002	3179326
077	BLANK	QC702869	3204606
078	BS	QC702870	3088216
079	BSD	QC702871	3062862
080	MSS	248030-005	3029796
081	MS	QC702872	3000649
082	MSD	QC702873	3019358
083	SER	QC702874	3090374
084	ICSAB		2642152
085	CCV		3050603
086	CCB		3294838
087	PDS	QC702875	3048890
088	SAMPLE	248030-002	3010398
089	SAMPLE	248030-003	3229956
090	SAMPLE	248030-006	3065315
091	SAMPLE	248030-007	3131547
092	SAMPLE	248030-008	3098227
093	SAMPLE	248030-009	2948456
094	SAMPLE	248030-010	2910073
095	SAMPLE	248030-011	2946369
096	SAMPLE	248030-012	3062658
097	CCV		3090561
098	CCB		3191025
099	SAMPLE	248030-013	2938365
100	SAMPLE	248030-014	3099371
101	SAMPLE	248030-015	2939439
102	SAMPLE	248030-016	3138003
103	SAMPLE	248030-017	3139941
104	SAMPLE	248030-019	2970670
105	SAMPLE	248030-020	3005203
106	SAMPLE	248030-021	2898573
107	SAMPLE	248030-022	3039777
108	SAMPLE	248030-023	3028399
109	ICSAB		2620675
110	CCV		3050520
111	CCB		3170400
112	BLANK	QC702876	3224447
113	BS	QC702877	3049756
114	BSD	QC702878	3038290
115	MSS	248030-018	2969125
116	MS	QC702879	2951940

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83343127

Date : 08/26/13  
 Sequence : MET08 08/26/13

Reference : met08\_sn\_6010  
 Analyzed : 08/26/13 06:52

#	Type	Sample ID	Y A
117	MSD	QC702880	2971166
118	SER	QC702881	3034100
119	PDS	QC702882	2920176
120	SAMPLE	248030-024	2914677
121	SAMPLE	248030-025	3017214
122	CCV		2979576
123	CCB		3102688
124	SAMPLE	248030-026	3001661
125	SAMPLE	248030-027	2641090
126	SAMPLE	248030-028	3022252
127	SAMPLE	248030-029	2885177
128	SAMPLE	248030-030	2876575
129	SAMPLE	248030-031	2897966
130	SAMPLE	248030-032	2900398
131	SAMPLE	248030-033	2863146
132	SAMPLE	248030-034	2874486
133	SAMPLE	248030-035	2866329
134	ICSAB		2595312
135	CCV		2954002
136	CCB		3093898
137	SAMPLE	248030-036	2833328
138	SAMPLE	248030-037	2977228
139	SAMPLE	248030-039	2891916
140	SAMPLE	248030-040	2762576
141	SAMPLE	248030-041	2807047
142	SAMPLE	248030-042	2703037
143	SAMPLE	248030-043	2929464
144	CCV		2936853
145	CCB		3035568
147	BLANK	QC703135	3087645
148	ICSAB		2582830
149	BS	QC703136	2962558
150	BSD	QC703137	2953119
151	MSS	248243-001	2965718
152	MS	QC703138	2936875
153	MSD	QC703139	2866256
154	SER	QC703140	2951943
155	PDS	QC703141	2858224
156	CCV		2908874
157	CCB		3034460
158	SAMPLE	247946-007	2636994
159	SAMPLE	247946-008	2877997
160	SAMPLE	248152-001	2701994
161	SAMPLE	248152-002	2687623
162	SAMPLE	248152-003	2724645
163	SAMPLE	248152-004	2742009
164	SAMPLE	248152-005	2770659
165	SAMPLE	248152-006	2710948
166	SAMPLE	248154-001	2934600
167	SAMPLE	248154-003	2921626
168	ICSAB		2553129
169	CCV		2977061

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83343127

Date : 08/26/13  
 Sequence : MET08 08/26/13

Reference : met08\_sn\_6010  
 Analyzed : 08/26/13 06:52

#	Type	Sample ID	Y A
170	CCB		3058802
171	SAMPLE	248154-006	2975627
172	SAMPLE	248154-007	2984373
173	SAMPLE	248154-008	2947076
174	SAMPLE	248154-009	2988567
175	SAMPLE	248154-010	2885327
176	SAMPLE	248154-011	2981502
177	SAMPLE	248154-013	2928760
178	SAMPLE	248154-014	2983600
179	CCV		2948209
180	CCB		3053925
181	ICSAB		2555160

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS SOIL: EPA 6010B

Inst : MET08  
 Calnum : 83343127001  
 Units : ug/L  
 Date : 26-AUG-2013 06:47  
 X Axis : R  
 Reviewer : ---

Level	File	Seqnum	Sample ID	Analyzed	Std
L1	met08_sn_6010_83343127002	CR15.1	26-AUG-2013 06:52	S22714	
L2	met08_sn_6010_83343127003	CS100	26-AUG-2013 06:57	S22716	
L3	met08_sn_6010_83343127004	CS1K	26-AUG-2013 07:02	S22715	
L4	met08_sn_6010_83343127005	CS10K	26-AUG-2013 07:06	S22717	
L5	met08_sn_6010_83343127006	CS100K	26-AUG-2013 07:11	S22718	

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	36.340	36.614	37.010	37.201		LORO	0.00000	0.02688		36.791	1.000	0.995	
Arsenic	A	25.680	21.545	21.642	21.783		LORO	0.00000	0.04591		22.662	1.000	0.995	
Barium	A	467.38	463.72	461.63	443.99		LORO	0.00000	0.00225		459.18	1.000	0.995	
Beryllium	A	5397.7	5335.9	5322.3			LORO	0.00000	1.88E-4		5352.0	1.000	0.995	
Cadmium	A	256.02	258.18	259.39	248.95		LORO	0.00000	0.00402		255.63	1.000	0.995	
Chromium	A	106.66	105.37	104.95	103.28		LORO	0.00000	0.00968		105.07	1.000	0.995	
Cobalt	A	132.96	135.62	139.32	137.36		LORO	0.00000	0.00728		136.32	1.000	0.995	
Copper	A	116.62	131.50	136.01	136.71		LORO	0.00000	0.00732		130.21	1.000	0.995	
Lead	A	67.860	64.646	65.001	63.816		LORO	0.00000	0.01567		65.331	1.000	0.995	
Molybdenum	A	41.740	41.212	41.039	40.902		LORO	0.00000	0.02445		41.223	1.000	0.995	
Nickel	A	53.700	54.161	55.576	54.799		LORO	0.00000	0.01825		54.559	1.000	0.995	
Selenium	A	32.450	30.471	30.453	30.790		LORO	0.00000	0.03248		31.041	1.000	0.995	
Silver	A	816.74	842.95	854.16	854.85		LORO	0.00000	0.00117		842.18	1.000	0.995	
Thallium	A	20.510	20.563	20.577	19.921		LORO	0.00000	0.05018		20.393	1.000	0.995	
Vanadium	A	170.36	179.94	181.53	180.11		LORO	0.00000	0.00555		177.99	1.000	0.995	
Zinc	A	83.925	85.404	82.658	81.893		LORO	0.00000	0.01221		83.470	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	-2	100.00	-2	1000.0	-1	10000	0		
Arsenic	A	5.0000	18	100.00	-1	1000.0	-1	10000	0		
Barium	A	5.0000	5	100.00	4	1000.0	4	10000	0		
Beryllium	A	2.0000	1	100.00	0	1000.0	0				
Cadmium	A	5.0000	3	100.00	4	1000.0	4	10000	0		
Chromium	A	5.0000	3	100.00	2	1000.0	2	10000	0		
Cobalt	A	5.0000	-3	100.00	-1	1000.0	1	10000	0		
Copper	A	5.0000	-15	100.00	-4	1000.0	-1	10000	0		
Lead	A	5.0000	6	100.00	1	1000.0	2	10000	0		
Molybdenum	A	5.0000	2	100.00	1	1000.0	0	10000	0		
Nickel	A	5.0000	-2	100.00	-1	1000.0	1	10000	0		
Selenium	A	10.000	5	100.00	-1	1000.0	-1	10000	0		
Silver	A	5.0000	-4	100.00	-1	1000.0	0	2000.0	0		
Thallium	A	10.000	3	100.00	3	1000.0	3	10000	0		
Vanadium	A	5.0000	-5	100.00	0	1000.0	1	10000	0		
Zinc	A	20.000	2	100.00	4	1000.0	1	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Calnum : 83343127001

Cal Date : 26-AUG-2013

ICV 83343127007 (26-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	5011	ug/L	0	10	
Arsenic	A	5000	4913	ug/L	-2	10	
Barium	A	5000	5069	ug/L	1	10	
Beryllium	A	500.0	512.4	ug/L	2	10	
Cadmium	A	5000	5134	ug/L	3	10	
Chromium	A	5000	5003	ug/L	0	10	
Cobalt	A	5000	5018	ug/L	0	10	
Copper	A	5000	4863	ug/L	-3	10	
Lead	A	5000	4916	ug/L	-2	10	
Molybdenum	A	5000	5087	ug/L	2	10	
Nickel	A	5000	5036	ug/L	1	10	
Selenium	A	5000	4968	ug/L	-1	10	
Silver	A	1000	980.0	ug/L	-2	10	
Thallium	A	5000	4955	ug/L	-1	10	
Vanadium	A	5000	4982	ug/L	0	10	
Zinc	A	5000	4997	ug/L	0	10	

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83343127009 File : met08\_sn\_6010 Time : 26-AUG-2013 07:27  
 Cal : 83343127001 Caldate : 26-AUG-2013  
 Standards: S22719

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[3.248]	10.00	ug/L	
Arsenic	A	[-3.711]	5.000	ug/L	!a-
Barium	A	[0.5917]	5.000	ug/L	!a+
Beryllium	A	[0.1961]	2.000	ug/L	
Cadmium	A	[-1.768]	5.000	ug/L	!a-
Cobalt	A	[-2.679]	5.000	ug/L	!a-
Lead	A	[-1.497]	5.000	ug/L	
Molybdenum	A	[-0.8716]	5.000	ug/L	!a-
Selenium	A	[0.4784]	10.00	ug/L	
Silver	A	[0.2519]	5.000	ug/L	
Thallium	A	[3.708]	10.00	ug/L	
Zinc	A	[7.635]	20.00	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19420	ug/L	97
Copper	A	20000	20400	ug/L	102
Manganese	A	20000	18410	ug/L	92
Nickel	A	20000	18330	ug/L	92
Vanadium	A	20000	19870	ug/L	99
Aluminum	R	500000	508100	ug/L	102
Calcium	R	500000	486300	ug/L	97
Iron	R	200000	192600	ug/L	96
Magnesium	R	500000	505800	ug/L	101
Titanium	R	20000	21240	ug/L	106

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	2684508	-15.36

!=warning +=high bias -=low bias a=ICSA

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83343127071  
Cal : 83343127001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 26-AUG-2013

IDF : 1.0  
Time : 26-AUG-2013 12:38

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	36.791	38.995	5000	5241	ug/L	5	10	
Arsenic	A	22.662	22.688	5000	5208	ug/L	4	10	
Barium	A	459.18	463.54	5000	5218	ug/L	4	10	
Beryllium	A	5352.0	5608.0	500.0	526.8	ug/L	5	10	
Cadmium	A	255.63	266.17	5000	5344	ug/L	7	10	
Chromium	A	105.07	105.99	5000	5131	ug/L	3	10	
Cobalt	A	136.32	143.45	5000	5211	ug/L	4	10	
Copper	A	130.21	134.49	5000	4919	ug/L	-2	10	
Lead	A	65.331	65.127	5000	5102	ug/L	2	10	
Molybdenum	A	41.223	42.705	5000	5220	ug/L	4	10	
Nickel	A	54.559	57.233	5000	5221	ug/L	4	10	
Selenium	A	31.041	32.861	5000	5337	ug/L	7	10	
Silver	A	842.18	852.27	1000	997.2	ug/L	0	10	
Thallium	A	20.393	20.774	5000	5212	ug/L	4	10	
Vanadium	A	177.99	183.52	5000	5094	ug/L	2	10	
Zinc	A	83.470	85.930	5000	5246	ug/L	5	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3054846	-3.68

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83343127073 File : met08\_sn\_6010 Time : 26-AUG-2013 12:47  
 Cal : 83343127001 Caldate : 26-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3167906	-0.11

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83343127074  
Cal : 83343127001  
Standards: S22720

File : met08\_sn\_6010  
Caldate : 26-AUG-2013

IDF : 1.0  
Time : 26-AUG-2013 12:52

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	542.6	ug/L	9	20	
Arsenic	A	500.0	542.4	ug/L	8	20	
Barium	A	500.0	547.6	ug/L	10	20	
Beryllium	A	500.0	545.9	ug/L	9	20	
Cadmium	A	1000	1055	ug/L	6	20	
Chromium	A	500.0	521.3	ug/L	4	20	
Cobalt	A	500.0	494.2	ug/L	-1	20	
Copper	A	500.0	544.4	ug/L	9	20	
Lead	A	1000	993.8	ug/L	-1	20	
Molybdenum	A	500.0	525.4	ug/L	5	20	
Nickel	A	1000	982.4	ug/L	-2	20	
Selenium	A	500.0	552.0	ug/L	10	20	
Silver	A	1000	1113	ug/L	11	20	
Thallium	A	500.0	452.9	ug/L	-9	20	
Vanadium	A	500.0	547.0	ug/L	9	20	
Zinc	A	1000	1028	ug/L	3	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	2622712	-17.30

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83343127084  
 Cal : 83343127001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 26-AUG-2013  
 IDF : 1.0  
 Time : 26-AUG-2013 13:33

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	522.2	ug/L	4	20	
Arsenic	A	500.0	516.8	ug/L	3	20	
Barium	A	500.0	541.0	ug/L	8	20	
Beryllium	A	500.0	534.3	ug/L	7	20	
Cadmium	A	1000	1044	ug/L	4	20	
Chromium	A	500.0	516.8	ug/L	3	20	
Cobalt	A	500.0	482.4	ug/L	-4	20	
Copper	A	500.0	551.8	ug/L	10	20	
Lead	A	1000	974.1	ug/L	-3	20	
Molybdenum	A	500.0	520.1	ug/L	4	20	
Nickel	A	1000	968.6	ug/L	-3	20	
Selenium	A	500.0	530.2	ug/L	6	20	
Silver	A	1000	1108	ug/L	11	20	
Thallium	A	500.0	439.0	ug/L	-12	20	
Vanadium	A	500.0	545.5	ug/L	9	20	
Zinc	A	1000	1004	ug/L	0	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	2642152	-16.69

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83343127085  
Cal : 83343127001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 26-AUG-2013

IDF : 1.0  
Time : 26-AUG-2013 13:39

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	36.791	37.660	5000	5062	ug/L	1	10	
Arsenic	A	22.662	21.761	5000	4995	ug/L	0	10	
Barium	A	459.18	452.85	5000	5098	ug/L	2	10	
Beryllium	A	5352.0	5427.6	500.0	509.9	ug/L	2	10	
Cadmium	A	255.63	259.49	5000	5210	ug/L	4	10	
Chromium	A	105.07	103.10	5000	4991	ug/L	0	10	
Cobalt	A	136.32	138.95	5000	5047	ug/L	1	10	
Copper	A	130.21	135.92	5000	4971	ug/L	-1	10	
Lead	A	65.331	63.073	5000	4941	ug/L	-1	10	
Molybdenum	A	41.223	41.749	5000	5103	ug/L	2	10	
Nickel	A	54.559	55.421	5000	5056	ug/L	1	10	
Selenium	A	31.041	31.198	5000	5067	ug/L	1	10	
Silver	A	842.18	835.61	1000	977.7	ug/L	-2	10	
Thallium	A	20.393	19.981	5000	5013	ug/L	0	10	
Vanadium	A	177.99	180.62	5000	5014	ug/L	0	10	
Zinc	A	83.470	82.535	5000	5039	ug/L	1	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3050603	-3.81

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83343127086 File : met08\_sn\_6010 Time : 26-AUG-2013 13:44  
 Cal : 83343127001 Caldate : 26-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	[1.714]	5.000	1.484	ug/L	!ib
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	[0.8334]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3294838	3.89

!=warning ib=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83343127097  
 Cal : 83343127001  
 Standards: S22722

IDF : 1.0  
 Time : 26-AUG-2013 14:27

File : met08\_sn\_6010  
 Caldate : 26-AUG-2013

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	36.791	37.065	5000	4982	ug/L	0	10	
Arsenic	A	22.662	21.284	5000	4886	ug/L	-2	10	
Barium	A	459.18	444.74	5000	5006	ug/L	0	10	
Beryllium	A	5352.0	5362.4	500.0	503.8	ug/L	1	10	
Cadmium	A	255.63	257.18	5000	5163	ug/L	3	10	
Chromium	A	105.07	101.95	5000	4935	ug/L	-1	10	
Cobalt	A	136.32	137.47	5000	4994	ug/L	0	10	
Copper	A	130.21	136.22	5000	4983	ug/L	0	10	
Lead	A	65.331	62.768	5000	4917	ug/L	-2	10	
Molybdenum	A	41.223	41.380	5000	5058	ug/L	1	10	
Nickel	A	54.559	54.905	5000	5009	ug/L	0	10	
Selenium	A	31.041	30.406	5000	4938	ug/L	-1	10	
Silver	A	842.18	827.27	1000	967.9	ug/L	-3	10	
Thallium	A	20.393	19.558	5000	4907	ug/L	-2	10	
Vanadium	A	177.99	177.97	5000	4940	ug/L	-1	10	
Zinc	A	83.470	82.007	5000	5006	ug/L	0	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3090561	-2.55

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83343127098 File : met08\_sn\_6010 Time : 26-AUG-2013 14:32  
 Cal : 83343127001 Caldate : 26-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.9110]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[2.146]	5.000	1.694	ug/L	!ib
Molybdenum	A	[0.7058]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3191025	0.61

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83343127109  
 Cal : 83343127001  
 Standards: S22720

File : met08\_sn\_6010  
 Caldate : 26-AUG-2013

IDF : 1.0  
 Time : 26-AUG-2013 15:21

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	524.5	ug/L	5	20	
Arsenic	A	500.0	516.2	ug/L	3	20	
Barium	A	500.0	538.7	ug/L	8	20	
Beryllium	A	500.0	529.8	ug/L	6	20	
Cadmium	A	1000	1040	ug/L	4	20	
Chromium	A	500.0	516.9	ug/L	3	20	
Cobalt	A	500.0	487.5	ug/L	-2	20	
Copper	A	500.0	556.2	ug/L	11	20	
Lead	A	1000	980.1	ug/L	-2	20	
Molybdenum	A	500.0	522.2	ug/L	4	20	
Nickel	A	1000	970.7	ug/L	-3	20	
Selenium	A	500.0	513.7	ug/L	3	20	
Silver	A	1000	1106	ug/L	11	20	
Thallium	A	500.0	450.7	ug/L	-10	20	
Vanadium	A	500.0	543.3	ug/L	9	20	
Zinc	A	1000	1004	ug/L	0	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	2620675	-17.37

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83343127110  
Cal : 83343127001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 26-AUG-2013

IDF : 1.0  
Time : 26-AUG-2013 15:27

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	36.791	37.845	5000	5087	ug/L	2	10	
Arsenic	A	22.662	21.800	5000	5004	ug/L	0	10	
Barium	A	459.18	457.69	5000	5152	ug/L	3	10	
Beryllium	A	5352.0	5478.1	500.0	514.6	ug/L	3	10	
Cadmium	A	255.63	262.35	5000	5267	ug/L	5	10	
Chromium	A	105.07	104.94	5000	5080	ug/L	2	10	
Cobalt	A	136.32	141.17	5000	5128	ug/L	3	10	
Copper	A	130.21	137.16	5000	5017	ug/L	0	10	
Lead	A	65.331	64.177	5000	5027	ug/L	1	10	
Molybdenum	A	41.223	42.420	5000	5185	ug/L	4	10	
Nickel	A	54.559	56.367	5000	5142	ug/L	3	10	
Selenium	A	31.041	31.231	5000	5072	ug/L	1	10	
Silver	A	842.18	849.11	1000	993.5	ug/L	-1	10	
Thallium	A	20.393	20.065	5000	5035	ug/L	1	10	
Vanadium	A	177.99	182.81	5000	5074	ug/L	1	10	
Zinc	A	83.470	84.038	5000	5130	ug/L	3	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3050520	-3.82

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83343127111 File : met08\_sn\_6010 Time : 26-AUG-2013 15:32  
 Cal : 83343127001 Caldate : 26-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.7610]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[2.457]	5.000	1.694	ug/L	!ib
Molybdenum	A	[0.7529]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3170400	-0.04

!=warning ib=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83343127122  
Cal : 83343127001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 26-AUG-2013

IDF : 1.0  
Time : 26-AUG-2013 16:24

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	36.791	38.743	5000	5208	ug/L	4	10	
Arsenic	A	22.662	22.229	5000	5103	ug/L	2	10	
Barium	A	459.18	463.27	5000	5215	ug/L	4	10	
Beryllium	A	5352.0	5577.5	500.0	524.0	ug/L	5	10	
Cadmium	A	255.63	264.33	5000	5307	ug/L	6	10	
Chromium	A	105.07	105.65	5000	5114	ug/L	2	10	
Cobalt	A	136.32	142.13	5000	5163	ug/L	3	10	
Copper	A	130.21	137.07	5000	5014	ug/L	0	10	
Lead	A	65.331	64.646	5000	5064	ug/L	1	10	
Molybdenum	A	41.223	42.740	5000	5224	ug/L	4	10	
Nickel	A	54.559	56.758	5000	5178	ug/L	4	10	
Selenium	A	31.041	32.078	5000	5210	ug/L	4	10	
Silver	A	842.18	851.71	1000	996.5	ug/L	0	10	
Thallium	A	20.393	20.540	5000	5154	ug/L	3	10	
Vanadium	A	177.99	183.92	5000	5105	ug/L	2	10	
Zinc	A	83.470	84.558	5000	5162	ug/L	3	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	2979576	-6.05

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83343127123 File : met08\_sn\_6010 Time : 26-AUG-2013 16:30  
 Cal : 83343127001 Caldate : 26-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.7450]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[3.266]	5.000	1.694	ug/L	!ib
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3102688	-2.17

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83343127134  
Cal : 83343127001  
Standards: S22720

File : met08\_sn\_6010  
Caldate : 26-AUG-2013

IDF : 1.0  
Time : 26-AUG-2013 17:12

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	532.6	ug/L	7	20	
Arsenic	A	500.0	521.6	ug/L	4	20	
Barium	A	500.0	547.4	ug/L	9	20	
Beryllium	A	500.0	547.2	ug/L	9	20	
Cadmium	A	1000	1047	ug/L	5	20	
Chromium	A	500.0	523.1	ug/L	5	20	
Cobalt	A	500.0	493.0	ug/L	-1	20	
Copper	A	500.0	544.7	ug/L	9	20	
Lead	A	1000	990.4	ug/L	-1	20	
Molybdenum	A	500.0	524.6	ug/L	5	20	
Nickel	A	1000	981.2	ug/L	-2	20	
Selenium	A	500.0	547.4	ug/L	9	20	
Silver	A	1000	1115	ug/L	12	20	
Thallium	A	500.0	453.2	ug/L	-9	20	
Vanadium	A	500.0	549.1	ug/L	10	20	
Zinc	A	1000	1020	ug/L	2	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	2595312	-18.17

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83343127135  
Cal : 83343127001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 26-AUG-2013

IDF : 1.0  
Time : 26-AUG-2013 17:18

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	36.791	38.072	5000	5117	ug/L	2	10	
Arsenic	A	22.662	21.978	5000	5045	ug/L	1	10	
Barium	A	459.18	465.44	5000	5240	ug/L	5	10	
Beryllium	A	5352.0	5536.8	500.0	520.1	ug/L	4	10	
Cadmium	A	255.63	262.92	5000	5278	ug/L	6	10	
Chromium	A	105.07	106.86	5000	5173	ug/L	3	10	
Cobalt	A	136.32	142.97	5000	5193	ug/L	4	10	
Copper	A	130.21	135.38	5000	4952	ug/L	-1	10	
Lead	A	65.331	64.818	5000	5078	ug/L	2	10	
Molybdenum	A	41.223	42.923	5000	5247	ug/L	5	10	
Nickel	A	54.559	57.123	5000	5211	ug/L	4	10	
Selenium	A	31.041	31.448	5000	5107	ug/L	2	10	
Silver	A	842.18	863.26	1000	1010	ug/L	1	10	
Thallium	A	20.393	20.373	5000	5112	ug/L	2	10	
Vanadium	A	177.99	185.59	5000	5152	ug/L	3	10	
Zinc	A	83.470	84.810	5000	5178	ug/L	4	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	2954002	-6.86

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83343127136 File : met08\_sn\_6010 Time : 26-AUG-2013 17:23  
 Cal : 83343127001 Caldate : 26-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	[0.7128]	5.000	0.5157	ug/L	!ib
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[2.676]	5.000	1.694	ug/L	!ib
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3093898	-2.45

!=warning ib=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83343127144  
 Cal : 83343127001  
 Standards: S22722

File : met08\_sn\_6010  
 Caldate : 26-AUG-2013

IDF : 1.0  
 Time : 26-AUG-2013 17:58

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	36.791	38.973	5000	5238	ug/L	5	10	
Arsenic	A	22.662	22.618	5000	5192	ug/L	4	10	
Barium	A	459.18	469.59	5000	5286	ug/L	6	10	
Beryllium	A	5352.0	5667.7	500.0	532.4	ug/L	6	10	
Cadmium	A	255.63	265.99	5000	5340	ug/L	7	10	
Chromium	A	105.07	107.47	5000	5202	ug/L	4	10	
Cobalt	A	136.32	144.73	5000	5257	ug/L	5	10	
Copper	A	130.21	134.66	5000	4925	ug/L	-1	10	
Lead	A	65.331	65.473	5000	5129	ug/L	3	10	
Molybdenum	A	41.223	43.238	5000	5285	ug/L	6	10	
Nickel	A	54.559	57.597	5000	5255	ug/L	5	10	
Selenium	A	31.041	32.568	5000	5289	ug/L	6	10	
Silver	A	842.18	865.51	1000	1013	ug/L	1	10	
Thallium	A	20.393	20.869	5000	5236	ug/L	5	10	
Vanadium	A	177.99	185.79	5000	5157	ug/L	3	10	
Zinc	A	83.470	86.165	5000	5260	ug/L	5	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	2936853	-7.40

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83343127145 File : met08\_sn\_6010 Time : 26-AUG-2013 18:03  
 Cal : 83343127001 Caldate : 26-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[2.318]	5.000	1.694	ug/L	!ib
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	3035568	-4.29

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83343127148  
 Cal : 83343127001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 26-AUG-2013  
 IDF : 1.0  
 Time : 26-AUG-2013 20:58

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	532.1	ug/L	6	20	
Arsenic	A	500.0	522.2	ug/L	4	20	
Barium	A	500.0	554.4	ug/L	11	20	
Beryllium	A	500.0	564.8	ug/L	13	20	
Cadmium	A	1000	1048	ug/L	5	20	
Chromium	A	500.0	529.8	ug/L	6	20	
Cobalt	A	500.0	489.7	ug/L	-2	20	
Copper	A	500.0	526.5	ug/L	5	20	
Lead	A	1000	974.7	ug/L	-3	20	
Molybdenum	A	500.0	519.6	ug/L	4	20	
Nickel	A	1000	990.6	ug/L	-1	20	
Selenium	A	500.0	553.5	ug/L	11	20	
Silver	A	1000	1128	ug/L	13	20	
Thallium	A	500.0	477.9	ug/L	-4	20	
Vanadium	A	500.0	552.7	ug/L	11	20	
Zinc	A	1000	1031	ug/L	3	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3171532	2582830	-18.56

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 93343211

Instrument : MET09  
 Method : EPA 6010B

Begun : 08/26/13 08:11  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met09_sn	ICALBLK				08/26/13 08:11	1.0		
002	met09_sn	ICAL	CRI5.1			08/26/13 08:16	1.0	1	
003	met09_sn	ICAL	CS100			08/26/13 08:21	1.0	2	
004	met09_sn	ICAL	CS1K			08/26/13 08:25	1.0	3	
005	met09_sn	ICAL	CS10K			08/26/13 08:29	1.0	4	
006	met09_sn	ICAL	CS100K			08/26/13 08:35	1.0	5	
007	met09_sn	XICV				08/26/13 08:41	1.0	6	
008	met09_sn	XICV				08/26/13 08:45	1.0	6	
009	met09_sn	ICV				08/26/13 08:50	1.0	6	
010	met09_sn	ICB				08/26/13 08:56	1.0		
011	met09_sn	ICSA				08/26/13 09:01	1.0	7	10:AL=510000
012	met09_sn	ICSAB				08/26/13 09:13	1.0	8	5:AL=520000
013	met09_sn	XCRI				08/26/13 09:19	1.0	9	
014	met09_sn	CRI				08/26/13 09:24	1.0	9	
015	met09_sn	BLANK	QC703352	WET Leachate	202047	08/26/13 09:28	10.0		1:NA=170000
016	met09_sn	BS	QC703353	WET Leachate	202047	08/26/13 09:36	1.0		
017	met09_sn	BSD	QC703354	WET Leachate	202047	08/26/13 09:39	1.0		
018	met09_sn	MSS	248029-005	WET Leachate	202047	08/26/13 09:42	10.0		1:NA=160000
019	met09_sn	CCV				08/26/13 09:51	1.0	10	
020	met09_sn	CCB				08/26/13 09:57	1.0		
021	met09_sn	BLANK	QC703667	WET Leachate	202121	08/26/13 10:07	10.0		1:NA=170000
022	met09_sn	BS	QC703668	WET Leachate	202121	08/26/13 10:15	1.0		
023	met09_sn	BSD	QC703669	WET Leachate	202121	08/26/13 10:19	1.0		
024	met09_sn	MSS	248312-001	WET Leachate	202121	08/26/13 10:22	10.0		1:NA=180000
025	met09_sn	CCV				08/26/13 11:55	1.0	10	
026	met09_sn	CCB				08/26/13 12:02	1.0		
027	met09_sn	ICSAB				08/26/13 12:07	1.0	8	5:MG=520000
028	met09_sn	MS	QC703670	WET Leachate	202121	08/26/13 12:11	10.0		
029	met09_sn	MSD	QC703671	WET Leachate	202121	08/26/13 12:18	10.0		
030	met09_sn	SAMPLE	248322-001	WET Leachate	202121	08/26/13 12:25	10.0		1:NA=180000
031	met09_sn	SAMPLE	248322-002	WET Leachate	202121	08/26/13 12:32	10.0		1:NA=150000
032	met09_sn	CCV				08/26/13 12:39	1.0	10	
033	met09_sn	CCB				08/26/13 12:45	1.0		
034	met09_sn	BLANK	QC703657	WET Leachate	202119	08/26/13 12:50	10.0		1:NA=150000
035	met09_sn	BS	QC703658	WET Leachate	202119	08/26/13 12:58	1.0		
036	met09_sn	BSD	QC703659	WET Leachate	202119	08/26/13 13:02	1.0		
037	met09_sn	MSS	248211-001	WET Leachate	202119	08/26/13 13:05	10.0		1:NA=160000
038	met09_sn	MS	QC703660	WET Leachate	202119	08/26/13 13:12	10.0		
039	met09_sn	MSD	QC703661	WET Leachate	202119	08/26/13 13:19	10.0		
040	met09_sn	SER	QC703662	WET Leachate	202119	08/26/13 13:26	50.0		
041	met09_sn	PDS	QC703663	WET Leachate	202119	08/26/13 13:31	10.0	11 12	
042	met09_sn	CCV				08/26/13 13:38	1.0	10	
043	met09_sn	CCB				08/26/13 13:44	1.0		
044	met09_sn	ICSAB				08/26/13 13:49	1.0	8	5:MG=530000
045	met09_sn	MS	QC703355	WET Leachate	202047	08/26/13 16:08	10.0		
046	met09_sn	MSD	QC703356	WET Leachate	202047	08/26/13 16:15	10.0		
047	met09_sn	SER	QC703357	WET Leachate	202047	08/26/13 16:22	50.0		
048	met09_sn	PDS	QC703358	WET Leachate	202047	08/26/13 16:27	10.0	11 12	
049	met09_sn	SAMPLE	248029-006	WET Leachate	202047	08/26/13 16:33	10.0		1:NA=150000
050	met09_sn	SAMPLE	248029-007	WET Leachate	202047	08/26/13 16:40	10.0		1:NA=170000
051	met09_sn	CCV				08/26/13 16:48	1.0	10	
052	met09_sn	CCB				08/26/13 16:55	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 93343211

Instrument : MET09 Begun : 08/26/13 08:11  
 Method : EPA 6010B SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	met09_sn	ICSAB				08/26/13 17:00	1.0	8	5:AL=530000
054	met09_sn	BLANK	QC702883	Soil	201938	08/26/13 18:55	1.0		
055	met09_sn	BS	QC702884	Soil	201938	08/26/13 19:00	1.0		
056	met09_sn	BSD	QC702885	Soil	201938	08/26/13 19:03	1.0		
057	met09_sn	MSS	248046-001	Soil	201938	08/26/13 19:06	1.0		2:FE=250000
058	met09_sn	MS	QC702886	Soil	201938	08/26/13 19:10	1.0		3:FE=340000
059	met09_sn	MSD	QC702887	Soil	201938	08/26/13 19:14	1.0		3:FE=340000
060	met09_sn	SER	QC702888	Soil	201938	08/26/13 19:17	5.0		
061	met09_sn	PDS	QC702889	Soil	201938	08/26/13 19:21	1.0	11 12	1:FE=260000
062	met09_sn	CCV				08/26/13 19:24	1.0	10	
063	met09_sn	CCB				08/26/13 19:31	1.0		
064	met09_sn	SAMPLE	248030-001	Soil	201938	08/26/13 19:36	1.0		5:FE=520000
065	met09_sn	SAMPLE	248030-004	Soil	201938	08/26/13 19:42	1.0		5:MG=3200000
066	met09_sn	SAMPLE	248030-044	Soil	201938	08/26/13 19:46	1.0		6:FE=610000
067	met09_sn	SAMPLE	248039-009	Soil	201938	08/26/13 19:50	1.0		5:CA=850000
068	met09_sn	SAMPLE	248046-002	Soil	201938	08/26/13 19:53	1.0		3:FE=260000
069	met09_sn	SAMPLE	248046-003	Soil	201938	08/26/13 19:57	1.0		2:FE=170000
070	met09_sn	SAMPLE	248046-004	Soil	201938	08/26/13 20:02	1.0		1:FE=140000
071	met09_sn	SAMPLE	248046-005	Soil	201938	08/26/13 20:06	1.0		2:FE=200000
072	met09_sn	SAMPLE	248046-006	Soil	201938	08/26/13 20:10	1.0		1:FE=160000
073	met09_sn	SAMPLE	248098-001	Soil	201938	08/26/13 20:14	1.0		1:FE=160000
074	met09_sn	ICSAB				08/26/13 20:19	1.0	8	5:MG=550000
075	met09_sn	CCV				08/26/13 20:25	1.0	10	
076	met09_sn	CCB				08/26/13 20:31	1.0		
077	met09_sn	SAMPLE	248098-002	Soil	201938	08/26/13 20:36	1.0		1:FE=170000
078	met09_sn	SAMPLE	248098-003	Soil	201938	08/26/13 20:40	1.0		1:FE=150000
079	met09_sn	SAMPLE	248098-004	Soil	201938	08/26/13 20:45	1.0		3:FE=170000
080	met09_sn	SAMPLE	248100-001	Soil	201938	08/26/13 20:49	1.0		2:FE=210000
081	met09_sn	SAMPLE	248100-002	Soil	201938	08/26/13 20:53	1.0		2:FE=210000
082	met09_sn	SAMPLE	248109-002	Soil	201938	08/26/13 20:57	1.0		7:CA=1100000
083	met09_sn	SAMPLE	248122-001	Soil	201938	08/26/13 21:04	1.0		2:FE=280000
084	met09_sn	CCV				08/26/13 21:08	1.0	10	
085	met09_sn	CCB				08/26/13 21:14	1.0		
086	met09_sn	ICSAB				08/26/13 21:19	1.0	8	5:MG=520000

NT 08/27/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 86.

JDB 08/26/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 15 through 53.

Standards used: 1=S22714 2=S22716 3=S22715 4=S22717 5=S22718 6=S22721 7=S22719 8=S22720 9=S22723 10=S22722 11=S22594  
 12=S22595

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 93343211

Date : 08/26/13  
 Sequence : MET09 08/26/13

Reference : met09\_sn  
 Analyzed : 08/26/13 08:16

#	Type	Sample ID	Y A
		ICAL STD	3224403
		LOWER LIMIT	967321
		UPPER LIMIT	6448806
010	ICB		3297113
011	ICSA		2771104
012	ICSAB		2760931
015	BLANK	QC703352	3023384
016	BS	QC703353	3152805
017	BSD	QC703354	3175694
019	CCV		3183653
020	CCB		3318951
021	BLANK	QC703667	3048940
022	BS	QC703668	3251587
023	BSD	QC703669	3188599
024	MSS	248312-001	3018486
025	CCV		3304109
026	CCB		3469641
027	ICSAB		2850586
028	MS	QC703670	3190050
029	MSD	QC703671	3217545
030	SAMPLE	248322-001	3210506
031	SAMPLE	248322-002	3226381
032	CCV		3357391
033	CCB		3571341
034	BLANK	QC703657	3212323
035	BS	QC703658	3275419
036	BSD	QC703659	3341347
037	MSS	248211-001	3150177
038	MS	QC703660	3148594
039	MSD	QC703661	3290765
040	SER	QC703662	3350084
041	PDS	QC703663	3215545
042	CCV		3198097
043	CCB		3403747
044	ICSAB		2790923
045	MS	QC703355	3020302
046	MSD	QC703356	3072459
047	SER	QC703357	3237857
048	PDS	QC703358	3011305
051	CCV		3171761
052	CCB		3311418
053	ICSAB		2702282
054	BLANK	QC702883	3301583
055	BS	QC702884	3103033
056	BSD	QC702885	3261513
057	MSS	248046-001	3208616
058	MS	QC702886	3136294
059	MSD	QC702887	3179120
060	SER	QC702888	3193695
061	PDS	QC702889	3162036
062	CCV		3128822

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 93343211

Date : 08/26/13  
 Sequence : MET09 08/26/13

Reference : met09\_sn  
 Analyzed : 08/26/13 08:16

#	Type	Sample ID	Y	A
063	CCB		3349502	
064	SAMPLE	248030-001	3151778	
065	SAMPLE	248030-004	2695893	
066	SAMPLE	248030-044	3027988	
067	SAMPLE	248039-009	2974434	
068	SAMPLE	248046-002	3391249	
069	SAMPLE	248046-003	3146724	
070	SAMPLE	248046-004	3251910	
071	SAMPLE	248046-005	3271285	
072	SAMPLE	248046-006	3223717	
073	SAMPLE	248098-001	3132048	
074	ICSAB		2727730	
075	CCV		3153249	
076	CCB		3373015	
077	SAMPLE	248098-002	3215400	
078	SAMPLE	248098-003	3176946	
079	SAMPLE	248098-004	3129299	
080	SAMPLE	248100-001	3267042	
081	SAMPLE	248100-002	3235267	
083	SAMPLE	248122-001	3405952	
084	CCV		3178453	
085	CCB		3459496	
086	ICSAB		2755815	

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS Soil: EPA 6010B

Inst : MET09  
 Calnum : 93343211001  
 Units : ug/L  
 Date : 26-AUG-2013 08:11  
 X Axis : R  
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	met09_sn 93343211002		CRI5.1	26-AUG-2013 08:16	S22714
L2	met09_sn 93343211003		CS100	26-AUG-2013 08:21	S22716
L3	met09_sn 93343211004		CS1K	26-AUG-2013 08:25	S22715
L4	met09_sn 93343211005		CS10K	26-AUG-2013 08:29	S22717
L5	met09_sn 93343211006		CS100K	26-AUG-2013 08:35	S22718

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	14.010	13.135	13.202	13.053		LOR0	0.00000	0.07660		13.350	1.000	0.995	
Arsenic	A	6.0800	6.6380	6.7037	6.6101		LOR0	0.00000	0.15126		6.5079	1.000	0.995	
Barium	A	88.180	86.468	88.036	83.039		LOR0	0.00000	0.01204		86.431	1.000	0.995	
Beryllium	A	6297.5	5746.5	5692.7			LOR0	0.00000	1.76E-4		5912.2	1.000	0.995	
Cadmium	A	143.20	136.14	136.95	127.29		LOR0	0.00000	0.00785		135.89	1.000	0.995	
Chromium	A	233.84	226.97	225.70	216.34		LOR0	0.00000	0.00462		225.71	1.000	0.995	
Cobalt	A	60.780	57.647	59.720	57.265		LOR0	0.00000	0.01746		58.853	1.000	0.995	
Copper	A	247.34	238.09	247.50	237.11		LOR0	0.00000	0.00422		242.51	1.000	0.995	
Lead	A	55.180	47.962	48.711	46.270		LOR0	0.00000	0.02160		49.531	1.000	0.995	
Molybdenum	A	35.500	33.288	33.335	32.085		LOR0	0.00000	0.03116		33.552	1.000	0.995	
Nickel	A	97.860	99.064	100.70	96.719		LOR0	0.00000	0.01034		98.585	1.000	0.995	
Selenium	A	8.6200	8.8580	9.1266	9.0862		LOR0	0.00000	0.11005		8.9227	1.000	0.995	
Silver	A	667.96	600.20	600.11	594.86		LOR0	0.00000	0.00168		615.78	1.000	0.995	
Thallium	A	7.4800	7.0100	7.0422	6.6640		LOR0	0.00000	0.14997		7.0491	1.000	0.995	
Vanadium	A	276.88	264.55	265.42	259.01		LOR0	0.00000	0.00386		266.46	1.000	0.995	
Zinc	A	19.535	44.572	54.002	53.368		LOR0	0.00000	0.01874		42.869	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	7	100.00	1	1000.0	1	10000	0		
Arsenic	A	5.0000	-8	100.00	0	1000.0	1	10000	0		
Barium	A	5.0000	6	100.00	4	1000.0	6	10000	0		
Beryllium	A	2.0000	11	100.00	1	1000.0	0				
Cadmium	A	5.0000	12	100.00	7	1000.0	8	10000	0		
Chromium	A	5.0000	8	100.00	5	1000.0	4	10000	0		
Cobalt	A	5.0000	6	100.00	1	1000.0	4	10000	0		
Copper	A	5.0000	4	100.00	0	1000.0	4	10000	0		
Lead	A	5.0000	19	100.00	4	1000.0	5	10000	0		
Molybdenum	A	5.0000	11	100.00	4	1000.0	4	10000	0		
Nickel	A	5.0000	1	100.00	2	1000.0	4	10000	0		
Selenium	A	10.000	-5	100.00	-3	1000.0	0	10000	0		
Silver	A	5.0000	12	100.00	1	1000.0	1	2000.0	0		
Thallium	A	10.000	12	100.00	5	1000.0	6	10000	0		
Vanadium	A	5.0000	7	100.00	2	1000.0	2	10000	0		
Zinc	A	20.000	-63	100.00	-16	1000.0	1	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
Calnum : 93343211001

Cal Date : 26-AUG-2013

ICV 93343211009 (26-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	5157	ug/L	3	10	
Arsenic	A	5000	5093	ug/L	2	10	
Barium	A	5000	5269	ug/L	5	10	
Beryllium	A	500.0	519.4	ug/L	4	10	
Cadmium	A	5000	5399	ug/L	8	10	
Chromium	A	5000	5249	ug/L	5	10	
Cobalt	A	5000	5103	ug/L	2	10	
Copper	A	5000	5143	ug/L	3	10	
Lead	A	5000	5101	ug/L	2	10	
Molybdenum	A	5000	5301	ug/L	6	10	
Nickel	A	5000	5263	ug/L	5	10	
Selenium	A	5000	5124	ug/L	2	10	
Silver	A	1000	1020	ug/L	2	10	
Thallium	A	5000	5147	ug/L	3	10	
Vanadium	A	5000	5202	ug/L	4	10	
Zinc	A	5000	5109	ug/L	2	10	

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 93343211011 File : met09\_sn Time : 26-AUG-2013 09:01  
 Cal : 93343211001 Caldate : 26-AUG-2013  
 Standards: S22719

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[-0.7699]	10.00	ug/L	
Arsenic	A	[4.024]	5.000	ug/L	!a+
Barium	A	[-2.369]	5.000	ug/L	!a-
Beryllium	A	[-1.675]	2.000	ug/L	!a-
Cadmium	A	[3.047]	5.000	ug/L	!a+
Cobalt	A	[2.986]	5.000	ug/L	!a+
Lead	A	[0.00005940]	5.000	ug/L	
Molybdenum	A	[-1.672]	5.000	ug/L	!a-
Selenium	A	[1.608]	10.00	ug/L	
Silver	A	[-2.584]	5.000	ug/L	!a-
Thallium	A	[-6.881]	10.00	ug/L	!a-
Zinc	A	[-9.616]	20.00	ug/L	!a-

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19660	ug/L	98
Copper	A	20000	21150	ug/L	106
Manganese	A	20000	18720	ug/L	94
Nickel	A	20000	18310	ug/L	92
Vanadium	A	20000	20290	ug/L	101
Aluminum	R	500000	508000	ug/L	102
Calcium	R	500000	484800	ug/L	97
Iron	R	200000	189900	ug/L	95
Magnesium	R	500000	506800	ug/L	101
Titanium	R	20000	21260	ug/L	106

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3224403	2771104	-14.06

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
Seqnum : 93343211051  
Cal : 93343211001  
Standards: S22722

File : met09\_sn  
Caldate : 26-AUG-2013

IDF : 1.0  
Time : 26-AUG-2013 16:48

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	13.350	13.578	5000	5200	ug/L	4	10	
Arsenic	A	6.5079	6.7842	5000	5131	ug/L	3	10	
Barium	A	86.431	87.434	5000	5261	ug/L	5	10	
Beryllium	A	5912.2	5878.8	500.0	516.3	ug/L	3	10	
Cadmium	A	135.89	136.07	5000	5341	ug/L	7	10	
Chromium	A	225.71	226.21	5000	5226	ug/L	5	10	
Cobalt	A	58.853	59.236	5000	5160	ug/L	3	10	
Copper	A	242.51	244.23	5000	5148	ug/L	3	10	
Lead	A	49.531	47.346	5000	5114	ug/L	2	10	
Molybdenum	A	33.552	34.259	5000	5337	ug/L	7	10	
Nickel	A	98.585	101.30	5000	5235	ug/L	5	10	
Selenium	A	8.9227	9.4344	5000	5191	ug/L	4	10	
Silver	A	615.78	606.34	1000	1017	ug/L	2	10	
Thallium	A	7.0491	6.9613	5000	5220	ug/L	4	10	
Vanadium	A	266.46	267.98	5000	5172	ug/L	3	10	
Zinc	A	42.869	54.846	5000	5138	ug/L	3	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3224403	3171761	-1.63

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93343211052  
 Cal : 93343211001  
 File : met09\_sn  
 Caldate : 26-AUG-2013  
 IDF : 1.0  
 Time : 26-AUG-2013 16:55

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	[1.480]	10.00	1.449	ug/L	!ib
Arsenic	A	ND	5.000	3.108	ug/L	
Barium	A	ND	5.000	1.970	ug/L	
Beryllium	A	ND	2.000	0.6865	ug/L	
Cadmium	A	ND	5.000	0.5708	ug/L	
Chromium	A	ND	5.000	1.252	ug/L	
Cobalt	A	ND	5.000	0.3602	ug/L	
Copper	A	ND	5.000	2.282	ug/L	
Lead	A	ND	5.000	2.493	ug/L	
Molybdenum	A	[1.012]	5.000	0.6113	ug/L	!ib
Nickel	A	ND	5.000	1.880	ug/L	
Selenium	A	ND	10.00	2.693	ug/L	
Silver	A	ND	5.000	1.790	ug/L	
Thallium	A	ND	10.00	2.804	ug/L	
Vanadium	A	ND	5.000	1.070	ug/L	
Zinc	A	ND	20.00	2.385	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3224403	3311418	2.70

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93343211053  
 Cal : 93343211001  
 Standards: S22720

File : met09\_sn  
 Caldate : 26-AUG-2013

IDF : 1.0  
 Time : 26-AUG-2013 17:00

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	545.8	ug/L	9	20	
Arsenic	A	500.0	551.9	ug/L	10	20	
Barium	A	500.0	554.2	ug/L	11	20	
Beryllium	A	500.0	536.0	ug/L	7	20	
Cadmium	A	1000	1078	ug/L	8	20	
Chromium	A	500.0	537.9	ug/L	8	20	
Cobalt	A	500.0	501.2	ug/L	0	20	
Copper	A	500.0	590.9	ug/L	18	20	
Lead	A	1000	1015	ug/L	2	20	
Molybdenum	A	500.0	544.1	ug/L	9	20	
Nickel	A	1000	988.6	ug/L	-1	20	
Selenium	A	500.0	545.3	ug/L	9	20	
Silver	A	1000	1204	ug/L	20	20	
Thallium	A	500.0	490.6	ug/L	-2	20	
Vanadium	A	500.0	558.9	ug/L	12	20	
Zinc	A	1000	1008	ug/L	1	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3224403	2702282	-16.19

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
Seqnum : 93343211062  
Cal : 93343211001  
Standards: S22722

File : met09\_sn  
Caldate : 26-AUG-2013

IDF : 1.0  
Time : 26-AUG-2013 19:24

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	13.350	13.742	5000	5263	ug/L	5	10	
Arsenic	A	6.5079	6.7821	5000	5129	ug/L	3	10	
Barium	A	86.431	88.600	5000	5332	ug/L	7	10	
Beryllium	A	5912.2	5980.3	500.0	525.2	ug/L	5	10	
Cadmium	A	135.89	135.99	5000	5338	ug/L	7	10	
Chromium	A	225.71	229.85	5000	5310	ug/L	6	10	
Cobalt	A	58.853	61.431	5000	5351	ug/L	7	10	
Copper	A	242.51	252.35	5000	5319	ug/L	6	10	
Lead	A	49.531	46.231	5000	4993	ug/L	0	10	
Molybdenum	A	33.552	34.853	5000	5429	ug/L	9	10	
Nickel	A	98.585	102.69	5000	5307	ug/L	6	10	
Selenium	A	8.9227	9.6711	5000	5322	ug/L	6	10	
Silver	A	615.78	599.50	1000	1006	ug/L	1	10	
Thallium	A	7.0491	7.0134	5000	5259	ug/L	5	10	
Vanadium	A	266.46	272.16	5000	5253	ug/L	5	10	
Zinc	A	42.869	56.044	5000	5250	ug/L	5	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3224403	3128822	-2.96

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93343211063  
 Cal : 93343211001  
 File : met09\_sn  
 Caldate : 26-AUG-2013  
 IDF : 1.0  
 Time : 26-AUG-2013 19:31

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	[2.101]	10.00	1.449	ug/L	!ib
Arsenic	A	ND	5.000	3.108	ug/L	
Barium	A	ND	5.000	1.970	ug/L	
Beryllium	A	ND	2.000	0.6865	ug/L	
Cadmium	A	ND	5.000	0.5708	ug/L	
Chromium	A	ND	5.000	1.252	ug/L	
Cobalt	A	ND	5.000	0.3602	ug/L	
Copper	A	ND	5.000	2.282	ug/L	
Lead	A	ND	5.000	2.493	ug/L	
Molybdenum	A	[1.056]	5.000	0.6113	ug/L	!ib
Nickel	A	ND	5.000	1.880	ug/L	
Selenium	A	ND	10.00	2.693	ug/L	
Silver	A	ND	5.000	1.790	ug/L	
Thallium	A	ND	10.00	2.804	ug/L	
Vanadium	A	ND	5.000	1.070	ug/L	
Zinc	A	ND	20.00	2.385	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3224403	3349502	3.88

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93343211074  
 Cal : 93343211001  
 Standards: S22720  
 File : met09\_sn  
 Caldate : 26-AUG-2013  
 IDF : 1.0  
 Time : 26-AUG-2013 20:19

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	548.2	ug/L	10	20	
Arsenic	A	500.0	538.3	ug/L	8	20	
Barium	A	500.0	549.9	ug/L	10	20	
Beryllium	A	500.0	548.5	ug/L	10	20	
Cadmium	A	1000	1072	ug/L	7	20	
Chromium	A	500.0	549.1	ug/L	10	20	
Cobalt	A	500.0	499.8	ug/L	0	20	
Copper	A	500.0	618.9	ug/L	<b>24</b>	20	ab+ ***
Lead	A	1000	971.8	ug/L	-3	20	
Molybdenum	A	500.0	538.1	ug/L	8	20	
Nickel	A	1000	1005	ug/L	0	20	
Selenium	A	500.0	574.4	ug/L	15	20	
Silver	A	1000	1174	ug/L	17	20	
Thallium	A	500.0	485.8	ug/L	-3	20	
Vanadium	A	500.0	570.0	ug/L	14	20	
Zinc	A	1000	998.4	ug/L	0	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3224403	2727730	-15.40

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93343211075  
 Cal : 93343211001  
 Standards: S22722

File : met09\_sn  
 Caldate : 26-AUG-2013

IDF : 1.0  
 Time : 26-AUG-2013 20:25

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	13.350	13.616	5000	5215	ug/L	4	10	
Arsenic	A	6.5079	6.7510	5000	5106	ug/L	2	10	
Barium	A	86.431	87.116	5000	5242	ug/L	5	10	
Beryllium	A	5912.2	5892.6	500.0	517.5	ug/L	4	10	
Cadmium	A	135.89	132.77	5000	5211	ug/L	4	10	
Chromium	A	225.71	226.51	5000	5233	ug/L	5	10	
Cobalt	A	58.853	60.460	5000	5266	ug/L	5	10	
Copper	A	242.51	249.73	5000	5264	ug/L	5	10	
Lead	A	49.531	45.663	5000	4932	ug/L	-1	10	
Molybdenum	A	33.552	34.600	5000	5390	ug/L	8	10	
Nickel	A	98.585	100.85	5000	5211	ug/L	4	10	
Selenium	A	8.9227	9.6386	5000	5304	ug/L	6	10	
Silver	A	615.78	579.75	1000	972.9	ug/L	-3	10	
Thallium	A	7.0491	6.9837	5000	5237	ug/L	5	10	
Vanadium	A	266.46	267.69	5000	5166	ug/L	3	10	
Zinc	A	42.869	55.073	5000	5159	ug/L	3	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3224403	3153249	-2.21

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93343211076  
 Cal : 93343211001  
 File : met09\_sn  
 Caldate : 26-AUG-2013  
 IDF : 1.0  
 Time : 26-AUG-2013 20:31

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	[1.638]	10.00	1.449	ug/L	!ib
Arsenic	A	ND	5.000	3.108	ug/L	
Barium	A	ND	5.000	1.970	ug/L	
Beryllium	A	ND	2.000	0.6865	ug/L	
Cadmium	A	ND	5.000	0.5708	ug/L	
Chromium	A	ND	5.000	1.252	ug/L	
Cobalt	A	ND	5.000	0.3602	ug/L	
Copper	A	ND	5.000	2.282	ug/L	
Lead	A	ND	5.000	2.493	ug/L	
Molybdenum	A	[0.9827]	5.000	0.6113	ug/L	!ib
Nickel	A	ND	5.000	1.880	ug/L	
Selenium	A	ND	10.00	2.693	ug/L	
Silver	A	ND	5.000	1.790	ug/L	
Thallium	A	ND	10.00	2.804	ug/L	
Vanadium	A	ND	5.000	1.070	ug/L	
Zinc	A	ND	20.00	2.385	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3224403	3373015	4.61

!=warning ib=instrument blank

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 93344575

Instrument : MET09  
 Method : EPA 6010B

Begun : 08/27/13 06:55  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met09_sn	ICALBLK				08/27/13 06:55	1.0		
002	met09_sn	ICAL	CRI5.1			08/27/13 07:00	1.0	1	
003	met09_sn	ICAL	CS100			08/27/13 07:05	1.0	2	
004	met09_sn	ICAL	CS1K			08/27/13 07:09	1.0	3	
005	met09_sn	ICAL	CS10K			08/27/13 07:13	1.0	4	
006	met09_sn	ICAL	CS100K			08/27/13 07:19	1.0	5	
007	met09_sn	ICV				08/27/13 07:25	1.0	6	
008	met09_sn	ICB				08/27/13 07:31	1.0		
009	met09_sn	ICSA				08/27/13 07:36	1.0	7	10:MG=500000
010	met09_sn	ICSAB				08/27/13 07:47	1.0	8	5:MG=520000
011	met09_sn	XCRI				08/27/13 07:54	1.0	9	
012	met09_sn	CRI				08/27/13 07:57	1.0	9	
013	met09_sn	SAMPLE	248337-002	Soil	202117	08/27/13 08:01	1.0		4:FE=300000
014	met09_sn	SAMPLE	248337-002	Soil	202117	08/27/13 08:04	1.0		4:FE=300000
015	met09_sn	SAMPLE	248337-003	Soil	202117	08/27/13 08:08	1.0		4:FE=310000
016	met09_sn	SAMPLE	248337-004	Soil	202117	08/27/13 08:11	1.0		5:FE=280000
017	met09_sn	SAMPLE	248337-005	Soil	202117	08/27/13 08:14	1.0		4:CA=360000
018	met09_sn	SAMPLE	248337-006	Soil	202117	08/27/13 08:17	1.0		5:FE=350000
019	met09_sn	SAMPLE	248339-001	Soil	202117	08/27/13 08:21	1.0		5:CA=680000
020	met09_sn	SAMPLE	248339-001	Soil	202117	08/27/13 08:24	1.0		5:CA=710000
021	met09_sn	SAMPLE	248337-005	Soil	202117	08/27/13 08:27	1.0		4:CA=350000
022	met09_sn	CCV				08/27/13 08:30	1.0	10	
023	met09_sn	CCB				08/27/13 08:36	1.0		
024	met09_sn	SAMPLE	247998-001	Miscell.	202117	08/27/13 08:41	10.0		
025	met09_sn	SAMPLE	247999-001	Miscell.	202117	08/27/13 08:46	10.0		
026	met09_sn	SAMPLE	248000-001	Miscell.	202117	08/27/13 08:51	10.0		
027	met09_sn	SAMPLE	248001-001	Miscell.	202117	08/27/13 08:56	10.0		
028	met09_sn	SAMPLE	248275-001	Miscell.	202117	08/27/13 09:01	10.0		
029	met09_sn	SAMPLE	248278-001	Miscell.	202117	08/27/13 09:06	10.0		
030	met09_sn	SAMPLE	248280-001	Miscell.	202117	08/27/13 09:12	10.0		
031	met09_sn	SAMPLE	248281-001	Miscell.	202117	08/27/13 09:17	10.0		
032	met09_sn	SAMPLE	248282-001	Miscell.	202117	08/27/13 09:22	10.0		
033	met09_sn	SAMPLE	248283-001	Miscell.	202117	08/27/13 09:26	10.0		
034	met09_sn	ICSAB				08/27/13 09:31	1.0	8	5:MG=520000
035	met09_sn	CCV				08/27/13 09:37	1.0	10	
036	met09_sn	CCB				08/27/13 09:43	1.0		
037	met09_sn	SAMPLE	248285-001	Miscell.	202117	08/27/13 09:49	10.0		
038	met09_sn	SAMPLE	248105-010	Filtrate	201989	08/27/13 09:54	10.0		1:NA=120000
039	met09_sn	SAMPLE	248105-016	Filtrate	201989	08/27/13 10:02	100.0		
040	met09_sn	SAMPLE	248000-001	Miscell.	202117	08/27/13 10:07	1.0		
041	met09_sn	SAMPLE	248275-001	Miscell.	202117	08/27/13 10:11	1.0		
042	met09_sn	SER	QC702888	Soil	201938	08/27/13 10:16	5.0		
043	met09_sn	PDS	QC702889	Soil	201938	08/27/13 10:20	1.0	11 12	
044	met09_sn	SAMPLE	248030-001	Soil	201938	08/27/13 10:24	1.0		5:FE=530000
045	met09_sn	SAMPLE	248030-044	Soil	201938	08/27/13 10:30	1.0		5:FE=610000
046	met09_sn	SAMPLE	248039-009	Soil	201938	08/27/13 10:33	1.0		5:CA=790000
047	met09_sn	CCV				08/27/13 10:36	1.0	10	
048	met09_sn	CCB				08/27/13 10:43	1.0		
049	met09_sn	SAMPLE	248030-004	Soil	201938	08/27/13 10:48	1.0		5:MG=3100000
050	met09_sn	SAMPLE	248030-004	Soil	201938	08/27/13 10:52	100.0		
051	met09_sn	SAMPLE	248109-002	Soil	201938	08/27/13 10:56	1.0		6:CA=1100000
052	met09_sn	SAMPLE	248109-002	Soil	201938	08/27/13 11:02	100.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 93344575

Instrument : MET09  
 Method : EPA 6010B

Begun : 08/27/13 06:55  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	met09_sn	SAMPLE	248122-001	Soil	201938	08/27/13 11:07	1.0		2:FE=280000
054	met09_sn	BLANK	QC703135	Soil	201993	08/27/13 11:11	1.0		
055	met09_sn	BS	QC703136	Soil	201993	08/27/13 11:16	1.0		
056	met09_sn	BSD	QC703137	Soil	201993	08/27/13 11:19	1.0		
057	met09_sn	MSS	248243-001	Soil	201993	08/27/13 11:22	1.0		1:FE=190000
058	met09_sn	MS	QC703138	Soil	201993	08/27/13 11:27	1.0		1:FE=170000
059	met09_sn	ICSAB				08/27/13 11:30	1.0	8	5:MG=480000
060	met09_sn	CCV				08/27/13 11:36	1.0	10	
061	met09_sn	CCB				08/27/13 11:42	1.0		
062	met09_sn	MSD	QC703139	Soil	201993	08/27/13 11:47	1.0		1:FE=180000
063	met09_sn	SER	QC703140	Soil	201993	08/27/13 11:50	5.0		
064	met09_sn	PDS	QC703141	Soil	201993	08/27/13 11:55	1.0	11 12	1:FE=200000
065	met09_sn	SAMPLE	247946-007	Miscell.	201993	08/27/13 11:58	100.0		
066	met09_sn	SAMPLE	247946-008	Miscell.	201993	08/27/13 12:03	100.0		
067	met09_sn	SAMPLE	248154-003	Soil	201993	08/27/13 12:08	1.0		2:FE=310000
068	met09_sn	SAMPLE	247888-002	Filtrate	201898	08/27/13 12:12	1.0		3:MG=650000
069	met09_sn	SAMPLE	247888-003	Filtrate	201898	08/27/13 12:20	1.0		2:CA=1900000
070	met09_sn	SAMPLE	247888-004	Filtrate	201898	08/27/13 12:28	1.0		3:CA=550000
071	met09_sn	CCV				08/27/13 12:36	1.0	10	
072	met09_sn	XCCB				08/27/13 12:43	1.0		
073	met09_sn	CCB				08/27/13 12:46	1.0		
074	met09_sn	ICSAB				08/27/13 12:52	1.0	8	5:MG=490000
075	met09_sn	BLANK	QC703445	WET Leachate	202068	08/27/13 13:04	10.0		1:NA=150000
076	met09_sn	BS	QC703446	WET Leachate	202068	08/27/13 13:12	1.0		
077	met09_sn	BSD	QC703447	WET Leachate	202068	08/27/13 13:15	1.0		
078	met09_sn	MSS	247946-001	WET Leachate	202068	08/27/13 13:18	10.0		1:NA=180000
079	met09_sn	MS	QC703448	WET Leachate	202068	08/27/13 13:27	10.0		
080	met09_sn	MSD	QC703449	WET Leachate	202068	08/27/13 13:34	10.0		
081	met09_sn	SER	QC703450	WET Leachate	202068	08/27/13 13:41	50.0		
082	met09_sn	PDS	QC703451	WET Leachate	202068	08/27/13 13:46	10.0	11 12	
083	met09_sn	CCV				08/27/13 13:52	1.0	10	
084	met09_sn	CCB				08/27/13 13:58	1.0		
085	met09_sn	SAMPLE	247946-002	WET Leachate	202068	08/27/13 14:03	10.0		1:NA=160000
086	met09_sn	SAMPLE	247946-003	WET Leachate	202068	08/27/13 14:12	10.0		1:NA=160000
087	met09_sn	SAMPLE	247946-004	WET Leachate	202068	08/27/13 14:20	10.0		1:NA=150000
088	met09_sn	SAMPLE	247946-005	WET Leachate	202068	08/27/13 14:28	10.0		1:NA=150000
089	met09_sn	SAMPLE	247946-006	WET Leachate	202068	08/27/13 14:35	10.0		1:NA=180000
090	met09_sn	CCV				08/27/13 14:43	1.0	10	
091	met09_sn	CCB				08/27/13 14:49	1.0		
092	met09_sn	ICSAB				08/27/13 14:54	1.0	8	5:MG=530000
093	met09_sn	BLANK	QC703887	TCLP Leachate	202173	08/27/13 17:46	10.0		
094	met09_sn	BS	QC703888	TCLP Leachate	202173	08/27/13 17:51	1.0		
095	met09_sn	BSD	QC703889	TCLP Leachate	202173	08/27/13 17:55	1.0		
096	met09_sn	MSS	248334-001	TCLP Leachate	202173	08/27/13 17:58	10.0		
097	met09_sn	MS	QC703890	TCLP Leachate	202173	08/27/13 18:03	10.0		
098	met09_sn	MSD	QC703891	TCLP Leachate	202173	08/27/13 18:07	10.0		
099	met09_sn	SAMPLE	248334-002	TCLP Leachate	202173	08/27/13 18:12	10.0		
100	met09_sn	CCV				08/27/13 18:17	1.0	10	
101	met09_sn	CCB				08/27/13 18:23	1.0		
102	met09_sn	ICSAB				08/27/13 18:28	1.0	8	5:MG=540000
103	met09_sn	SAMPLE	248107-002	Water	201845	08/27/13 18:46	1.0		2:CA=510000
104	met09_sn	SAMPLE	248030-011	Soil	201936	08/27/13 18:51	1.0		4:CA=700000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 93344575

Instrument : MET09  
 Method : EPA 6010B

Begun : 08/27/13 06:55  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	met09_sn	SAMPLE	248030-016	Soil	201936	08/27/13 18:54	1.0		6:FE=520000
106	met09_sn	BLANK	QC703274	Soil	202027	08/27/13 19:17	1.0		
107	met09_sn	BS	QC703275	Soil	202027	08/27/13 19:22	1.0		
108	met09_sn	BSD	QC703276	Soil	202027	08/27/13 19:25	1.0		
109	met09_sn	MSS	248240-001	Soil	202027	08/27/13 19:29	1.0		2:FE=220000
110	met09_sn	MS	QC703277	Soil	202027	08/27/13 19:33	1.0		
111	met09_sn	MSD	QC703278	Soil	202027	08/27/13 19:36	1.0		
112	met09_sn	SER	QC703279	Soil	202027	08/27/13 19:39	5.0		
113	met09_sn	CCV				08/27/13 19:43	1.0	10	
114	met09_sn	CCB				08/27/13 19:50	1.0		
115	met09_sn	PDS	QC703280	Soil	202027	08/27/13 19:55	1.0	11 12	
116	met09_sn	SAMPLE	248240-002	Soil	202027	08/27/13 19:58	1.0		2:CA=190000
117	met09_sn	SAMPLE	248240-003	Soil	202027	08/27/13 20:02	1.0		2:FE=200000
118	met09_sn	SAMPLE	248240-004	Soil	202027	08/27/13 20:07	1.0		1:FE=170000
119	met09_sn	SAMPLE	248240-005	Soil	202027	08/27/13 20:11	1.0		2:FE=200000
120	met09_sn	SAMPLE	248240-006	Soil	202027	08/27/13 20:15	1.0		2:FE=190000
121	met09_sn	SAMPLE	248241-001	Soil	202027	08/27/13 20:19	1.0		3:FE=240000
122	met09_sn	SAMPLE	248241-002	Soil	202027	08/27/13 20:23	1.0		2:FE=180000
123	met09_sn	SAMPLE	248241-003	Soil	202027	08/27/13 20:27	1.0		2:FE=190000
124	met09_sn	SAMPLE	248241-004	Soil	202027	08/27/13 20:31	1.0		2:FE=170000
125	met09_sn	ICSAB				08/27/13 20:35	1.0	8	5:MG=540000
126	met09_sn	CCV				08/27/13 20:41	1.0	10	
127	met09_sn	CCB				08/27/13 20:48	1.0		
128	met09_sn	SAMPLE	248241-005	Soil	202027	08/27/13 20:53	1.0		2:CA=240000
129	met09_sn	SAMPLE	248241-006	Soil	202027	08/27/13 20:57	1.0		1:FE=160000
130	met09_sn	SAMPLE	248249-029	Soil	202027	08/27/13 21:01	1.0		3:FE=320000
131	met09_sn	SAMPLE	248249-030	Soil	202027	08/27/13 21:06	1.0		2:FE=420000
132	met09_sn	SAMPLE	248249-031	Soil	202027	08/27/13 21:10	1.0		4:FE=380000
133	met09_sn	SAMPLE	248249-032	Soil	202027	08/27/13 21:13	1.0		2:AL=310000
134	met09_sn	SAMPLE	248249-035	Soil	202027	08/27/13 21:17	1.0		4:FE=380000
135	met09_sn	SAMPLE	248249-036	Soil	202027	08/27/13 21:21	1.0		3:FE=370000
136	met09_sn	CCV				08/27/13 21:25	1.0	10	
137	met09_sn	CCB				08/27/13 21:31	1.0		
138	met09_sn	ICSAB				08/27/13 21:36	1.0	8	5:MG=550000

NT 08/28/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 138.

JDB 08/27/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 75 through 102.

Standards used: 1=S22714 2=S22716 3=S22715 4=S22717 5=S22718 6=S22721 7=S22719 8=S22720 9=S22723 10=S22722 11=S22594  
 12=S22595

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 93344575

Date : 08/27/13  
 Sequence : MET09 08/27/13

Reference : met09\_sn  
 Analyzed : 08/27/13 07:00

#	Type	Sample ID	Y A
		ICAL STD	3241601
		LOWER LIMIT	972480
		UPPER LIMIT	6483202
008	ICB		3405027
009	ICSA		2694199
010	ICSAB		2704670
013	SAMPLE	248337-002	3083354
014	SAMPLE	248337-002	3090953
015	SAMPLE	248337-003	3171251
016	SAMPLE	248337-004	3121578
017	SAMPLE	248337-005	3090796
018	SAMPLE	248337-006	3151159
019	SAMPLE	248339-001	3133321
020	SAMPLE	248339-001	2963319
021	SAMPLE	248337-005	3117740
022	CCV		3110296
023	CCB		3307556
024	SAMPLE	247998-001	3339822
025	SAMPLE	247999-001	3377832
026	SAMPLE	248000-001	3294290
027	SAMPLE	248001-001	3273991
028	SAMPLE	248275-001	3317563
029	SAMPLE	248278-001	3152755
030	SAMPLE	248280-001	3241868
031	SAMPLE	248281-001	3120188
032	SAMPLE	248282-001	3371249
033	SAMPLE	248283-001	3192525
034	ICSAB		2704043
035	CCV		3153773
036	CCB		3388687
037	SAMPLE	248285-001	3403606
038	SAMPLE	248105-010	3096909
039	SAMPLE	248105-016	3251124
040	SAMPLE	248000-001	3480813
041	SAMPLE	248275-001	3351045
042	SER	QC702888	3226165
043	PDS	QC702889	3229330
044	SAMPLE	248030-001	3062663
045	SAMPLE	248030-044	3072317
046	SAMPLE	248039-009	3147654
047	CCV		3220658
048	CCB		3425739
049	SAMPLE	248030-004	2602887
050	SAMPLE	248030-004	3289071
053	SAMPLE	248122-001	3410030
054	BLANK	QC703135	3393548
055	BS	QC703136	3232313
056	BSD	QC703137	3211528
057	MSS	248243-001	3229562
058	MS	QC703138	3323773
059	ICSAB		2920019

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 93344575

Date : 08/27/13  
 Sequence : MET09 08/27/13

Reference : met09\_sn  
 Analyzed : 08/27/13 07:00

#	Type	Sample ID	Y A
060	CCV		3426219
061	CCB		3420851
062	MSD	QC703139	3211379
063	SER	QC703140	3364749
064	PDS	QC703141	3211008
065	SAMPLE	247946-007	3381434
066	SAMPLE	247946-008	3663498
067	SAMPLE	248154-003	3436940
068	SAMPLE	247888-002	2363320
069	SAMPLE	247888-003	2158004
070	SAMPLE	247888-004	2402480
071	CCV		3288423
073	CCB		3327651
074	ICSAB		2905520
075	BLANK	QC703445	3132873
076	BS	QC703446	3294428
077	BSD	QC703447	3213911
078	MSS	247946-001	2994112
079	MS	QC703448	3028388
080	MSD	QC703449	3070288
081	SER	QC703450	3139074
082	PDS	QC703451	3000058
083	CCV		3156049
084	CCB		3457916
085	SAMPLE	247946-002	3060737
086	SAMPLE	247946-003	3044127
087	SAMPLE	247946-004	3020620
088	SAMPLE	247946-005	3037027
089	SAMPLE	247946-006	2986050
090	CCV		3255311
091	CCB		3482263
092	ICSAB		2643286
093	BLANK	QC703887	2953028
094	BS	QC703888	2825690
095	BSD	QC703889	2914951
096	MSS	248334-001	2866272
097	MS	QC703890	2969284
098	MSD	QC703891	3034889
099	SAMPLE	248334-002	3010756
100	CCV		2970765
101	CCB		3214472
102	ICSAB		2627806
103	SAMPLE	248107-002	2877727
104	SAMPLE	248030-011	3110294
105	SAMPLE	248030-016	3298419
106	BLANK	QC703274	3274095
107	BS	QC703275	3078749
108	BSD	QC703276	3094535
109	MSS	248240-001	3216543
110	MS	QC703277	3157877
111	MSD	QC703278	3259607
112	SER	QC703279	3173577

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 93344575

Date : 08/27/13  
 Sequence : MET09 08/27/13

Reference : met09\_sn  
 Analyzed : 08/27/13 07:00

#	Type	Sample ID	Y	A
113	CCV		3074039	
114	CCB		3290063	
115	PDS	QC703280	3181101	
116	SAMPLE	248240-002	3219950	
117	SAMPLE	248240-003	3177654	
118	SAMPLE	248240-004	3205431	
119	SAMPLE	248240-005	3208875	
120	SAMPLE	248240-006	3137176	
121	SAMPLE	248241-001	3312796	
122	SAMPLE	248241-002	3108480	
123	SAMPLE	248241-003	3202097	
124	SAMPLE	248241-004	3100574	
125	ICSAB		2708425	
126	CCV		3186961	
127	CCB		3568480	
128	SAMPLE	248241-005	3212076	
129	SAMPLE	248241-006	3189974	
130	SAMPLE	248249-029	3226694	
131	SAMPLE	248249-030	3301800	
132	SAMPLE	248249-031	3144181	
133	SAMPLE	248249-032	3443262	
134	SAMPLE	248249-035	3175417	
135	SAMPLE	248249-036	3351059	
136	CCV		3159071	
137	CCB		3275483	
138	ICSAB		2732772	

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS SOIL: EPA 6010B

Inst : MET09  
 Calnum : 93344575001  
 Units : ug/L

Date : 27-AUG-2013 06:55  
 X Axis : R

Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	met09_sn 93344575002		CRI5.1	27-AUG-2013 07:00	S22714
L2	met09_sn 93344575003		CS100	27-AUG-2013 07:05	S22716
L3	met09_sn 93344575004		CS1K	27-AUG-2013 07:09	S22715
L4	met09_sn 93344575005		CS10K	27-AUG-2013 07:13	S22717
L5	met09_sn 93344575006		CS100K	27-AUG-2013 07:19	S22718

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	14.570	13.252	13.551	13.717		LOR0	0.00000	0.07291		13.773	1.000	0.995	
Arsenic	A	7.6400	6.8580	6.9833	7.0051		LOR0	0.00000	0.14276		7.1216	1.000	0.995	
Barium	A	95.660	91.227	93.948	89.638		LOR0	0.00000	0.01115		92.618	1.000	0.995	
Beryllium	A	6245.3	5919.3	6009.2			LOR0	0.00000	1.66E-4		6057.9	1.000	0.995	
Cadmium	A	140.38	140.82	141.97	133.61		LOR0	0.00000	0.00748		139.19	1.000	0.995	
Chromium	A	249.46	239.46	240.94	233.89		LOR0	0.00000	0.00427		240.94	1.000	0.995	
Cobalt	A	64.200	61.690	64.582	62.543		LOR0	0.00000	0.01598		63.254	1.000	0.995	
Copper	A	270.22	264.76	273.24	269.85		LOR0	0.00000	0.00371		269.52	1.000	0.995	
Lead	A	53.320	48.518	49.066	47.271		LOR0	0.00000	0.02115		49.544	1.000	0.995	
Molybdenum	A	36.020	34.721	34.986	34.431		LOR0	0.00000	0.02904		35.039	1.000	0.995	
Nickel	A	105.18	105.34	106.76	103.89		LOR0	0.00000	0.00962		105.29	1.000	0.995	
Selenium	A	8.8000	9.6550	9.6912	9.9950		LOR0	0.00000	0.10008		9.5353	1.000	0.995	
Silver	A	615.08	605.38	617.25	609.81		LOR0	0.00000	0.00164		611.88	1.000	0.995	
Thallium	A	7.5500	7.3830	7.4322	7.1706		LOR0	0.00000	0.13941		7.3839	1.000	0.995	
Vanadium	A	277.94	279.67	282.55	279.52		LOR0	0.00000	0.00358		279.92	1.000	0.995	
Zinc	A	71.645	58.894	58.159	57.767		LOR0	0.00000	0.01731		61.616	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	6	100.00	-3	1000.0	-1	10000	0		
Arsenic	A	5.0000	9	100.00	-2	1000.0	0	10000	0		
Barium	A	5.0000	7	100.00	2	1000.0	5	10000	0		
Beryllium	A	2.0000	4	100.00	-1	1000.0	0				
Cadmium	A	5.0000	5	100.00	5	1000.0	6	10000	0		
Chromium	A	5.0000	7	100.00	2	1000.0	3	10000	0		
Cobalt	A	5.0000	3	100.00	-1	1000.0	3	10000	0		
Copper	A	5.0000	0	100.00	-2	1000.0	1	10000	0		
Lead	A	5.0000	13	100.00	3	1000.0	4	10000	0		
Molybdenum	A	5.0000	5	100.00	1	1000.0	2	10000	0		
Nickel	A	5.0000	1	100.00	1	1000.0	3	10000	0		
Selenium	A	10.000	-12	100.00	-3	1000.0	-3	10000	0		
Silver	A	5.0000	1	100.00	-1	1000.0	1	2000.0	0		
Thallium	A	10.000	5	100.00	3	1000.0	4	10000	0		
Vanadium	A	5.0000	-1	100.00	0	1000.0	1	10000	0		
Zinc	A	20.000	<b>24</b>	100.00	2	1000.0	1	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
Calnum : 93344575001

Cal Date : 27-AUG-2013

ICV 93344575007 (27-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	5164	ug/L	3	10	
Arsenic	A	5000	5076	ug/L	2	10	
Barium	A	5000	5041	ug/L	1	10	
Beryllium	A	500.0	509.9	ug/L	2	10	
Cadmium	A	5000	5158	ug/L	3	10	
Chromium	A	5000	5014	ug/L	0	10	
Cobalt	A	5000	5033	ug/L	1	10	
Copper	A	5000	4836	ug/L	-3	10	
Lead	A	5000	5059	ug/L	1	10	
Molybdenum	A	5000	5232	ug/L	5	10	
Nickel	A	5000	5032	ug/L	1	10	
Selenium	A	5000	5100	ug/L	2	10	
Silver	A	1000	980.9	ug/L	-2	10	
Thallium	A	5000	5092	ug/L	2	10	
Vanadium	A	5000	4968	ug/L	-1	10	
Zinc	A	5000	5026	ug/L	1	10	

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09 IDF : 1.0  
 Seqnum : 93344575009 File : met09\_sn Time : 27-AUG-2013 07:36  
 Cal : 93344575001 Caldate : 27-AUG-2013  
 Standards: S22719

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[8.404]	10.00	ug/L	!a+
Arsenic	A	[2.494]	5.000	ug/L	
Barium	A	[-1.041]	5.000	ug/L	
Beryllium	A	[-0.7838]	2.000	ug/L	!a-
Cadmium	A	[-2.539]	5.000	ug/L	!a-
Cobalt	A	[2.029]	5.000	ug/L	!a+
Lead	A	[0.2813]	5.000	ug/L	
Molybdenum	A	[-2.944]	5.000	ug/L	!a-
Selenium	A	[-8.597]	10.00	ug/L	!a-
Silver	A	[-2.178]	5.000	ug/L	!a-
Thallium	A	[0.4236]	10.00	ug/L	
Zinc	A	[13.45]	20.00	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19030	ug/L	95
Copper	A	20000	20310	ug/L	102
Manganese	A	20000	18030	ug/L	90
Nickel	A	20000	17670	ug/L	88
Vanadium	A	20000	19630	ug/L	98
Aluminum	R	500000	499400	ug/L	100
Calcium	R	500000	480400	ug/L	96
Iron	R	200000	188200	ug/L	94
Magnesium	R	500000	500800	ug/L	100
Titanium	R	20000	21430	ug/L	107

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	2694199	-16.89

!=warning +=high bias -=low bias a=ICSA

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93344575034  
 Cal : 93344575001  
 Standards: S22720

File : met09\_sn  
 Caldate : 27-AUG-2013

IDF : 1.0  
 Time : 27-AUG-2013 09:31

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	533.2	ug/L	7	20	
Arsenic	A	500.0	541.0	ug/L	8	20	
Barium	A	500.0	522.6	ug/L	5	20	
Beryllium	A	500.0	530.2	ug/L	6	20	
Cadmium	A	1000	1042	ug/L	4	20	
Chromium	A	500.0	518.9	ug/L	4	20	
Cobalt	A	500.0	470.3	ug/L	-6	20	
Copper	A	500.0	554.7	ug/L	11	20	
Lead	A	1000	990.3	ug/L	-1	20	
Molybdenum	A	500.0	513.7	ug/L	3	20	
Nickel	A	1000	961.4	ug/L	-4	20	
Selenium	A	500.0	518.9	ug/L	4	20	
Silver	A	1000	1170	ug/L	17	20	
Thallium	A	500.0	461.3	ug/L	-8	20	
Vanadium	A	500.0	539.1	ug/L	8	20	
Zinc	A	1000	975.1	ug/L	-2	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	2704043	-16.58

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
Seqnum : 93344575035  
Cal : 93344575001  
Standards: S22722

File : met09\_sn  
Caldate : 27-AUG-2013

IDF : 1.0  
Time : 27-AUG-2013 09:37

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	13.773	13.793	5000	5028	ug/L	1	10	
Arsenic	A	7.1216	6.9527	5000	4963	ug/L	-1	10	
Barium	A	92.618	90.344	5000	5037	ug/L	1	10	
Beryllium	A	6057.9	6099.9	500.0	507.6	ug/L	2	10	
Cadmium	A	139.19	138.16	5000	5167	ug/L	3	10	
Chromium	A	240.94	234.35	5000	5008	ug/L	0	10	
Cobalt	A	63.254	61.883	5000	4935	ug/L	-1	10	
Copper	A	269.52	257.29	5000	4767	ug/L	-5	10	
Lead	A	49.544	47.827	5000	5057	ug/L	1	10	
Molybdenum	A	35.039	35.361	5000	5134	ug/L	3	10	
Nickel	A	105.29	104.55	5000	5030	ug/L	1	10	
Selenium	A	9.5353	9.9875	5000	4998	ug/L	0	10	
Silver	A	611.88	615.22	1000	1006	ug/L	1	10	
Thallium	A	7.3839	7.1961	5000	5016	ug/L	0	10	
Vanadium	A	279.92	277.98	5000	4972	ug/L	-1	10	
Zinc	A	61.616	57.034	5000	4936	ug/L	-1	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	3153773	-2.71

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93344575036  
 Cal : 93344575001  
 File : met09\_sn  
 Caldate : 27-AUG-2013  
 IDF : 1.0  
 Time : 27-AUG-2013 09:43

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	1.449	ug/L	
Arsenic	A	ND	5.000	3.108	ug/L	
Barium	A	ND	5.000	1.970	ug/L	
Beryllium	A	ND	2.000	0.6865	ug/L	
Cadmium	A	[0.6876]	5.000	0.5708	ug/L	!ib
Chromium	A	ND	5.000	1.252	ug/L	
Cobalt	A	[0.6186]	5.000	0.3602	ug/L	!ib
Copper	A	ND	5.000	2.282	ug/L	
Lead	A	ND	5.000	2.493	ug/L	
Molybdenum	A	[1.215]	5.000	0.6113	ug/L	!ib
Nickel	A	ND	5.000	1.880	ug/L	
Selenium	A	ND	10.00	2.693	ug/L	
Silver	A	ND	5.000	1.790	ug/L	
Thallium	A	ND	10.00	2.804	ug/L	
Vanadium	A	ND	5.000	1.070	ug/L	
Zinc	A	ND	20.00	2.385	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	3388687	4.54

!=warning ib=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
Seqnum : 93344575047  
Cal : 93344575001  
Standards: S22722

File : met09\_sn  
Caldate : 27-AUG-2013

IDF : 1.0  
Time : 27-AUG-2013 10:36

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	13.773	13.368	5000	4873	ug/L	-3	10	
Arsenic	A	7.1216	6.7797	5000	4839	ug/L	-3	10	
Barium	A	92.618	88.314	5000	4924	ug/L	-2	10	
Beryllium	A	6057.9	5971.8	500.0	497.0	ug/L	-1	10	
Cadmium	A	139.19	134.94	5000	5047	ug/L	1	10	
Chromium	A	240.94	229.32	5000	4901	ug/L	-2	10	
Cobalt	A	63.254	60.075	5000	4791	ug/L	-4	10	
Copper	A	269.52	253.75	5000	4701	ug/L	-6	10	
Lead	A	49.544	46.128	5000	4877	ug/L	-2	10	
Molybdenum	A	35.039	34.249	5000	4973	ug/L	-1	10	
Nickel	A	105.29	102.35	5000	4924	ug/L	-2	10	
Selenium	A	9.5353	9.6667	5000	4837	ug/L	-3	10	
Silver	A	611.88	592.52	1000	969.3	ug/L	-3	10	
Thallium	A	7.3839	6.9428	5000	4839	ug/L	-3	10	
Vanadium	A	279.92	271.83	5000	4862	ug/L	-3	10	
Zinc	A	61.616	55.397	5000	4795	ug/L	-4	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	3220658	-0.65

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
Seqnum : 93344575048  
Cal : 93344575001

File : met09\_sn  
Caldate : 27-AUG-2013

IDF : 1.0  
Time : 27-AUG-2013 10:43

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	1.449	ug/L	
Arsenic	A	ND	5.000	3.108	ug/L	
Barium	A	ND	5.000	1.970	ug/L	
Beryllium	A	ND	2.000	0.6865	ug/L	
Cadmium	A	ND	5.000	0.5708	ug/L	
Chromium	A	ND	5.000	1.252	ug/L	
Cobalt	A	[0.4784]	5.000	0.3602	ug/L	!ib
Copper	A	ND	5.000	2.282	ug/L	
Lead	A	ND	5.000	2.493	ug/L	
Molybdenum	A	[1.152]	5.000	0.6113	ug/L	!ib
Nickel	A	ND	5.000	1.880	ug/L	
Selenium	A	ND	10.00	2.693	ug/L	
Silver	A	ND	5.000	1.790	ug/L	
Thallium	A	ND	10.00	2.804	ug/L	
Vanadium	A	ND	5.000	1.070	ug/L	
Zinc	A	ND	20.00	2.385	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	3425739	5.68

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93344575059.2  
 Cal : 93344575001  
 Standards: S22720  
 File : met09\_sn  
 Caldate : 27-AUG-2013  
 IDF : 1.0  
 Time : 27-AUG-2013 11:30

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	502.2	ug/L	0	20	
Arsenic	A	500.0	508.5	ug/L	2	20	
Barium	A	500.0	489.1	ug/L	-2	20	
Beryllium	A	500.0	487.2	ug/L	-3	20	
Cadmium	A	1000	957.5	ug/L	-4	20	
Chromium	A	500.0	477.0	ug/L	-5	20	
Cobalt	A	500.0	441.2	ug/L	-12	20	
Copper	A	500.0	509.0	ug/L	2	20	
Lead	A	1000	916.7	ug/L	-8	20	
Molybdenum	A	500.0	480.3	ug/L	-4	20	
Nickel	A	1000	883.3	ug/L	-12	20	
Selenium	A	500.0	489.7	ug/L	-2	20	
Silver	A	1000	1077	ug/L	8	20	
Thallium	A	500.0	435.2	ug/L	-13	20	
Vanadium	A	500.0	496.3	ug/L	-1	20	
Zinc	A	1000	908.3	ug/L	-9	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	2920019	-9.92

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93344575060  
 Cal : 93344575001  
 Standards: S22722

File : met09\_sn  
 Caldate : 27-AUG-2013

IDF : 1.0  
 Time : 27-AUG-2013 11:36

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	13.773	12.720	5000	4637	ug/L	-7	10	
Arsenic	A	7.1216	6.3945	5000	4564	ug/L	-9	10	
Barium	A	92.618	83.092	5000	4633	ug/L	-7	10	
Beryllium	A	6057.9	5631.4	500.0	468.6	ug/L	-6	10	
Cadmium	A	139.19	126.04	5000	4714	ug/L	-6	10	
Chromium	A	240.94	215.93	5000	4615	ug/L	-8	10	
Cobalt	A	63.254	57.230	5000	4564	ug/L	-9	10	
Copper	A	269.52	240.24	5000	4451	ug/L	-11	10	c- ***
Lead	A	49.544	43.432	5000	4592	ug/L	-8	10	
Molybdenum	A	35.039	32.560	5000	4728	ug/L	-5	10	
Nickel	A	105.29	96.230	5000	4630	ug/L	-7	10	
Selenium	A	9.5353	9.2610	5000	4634	ug/L	-7	10	
Silver	A	611.88	554.99	1000	907.9	ug/L	-9	10	
Thallium	A	7.3839	6.6069	5000	4605	ug/L	-8	10	
Vanadium	A	279.92	255.96	5000	4578	ug/L	-8	10	
Zinc	A	61.616	52.366	5000	4532	ug/L	-9	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	3426219	5.70

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93344575061  
 Cal : 93344575001

File : met09\_sn  
 Caldate : 27-AUG-2013

IDF : 1.0  
 Time : 27-AUG-2013 11:42

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	1.449	ug/L	
Arsenic	A	ND	5.000	3.108	ug/L	
Barium	A	ND	5.000	1.970	ug/L	
Beryllium	A	ND	2.000	0.6865	ug/L	
Cadmium	A	[0.6836]	5.000	0.5708	ug/L	!ib
Chromium	A	ND	5.000	1.252	ug/L	
Cobalt	A	[0.5212]	5.000	0.3602	ug/L	!ib
Copper	A	ND	5.000	2.282	ug/L	
Lead	A	ND	5.000	2.493	ug/L	
Molybdenum	A	[1.233]	5.000	0.6113	ug/L	!ib
Nickel	A	ND	5.000	1.880	ug/L	
Selenium	A	ND	10.00	2.693	ug/L	
Silver	A	ND	5.000	1.790	ug/L	
Thallium	A	ND	10.00	2.804	ug/L	
Vanadium	A	ND	5.000	1.070	ug/L	
Zinc	A	ND	20.00	2.385	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	3420851	5.53

!=warning ib=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93344575100  
 Cal : 93344575001  
 Standards: S22722

IDF : 1.0  
 Time : 27-AUG-2013 18:17

File : met09\_sn  
 Caldate : 27-AUG-2013

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	13.773	14.304	5000	5214	ug/L	4	10	
Arsenic	A	7.1216	7.1723	5000	5120	ug/L	2	10	
Barium	A	92.618	93.037	5000	5187	ug/L	4	10	
Beryllium	A	6057.9	6305.3	500.0	524.7	ug/L	5	10	
Cadmium	A	139.19	139.71	5000	5225	ug/L	4	10	
Chromium	A	240.94	242.09	5000	5174	ug/L	3	10	
Cobalt	A	63.254	64.988	5000	5184	ug/L	4	10	
Copper	A	269.52	272.68	5000	5052	ug/L	1	10	
Lead	A	49.544	47.645	5000	5038	ug/L	1	10	
Molybdenum	A	35.039	36.240	5000	5262	ug/L	5	10	
Nickel	A	105.29	107.41	5000	5168	ug/L	3	10	
Selenium	A	9.5353	10.373	5000	5191	ug/L	4	10	
Silver	A	611.88	604.71	1000	989.2	ug/L	-1	10	
Thallium	A	7.3839	7.4364	5000	5183	ug/L	4	10	
Vanadium	A	279.92	286.57	5000	5126	ug/L	3	10	
Zinc	A	61.616	58.820	5000	5091	ug/L	2	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	2970765	-8.36

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93344575101  
 Cal : 93344575001

File : met09\_sn  
 Caldate : 27-AUG-2013

IDF : 1.0  
 Time : 27-AUG-2013 18:23

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	1.449	ug/L	
Arsenic	A	ND	5.000	3.108	ug/L	
Barium	A	ND	5.000	1.970	ug/L	
Beryllium	A	ND	2.000	0.6865	ug/L	
Cadmium	A	ND	5.000	0.5708	ug/L	
Chromium	A	ND	5.000	1.252	ug/L	
Cobalt	A	[0.4221]	5.000	0.3602	ug/L	!ib
Copper	A	ND	5.000	2.282	ug/L	
Lead	A	ND	5.000	2.493	ug/L	
Molybdenum	A	[1.213]	5.000	0.6113	ug/L	!ib
Nickel	A	ND	5.000	1.880	ug/L	
Selenium	A	ND	10.00	2.693	ug/L	
Silver	A	ND	5.000	1.790	ug/L	
Thallium	A	ND	10.00	2.804	ug/L	
Vanadium	A	ND	5.000	1.070	ug/L	
Zinc	A	ND	20.00	2.385	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	3214472	-0.84

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93344575102  
 Cal : 93344575001  
 Standards: S22720

File : met09\_sn  
 Caldate : 27-AUG-2013

IDF : 1.0  
 Time : 27-AUG-2013 18:28

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	525.7	ug/L	5	20	
Arsenic	A	500.0	528.1	ug/L	6	20	
Barium	A	500.0	525.0	ug/L	5	20	
Beryllium	A	500.0	530.8	ug/L	6	20	
Cadmium	A	1000	1023	ug/L	2	20	
Chromium	A	500.0	518.6	ug/L	4	20	
Cobalt	A	500.0	479.3	ug/L	-4	20	
Copper	A	500.0	566.1	ug/L	13	20	
Lead	A	1000	957.2	ug/L	-4	20	
Molybdenum	A	500.0	516.4	ug/L	3	20	
Nickel	A	1000	956.3	ug/L	-4	20	
Selenium	A	500.0	525.9	ug/L	5	20	
Silver	A	1000	1120	ug/L	12	20	
Thallium	A	500.0	471.3	ug/L	-6	20	
Vanadium	A	500.0	538.8	ug/L	8	20	
Zinc	A	1000	976.9	ug/L	-2	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	2627806	-18.93

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
Seqnum : 93344575113  
Cal : 93344575001  
Standards: S22722

File : met09\_sn  
Caldate : 27-AUG-2013

IDF : 1.0  
Time : 27-AUG-2013 19:43

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	13.773	14.144	5000	5156	ug/L	3	10	
Arsenic	A	7.1216	7.0889	5000	5060	ug/L	1	10	
Barium	A	92.618	92.018	5000	5130	ug/L	3	10	
Beryllium	A	6057.9	6270.3	500.0	521.8	ug/L	4	10	
Cadmium	A	139.19	138.41	5000	5176	ug/L	4	10	
Chromium	A	240.94	239.65	5000	5122	ug/L	2	10	
Cobalt	A	63.254	64.441	5000	5140	ug/L	3	10	
Copper	A	269.52	271.45	5000	5029	ug/L	1	10	
Lead	A	49.544	46.759	5000	4944	ug/L	-1	10	
Molybdenum	A	35.039	36.206	5000	5257	ug/L	5	10	
Nickel	A	105.29	106.82	5000	5140	ug/L	3	10	
Selenium	A	9.5353	10.435	5000	5222	ug/L	4	10	
Silver	A	611.88	590.67	1000	966.3	ug/L	-3	10	
Thallium	A	7.3839	7.3287	5000	5108	ug/L	2	10	
Vanadium	A	279.92	283.01	5000	5062	ug/L	1	10	
Zinc	A	61.616	58.720	5000	5082	ug/L	2	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	3074039	-5.17

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93344575114  
 Cal : 93344575001  
 File : met09\_sn  
 Caldate : 27-AUG-2013  
 IDF : 1.0  
 Time : 27-AUG-2013 19:50

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	1.449	ug/L	
Arsenic	A	ND	5.000	3.108	ug/L	
Barium	A	ND	5.000	1.970	ug/L	
Beryllium	A	ND	2.000	0.6865	ug/L	
Cadmium	A	[0.6179]	5.000	0.5708	ug/L	!ib
Chromium	A	ND	5.000	1.252	ug/L	
Cobalt	A	[0.4858]	5.000	0.3602	ug/L	!ib
Copper	A	ND	5.000	2.282	ug/L	
Lead	A	ND	5.000	2.493	ug/L	
Molybdenum	A	[0.9857]	5.000	0.6113	ug/L	!ib
Nickel	A	ND	5.000	1.880	ug/L	
Selenium	A	ND	10.00	2.693	ug/L	
Silver	A	ND	5.000	1.790	ug/L	
Thallium	A	ND	10.00	2.804	ug/L	
Vanadium	A	ND	5.000	1.070	ug/L	
Zinc	A	ND	20.00	2.385	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	3290063	1.49

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET09  
 Seqnum : 93344575125  
 Cal : 93344575001  
 Standards: S22720  
 File : met09\_sn  
 Caldate : 27-AUG-2013  
 IDF : 1.0  
 Time : 27-AUG-2013 20:35

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	528.3	ug/L	6	20	
Arsenic	A	500.0	521.9	ug/L	4	20	
Barium	A	500.0	519.6	ug/L	4	20	
Beryllium	A	500.0	525.2	ug/L	5	20	
Cadmium	A	1000	1013	ug/L	1	20	
Chromium	A	500.0	511.4	ug/L	2	20	
Cobalt	A	500.0	478.2	ug/L	-4	20	
Copper	A	500.0	558.2	ug/L	12	20	
Lead	A	1000	924.4	ug/L	-8	20	
Molybdenum	A	500.0	510.0	ug/L	2	20	
Nickel	A	1000	947.4	ug/L	-5	20	
Selenium	A	500.0	548.6	ug/L	10	20	
Silver	A	1000	1099	ug/L	10	20	
Thallium	A	500.0	472.6	ug/L	-5	20	
Vanadium	A	500.0	531.2	ug/L	6	20	
Zinc	A	1000	972.6	ug/L	-3	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3241601	2708425	-16.45

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83344579

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/27/13 06:59  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met08_sn_6010	ICALBLK				08/27/13 06:59	1.0		
002	met08_sn_6010	ICAL	CRI5.1			08/27/13 07:04	1.0	1	
003	met08_sn_6010	ICAL	CS100			08/27/13 07:09	1.0	2	
004	met08_sn_6010	ICAL	CS1K			08/27/13 07:13	1.0	3	
005	met08_sn_6010	ICAL	CS10K			08/27/13 07:18	1.0	4	
006	met08_sn_6010	ICAL	CS100K			08/27/13 07:23	1.0	5	
007	met08_sn_6010	ICV				08/27/13 07:28	1.0	6	
008	met08_sn_6010	ICB				08/27/13 07:34	1.0		
009	met08_sn_6010	ICSA				08/27/13 07:39	1.0	7	10:AL=500000
010	met08_sn_6010	ICSAB				08/27/13 07:55	1.0	8	5:AL=500000
011	met08_sn_6010	XCRI				08/27/13 08:01	1.0	9	
012	met08_sn_6010	CRI				08/27/13 08:04	1.0	9	
013	met08_sn_6010	MSS	248030-005	Soil	201936	08/27/13 08:09	1.0		3:FE=440000
014	met08_sn_6010	MS	QC702872	Soil	201936	08/27/13 08:12	1.0		3:FE=580000
015	met08_sn_6010	MSD	QC702873	Soil	201936	08/27/13 08:15	1.0		3:FE=600000
016	met08_sn_6010	PDS	QC702875	Soil	201936	08/27/13 08:19	1.0	10 11	
017	met08_sn_6010	SAMPLE	248030-003	Soil	201936	08/27/13 08:22	100.0		
018	met08_sn_6010	SAMPLE	248030-007	Soil	201936	08/27/13 08:26	1.0		5:FE=570000
019	met08_sn_6010	SAMPLE	248030-007	Soil	201936	08/27/13 08:30	100.0		
020	met08_sn_6010	SAMPLE	248030-008	Soil	201936	08/27/13 08:34	100.0		
021	met08_sn_6010	CCV				08/27/13 08:38	1.0	12	
022	met08_sn_6010	CCB				08/27/13 08:43	1.0		
023	met08_sn_6010	SAMPLE	248030-009	Soil	201936	08/27/13 08:49	1.0		5:CA=530000
024	met08_sn_6010	SAMPLE	248030-010	Soil	201936	08/27/13 08:54	1.0		9:FE=660000
025	met08_sn_6010	SAMPLE	248030-010	Soil	201936	08/27/13 08:59	100.0		
026	met08_sn_6010	SAMPLE	248030-012	Soil	201936	08/27/13 09:04	1.0		5:FE=540000
027	met08_sn_6010	SAMPLE	248030-012	Soil	201936	08/27/13 09:07	100.0		
028	met08_sn_6010	SAMPLE	248030-013	Soil	201936	08/27/13 09:11	100.0		
029	met08_sn_6010	SAMPLE	248030-014	Soil	201936	08/27/13 09:15	1.0		8:CA=1000000
030	met08_sn_6010	SAMPLE	248030-014	Soil	201936	08/27/13 09:21	100.0		
031	met08_sn_6010	SAMPLE	248030-015	Soil	201936	08/27/13 09:25	100.0		
032	met08_sn_6010	SAMPLE	248030-019	Soil	201936	08/27/13 09:29	100.0		
033	met08_sn_6010	ICSAB				08/27/13 09:33	1.0	8	5:AL=500000
034	met08_sn_6010	CCV				08/27/13 09:39	1.0	12	
035	met08_sn_6010	CCB				08/27/13 09:44	1.0		
036	met08_sn_6010	SAMPLE	248030-020	Soil	201936	08/27/13 09:49	1.0		5:FE=520000
037	met08_sn_6010	SAMPLE	248030-021	Soil	201936	08/27/13 09:55	1.0		5:MG=690000
038	met08_sn_6010	MSS	248030-018	Soil	201937	08/27/13 09:58	1.0		6:FE=410000
039	met08_sn_6010	MSS	248030-018	Soil	201937	08/27/13 10:04	100.0		
040	met08_sn_6010	SER	QC702881	Soil	201937	08/27/13 10:08	500.0		
041	met08_sn_6010	PDS	QC702882	Soil	201937	08/27/13 10:12	100.0	10 11	
042	met08_sn_6010	SAMPLE	248030-024	Soil	201937	08/27/13 10:16	1.0		6:MG=530000
043	met08_sn_6010	SAMPLE	248030-025	Soil	201937	08/27/13 10:19	100.0		
044	met08_sn_6010	SAMPLE	248030-027	Soil	201937	08/27/13 10:24	1.0		9:FE=1100000
045	met08_sn_6010	SAMPLE	248030-027	Soil	201937	08/27/13 10:29	100.0		
046	met08_sn_6010	CCV				08/27/13 10:33	1.0	12	
047	met08_sn_6010	CCB				08/27/13 10:39	1.0		
048	met08_sn_6010	BLANK	QC702727	Filtrate	201898	08/27/13 10:44	1.0		
049	met08_sn_6010	BS	QC702728	Filtrate	201898	08/27/13 10:49	1.0		
050	met08_sn_6010	BSD	QC702729	Filtrate	201898	08/27/13 10:53	1.0		
051	met08_sn_6010	MSS	247902-001	Filtrate	201898	08/27/13 10:57	1.0		1:NA=120000
052	met08_sn_6010	MS	QC702730	Filtrate	201898	08/27/13 11:02	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83344579

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/27/13 06:59  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
053	met08_sn_6010	MSD	QC702731	Filtrate	201898	08/27/13 11:07	1.0	
054	met08_sn_6010	SER	QC702732	Filtrate	201898	08/27/13 11:11	5.0	
055	met08_sn_6010	PDS	QC702733	Filtrate	201898	08/27/13 11:16	1.0	13 14
056	met08_sn_6010	SAMPLE	248019-001	Filtrate	201898	08/27/13 11:20	1.0	3:CA=260000
057	met08_sn_6010	ICSAB				08/27/13 11:24	1.0	8 5:MG=500000
058	met08_sn_6010	CCV				08/27/13 11:30	1.0	12
059	met08_sn_6010	CCB				08/27/13 11:35	1.0	
060	met08_sn_6010	SAMPLE	248030-028	Soil	201937	08/27/13 11:40	1.0	5:FE=520000
061	met08_sn_6010	SAMPLE	248030-029	Soil	201937	08/27/13 11:44	1.0	5:FE=490000
062	met08_sn_6010	SAMPLE	248030-032	Soil	201937	08/27/13 11:47	1.0	4:FE=350000
063	met08_sn_6010	SAMPLE	248030-033	Soil	201937	08/27/13 11:50	1.0	7:MG=1000000
064	met08_sn_6010	SAMPLE	248030-033	Soil	201937	08/27/13 11:54	100.0	
065	met08_sn_6010	SAMPLE	248030-034	Soil	201937	08/27/13 11:58	1.0	4:MG=730000
066	met08_sn_6010	SAMPLE	248030-035	Soil	201937	08/27/13 12:01	1.0	5:CA=480000
067	met08_sn_6010	SAMPLE	248030-036	Soil	201937	08/27/13 12:07	1.0	5:MG=1100000
068	met08_sn_6010	SAMPLE	248030-036	Soil	201937	08/27/13 12:10	100.0	
069	met08_sn_6010	SAMPLE	248030-037	Soil	201937	08/27/13 12:14	1.0	4:FE=450000
070	met08_sn_6010	CCV				08/27/13 12:17	1.0	12
071	met08_sn_6010	CCB				08/27/13 12:23	1.0	
072	met08_sn_6010	SAMPLE	248030-004	Soil	201938	08/27/13 12:28	1.0	5:MG=3200000
073	met08_sn_6010	SAMPLE	248109-002	Soil	201938	08/27/13 12:31	1.0	6:CA=1200000
074	met08_sn_6010	SAMPLE	248122-001	Soil	201938	08/27/13 12:37	1.0	2:FE=300000
075	met08_sn_6010	SAMPLE	248030-040	Soil	201937	08/27/13 12:40	1.0	7:FE=990000
076	met08_sn_6010	SAMPLE	248030-040	Soil	201937	08/27/13 12:46	100.0	
077	met08_sn_6010	SAMPLE	248030-041	Soil	201937	08/27/13 12:50	1.0	6:FE=840000
078	met08_sn_6010	SAMPLE	248030-042	Soil	201937	08/27/13 12:55	1.0	7:FE=1600000
079	met08_sn_6010	SAMPLE	248030-042	Soil	201937	08/27/13 13:01	100.0	
080	met08_sn_6010	SAMPLE	248030-043	Soil	201937	08/27/13 13:05	1.0	4:FE=380000
081	met08_sn_6010	MS	QC702910	Water	201943	08/27/13 13:08	1.0	1:NA=100000
082	met08_sn_6010	ICSAB				08/27/13 13:13	1.0	8 5:MG=500000
083	met08_sn_6010	CCV				08/27/13 13:18	1.0	12
084	met08_sn_6010	CCB				08/27/13 13:23	1.0	
085	met08_sn_6010	MSD	QC702911	Water	201943	08/27/13 13:29	1.0	1:NA=100000
086	met08_sn_6010	SAMPLE	248102-002	Water	201943	08/27/13 13:33	1.0	
087	met08_sn_6010	SAMPLE	248146-001	Water	201943	08/27/13 13:38	100.0	
088	met08_sn_6010	SAMPLE	248146-002	Water	201943	08/27/13 13:43	100.0	
089	met08_sn_6010	SAMPLE	248146-003	Water	201943	08/27/13 13:48	100.0	
090	met08_sn_6010	SAMPLE	248146-004	Water	201943	08/27/13 13:52	100.0	
091	met08_sn_6010	CCV				08/27/13 13:57	1.0	12
092	met08_sn_6010	CCB				08/27/13 14:03	1.0	
093	met08_sn_6010	ICSAB				08/27/13 14:08	1.0	8 5:AL=490000

NT 08/27/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 61.

JDB 08/27/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 62 through 93.

Standards used: 1=S22714 2=S22716 3=S22715 4=S22717 5=S22718 6=S22721 7=S22719 8=S22720 9=S22723 10=S22594 11=S22595  
 12=S22722 13=S21652 14=S21653

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83344579

Date : 08/27/13  
 Sequence : MET08 08/27/13

Reference : met08\_sn\_6010  
 Analyzed : 08/27/13 07:04

#	Type	Sample ID	Y A
		ICAL STD	3183720
		LOWER LIMIT	955116
		UPPER LIMIT	6367440
008	ICB		3207911
009	ICSA		2648255
010	ICSAB		2674454
013	MSS	248030-005	3105577
014	MS	QC702872	3053373
015	MSD	QC702873	3055254
016	PDS	QC702875	3031797
017	SAMPLE	248030-003	3249821
018	SAMPLE	248030-007	3132244
019	SAMPLE	248030-007	3198143
020	SAMPLE	248030-008	3250602
021	CCV		3109967
022	CCB		3226549
023	SAMPLE	248030-009	2998871
024	SAMPLE	248030-010	2924215
025	SAMPLE	248030-010	3215193
026	SAMPLE	248030-012	3024722
027	SAMPLE	248030-012	3246018
028	SAMPLE	248030-013	3193832
029	SAMPLE	248030-014	3097675
030	SAMPLE	248030-014	3225646
031	SAMPLE	248030-015	3224368
032	SAMPLE	248030-019	3194594
033	ICSAB		2662362
034	CCV		3105614
035	CCB		3256374
036	SAMPLE	248030-020	3011764
037	SAMPLE	248030-021	2952603
038	MSS	248030-018	3044761
039	MSS	248030-018	3236957
040	SER	QC702881	3239042
041	PDS	QC702882	3111539
042	SAMPLE	248030-024	2994252
043	SAMPLE	248030-025	3259768
044	SAMPLE	248030-027	2756069
045	SAMPLE	248030-027	3212483
046	CCV		3128035
047	CCB		3300276
048	BLANK	QC702727	3342960
049	BS	QC702728	3209198
050	BSD	QC702729	3214643
051	MSS	247902-001	3085921
052	MS	QC702730	3074247
053	MSD	QC702731	3037051
054	SER	QC702732	3161217
055	PDS	QC702733	3073156
056	SAMPLE	248019-001	2951432
057	ICSAB		2724530

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83344579

Date : 08/27/13  
 Sequence : MET08 08/27/13

Reference : met08\_sn\_6010  
 Analyzed : 08/27/13 07:04

#	Type	Sample ID	Y	A
058	CCV		3120104	
059	CCB		3247406	
060	SAMPLE	248030-028	3073105	
061	SAMPLE	248030-029	2939104	
062	SAMPLE	248030-032	2989609	
063	SAMPLE	248030-033	2938120	
064	SAMPLE	248030-033	3221944	
065	SAMPLE	248030-034	2962087	
066	SAMPLE	248030-035	2958449	
067	SAMPLE	248030-036	2980729	
068	SAMPLE	248030-036	3216252	
069	SAMPLE	248030-037	3126018	
070	CCV		3085802	
071	CCB		3250039	
072	SAMPLE	248030-004	2557627	
074	SAMPLE	248122-001	3179612	
075	SAMPLE	248030-040	2892080	
076	SAMPLE	248030-040	3159754	
077	SAMPLE	248030-041	2959721	
078	SAMPLE	248030-042	2824274	
079	SAMPLE	248030-042	3286550	
080	SAMPLE	248030-043	3088801	
081	MS	QC702910	3086381	
082	ICSAB		2712790	
083	CCV		3098112	
084	CCB		3250644	
085	MSD	QC702911	3100163	
086	SAMPLE	248102-002	3177974	
091	CCV		3101565	
092	CCB		3310439	
093	ICSAB		2733325	

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS SOIL: EPA 6010B

Inst : MET08  
 Calnum : 83344579001  
 Units : ug/L  
 Date : 27-AUG-2013 06:59  
 X Axis : R  
 Reviewer : ---

Level	File	Seqnum	Sample ID	Analyzed	Std
L1	met08_sn_6010_83344579002	CR15.1	27-AUG-2013 07:04	S22714	
L2	met08_sn_6010_83344579003	CS100	27-AUG-2013 07:09	S22716	
L3	met08_sn_6010_83344579004	CS1K	27-AUG-2013 07:13	S22715	
L4	met08_sn_6010_83344579005	CS10K	27-AUG-2013 07:18	S22717	
L5	met08_sn_6010_83344579006	CS100K	27-AUG-2013 07:23	S22718	

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	38.900	36.909	37.381	37.242		LOR0	0.00000	0.02685		37.608	1.000	0.995	
Arsenic	A	21.480	22.068	22.262	22.096		LOR0	0.00000	0.04525		21.976	1.000	0.995	
Barium	A	478.76	480.87	474.17	463.84		LOR0	0.00000	0.00216		474.41	1.000	0.995	
Beryllium	A	5657.8	5467.6	5526.3			LOR0	0.00000	1.81E-4		5550.6	1.000	0.995	
Cadmium	A	260.40	263.44	263.90	253.26		LOR0	0.00000	0.00395		260.25	1.000	0.995	
Chromium	A	115.14	109.15	107.30	105.75		LOR0	0.00000	0.00946		109.34	1.000	0.995	
Cobalt	A	142.24	139.48	143.78	142.15		LOR0	0.00000	0.00703		141.91	1.000	0.995	
Copper	A	138.80	127.89	130.99	133.28		LOR0	0.00000	0.00750		132.74	1.000	0.995	
Lead	A	70.420	66.077	66.434	65.529		LOR0	0.00000	0.01526		67.115	1.000	0.995	
Molybdenum	A	42.280	41.168	41.076	41.069		LOR0	0.00000	0.02435		41.398	1.000	0.995	
Nickel	A	55.620	55.737	56.742	56.256		LOR0	0.00000	0.01777		56.089	1.000	0.995	
Selenium	A	36.620	32.375	31.784	31.736		LOR0	0.00000	0.03151		33.129	1.000	0.995	
Silver	A	840.96	870.59	867.21	872.98		LOR0	0.00000	0.00115		862.94	1.000	0.995	
Thallium	A	23.460	21.377	21.301	20.455		LOR0	0.00000	0.04887		21.648	1.000	0.995	
Vanadium	A	177.88	185.73	183.15	182.74		LOR0	0.00000	0.00547		182.37	1.000	0.995	
Zinc	A	88.090	87.610	85.409	84.489		LOR0	0.00000	0.01183		86.399	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	4	100.00	-1	1000.0	0	10000	0		
Arsenic	A	5.0000	-3	100.00	0	1000.0	1	10000	0		
Barium	A	5.0000	3	100.00	4	1000.0	2	10000	0		
Beryllium	A	2.0000	2	100.00	-1	1000.0	0				
Cadmium	A	5.0000	3	100.00	4	1000.0	4	10000	0		
Chromium	A	5.0000	9	100.00	3	1000.0	1	10000	0		
Cobalt	A	5.0000	0	100.00	-2	1000.0	1	10000	0		
Copper	A	5.0000	4	100.00	-4	1000.0	-2	10000	0		
Lead	A	5.0000	7	100.00	1	1000.0	1	10000	0		
Molybdenum	A	5.0000	3	100.00	0	1000.0	0	10000	0		
Nickel	A	5.0000	-1	100.00	-1	1000.0	1	10000	0		
Selenium	A	10.000	15	100.00	2	1000.0	0	10000	0		
Silver	A	5.0000	-4	100.00	0	1000.0	-1	2000.0	0		
Thallium	A	10.000	15	100.00	4	1000.0	4	10000	0		
Vanadium	A	5.0000	-3	100.00	2	1000.0	0	10000	0		
Zinc	A	20.000	4	100.00	4	1000.0	1	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Calnum : 83344579001

Cal Date : 27-AUG-2013

ICV 83344579007 (27-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	5041	ug/L	1	10	
Arsenic	A	5000	4944	ug/L	-1	10	
Barium	A	5000	4951	ug/L	-1	10	
Beryllium	A	500.0	501.8	ug/L	0	10	
Cadmium	A	5000	5098	ug/L	2	10	
Chromium	A	5000	4980	ug/L	0	10	
Cobalt	A	5000	4961	ug/L	-1	10	
Copper	A	5000	4806	ug/L	-4	10	
Lead	A	5000	4871	ug/L	-3	10	
Molybdenum	A	5000	5050	ug/L	1	10	
Nickel	A	5000	4978	ug/L	0	10	
Selenium	A	5000	4964	ug/L	-1	10	
Silver	A	1000	969.9	ug/L	-3	10	
Thallium	A	5000	4986	ug/L	0	10	
Vanadium	A	5000	4970	ug/L	-1	10	
Zinc	A	5000	4954	ug/L	-1	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83344579008 File : met08\_sn\_6010 Time : 27-AUG-2013 07:34  
 Cal : 83344579001 Caldate : 27-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	[2.256]	5.000	1.484	ug/L	!ib
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	[0.9588]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3207911	0.76

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83344579009  
 Cal : 83344579001  
 Standards: S22719  
 File : met08\_sn\_6010  
 Caldate : 27-AUG-2013  
 IDF : 1.0  
 Time : 27-AUG-2013 07:39

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[-2.711]	10.00	ug/L	
Arsenic	A	[1.670]	5.000	ug/L	!a+
Barium	A	[0.5374]	5.000	ug/L	!a+
Beryllium	A	[0.1733]	2.000	ug/L	
Cadmium	A	[-1.819]	5.000	ug/L	!a-
Cobalt	A	[-0.8424]	5.000	ug/L	!a-
Lead	A	[0.3402]	5.000	ug/L	
Molybdenum	A	[-1.253]	5.000	ug/L	!a-
Selenium	A	[-9.105]	10.00	ug/L	!a-
Silver	A	[0.6356]	5.000	ug/L	
Thallium	A	[-3.906]	10.00	ug/L	
Zinc	A	[13.95]	20.00	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19460	ug/L	97
Copper	A	20000	20280	ug/L	101
Manganese	A	20000	18300	ug/L	91
Nickel	A	20000	17950	ug/L	90
Vanadium	A	20000	19920	ug/L	100
Aluminum	R	500000	500900	ug/L	100
Calcium	R	500000	474500	ug/L	95
Iron	R	200000	188700	ug/L	94
Magnesium	R	500000	488900	ug/L	98
Titanium	R	20000	21440	ug/L	107

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	2648255	-16.82

!=warning +=high bias -=low bias a=ICSA

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83344579010  
 Cal : 83344579001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 27-AUG-2013  
 IDF : 1.0  
 Time : 27-AUG-2013 07:55

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	518.5	ug/L	4	20	
Arsenic	A	500.0	512.0	ug/L	2	20	
Barium	A	500.0	518.2	ug/L	4	20	
Beryllium	A	500.0	514.9	ug/L	3	20	
Cadmium	A	1000	1001	ug/L	0	20	
Chromium	A	500.0	505.3	ug/L	1	20	
Cobalt	A	500.0	459.1	ug/L	-8	20	
Copper	A	500.0	534.4	ug/L	7	20	
Lead	A	1000	936.5	ug/L	-6	20	
Molybdenum	A	500.0	505.5	ug/L	1	20	
Nickel	A	1000	927.9	ug/L	-7	20	
Selenium	A	500.0	524.8	ug/L	5	20	
Silver	A	1000	1073	ug/L	7	20	
Thallium	A	500.0	456.8	ug/L	-9	20	
Vanadium	A	500.0	535.2	ug/L	7	20	
Zinc	A	1000	961.5	ug/L	-4	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	2674454	-16.00

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83344579021  
 Cal : 83344579001  
 Standards: S22722

File : met08\_sn\_6010  
 Caldate : 27-AUG-2013

IDF : 1.0  
 Time : 27-AUG-2013 08:38

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.608	37.670	5000	5057	ug/L	1	10	
Arsenic	A	21.976	21.973	5000	4972	ug/L	-1	10	
Barium	A	474.41	465.10	5000	5012	ug/L	0	10	
Beryllium	A	5550.6	5527.1	500.0	500.1	ug/L	0	10	
Cadmium	A	260.25	261.17	5000	5154	ug/L	3	10	
Chromium	A	109.34	106.82	5000	5050	ug/L	1	10	
Cobalt	A	141.91	143.27	5000	5029	ug/L	1	10	
Copper	A	132.74	129.32	5000	4852	ug/L	-3	10	
Lead	A	67.115	64.348	5000	4909	ug/L	-2	10	
Molybdenum	A	41.398	41.965	5000	5109	ug/L	2	10	
Nickel	A	56.089	56.700	5000	5039	ug/L	1	10	
Selenium	A	33.129	32.021	5000	5045	ug/L	1	10	
Silver	A	862.94	854.23	1000	979.8	ug/L	-2	10	
Thallium	A	21.648	20.608	5000	5035	ug/L	1	10	
Vanadium	A	182.37	184.28	5000	5042	ug/L	1	10	
Zinc	A	86.399	84.891	5000	5023	ug/L	0	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3109967	-2.32

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83344579022 File : met08\_sn\_6010 Time : 27-AUG-2013 08:43  
 Cal : 83344579001 Caldate : 27-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	[1.543]	5.000	1.484	ug/L	!ib
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[1.796]	5.000	1.694	ug/L	!ib
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3226549	1.35

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CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83344579033  
 Cal : 83344579001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 27-AUG-2013  
 IDF : 1.0  
 Time : 27-AUG-2013 09:33

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	530.5	ug/L	6	20	
Arsenic	A	500.0	519.5	ug/L	4	20	
Barium	A	500.0	524.3	ug/L	5	20	
Beryllium	A	500.0	517.4	ug/L	3	20	
Cadmium	A	1000	1013	ug/L	1	20	
Chromium	A	500.0	511.0	ug/L	2	20	
Cobalt	A	500.0	469.3	ug/L	-6	20	
Copper	A	500.0	531.3	ug/L	6	20	
Lead	A	1000	956.8	ug/L	-4	20	
Molybdenum	A	500.0	517.1	ug/L	3	20	
Nickel	A	1000	939.1	ug/L	-6	20	
Selenium	A	500.0	513.9	ug/L	3	20	
Silver	A	1000	1082	ug/L	8	20	
Thallium	A	500.0	449.5	ug/L	-10	20	
Vanadium	A	500.0	540.2	ug/L	8	20	
Zinc	A	1000	976.0	ug/L	-2	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	2662362	-16.38

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83344579034  
 Cal : 83344579001  
 Standards: S22722

File : met08\_sn\_6010  
 Caldate : 27-AUG-2013

IDF : 1.0  
 Time : 27-AUG-2013 09:39

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.608	37.617	5000	5050	ug/L	1	10	
Arsenic	A	21.976	21.949	5000	4966	ug/L	-1	10	
Barium	A	474.41	462.85	5000	4988	ug/L	0	10	
Beryllium	A	5550.6	5566.4	500.0	503.7	ug/L	1	10	
Cadmium	A	260.25	260.97	5000	5150	ug/L	3	10	
Chromium	A	109.34	105.94	5000	5009	ug/L	0	10	
Cobalt	A	141.91	141.87	5000	4980	ug/L	0	10	
Copper	A	132.74	129.02	5000	4841	ug/L	-3	10	
Lead	A	67.115	64.137	5000	4893	ug/L	-2	10	
Molybdenum	A	41.398	41.704	5000	5077	ug/L	2	10	
Nickel	A	56.089	56.372	5000	5010	ug/L	0	10	
Selenium	A	33.129	31.966	5000	5036	ug/L	1	10	
Silver	A	862.94	847.77	1000	972.4	ug/L	-3	10	
Thallium	A	21.648	20.418	5000	4989	ug/L	0	10	
Vanadium	A	182.37	183.29	5000	5015	ug/L	0	10	
Zinc	A	86.399	84.197	5000	4982	ug/L	0	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3105614	-2.45

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83344579035 File : met08\_sn\_6010 Time : 27-AUG-2013 09:44  
 Cal : 83344579001 Caldate : 27-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	[0.3372]	5.000	0.2850	ug/L	!ib
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[3.909]	5.000	1.694	ug/L	!ib
Molybdenum	A	[0.8335]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3256374	2.28

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CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83344579046  
Cal : 83344579001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 27-AUG-2013

IDF : 1.0  
Time : 27-AUG-2013 10:33

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.608	38.231	5000	5133	ug/L	3	10	
Arsenic	A	21.976	22.252	5000	5035	ug/L	1	10	
Barium	A	474.41	463.47	5000	4995	ug/L	0	10	
Beryllium	A	5550.6	5524.7	500.0	499.9	ug/L	0	10	
Cadmium	A	260.25	261.21	5000	5155	ug/L	3	10	
Chromium	A	109.34	106.02	5000	5012	ug/L	0	10	
Cobalt	A	141.91	142.79	5000	5012	ug/L	0	10	
Copper	A	132.74	127.98	5000	4802	ug/L	-4	10	
Lead	A	67.115	64.357	5000	4910	ug/L	-2	10	
Molybdenum	A	41.398	41.871	5000	5098	ug/L	2	10	
Nickel	A	56.089	56.664	5000	5036	ug/L	1	10	
Selenium	A	33.129	32.423	5000	5108	ug/L	2	10	
Silver	A	862.94	848.91	1000	973.7	ug/L	-3	10	
Thallium	A	21.648	20.710	5000	5060	ug/L	1	10	
Vanadium	A	182.37	182.81	5000	5002	ug/L	0	10	
Zinc	A	86.399	84.913	5000	5025	ug/L	0	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3128035	-1.75

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83344579047 File : met08\_sn\_6010 Time : 27-AUG-2013 10:39  
 Cal : 83344579001 Caldate : 27-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	[1.627]	5.000	1.484	ug/L	!ib
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[3.007]	5.000	1.694	ug/L	!ib
Molybdenum	A	[0.7145]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3300276	3.66

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83344579057  
 Cal : 83344579001  
 Standards: S22720

File : met08\_sn\_6010  
 Caldate : 27-AUG-2013

IDF : 1.0  
 Time : 27-AUG-2013 11:24

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	535.5	ug/L	7	20	
Arsenic	A	500.0	528.2	ug/L	6	20	
Barium	A	500.0	523.6	ug/L	5	20	
Beryllium	A	500.0	523.4	ug/L	5	20	
Cadmium	A	1000	1018	ug/L	2	20	
Chromium	A	500.0	507.4	ug/L	1	20	
Cobalt	A	500.0	468.9	ug/L	-6	20	
Copper	A	500.0	518.1	ug/L	4	20	
Lead	A	1000	955.3	ug/L	-4	20	
Molybdenum	A	500.0	511.1	ug/L	2	20	
Nickel	A	1000	940.9	ug/L	-6	20	
Selenium	A	500.0	511.2	ug/L	2	20	
Silver	A	1000	1070	ug/L	7	20	
Thallium	A	500.0	458.1	ug/L	-8	20	
Vanadium	A	500.0	534.2	ug/L	7	20	
Zinc	A	1000	989.3	ug/L	-1	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	2724530	-14.42

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83344579058  
 Cal : 83344579001  
 Standards: S22722

File : met08\_sn\_6010  
 Caldate : 27-AUG-2013

IDF : 1.0  
 Time : 27-AUG-2013 11:30

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.608	38.398	5000	5155	ug/L	3	10	
Arsenic	A	21.976	22.584	5000	5110	ug/L	2	10	
Barium	A	474.41	468.80	5000	5052	ug/L	1	10	
Beryllium	A	5550.6	5601.0	500.0	506.8	ug/L	1	10	
Cadmium	A	260.25	265.65	5000	5243	ug/L	5	10	
Chromium	A	109.34	107.03	5000	5060	ug/L	1	10	
Cobalt	A	141.91	145.13	5000	5094	ug/L	2	10	
Copper	A	132.74	128.59	5000	4825	ug/L	-4	10	
Lead	A	67.115	65.391	5000	4989	ug/L	0	10	
Molybdenum	A	41.398	42.317	5000	5152	ug/L	3	10	
Nickel	A	56.089	57.406	5000	5102	ug/L	2	10	
Selenium	A	33.129	33.113	5000	5217	ug/L	4	10	
Silver	A	862.94	854.90	1000	980.6	ug/L	-2	10	
Thallium	A	21.648	20.994	5000	5130	ug/L	3	10	
Vanadium	A	182.37	183.97	5000	5033	ug/L	1	10	
Zinc	A	86.399	86.627	5000	5126	ug/L	3	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3120104	-2.00

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83344579059 File : met08\_sn\_6010 Time : 27-AUG-2013 11:35  
 Cal : 83344579001 Caldate : 27-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	[1.494]	5.000	1.484	ug/L	!ib
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[2.336]	5.000	1.694	ug/L	!ib
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3247406	2.00

!=warning ib=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83344579070  
Cal : 83344579001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 27-AUG-2013

IDF : 1.0  
Time : 27-AUG-2013 12:17

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.608	38.248	5000	5135	ug/L	3	10	
Arsenic	A	21.976	22.620	5000	5118	ug/L	2	10	
Barium	A	474.41	472.01	5000	5087	ug/L	2	10	
Beryllium	A	5550.6	5638.4	500.0	510.2	ug/L	2	10	
Cadmium	A	260.25	267.88	5000	5286	ug/L	6	10	
Chromium	A	109.34	107.83	5000	5098	ug/L	2	10	
Cobalt	A	141.91	146.45	5000	5141	ug/L	3	10	
Copper	A	132.74	128.82	5000	4833	ug/L	-3	10	
Lead	A	67.115	65.941	5000	5031	ug/L	1	10	
Molybdenum	A	41.398	42.466	5000	5170	ug/L	3	10	
Nickel	A	56.089	57.756	5000	5133	ug/L	3	10	
Selenium	A	33.129	33.150	5000	5223	ug/L	4	10	
Silver	A	862.94	858.13	1000	984.3	ug/L	-2	10	
Thallium	A	21.648	21.050	5000	5143	ug/L	3	10	
Vanadium	A	182.37	184.49	5000	5048	ug/L	1	10	
Zinc	A	86.399	87.558	5000	5181	ug/L	4	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3085802	-3.08

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83344579071 File : met08\_sn\_6010 Time : 27-AUG-2013 12:23  
 Cal : 83344579001 Caldate : 27-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	[0.3201]	5.000	0.2850	ug/L	!ib
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[2.786]	5.000	1.694	ug/L	!ib
Molybdenum	A	[0.6773]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3250039	2.08

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CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
 Seqnum : 83344579082  
 Cal : 83344579001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 27-AUG-2013  
 IDF : 1.0  
 Time : 27-AUG-2013 13:13

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	531.4	ug/L	6	20	
Arsenic	A	500.0	512.1	ug/L	2	20	
Barium	A	500.0	516.2	ug/L	3	20	
Beryllium	A	500.0	511.9	ug/L	2	20	
Cadmium	A	1000	1016	ug/L	2	20	
Chromium	A	500.0	500.5	ug/L	0	20	
Cobalt	A	500.0	469.0	ug/L	-6	20	
Copper	A	500.0	520.2	ug/L	4	20	
Lead	A	1000	955.8	ug/L	-4	20	
Molybdenum	A	500.0	508.3	ug/L	2	20	
Nickel	A	1000	936.1	ug/L	-6	20	
Selenium	A	500.0	522.5	ug/L	5	20	
Silver	A	1000	1055	ug/L	5	20	
Thallium	A	500.0	434.6	ug/L	-13	20	
Vanadium	A	500.0	526.4	ug/L	5	20	
Zinc	A	1000	983.5	ug/L	-2	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	2712790	-14.79

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08  
Seqnum : 83344579083  
Cal : 83344579001  
Standards: S22722

File : met08\_sn\_6010  
Caldate : 27-AUG-2013

IDF : 1.0  
Time : 27-AUG-2013 13:18

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.608	37.444	5000	5027	ug/L	1	10	
Arsenic	A	21.976	22.003	5000	4979	ug/L	0	10	
Barium	A	474.41	460.33	5000	4961	ug/L	-1	10	
Beryllium	A	5550.6	5517.9	500.0	499.3	ug/L	0	10	
Cadmium	A	260.25	260.69	5000	5145	ug/L	3	10	
Chromium	A	109.34	104.95	5000	4962	ug/L	-1	10	
Cobalt	A	141.91	141.42	5000	4964	ug/L	-1	10	
Copper	A	132.74	127.89	5000	4799	ug/L	-4	10	
Lead	A	67.115	63.897	5000	4875	ug/L	-3	10	
Molybdenum	A	41.398	41.372	5000	5037	ug/L	1	10	
Nickel	A	56.089	56.137	5000	4989	ug/L	0	10	
Selenium	A	33.129	32.116	5000	5060	ug/L	1	10	
Silver	A	862.94	840.59	1000	964.2	ug/L	-4	10	
Thallium	A	21.648	20.493	5000	5007	ug/L	0	10	
Vanadium	A	182.37	181.38	5000	4963	ug/L	-1	10	
Zinc	A	86.399	84.366	5000	4992	ug/L	0	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3098112	-2.69

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83344579084 File : met08\_sn\_6010 Time : 27-AUG-2013 13:23  
 Cal : 83344579001 Caldate : 27-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	[1.509]	5.000	1.484	ug/L	!ib
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[2.053]	5.000	1.694	ug/L	!ib
Molybdenum	A	[0.7926]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3183720	3250644	2.10

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SAMPLE PREPARATION SUMMARY

Batch # : 201936  
 Started By : MRN  
 Method : 3050B  
 Spike #1 ID : S22594

Prep Date : 20-AUG-2013 17:00  
 SOP Version : 3050B\_ICP\_rv13  
 Spike #2 ID : S22595

Analysis : ICAP  
 Finished By : MRN  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-002		Soil	.93	50	1	53.76						T22/ICP	
248030-003		Soil	.96	50	1	52.08						T22/ICP	
248030-005		Soil	.9	50	1	55.56						T22/ICP	
248030-006		Soil	.95	50	1	52.63						T22/ICP	
248030-007		Soil	1.1	50	1	45.45						T22/ICP	
248030-008		Soil	1.03	50	1	48.54						T22/ICP	
248030-009		Soil	1.07	50	1	46.73						T22/ICP	
248030-010		Soil	1.02	50	1	49.02						T22/ICP	
248030-011		Soil	.95	50	1	52.63						T22/ICP	
248030-012		Soil	.93	50	1	53.76						T22/ICP	
248030-013		Soil	.96	50	1	52.08						T22/ICP	
248030-014		Soil	.98	50	1	51.02						T22/ICP	
248030-015		Soil	1.05	50	1	47.62						T22/ICP	
248030-016		Soil	1.06	50	1	47.17						T22/ICP	
248030-017		Soil	.97	50	1	51.55						T22/ICP	
248030-019		Soil	1.01	50	1	49.50						T22/ICP	
248030-020		Soil	.92	50	1	54.35						T22/ICP	
248030-021		Soil	1.04	50	1	48.08						T22/ICP	
248030-022		Soil	1.03	50	1	48.54						T22/ICP	
248030-023		Soil	.95	50	1	52.63						T22/ICP	
QC702869	BLANK	Soil	1	50	1	50.0							
QC702870	BS	Soil	1	50	1	50.0		.5	.5				
QC702871	BSD	Soil	1	50	1	50.0		.5	.5				
QC702872	MS	Soil	.93	50	1	53.76		.5	.5				
QC702873	MSD	Soil	1.08	50	1	46.30		.5	.5				
QC702874	SER	Soil	.9	50	1	55.56							
QC702875	PDS	Soil	.9	50	1	55.56							

Analyst: NT

Date: 08/27/13

Reviewer: PRW

Date: 08/28/13

Soil Digestion for ICP & ICP-MS

Curtis & Tompkins, Ltd.

LIMS Batch #: 201936  
 Date Digested: 8/20/13  
 Digested by: MW

Scale Used  Metals Prep   
 Digestion Method  EPA 3050b

BK3472  
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Lvl.	Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Filtered? (y/n)	ID	Comments
	BK			1.50	<input type="checkbox"/>		
	B3			1.50	<input type="checkbox"/>		
	B6D			1.50	<input type="checkbox"/>		
5	218030 - 005	B	0.90	1.50	<input type="checkbox"/>		
	- 005 MS		0.93	1.50	<input type="checkbox"/>		
	- 005 MSD		1.08	1.50	<input type="checkbox"/>		
	-002	H	0.93	1.50	<input type="checkbox"/>		
	-003	H	0.96	1.50	<input type="checkbox"/>		
	-006	D	0.95	1.50	<input type="checkbox"/>		
10	-007	D	1.10	1.50	<input type="checkbox"/>		
	-008	D	1.03	1.50	<input type="checkbox"/>		
	-009	A	1.07	1.50	<input type="checkbox"/>		
	-010	B	1.02	1.50	<input type="checkbox"/>		
	-011	D	0.95	1.50	<input type="checkbox"/>		
15	-012	D	0.93	1.50	<input type="checkbox"/>		
	-013	B	0.96	1.50	<input type="checkbox"/>		
	-014	H	0.98	1.50	<input type="checkbox"/>		
	-015	H	1.05	1.50	<input type="checkbox"/>		
	-016	B	1.06	1.50	<input type="checkbox"/>		
20	-017	E	0.97	1.50	<input type="checkbox"/>		
	-019	B	1.01	1.50	<input type="checkbox"/>		
	-020	B	0.92	1.50	<input type="checkbox"/>		
	-021	E	1.04	1.50	<input type="checkbox"/>		
	-022	A	1.03	1.50	<input type="checkbox"/>		
	-023	A	0.95	1.50	<input type="checkbox"/>		

	Reagent ID or LIMS #	Initials / Date
Digestion tubes, lot#	11691261	MW 8/20/13
0.5 mL of spike solution (Std1) was added to all spikes	522594	
0.5 mL of spike solution (Std2) was added to all spikes	522595	
Digestion Temperature (°C), Block and Probe Location	95° B   19	
Digestion begun at (time)	5:30pm	
1:1 HNO3	3390 JTB	
concentrated HNO3	21587 JTB	
3mL 30% hydrogen peroxide	14468 ↓	
concentrated HCl	40272	
Digestion ended at (time)	8:00pm	
<input checked="" type="checkbox"/> filtered	4505267	
Relinquished to ICP group	ICAP	

MW 8/20/13  
 Digestion Chemist / Date

Continued from page 1  
 Continued on page 1

Reviewed Online / See LIMS

SAMPLE PREPARATION SUMMARY

Batch # : 201937  
 Started By : MRN  
 Method : 3050B  
 Spike #1 ID : S22594

Prep Date : 20-AUG-2013 17:00  
 SOP Version : 3050B\_ICP\_rv13  
 Spike #2 ID : S22595

Analysis : ICAP  
 Finished By : MRN  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-018		Soil	.92	50	1	54.35						T22/ICP	
248030-024		Soil	.97	50	1	51.55						T22/ICP	
248030-025		Soil	.99	50	1	50.51						T22/ICP	
248030-026		Soil	.97	50	1	51.55						T22/ICP	
248030-027		Soil	.92	50	1	54.35						T22/ICP	
248030-028		Soil	.97	50	1	51.55						T22/ICP	
248030-029		Soil	.94	50	1	53.19						T22/ICP	
248030-030		Soil	.94	50	1	53.19						T22/ICP	
248030-031		Soil	.9	50	1	55.56						T22/ICP	
248030-032		Soil	.94	50	1	53.19						T22/ICP	
248030-033		Soil	1.01	50	1	49.50						T22/ICP	
248030-034		Soil	.97	50	1	51.55						T22/ICP	
248030-035		Soil	1	50	1	50.0						T22/ICP	
248030-036		Soil	1.1	50	1	45.45						T22/ICP	
248030-037		Soil	1.02	50	1	49.02						T22/ICP	
248030-039		Soil	.93	50	1	53.76						T22/ICP	
248030-040		Soil	.92	50	1	54.35						T22/ICP	
248030-041		Soil	1	50	1	50.0						T22/ICP	
248030-042		Soil	1	50	1	50.0						T22/ICP	
248030-043		Soil	.99	50	1	50.51						T22/ICP	
QC702876	BLANK	Soil	1	50	1	50.0							
QC702877	BS	Soil	1	50	1	50.0		.5	.5				
QC702878	BSD	Soil	1	50	1	50.0		.5	.5				
QC702879	MS	Soil	.94	50	1	53.19		.5	.5				
QC702880	MSD	Soil	.99	50	1	50.51		.5	.5				
QC702881	SER	Soil	.92	50	1	54.35							
QC702882	PDS	Soil	.92	50	1	54.35							

JDB 08/27/13 : Reviewed weights

Analyst: JDB

Date: 08/27/13

Reviewer: PRW

Date: 08/28/13

Soil Digestion for ICP & ICP-MS

Curtis & Tompkins, Ltd.

LIMS Batch #: 201937  
 Date Digested: 8/20/13  
 Digested by: MN

Scale Used  \_\_\_\_\_  
 Metals Prep  \_\_\_\_\_  
 Digestion Method  EPA 3050b  \_\_\_\_\_

BK3472  
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Level	Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Filtered? (y/n)	ID	Comments
	BIK			50 <input type="checkbox"/>			
	BS			50 <input type="checkbox"/>			
	BSD			50 <input type="checkbox"/>			
5	TTL 248030 - 018	G	0.92	50 <input type="checkbox"/>			
	- 018 MS		0.94	50 <input type="checkbox"/>			
	- 018 MSD		0.99	50 <input type="checkbox"/>			
	- 024	A	0.97	50 <input type="checkbox"/>			
	- 025	B	0.99	50 <input type="checkbox"/>			
	- 026	B	0.97	50 <input type="checkbox"/>			
10	- 027	B	0.92	50 <input type="checkbox"/>			
	- 028	A	0.97	50 <input type="checkbox"/>			
	- 029	B	0.94	50 <input type="checkbox"/>			
	- 030	B	0.94	50 <input type="checkbox"/>			
	- 031	B	0.90	50 <input type="checkbox"/>			
15	- 032	B	0.94	50 <input type="checkbox"/>			
	- 033	A	1.01	50 <input type="checkbox"/>			
	- 034	D	0.97	50 <input type="checkbox"/>			
	- 035	D	1.00	50 <input type="checkbox"/>			
	- 036	D	1.10	50 <input type="checkbox"/>			
20	- 037	A	1.02	50 <input type="checkbox"/>			
	- 039	D	0.93	50 <input type="checkbox"/>			
	- 040	A	0.92	50 <input type="checkbox"/>			
	- 041	B	1.00	50 <input type="checkbox"/>			
	- 042	A	1.00	50 <input type="checkbox"/>			
	- 043	D	0.99	50 <input type="checkbox"/>			

	Reagent ID or LIMS #	Initials / Date
Digestion tubes, lot#	16L909-261	MN 8/20/13
<u>0.5</u> mL of spike solution (Std1) was added to all spikes	S 22594	
<u>0.5</u> mL of spike solution (Std2) was added to all spikes	S 22594	
Digestion Temperature (°C), Block and Probe Location	95°C   19	
Digestion begun at (time)	5:30pm	
1:1 HNO3	3380 JTB	
concentrated HNO3	21587	
3mL 30% hydrogen peroxide	14468	
concentrated HCl	42272	
Digestion ended at (time)	8:00pm	
<input checked="" type="checkbox"/> filtered	4505267	
Relinquished to ICP group	ICAP	

*Mark Mark* 8/20/13  
 Digestion Chemist / Date

Continued from page /  
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Reviewed Online / See LIMS

SAMPLE PREPARATION SUMMARY

Batch # : 201938  
 Started By : MRN  
 Method : 3050B  
 Spike #1 ID : S22594

Prep Date : 20-AUG-2013 17:00  
 SOP Version : 3050B\_ICP\_rv13  
 Spike #2 ID : S22595

Analysis : ICAP  
 Finished By : MRN  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248022-001		Soil	.92	50	1	54.35						AS	
248022-002		Soil	.98	50	1	51.02						AS	
248030-001		Soil	.99	50	1	50.51						T22/ICP	
248030-004		Soil	1.01	50	1	49.50						T22/ICP	
248030-044		Soil	1.08	50	1	46.30						T22/ICP	
248039-009		Soil	1.04	50	1	48.08						T22/ICP	
248046-001		Soil	1.01	50	1	49.50						PB	
248046-002		Soil	1.08	50	1	46.30						PB	
248046-003		Soil	1.05	50	1	47.62						PB	
248046-004		Soil	.92	50	1	54.35						PB	
248046-005		Soil	1.02	50	1	49.02						PB	
248046-006		Soil	1.06	50	1	47.17						PB	
248098-001		Soil	.97	50	1	51.55						PB	
248098-002		Soil	1.04	50	1	48.08						PB	
248098-003		Soil	.93	50	1	53.76						PB	
248098-004		Soil	1.02	50	1	49.02						PB	
248100-001		Soil	1.06	50	1	47.17						PB	
248100-002		Soil	.97	50	1	51.55						PB	
248109-002		Soil	1.04	50	1	48.08						T22/ICP	
248122-001		Soil	.99	50	1	50.51						T22/ICP	
QC702883	BLANK	Soil	1	50	1	50.0							
QC702884	BS	Soil	1	50	1	50.0	.5	.5					
QC702885	BSD	Soil	1	50	1	50.0	.5	.5					
QC702886	MS	Soil	1.08	50	1	46.30	.5	.5					
QC702887	MSD	Soil	.99	50	1	50.51	.5	.5					
QC702888	SER	Soil	1.01	50	1	49.50							
QC702889	PDS	Soil	1.01	50	1	49.50							

Analyst: JDB

Date: 08/23/13

Reviewer: PRW

Date: 08/23/13

LIMS Batch #: 201938  
 Date Digested: 8/20/13  
 Digested by: MN

Scale Used  
 Metals Prep

Digestion Method  
 EPA 3050b

BK3472  
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Lvl.	Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Filtered? (y/n)	ID	IC	Comments
	B/K			50 <input type="checkbox"/>				
	B/S			50 <input type="checkbox"/>				
	B/S/D			50 <input type="checkbox"/>				
III	248046-001	F	1.01	50 <input type="checkbox"/>				
5	-001 MS	↓	1.08	50 <input type="checkbox"/>				
	-001 MSD	↓	0.99	50 <input type="checkbox"/>				
	-002	F	1.08	50 <input type="checkbox"/>				
	-003	↓	1.05	50 <input type="checkbox"/>				
	-004	↓	0.92	50 <input type="checkbox"/>				
10	-005	↓	1.02	50 <input type="checkbox"/>				
	-006	↓	1.06	50 <input type="checkbox"/>				
II	248039-009	D	1.04	50 <input type="checkbox"/>				Comp 248039-009 = 1.4A 50g
II	248022-001	A	0.92	50 <input type="checkbox"/>				
	-002	A	0.98	50 <input type="checkbox"/>				
III	15 248030-001	A	0.99	50 <input type="checkbox"/>				
	-004	B	1.01	50 <input type="checkbox"/>				
	-044	A	1.08	50 <input type="checkbox"/>				
				50 <input type="checkbox"/>				
				50 <input type="checkbox"/>				
20				50 <input type="checkbox"/>				
				50 <input type="checkbox"/>				
				50 <input type="checkbox"/>				
				50 <input type="checkbox"/>				
				50 <input type="checkbox"/>				
				50 <input type="checkbox"/>				

Digestion tubes, lot# 162909-261 Initials / I MN 8/20/13  
0.5 mL of spike solution (Std1) was added to all spikes 522594  
0.5 mL of spike solution (Std2) was added to all spikes 522595  
 Digestion Temperature (°C), Block and Probe Location 95°C | 19  
 Digestion begun at (time) 5:30pm  
 1:1 HNO3 3390 JTO  
 concentrated HNO3 21587 ↓  
 3mL 30% hydrogen peroxide KF68 ↓  
 concentrated HCl 45272 ↓  
 Digestion ended at (time) 8:00pm  
 filtered 9505267  
 Relinquished to ICP group ICP

MN 8/20/13  
 Digestion Chemist / Date

Continued from page /  
 Continued on page /

Reviewed Online / See LIMS

LIMS Batch #: 201938  
 Date Digested: 8/20/13  
 Digested by: MN

Scale Used  
 Metals Prep

Digestion Method  
 EPA 3050b

BK3472  
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Lvl.	Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Filtered? (y/n)	ID	Comments
	BIK			50	y		
	BS			50	y		
	BSD			50	y		
III	248046-001	F	1.01	50	y		
5	-001 MS		1.08	50	y		
	-001 MSD		0.99	50	y		
	-002	F	1.08	50	y		
	-003		1.05	50	y		
	-004		0.92	50	y		
10	-005		1.02	50	y		
	-006		1.06	50	y		
II	248039-009	D	1.04	50	y		Comp 248039-009=1-4A 50g
II	248022-001	A	0.92	50	y		
	-002	A	0.98	50	y		
III	248030-001	A	0.99	50	y		
	-004	B	1.01	50	y		
	-044	A	1.08	50	y		
II	248122-001	B	0.99	50	y		Add 8/20/13 e. 300pm
II	248109-002	B	1.04	50	y		
III	248100-001	F	1.06	50	y		
	-002	F	0.97	50	y		
III	248098-001	F	0.97	50	y		
	-002		1.04	50	y		
	-003		0.93	50	y		
	-004		1.02	50	y		

	Reagent ID or LIMS #	Initials / Date
Digestion tubes, lot#	167909-261	MN 8/20/13
0.5 mL of spike solution (Std1) was added to all spikes	522594	
0.5 mL of spike solution (Std2) was added to all spikes	522595	
Digestion Temperature (°C), Block and Probe Location	95°C   19	
Digestion begun at (time)	5:30pm	
1:1 HNO3	3390 JTO	
concentrated HNO3	21517	
3mL 30% hydrogen peroxide	K68	
concentrated HCl	C6272	
Digestion ended at (time)	8:00pm	
<input checked="" type="checkbox"/> filtered	9505267	
Relinquished to ICP group	ICP	

MMA Made 8/20/13  
 Digestion Chemist / Date

Continued from page /  
 Continued on page /

Reviewed Online / See LIMS

**Mercury Data**

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 843333464

Instrument : MET14  
 Method : EPA 7470A

Begun : 08/19/13 13:44  
 SOP Version : hg\_water\_rv16

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	201872	ICALBLK	STD01REP1			08/19/13 13:44	1.0		
002	201872	ICAL	STD02REP1			08/19/13 13:46	1.0	1	
003	201872	ICAL	STD03REP1			08/19/13 13:48	1.0	1	
004	201872	ICAL	STD04REP1			08/19/13 13:50	1.0	1	
005	201872	ICAL	STD05REP1			08/19/13 13:52	1.0	1	
006	201872	ICAL	STD06REP1			08/19/13 13:55	1.0	1	
007	201872	ICV				08/19/13 14:01	1.0	2	
008	201872	ICB				08/19/13 14:03	1.0		
009	201872	BLANK	QC702617	Soil	201872	08/19/13 14:05	1.0		
010	201872	BS	QC702618	Soil	201872	08/19/13 14:07	1.0		
011	201872	BSD	QC702619	Soil	201872	08/19/13 14:09	1.0		
012	201872	MSS	248030-005	Soil	201872	08/19/13 14:12	1.0		
013	201872	MS	QC702620	Soil	201872	08/19/13 14:14	1.0		
014	201872	MSD	QC702621	Soil	201872	08/19/13 14:16	1.0		
015	201872	SAMPLE	248030-001	Soil	201872	08/19/13 14:18	1.0		
016	201872	SAMPLE	248030-002	Soil	201872	08/19/13 14:20	1.0		
017	201872	SAMPLE	248030-003	Soil	201872	08/19/13 14:23	1.0		
018	201872	SAMPLE	248030-004	Soil	201872	08/19/13 14:25	1.0		
019	201872	CCV				08/19/13 14:27	1.0	3	
020	201872	CCB				08/19/13 14:29	1.0		
021	201872	SAMPLE	248030-006	Soil	201872	08/19/13 14:32	1.0		
022	201872	SAMPLE	248030-007	Soil	201872	08/19/13 14:35	1.0		
023	201872	SAMPLE	248030-008	Soil	201872	08/19/13 14:37	1.0		
024	201872	SAMPLE	248030-009	Soil	201872	08/19/13 14:39	1.0		1:HG=21
025	201872	MSS	248037-001	Miscell.	201872	08/19/13 14:41	10.0		
026	201872	SER	QC702622	Miscell.	201872	08/19/13 14:43	50.0		
027	201872	SAMPLE	248037-002	Miscell.	201872	08/19/13 14:46	10.0		
028	201872	SAMPLE	248074-009	Soil	201872	08/19/13 14:49	1.0		
029	201872	SAMPLE	248074-010	Soil	201872	08/19/13 14:52	1.0		
030	201872	SAMPLE	247961-001	Miscell.	201872	08/19/13 14:54	1.0		
031	201872	CCV				08/19/13 14:56	1.0	3	
032	201872	CCB				08/19/13 14:59	1.0		
033	201872	SAMPLE	247961-002	Miscell.	201872	08/19/13 15:01	1.0		
034	201872	SAMPLE	247961-003	Miscell.	201872	08/19/13 15:03	1.0		
035	201872	SAMPLE	247961-004	Miscell.	201872	08/19/13 15:06	1.0		
036	201872	SAMPLE	247961-005	Miscell.	201872	08/19/13 15:08	1.0		
037	201872	SAMPLE	247978-001	Miscell.	201872	08/19/13 15:10	10.0		
038	201872	SAMPLE	248049-001	Soil	201872	08/19/13 15:14	1.0		
039	201872	MSS	248037-001	Miscell.	201872	08/19/13 15:19	1.0		
040	201872	SER	QC702622	Miscell.	201872	08/19/13 15:21	5.0		
041	201872	SAMPLE	248037-002	Miscell.	201872	08/19/13 15:24	1.0		
042	201872	SAMPLE	248030-009	Soil	201872	08/19/13 15:26	10.0		
043	201872	CCV				08/19/13 15:28	1.0	3	
044	201872	CCB				08/19/13 15:31	1.0		
045	201872	SAMPLE	247978-001	Miscell.	201872	08/19/13 15:33	1.0		
046	201872	CCV				08/19/13 15:35	1.0	3	
047	201872	CCB				08/19/13 15:38	1.0		

CRT 08/19/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 47.

Standards used: 1=S23064 2=S23066 3=S23067

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS Soil: EPA 7470A

Inst : MET14  
 Calnum : 843333464001  
 Units : ug/L  
 Date : 19-AUG-2013 13:44  
 X Axis : R  
 Reviewer : ---  
 Type : SOIL

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	201872	843333464002	STD02REP1	19-AUG-2013 13:46	S23064 (500X)
L2	201872	843333464003	STD03REP1	19-AUG-2013 13:48	S23064 (200X)
L3	201872	843333464004	STD04REP1	19-AUG-2013 13:50	S23064 (50X)
L4	201872	843333464005	STD05REP1	19-AUG-2013 13:52	S23064 (20X)
L5	201872	843333464006	STD06REP1	19-AUG-2013 13:55	S23064 (10X)

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	%RSD	Mnr^2	Flg
Mercury	3515.0	2164.0	2554.0	2340.4	2215.9	LI NR	-0.1016	4.50E-4		2557.9	0.999	0.999	.99	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D
Mercury	0.2000	0.5000	-23	2.0000	10	5.0000	3	10.000	-1

Instrument amount = a0 + response \* a1 + response^2 \* a2; LI NR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Soil  
EPA 7470A

Inst : MET14

Calnum : 843333464001

Cal Date : 19-AUG-2013

Type : SOIL

ICV 843333464007 (19-AUG-2013) stds: S23066

Analyte	Spiked	Quant	Units	%D	Max	Flags
Mercury	5.000	5.150	ug/L	3	10	



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 7470A

Inst : MET14  
 Seqnum : 843333464019 File : 201872  
 Cal : 843333464001 Caldate : 19-AUG-2013  
 Standards: S23067

IDF : 1.0  
 Time : 19-AUG-2013 14:27  
 Caltype : SOIL

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2557.9	2335.2	5.000	5.150	ug/L	3	20	



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 7470A

Inst : MET14  
 Seqnum : 843333464031 File : 201872  
 Cal : 843333464001 Caldate : 19-AUG-2013  
 Standards: S23067

IDF : 1.0  
 Time : 19-AUG-2013 14:56  
 Caltype : SOIL

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2557.9	2336.8	5.000	5.160	ug/L	3	20	



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 7470A

Inst : MET14  
 Seqnum : 843333464043 File : 201872  
 Cal : 843333464001 Caldate : 19-AUG-2013  
 Standards: S23067

IDF : 1.0  
 Time : 19-AUG-2013 15:28  
 Caltype : SOIL

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2557.9	2249.6	5.000	4.960	ug/L	-1	20	



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1053334733

Instrument : MET34  
 Method : EPA 7470A

Begun : 08/20/13 10:53  
 SOP Version : hg\_water\_rv16

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	201903	ICALBLK	CAL BLANK			08/20/13 10:53	1.0		
002	201903	ICAL	CAL 1			08/20/13 10:55	1.0	1	
003	201903	ICAL	CAL 2			08/20/13 10:56	1.0	1	
004	201903	ICAL	CAL 3			08/20/13 10:58	1.0	1	
005	201903	ICAL	CAL 4			08/20/13 11:00	1.0	1	
006	201903	ICAL	CAL 5			08/20/13 11:20	1.0	1	
007	201903	XICV				08/20/13 11:26	1.0	2	
008	201903	ICV				08/20/13 11:29	1.0	2	
009	201903	ICB				08/20/13 11:30	1.0		
010	201903	BLANK	QC702750	Soil	201903	08/20/13 11:32	1.0		
011	201903	XBS	QC702751	Soil	201903	08/20/13 11:34	1.0		
012	201903	BS	QC702751	Soil	201903	08/20/13 12:17	1.0		
013	201903	BSD	QC702752	Soil	201903	08/20/13 12:18	1.0		
014	201903	MSS	248030-018	Soil	201903	08/20/13 12:20	1.0		
015	201903	MS	QC702753	Soil	201903	08/20/13 12:22	1.0		
016	201903	MSD	QC702754	Soil	201903	08/20/13 12:23	1.0		
017	201903	SER	QC702755	Soil	201903	08/20/13 12:25	5.0		
018	201903	SAMPLE	248030-010	Soil	201903	08/20/13 12:27	1.0		1:HG=18
019	201903	SAMPLE	248030-011	Soil	201903	08/20/13 12:29	1.0		1:HG=14
020	201903	SAMPLE	248030-012	Soil	201903	08/20/13 12:30	1.0		
021	201903	CCV				08/20/13 12:32	1.0	3	
022	201903	CCB				08/20/13 12:34	1.0		
023	201903	SAMPLE	248030-013	Soil	201903	08/20/13 12:36	1.0		1:HG=15
024	201903	SAMPLE	248030-014	Soil	201903	08/20/13 12:37	1.0		
025	201903	SAMPLE	248030-015	Soil	201903	08/20/13 12:39	1.0		
026	201903	SAMPLE	248030-016	Soil	201903	08/20/13 12:40	1.0		
027	201903	SAMPLE	248030-017	Soil	201903	08/20/13 12:42	1.0		
028	201903	SAMPLE	248030-019	Soil	201903	08/20/13 12:44	1.0		
029	201903	SAMPLE	248030-020	Soil	201903	08/20/13 12:45	1.0		1:HG=11
030	201903	SAMPLE	248030-021	Soil	201903	08/20/13 12:47	1.0		
031	201903	SAMPLE	248030-022	Soil	201903	08/20/13 12:49	1.0		
032	201903	SAMPLE	248030-023	Soil	201903	08/20/13 12:51	1.0		
033	201903	CCV				08/20/13 12:53	1.0	3	
034	201903	CCB				08/20/13 12:55	1.0		
035	201903	SAMPLE	248030-024	Soil	201903	08/20/13 12:57	1.0		
036	201903	SAMPLE	248030-025	Soil	201903	08/20/13 12:58	1.0		
037	201903	SAMPLE	248030-026	Soil	201903	08/20/13 13:00	1.0		
038	201903	SAMPLE	248030-027	Soil	201903	08/20/13 13:02	1.0		
039	201903	SAMPLE	248030-028	Soil	201903	08/20/13 13:03	1.0		
040	201903	SAMPLE	248030-029	Soil	201903	08/20/13 13:05	1.0		
041	201903	SAMPLE	248030-010	Soil	201903	08/20/13 13:07	10.0		
042	201903	SAMPLE	248030-011	Soil	201903	08/20/13 13:09	10.0		
043	201903	SAMPLE	248030-013	Soil	201903	08/20/13 13:10	100.0		
044	201903	SAMPLE	248030-014	Soil	201903	08/20/13 13:12	100.0		
045	201903	CCV				08/20/13 13:14	1.0	3	
046	201903	CCB				08/20/13 13:15	1.0		
047	201903	SAMPLE	248030-015	Soil	201903	08/20/13 13:17	10.0		
048	201903	SAMPLE	248030-020	Soil	201903	08/20/13 13:19	10.0		
049	201903	SAMPLE	248030-027	Soil	201903	08/20/13 13:20	100.0		
050	201903	CCV				08/20/13 13:22	1.0	3	
051	201903	CCB				08/20/13 13:24	1.0		



CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS Soil: EPA 7470A

Inst : MET34  
 Calnum : 1053334733001  
 Units : ug/L  
 Date : 20-AUG-2013 10:53  
 X Axis : R  
 Reviewer : ---  
 Type : SOIL

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	201903	1053334733002	CAL 1	20-AUG-2013 10:55	S23064 (500X)
L2	201903	1053334733003	CAL 2	20-AUG-2013 10:56	S23064 (200X)
L3	201903	1053334733004	CAL 3	20-AUG-2013 10:58	S23064 (50X)
L4	201903	1053334733005	CAL 4	20-AUG-2013 11:00	S23064 (20X)
L5	201903	1053334733006	CAL 5	20-AUG-2013 11:20	S23064 (10X)

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	Flg
Mercury	5000.0	5404.0	5016.0	4916.0	4824.9	LINR	-0.0462	2.07E-4		5032.2	1.000	1.000	.99	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D		
Mercury	0.2000	-19		0.5000	3	2.0000	2	5.0000	1	10.000	0

Instrument amount = a0 + response \* a1 + response^2 \* a2; LINR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Soil  
EPA 7470A

Inst : MET34

Calnum : 1053334733001

Cal Date : 20-AUG-2013

Type : SOIL

ICV 1053334733008 (20-AUG-2013) stds: S23066

Analyte	Spiked	Quant	Units	%D	Max	Flags
Mercury	5.000	5.016	ug/L	0	10	



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 7470A

Inst : MET34  
 Seqnum : 1053334733021 File : 201903 Time : 20-AUG-2013 12:32  
 Cal : 1053334733001 Caldate : 20-AUG-2013 Caltype : SOIL  
 Standards: S23067

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	5032.2	4936.0	5.000	5.075	ug/L	1	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 7470A

Inst : MET34  
Seqnum : 1053334733022 File : 201903  
Cal : 1053334733001 Caldate : 20-AUG-2013

IDF : 1.0  
Time : 20-AUG-2013 12:34  
Caltype : SOIL

Analyte	Quant	IQL	MDL	Units	Flags
Mercury	ND	0.2000	0.02014	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 7470A

Inst : MET34  
 Seqnum : 1053334733033 File : 201903  
 Cal : 1053334733001 Caldate : 20-AUG-2013  
 Standards: S23067

IDF : 1.0  
 Time : 20-AUG-2013 12:53  
 Caltype : SOIL

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	5032.2	4980.0	5.000	5.120	ug/L	2	20	



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 7470A

Inst : MET34  
 Seqnum : 1053334733045      File : 201903  
 Cal : 1053334733001      Caldate : 20-AUG-2013  
 Standards: S23067

IDF : 1.0  
 Time : 20-AUG-2013 13:14  
 Caltype : SOIL

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	5032.2	4989.6	5.000	5.130	ug/L	3	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 METALS Soil  
EPA 7470A

Inst : MET34  
Seqnum : 1053334733046 File : 201903  
Cal : 1053334733001 Caldate : 20-AUG-2013

IDF : 1.0  
Time : 20-AUG-2013 13:15  
Caltype : SOIL

Analyte	Quant	IQL	MDL	Units	Flags
Mercury	ND	0.2000	0.02014	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 7470A

Inst : MET34  
 Seqnum : 1053334733050 File : 201903 Time : 20-AUG-2013 13:22  
 Cal : 1053334733001 Caldate : 20-AUG-2013 Caltype : SOIL  
 Standards: S23067

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	5032.2	4978.0	5.000	5.118	ug/L	2	20	



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 843334735

Instrument : MET14  
 Method : EPA 7470A

Begun : 08/20/13 10:55  
 SOP Version : hg\_water\_rv16

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	201904	ICALBLK	STD01REP1			08/20/13 10:55	1.0		
002	201904	ICAL	STD02REP1			08/20/13 10:57	1.0	1	
003	201904	ICAL	STD03REP1			08/20/13 10:59	1.0	1	
004	201904	ICAL	STD04REP1			08/20/13 11:01	1.0	1	
005	201904	ICAL	STD05REP1			08/20/13 11:04	1.0	1	
006	201904	ICAL	STD06REP1			08/20/13 11:06	1.0	1	
007	201904	ICV				08/20/13 11:23	1.0	2	
008	201904	ICB				08/20/13 11:25	1.0		
009	201904	BLANK	QC702756	Soil	201904	08/20/13 11:27	1.0		
010	201904	BS	QC702757	Soil	201904	08/20/13 11:30	1.0		
011	201904	BSD	QC702758	Soil	201904	08/20/13 11:32	1.0		
012	201904	MSS	248030-043	Soil	201904	08/20/13 11:35	1.0		
013	201904	MS	QC702759	Soil	201904	08/20/13 11:37	1.0		
014	201904	MSD	QC702760	Soil	201904	08/20/13 11:39	1.0		
015	201904	SAMPLE	248030-030	Soil	201904	08/20/13 11:41	1.0		
016	201904	SAMPLE	248030-031	Soil	201904	08/20/13 11:43	1.0		
017	201904	SAMPLE	248030-032	Soil	201904	08/20/13 11:45	1.0		
018	201904	SAMPLE	248030-033	Soil	201904	08/20/13 11:47	1.0		
019	201904	CCV				08/20/13 11:50	1.0	3	
020	201904	CCB				08/20/13 11:52	1.0		
021	201904	SAMPLE	248030-034	Soil	201904	08/20/13 11:54	1.0		
022	201904	SAMPLE	248030-035	Soil	201904	08/20/13 11:57	1.0		1:HG=23
023	201904	SAMPLE	248030-036	Soil	201904	08/20/13 11:59	1.0		
024	201904	SAMPLE	248030-037	Soil	201904	08/20/13 12:01	1.0		1:HG=12
025	201904	SAMPLE	248030-039	Soil	201904	08/20/13 12:03	1.0		
026	201904	SAMPLE	248030-040	Soil	201904	08/20/13 12:06	1.0		
027	201904	SAMPLE	248030-041	Soil	201904	08/20/13 12:08	1.0		
028	201904	SAMPLE	248030-042	Soil	201904	08/20/13 12:10	1.0		
029	201904	SAMPLE	248030-044	Soil	201904	08/20/13 12:12	1.0		1:HG=12
030	201904	MSS	248029-005	Soil	201904	08/20/13 12:15	1.0		
031	201904	CCV				08/20/13 12:17	1.0	3	
032	201904	CCB				08/20/13 12:20	1.0		
033	201904	SER	QC702761	Soil	201904	08/20/13 12:22	5.0		
034	201904	SAMPLE	248029-006	Soil	201904	08/20/13 12:24	1.0		
035	201904	SAMPLE	248029-007	Soil	201904	08/20/13 12:26	1.0		
036	201904	SAMPLE	248085-001	Miscell.	201904	08/20/13 12:29	1.0		1:HG=160
037	201904	SAMPLE	248085-002	Miscell.	201904	08/20/13 12:36	1.0		
038	201904	SAMPLE	248085-003	Miscell.	201904	08/20/13 12:38	1.0		
039	201904	SAMPLE	248030-035	Soil	201904	08/20/13 12:44	10.0		
040	201904	SAMPLE	248030-037	Soil	201904	08/20/13 12:47	10.0		
041	201904	SAMPLE	248030-044	Soil	201904	08/20/13 12:49	10.0		
042	201904	SAMPLE	248085-001	Miscell.	201904	08/20/13 12:51	100.0		
043	201904	CCV				08/20/13 12:53	1.0	3	
044	201904	CCB				08/20/13 12:56	1.0		
045	201904	BLANK	QC702762	Soil	201905	08/20/13 13:00	1.0		
046	201904	BS	QC702763	Soil	201905	08/20/13 13:02	1.0		
047	201904	BSD	QC702764	Soil	201905	08/20/13 13:04	1.0		
048	201904	MSS	248143-001	Soil	201905	08/20/13 13:07	1.0		
049	201904	MS	QC702765	Soil	201905	08/20/13 13:09	1.0		
050	201904	MSD	QC702766	Soil	201905	08/20/13 13:11	1.0		
051	201904	SAMPLE	248039-009	Soil	201905	08/20/13 13:13	1.0		
052	201904	SAMPLE	248123-001	Soil	201905	08/20/13 13:15	1.0		



CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 METALS Soil: EPA 7470A

Inst : MET14  
 Calnum : 843334735001  
 Units : ug/L

Date : 20-AUG-2013 10:55  
 X Axis : R

Reviewer : ---  
 Type : SOIL

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	201904	843334735002	STD02REP1	20-AUG-2013 10:57	S23064 (500X)
L2	201904	843334735003	STD03REP1	20-AUG-2013 10:59	S23064 (200X)
L3	201904	843334735004	STD04REP1	20-AUG-2013 11:01	S23064 (50X)
L4	201904	843334735005	STD05REP1	20-AUG-2013 11:04	S23064 (20X)
L5	201904	843334735006	STD06REP1	20-AUG-2013 11:06	S23064 (10X)

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	%RSD	MnR^2	Flg
Mercury	1850.0	3020.0	2241.5	2250.6	2112.5	LINR	-0.0935	4.72E-4		2294.9	0.999	0.999	.99	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D
Mercury	0.2000	0.5000	-59	2.0000	24	5.0000	1	10.000	-1

Instrument amount = a0 + response \* a1 + response^2 \* a2; LINR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 METALS Soil  
EPA 7470A

Inst : MET14

Calnum : 843334735001

Cal Date : 20-AUG-2013

Type : SOIL

ICV 843334735007 (20-AUG-2013) stds: S23066

Analyte	Spiked	Quant	Units	%D	Max	Flags
Mercury	5.000	5.210	ug/L	4	10	







CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 METALS Soil  
EPA 7470A

Inst : MET14  
 Seqnum : 843334735031 File : 201904  
 Cal : 843334735001 Caldate : 20-AUG-2013  
 Standards: S23067

IDF : 1.0  
 Time : 20-AUG-2013 12:17  
 Caltype : SOIL

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2294.9	2146.2	5.000	4.970	ug/L	-1	20	







SAMPLE PREPARATION SUMMARY

Batch # : 201872  
 Started By : CRT  
 Method : METHOD  
 Spike #1 ID : S23064

Prep Date : 19-AUG-2013 11:20

Analysis : HG  
 Finished By : CRT  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
247961-001		Miscell.	.57	50	1	87.72						T22/HG	
247961-002		Miscell.	.6	50	1	83.33						T22/HG	
247961-003		Miscell.	.58	50	1	86.21						T22/HG	
247961-004		Miscell.	.58	50	1	86.21						T22/HG	
247961-005		Miscell.	.55	50	1	90.91						T22/HG	
247978-001		Miscell.	.55	50	1	90.91						T22/HG	
248030-001		Soil	.57	50	1	87.72						T22/HG	
248030-002		Soil	.57	50	1	87.72						T22/HG	
248030-003		Soil	.65	50	1	76.92						T22/HG	
248030-004		Soil	.58	50	1	86.21						T22/HG	
248030-005		Soil	.59	50	1	84.75						T22/HG	MSS
248030-006		Soil	.58	50	1	86.21						T22/HG	
248030-007		Soil	.64	50	1	78.13						T22/HG	
248030-008		Soil	.57	50	1	87.72						T22/HG	
248030-009		Soil	.61	50	1	81.97						T22/HG	
248037-001		Miscell.	.64	50	1	78.13						T22/HG	grinded with mortar and pestle
248037-002		Miscell.	.63	50	1	79.37						T22/HG	grinded with mortar and pestle
248049-001		Soil	.56	50	1	89.29						T22/HG	
248074-009		Soil	.56	50	1	89.29						T22/HG	Comp. of cont. -001 to -004
248074-010		Soil	.62	50	1	80.65						T22/HG	Comp. of cont. -005 to -008
QC702617	BLANK	Soil	.6	50	1	83.33							
QC702618	BS	Soil	.6	50	1	83.33		1.25					
QC702619	BSD	Soil	.6	50	1	83.33		1.25					
QC702620	MS	Soil	.62	50	1	80.65		1.25					
QC702621	MSD	Soil	.64	50	1	78.13		1.25					
QC702622	SER	Miscell.	.64	50	1	78.13							

Analyst: CRT

Date: 08/19/13

Reviewer: PRW

Date: 08/19/13

Soil Digestion for Mercury

Curtis & Tompkins, Ltd.

Sol

LIMS Batch #: 201872  
 Date Digested: 9/19/13

Scale Used  Metals Prep   
 Digestion Method  EPA 7471A

BK 3460  
 Page 48

LIMS I  
 Date D

Sample #	container ID	Sample Weight (g)	Final Volume (mL)	Filtered? (y/n)	Comments
MB Qc702617		0	50 <input type="checkbox"/>	y	
BS ↓ 19		0	50 <input type="checkbox"/>		
BSD ↓ 19		0	50 <input type="checkbox"/>		
248030-005	A	0.59	50 <input type="checkbox"/>		MSS
MS Qc702620		0.62	50 <input type="checkbox"/>		
MSD ↓ 21		0.64	50 <input type="checkbox"/>		
248030-001	A	0.57	50 <input type="checkbox"/>		
-002	I	0.57	50 <input type="checkbox"/>		
-003	G	0.65	50 <input type="checkbox"/>		
-004	B	0.58	50 <input type="checkbox"/>		
-006	D	0.58	50 <input type="checkbox"/>		
-007	I	0.64	50 <input type="checkbox"/>		
-008	↓	0.57	50 <input type="checkbox"/>		
-009	A	0.61	50 <input type="checkbox"/>		
<del>010</del> <i>comp 1/19</i>		0.56	50 <input type="checkbox"/>		248024-004: comp 1/19
<del>011</del> <i>comp 1/19</i>		0.62	50 <input type="checkbox"/>		248074-010: Comp 1/19
248037-001	A	0.64	50 <input type="checkbox"/>		grinded w/ mortar & pestle, see ↓
-002	↓	0.63	50 <input type="checkbox"/>		
247961-001	A	0.57	50 <input type="checkbox"/>		
-002	I	0.60	50 <input type="checkbox"/>		
-003	I	0.58	50 <input type="checkbox"/>		
-004	I	0.58	50 <input type="checkbox"/>		
-005	↓	0.55	50 <input type="checkbox"/>		weighed out sediment layer
247998-001	A	0.55	50 <input type="checkbox"/>		
248049-001		0.56	50 <input type="checkbox"/>		

Reagent ID/ LIMS# / Time	Initials / Date
Digestion Tubes, Lot #	EK13057
ICAL Source LIMS S#	523064
ICV / CCV LIMS S#	↓ 65
Digestion Temperature (°C), Block and Probe Location	95°C   B-46
Digestion Started at (time)	11:25
Aqua Regia Acids (HNO3+ HCl)	8-19
5% KMnO4	8-14
NaCl hydroxylamine hydrochloride	8-14
Stannous Chloride	8-16
Digestion Completed at (time)	11:50
<input checked="" type="checkbox"/> filtered thru' 0.45 um syringe filter (lot #)	S.S. 30418103

1.25 mL of spike standard was added to all spikes  
 CAL digested with this batch

Digestion Temperature (°C), Block and Probe Location  
 Digestion Started at (time)  
 Aqua Regia Acids (HNO3+ HCl)  
 5% KMnO4  
 NaCl hydroxylamine hydrochloride  
 Stannous Chloride  
 Digestion Completed at (time)

*[Signature]* 9/19/13  
 Prep Chemist / Date

Continued from page \_\_\_\_\_  
 Continued on page \_\_\_\_\_

Reviewed by / Date \_\_\_\_\_

SAMPLE PREPARATION SUMMARY

Batch # : 201903  
 Started By : CRT  
 Method : METHOD  
 Spike #1 ID : S23064

Prep Date : 20-AUG-2013 08:30

Analysis : HG  
 Finished By : CRT  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-010		Soil	.57	50	1	87.72						T22/HG	
248030-011		Soil	.6	50	1	83.33						T22/HG	
248030-012		Soil	.57	50	1	87.72						T22/HG	
248030-013		Soil	.58	50	1	86.21						T22/HG	
248030-014		Soil	.58	50	1	86.21						T22/HG	
248030-015		Soil	.59	50	1	84.75						T22/HG	
248030-016		Soil	.59	50	1	84.75						T22/HG	
248030-017		Soil	.58	50	1	86.21						T22/HG	
248030-018		Soil	.64	50	1	78.13						T22/HG	MSS, SER
248030-019		Soil	.61	50	1	81.97						T22/HG	
248030-020		Soil	.63	50	1	79.37						T22/HG	
248030-021		Soil	.58	50	1	86.21						T22/HG	
248030-022		Soil	.61	50	1	81.97						T22/HG	
248030-023		Soil	.6	50	1	83.33						T22/HG	
248030-024		Soil	.59	50	1	84.75						T22/HG	
248030-025		Soil	.6	50	1	83.33						T22/HG	
248030-026		Soil	.6	50	1	83.33						T22/HG	
248030-027		Soil	.59	50	1	84.75						T22/HG	
248030-028		Soil	.62	50	1	80.65						T22/HG	
248030-029		Soil	.55	50	1	90.91						T22/HG	
QC702750	BLANK	Soil	.6	50	1	83.33							
QC702751	BS	Soil	.6	50	1	83.33		1.25					
QC702752	BSD	Soil	.6	50	1	83.33		1.25					
QC702753	MS	Soil	.57	50	1	87.72		1.25					
QC702754	MSD	Soil	.59	50	1	84.75		1.25					
QC702755	SER	Soil	.64	50	1	78.13							

JDB 08/27/13 : Reviewed weights

Analyst: JDB Date: 08/27/13 Reviewer: PRW Date: 08/28/13

Soil Digestion for Mercury

Curtis & Tompkins, Ltd.

MS Batch #: 201903  
 Date Digested: 9-20-13

Scale Used  Metals Prep   
 Digestion Method  EPA 7471A

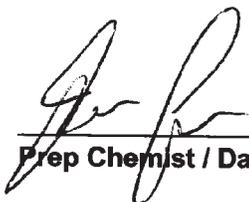
BK 3460  
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Sample #	container ID	Sample Weight (g)	Final Volume (mL)	Filtered? (y/n)	Comments
MB QC 702750		0	50 <input type="checkbox"/>	Y	
BS ↓ 51		0	50 <input type="checkbox"/>		
BSD ↓ 52		0	50 <input type="checkbox"/>		
248030-018	G	0.64	50 <input type="checkbox"/>		MSS, SER
MS QC 702753		0.57	50 <input type="checkbox"/>		
MED ↓ 54		0.59	50 <input type="checkbox"/>		
248030-010	B	0.57	50 <input type="checkbox"/>		
-011	P	0.60	50 <input type="checkbox"/>		
-012	D	0.57	50 <input type="checkbox"/>		
-013	B	0.58	50 <input type="checkbox"/>		
-014	E	0.58	50 <input type="checkbox"/>		
-015	J	0.59	50 <input type="checkbox"/>		
-016	B	0.59	50 <input type="checkbox"/>		
-017	E	0.58	50 <input type="checkbox"/>		
-019	B	0.61	50 <input type="checkbox"/>		
-020	B	0.63	50 <input type="checkbox"/>		
-021	E	0.58	50 <input type="checkbox"/>		
-022	A	0.61	50 <input type="checkbox"/>		
-023	A	0.60	50 <input type="checkbox"/>		
-024	A	0.59	50 <input type="checkbox"/>		
-025	B	0.60	50 <input type="checkbox"/>		
-026	B	0.60	50 <input type="checkbox"/>		
-027	B	0.59	50 <input type="checkbox"/>		
-028	A	0.62	50 <input type="checkbox"/>		
-029	B	0.55	50 <input type="checkbox"/>		

Reagent ID/ LIMS# / Time Initials / Date

1.25 mL of spike standard was added to all spikes  
 CAL digested with this batch

Digestion Tubes, Lot # EK13087 Initials / Date (RT) 9/20/13  
523064  
 ICAL Source LIMS S# 65  
 ICV / CCV LIMS S# 6467  
 Digestion Temperature (°C), Block and Probe Location 96°C B-47  
 Digestion Started at (time) 8:30  
 Aqua Regia Acids (HNO<sub>3</sub>+ HCl) 8-20  
 5% KMnO<sub>4</sub> 8-14  
 NaCl.hydroxylamine hydrochloride 8-14  
 Stannous Chloride 8-14  
 Digestion Completed at (time) 9:00  
 filtered thru' 0.45 um syringe filter (lot #) S.S. 304 49103

 9/20/13  
 Prep Chemist / Date

Continued from page 1

Continued on page 1

Reviewed by / Date

SAMPLE PREPARATION SUMMARY

Batch # : 201904  
 Started By : CRT  
 Method : METHOD  
 Spike #1 ID : S23064

Prep Date : 20-AUG-2013 08:30

Analysis : HG  
 Finished By : CRT  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248029-005		Soil	.61	50	1	81.97						T22/HG	SER
248029-006		Soil	.58	50	1	86.21						T22/HG	
248029-007		Soil	.63	50	1	79.37						T22/HG	
248030-030		Soil	.55	50	1	90.91						T22/HG	
248030-031		Soil	.6	50	1	83.33						T22/HG	
248030-032		Soil	.59	50	1	84.75						T22/HG	
248030-033		Soil	.6	50	1	83.33						T22/HG	
248030-034		Soil	.62	50	1	80.65						T22/HG	
248030-035		Soil	.65	50	1	76.92						T22/HG	
248030-036		Soil	.59	50	1	84.75						T22/HG	
248030-037		Soil	.57	50	1	87.72						T22/HG	
248030-039		Soil	.63	50	1	79.37						T22/HG	
248030-040		Soil	.6	50	1	83.33						T22/HG	
248030-041		Soil	.59	50	1	84.75						T22/HG	
248030-042		Soil	.6	50	1	83.33						T22/HG	
248030-043		Soil	.64	50	1	78.13						T22/HG	MSS
248030-044		Soil	.55	50	1	90.91						T22/HG	
248085-001		Miscell.	.65	50	1	76.92						T22/HG	
248085-002		Miscell.	.58	50	1	86.21						T22/HG	
248085-003		Miscell.	.61	50	1	81.97						T22/HG	
QC702756	BLANK	Soil	.6	50	1	83.33							
QC702757	BS	Soil	.6	50	1	83.33	1.25						
QC702758	BSD	Soil	.6	50	1	83.33	1.25						
QC702759	MS	Soil	.63	50	1	79.37	1.25						
QC702760	MSD	Soil	.58	50	1	86.21	1.25						
QC702761	SER	Soil	.61	50	1	81.97							

CRT 08/20/13 : MSD QC702760 failed recovery but passed RPD. This suggests that an interference is present in the matrix.

Analyst: CRT

Date: 08/20/13

Reviewer: PRW

Date: 08/26/13

Soil Digestion for Mercury

Curtis & Tompkins, Ltd.

Soi

LIMS Batch #: 201904  
 Date Digested: 9/20/13

Scale Used  
 Metals Prep  
 Digestion Method  
 EPA 7471A

BK 3460  
 Page 50

LIMS  
 Date C

Sample #	container ID	Sample Weight (g)	Final Volume (mL)	Filtered? (y/n)	Comments
MB GC 702756		0	50	Y	
BS	57	0	50		
BSD	58	0	50		
248030-043	D	0.64	50		MSS
MS GC 702759		0.63	50		
MSD	60	0.58	50		
248030-030	B	0.55	50		
-031	B	0.60	50		
-032	B	0.59	50		
-033	A	0.60	50		
-034	D	0.62	50		
-035	D	0.65	50		
-036	D	0.59	50		
-037	A	0.57	50		
<del>-038</del> CR1 8/22	A	0.61	50		Sample: 24802A-005, SER
-039	D	0.63	50		
-040	A	0.60	50		
-041	B	0.59	50		
-042	A	0.60	50		
-043	A	0.55	50		
248029-006		0.58	50		
-007		0.63	50		
248085-001	B	0.65	50		
-002		0.58	50		
-003		0.61	50		

Reagent ID/ LIMS# / Time	Initials / Date
Digestion Tubes, Lot #	EK13057
<input checked="" type="checkbox"/> CAL digested with this batch	CR1 8/20/13
ICAL Source LIMS S#	3230 CH
ICV / CCV LIMS S#	65
Digestion Temperature (°C), Block and Probe Location	66/67
Digestion Started at (time)	96°C B-47
Aqua Regia Acids (HNO3+ HCl)	8:30
5% KMnO4	8-20
NaCl.hydroxylamine hydrochloride	8-14
Stannous Chloride	8-14
Digestion Completed at (time)	8-16
<input checked="" type="checkbox"/> filtered thru' 0.45 um syringe filter (lot #)	9:00
	C.S. 30448103

 9/20/13  
 Prep Chemist / Date

Continued from page 1  
 Continued on page 1

Reviewed by / Date

Laboratory Job Number 248030

ANALYTICAL REPORT

Ion Chromatography

Matrix: Water

Fluoride			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 300.0
Field ID:	IA-40	Batch#:	201880
Matrix:	Water	Sampled:	08/15/13 13:45
Units:	mg/L	Received:	08/15/13
Diln Fac:	1.000		

Type: SAMPLE Chemist: VQ  
 Lab ID: 248030-038 Analyzed: 08/19/13 18:29

Analyte	Result	RL
Fluoride	ND	0.10

Type: BLANK Chemist: RDG  
 Lab ID: QC702646 Analyzed: 08/19/13 16:44

Analyte	Result	RL
Fluoride	ND	0.10

ND= Not Detected  
 RL= Reporting Limit



**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 IC Water: EPA 300.0

Inst : IC04 Name : IC04 CAL 231  
 Calnum : 633333371002 Date : 19-AUG-2013 13:20  
 Units : mg/L Inj Vol : 10 uL  
 X Axis : A

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	231_11	633333371011	L1	19-AUG-2013 13:20	S22689 (500X)
L2	231_12	633333371012	L2	19-AUG-2013 13:38	S22689 (250X)
L3	231_13	633333371013	L3	19-AUG-2013 13:55	S22689 (100X)
L4	231_14	633333371014	L4	19-AUG-2013 14:13	S22689 (25X)
L5	231_15	633333371015	L5	19-AUG-2013 14:30	S22689 (10X)
L6	231_16	633333371016	L6	19-AUG-2013 14:47	S22689 (5X)

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	MnR^2	Flg
Fluoride	0.6906	0.7246	0.7458	0.7051	0.7424	0.7304	QUAD	-0.0132	0.74388	-0.00116	0.7231	1.000	0.990	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Fluoride	0.1000	11	0.2000	6	0.5000	-4	2.0000	5.0000	10.000	1	10.000	0

RDG 08/20/13 : Integrated to match previous ICAL in multiple levels.

Analyst: RDG Date: 08/20/13 Reviewer: EAH Date: 08/20/13  
 Instrument response = a0 + amount \* a1 + amount^2 \* a2 (invert equation before quantitating); QUAD=Quadratic regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 IC Water  
EPA 300.0

Inst : IC04 Name : IC04 CAL 231  
Calnum : 633333371002 Cal Date : 19-AUG-2013

ICV 633333371019 (231\_19 19-AUG-2013) stds: S20822 (25X)

Analyte	Spiked	Quant	Units	%D	Max	Flags
Fluoride	0.8000	0.7379	mg/L	-8	10	

Analyst: RDG Date: 08/20/13 Reviewer: EAH Date: 08/20/13



CURTIS & TOMPKINS BLANK USER REPORT FOR 248030 IC Water  
EPA 300.0

Inst : IC04 Run Name : QC702646 IDF : 1.0  
Seqnum : 633333371020.2 File : 231\_20 Time : 19-AUG-2013 16:44  
Cal : 633333371002 Caldate : 19-AUG-2013

Analyte	Quant	IQL	MDL	Units	Flags
Fluoride	ND	0.1000	0.02000	mg/L	u

RDG 08/20/13 : Integrated to match integration of ICAL and CCV. [general version]

Analyst: VO Date: 08/20/13 Reviewer: EAH Date: 08/21/13

u=use

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 IC Water  
EPA 300.0

Inst : IC04  
Seqnum : 633333371035 File : 231\_35  
Cal : 633333371002 Caldate : 19-AUG-2013

IDF : 1.0  
Time : 19-AUG-2013 21:05

Analyte	Quant	IQL	MDL	Units	Flags
Fluoride	ND	0.1000	0.02000	mg/L	

VQ 08/20/13 : Corrected automatically drawn baseline.

Analyst: VO Date: 08/20/13 Reviewer: EAH Date: 08/20/13

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 633333371

Instrument : IC04  
 Method : EPA 300.0

Begun : 08/19/13 12:11  
 SOP Version : ANIONS\_300\_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
007	231_07	X	AS22 100X			08/19/13 12:11	1.0		
008	231_08	X	BLK			08/19/13 12:28	1.0		
009	231_09	X	BLK			08/19/13 12:46	1.0		
010	231_10	X	BLK			08/19/13 13:03	1.0		
011	231_11	ICAL	L1			08/19/13 13:20	1.0	1	
012	231_12	ICAL	L2			08/19/13 13:38	1.0	1	
013	231_13	ICAL	L3			08/19/13 13:55	1.0	1	
014	231_14	ICAL	L4			08/19/13 14:13	1.0	1	
015	231_15	ICAL	L5			08/19/13 14:30	1.0	1	
016	231_16	ICAL	L6			08/19/13 14:47	1.0	1	
017	231_17	ICB				08/19/13 15:22	1.0		
018	231_18	X	ICV			08/19/13 15:40	1.0	2	
019	231_19	ICV				08/19/13 16:05	1.0	2	
020	231_20	CCB/MB	QC702646	Water	201880	08/19/13 16:44	1.0		
021	231_21	LCS	QC702647	Water	201880	08/19/13 17:02	1.0	1	
022	231_22	MSS	247993-002	Water	201880	08/19/13 17:19	1.0		1:CL=200
023	231_23	X	BLK		201880	08/19/13 17:36	1.0		
024	231_24	SAMPLE	247993-003	Water	201880	08/19/13 17:54	1.0		1:CL=120
025	231_25	X	BLK		201880	08/19/13 18:11	1.0		
026	231_26	SAMPLE	248030-038	Water	201880	08/19/13 18:29	1.0		
027	231_27	SAMPLE	248107-001	Water	201880	08/19/13 18:46	100.0		
028	231_28	MSS	247993-002	Water	201880	08/19/13 19:03	5.0		1:CL=69
029	231_29	SAMPLE	247993-003	Water	201880	08/19/13 19:21	5.0		1:CL=37
030	231_30	SAMPLE	248107-001	Water	201880	08/19/13 19:38	50.0		1:CL=23
031	231_31	X	BLK		201880	08/19/13 19:56	1.0		
032	231_32	MS	QC702648	Water	201880	08/19/13 20:13	5.0	1	1:CL=69
033	231_33	MSD	QC702649	Water	201880	08/19/13 20:30	5.0	1	1:CL=69
034	231_34	CCV	M		201880	08/19/13 20:48	1.0	1	
035	231_35	CCB			201880	08/19/13 21:05	1.0		
036	231_36	X	BLK		201880	08/19/13 21:23	1.0		
037	231_37	X	BLK		201880	08/19/13 21:40	1.0		
038	231_38	X	BLK		201880	08/19/13 21:57	1.0		
039	231_39	X	BLK		201880	08/19/13 22:15	1.0		
040	231_40	X	SHUT DOWN		201880	08/19/13 22:32	1.0		

RDG 08/19/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 7 through 19.

VQ 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 20 through 40.

RDG: 08/19/13 VQ: 08/20/13 EAH: 08/20/13

Standards used: 1=S22689 2=S20822

Analysis:  Anions EPA 300 / EPA 9056  
 Perchlorate (ClO<sub>4</sub>) EPA 314  
 Cr6+ EPA 7199

Batch#: 201680  
 Date Started: 8/19/13  
 Prep Chemist: RDE

BK 3461  
 Page 44

Sample #	Conductivity	Estimated Dilution Factor	Filters Used	Comments
1 247993-002 A	1.09	1x/5x	5	MS
2 -003 ↓	0.13	↓		
3 248030-038 S	0.08	1x		
4 248107-001 B	3.05	100x/50x		
5 Blank QC702646	N/A	1x		
6 MS ↓ 647	↓	↓		
7 MS ↓ 648	1.09	5x		
8 MS ↓ 649	↓	↓	↓	
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

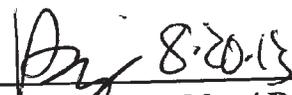
VQ 8/20/13

MS 8/20/13  
 VQ

	Mfg & Lot # / Time / Program	Initials / Date
Eluent Reagent ID	TC04 Eluent 8/17/13 RDE	VQ 8/20/13
BS/MSD Spiked with	6.2 mL of : 322689	
MS/MSD Spiked with	0.1 mL of : ↓	
Filters Used:	Ag: OnGuard II Ag N/A	
	Na: OnGuard II Na ↓	
	P: OnGuard II P ↓	
	RP: OnGuard II RP ↓	
	S: 0.20um/0.45um Sartorius #2137103	

  
 Extraction Chemist / Date 8/20/13

Continued from page /  
 Continued on page /

  
 Reviewed by / Date 8-20-13

Laboratory Job Number 248030

ANALYTICAL REPORT

Ion Chromatography

Matrix: Soil

Fluoride			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Analysis:	EPA 300.0
Project#:	20074.063.095.1340		
Matrix:	Soil	Batch#:	201794
Units:	mg/Kg	Chemist:	VQ
Basis:	dry	Received:	08/15/13

Field ID: IA-08A Diln Fac: 1.000  
 Type: SAMPLE Sampled: 08/15/13 09:30  
 Lab ID: 248030-002 Analyzed: 08/20/13 15:02  
 Moisture: 5%

Analyte	Result	RL
Fluoride	1.1	1.1

Field ID: IA-08B Diln Fac: 1.000  
 Type: SAMPLE Sampled: 08/15/13 09:35  
 Lab ID: 248030-003 Analyzed: 08/20/13 15:19  
 Moisture: 13%

Analyte	Result	RL
Fluoride	ND	1.1

Field ID: IA-10A Diln Fac: 5.000  
 Type: SAMPLE Sampled: 08/15/13 10:30  
 Lab ID: 248030-011 Analyzed: 08/20/13 17:03  
 Moisture: 8%

Analyte	Result	RL
Fluoride	ND	5.4

Field ID: IA-10B Diln Fac: 1.000  
 Type: SAMPLE Sampled: 08/15/13 10:35  
 Lab ID: 248030-012 Analyzed: 08/20/13 15:54  
 Moisture: 14%

Analyte	Result	RL
Fluoride	ND	1.2

ND= Not Detected  
 RL= Reporting Limit

Fluoride			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Analysis:	EPA 300.0
Project#:	20074.063.095.1340		
Matrix:	Soil	Batch#:	201794
Units:	mg/Kg	Chemist:	VQ
Basis:	dry	Received:	08/15/13

Field ID: IA-14A Diln Fac: 1.000  
 Type: SAMPLE Sampled: 08/15/13 11:05  
 Lab ID: 248030-014 Analyzed: 08/20/13 16:11  
 Moisture: 9%

Analyte	Result	RL
Fluoride	2.0	1.1

Field ID: IA-14B Diln Fac: 1.000  
 Type: SAMPLE Sampled: 08/15/13 11:10  
 Lab ID: 248030-015 Analyzed: 08/20/13 16:29  
 Moisture: 15%

Analyte	Result	RL
Fluoride	ND	1.2

Field ID: IA-29A Diln Fac: 1.000  
 Type: SAMPLE Sampled: 08/15/13 13:15  
 Lab ID: 248030-036 Analyzed: 08/20/13 16:46  
 Moisture: 6%

Analyte	Result	RL
Fluoride	1.8	1.1

Type: BLANK Diln Fac: 1.000  
 Lab ID: QC702257 Analyzed: 08/20/13 13:53

Analyte	Result	RL
Fluoride	ND	1.0

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Fluoride			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Analysis:	EPA 300.0
Project#:	20074.063.095.1340		
Field ID:	IA-08A	Diln Fac:	1.000
MSS Lab ID:	248030-002	Batch#:	201794
Matrix:	Soil	Chemist:	VQ
Units:	mg/Kg	Sampled:	08/15/13 09:30
Basis:	dry	Received:	08/15/13

Type: LCS Analyzed: 08/20/13 12:00  
 Lab ID: QC702258

Analyte	Spiked	Result	%REC	Limits
Fluoride	20.00	17.45	87	58-125

Type: MS Moisture: 5%  
 Lab ID: QC702259 Analyzed: 08/21/13 09:57

Analyte	MSS Result	Spiked	Result	%REC	Limits
Fluoride	1.134	10.53	8.996	75	75-125

Type: MSD Moisture: 5%  
 Lab ID: QC702260 Analyzed: 08/21/13 10:14

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Fluoride	10.53	8.826	73 *	75-125	2	50

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248030 IC Soil: EPA 300.0

Inst : IC04  
 Calnum : 633333371002  
 Units : mg/L  
 Name : IC04 CAL 231  
 Date : 19-AUG-2013 13:20  
 X Axis : A  
 Inj Vol : 10 uL

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	231_11	633333371011	L1	19-AUG-2013 13:20	S22689 (500X)
L2	231_12	633333371012	L2	19-AUG-2013 13:38	S22689 (250X)
L3	231_13	633333371013	L3	19-AUG-2013 13:55	S22689 (100X)
L4	231_14	633333371014	L4	19-AUG-2013 14:13	S22689 (25X)
L5	231_15	633333371015	L5	19-AUG-2013 14:30	S22689 (10X)
L6	231_16	633333371016	L6	19-AUG-2013 14:47	S22689 (5X)

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	MnR^2	Flg
Fluoride	0.6906	0.7246	0.7458	0.7051	0.7424	0.7304	QUAD	-0.0132	0.74388	-0.00116	0.7231	1.000	0.990	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Fluoride	0.1000	11	0.2000	6	0.5000	-4	2.0000	5.0000	10.000	1	10.000	0

RDG 08/20/13 : Integrated to match previous ICAL in multiple levels.

Analyst: RDG Date: 08/20/13 Reviewer: EAH Date: 08/20/13

Instrument response = a0 + amount \* a1 + amount^2 \* a2 (invert equation before quantitating); QUAD=Quadratic regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248030 IC Soil  
EPA 300.0

Inst : IC04 Name : IC04 CAL 231  
Calnum : 633333371002 Cal Date : 19-AUG-2013

ICV 633333371019 (231\_19 19-AUG-2013) stds: S20822 (25X)

Analyte	Spiked	Quant	Units	%D	Max	Flags
Fluoride	0.8000	0.7379	mg/L	-8	10	

Analyst: RDG Date: 08/20/13 Reviewer: EAH Date: 08/20/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 IC Soil  
EPA 300.0

Inst : IC04 Run Name : L IDF : 1.0  
Seqnum : 633334680009 File : 232\_09 Time : 20-AUG-2013 10:35  
Cal : 633333371002 Caldate : 19-AUG-2013  
Standards: S22689 (100X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Fluoride	0.7231	0.6550	0.5000	0.4583	mg/L	-8	10	

VQ 08/20/13 : Integrated to match integration of ICAL and CCV.

Analyst: VO Date: 08/20/13 Reviewer: EAH Date: 08/22/13



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 IC Soil  
EPA 300.0

Inst : IC04                                      Run Name : H                                      IDF : 1.0  
 Seqnum : 633334680028                      File : 232\_28                                      Time : 20-AUG-2013 17:38  
 Cal : 633333371002                      Caldate : 19-AUG-2013  
 Standards: S22689 (10X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Fluoride	0.7231	0.7157	5.000	4.865	mg/L	-3	10	

RDG 08/20/13 : Integrated to match integration of ICAL and CCV.

Analyst: RDG                      Date: 08/20/13                      Reviewer: EAH                      Date: 08/22/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 IC Soil  
EPA 300.0

Inst : IC04                      Run Name : L                      IDF : 1.0  
 Seqnum : 633336020010        File : 233\_10                    Time : 21-AUG-2013 09:12  
 Cal : 633333371002            Caldate : 19-AUG-2013  
 Standards: S22689 (100X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Fluoride	0.7231	0.6800	0.5000	0.4751	mg/L	-5	10	

VQ 08/21/13 : Integrated to match integration of ICAL and CCV.

Analyst: VO                      Date: 08/21/13                      Reviewer: EAH                      Date: 08/22/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248030 IC Soil  
EPA 300.0

Inst : IC04                                      Run Name : M                                      IDF : 1.0  
 Seqnum : 633336020014                      File : 233\_14                                      Time : 21-AUG-2013 10:59  
 Cal : 633333371002                      Caldate : 19-AUG-2013  
 Standards: S22689 (25X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Fluoride	0.7231	0.6643	2.000	1.809	mg/L	-10	10	

VQ 08/21/13 : Integrated to match integration of ICAL and CCV.

Analyst: VO                                      Date: 08/21/13                                      Reviewer: EAH                                      Date: 08/22/13

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 IC Soil  
EPA 300.0

Inst : IC04  
Seqnum : 633334680010  
Cal : 633333371002  
File : 232\_10  
Caldate : 19-AUG-2013  
IDF : 1.0  
Time : 20-AUG-2013 11:02

Analyte	Quant	IQL	MDL	Units	Flags
Fluoride	ND	0.1000	0.02000	mg/L	

VQ 08/20/13 : Integrated to match integration of ICAL and CCV.

Analyst: VO Date: 08/20/13 Reviewer: EAH Date: 08/22/13

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 IC Soil  
EPA 300.0

Inst : IC04  
Seqnum : 633334680017  
Cal : 633333371002  
File : 232\_17  
Caldate : 19-AUG-2013  
IDF : 1.0  
Time : 20-AUG-2013 14:27

Analyte	Quant	IQL	MDL	Units	Flags
Fluoride	ND	0.1000	0.02000	mg/L	

VQ 08/20/13 : Corrected automatically drawn baseline.

Analyst: VO Date: 08/20/13 Reviewer: EAH Date: 08/22/13

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 IC Soil  
EPA 300.0

Inst : IC04  
Seqnum : 633334680029  
Cal : 633333371002  
File : 232\_29  
Caldate : 19-AUG-2013  
IDF : 1.0  
Time : 20-AUG-2013 17:56

Analyte	Quant	IQL	MDL	Units	Flags
Fluoride	ND	0.1000	0.02000	mg/L	

RDG 08/20/13 : Integrated to match integration of ICAL and CCV.

Analyst: VO Date: 08/21/13 Reviewer: EAH Date: 08/22/13  
Page 1 of 1 633334680029

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 IC Soil  
EPA 300.0

Inst : IC04  
Seqnum : 633336020011 File : 233\_11  
Cal : 633333371002 Caldate : 19-AUG-2013

IDF : 1.0  
Time : 21-AUG-2013 09:39

Analyte	Quant	IQL	MDL	Units	Flags
Fluoride	ND	0.1000	0.02000	mg/L	

Analyst: VO

Date: 08/21/13

Reviewer: EAH

Date: 08/22/13

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248030 IC Soil  
EPA 300.0

Inst : IC04  
Seqnum : 633336020015  
Cal : 633333371002  
File : 233\_15  
Caldate : 19-AUG-2013  
IDF : 1.0  
Time : 21-AUG-2013 11:16

Analyte	Quant	IQL	MDL	Units	Flags
Fluoride	ND	0.1000	0.02000	mg/L	

Analyst: VO Date: 08/21/13 Reviewer: EAH Date: 08/22/13  
Page 1 of 1 633336020015

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 633333371

Instrument : IC04  
 Method : EPA 300.0

Begun : 08/19/13 12:11  
 SOP Version : ANIONS\_300\_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
007	231_07	X	AS22 100X			08/19/13 12:11	1.0		
008	231_08	X	BLK			08/19/13 12:28	1.0		
009	231_09	X	BLK			08/19/13 12:46	1.0		
010	231_10	X	BLK			08/19/13 13:03	1.0		
011	231_11	ICAL	L1			08/19/13 13:20	1.0	1	
012	231_12	ICAL	L2			08/19/13 13:38	1.0	1	
013	231_13	ICAL	L3			08/19/13 13:55	1.0	1	
014	231_14	ICAL	L4			08/19/13 14:13	1.0	1	
015	231_15	ICAL	L5			08/19/13 14:30	1.0	1	
016	231_16	ICAL	L6			08/19/13 14:47	1.0	1	
017	231_17	ICB				08/19/13 15:22	1.0		
018	231_18	X	ICV			08/19/13 15:40	1.0	2	
019	231_19	ICV				08/19/13 16:05	1.0	2	
020	231_20	CCB/MB	QC702646	Water	201880	08/19/13 16:44	1.0		
021	231_21	LCS	QC702647	Water	201880	08/19/13 17:02	1.0	1	
022	231_22	MSS	247993-002	Water	201880	08/19/13 17:19	1.0		1:CL=200
023	231_23	X	BLK		201880	08/19/13 17:36	1.0		
024	231_24	SAMPLE	247993-003	Water	201880	08/19/13 17:54	1.0		1:CL=120
025	231_25	X	BLK		201880	08/19/13 18:11	1.0		
026	231_26	SAMPLE	248030-038	Water	201880	08/19/13 18:29	1.0		
027	231_27	SAMPLE	248107-001	Water	201880	08/19/13 18:46	100.0		
028	231_28	MSS	247993-002	Water	201880	08/19/13 19:03	5.0		1:CL=69
029	231_29	SAMPLE	247993-003	Water	201880	08/19/13 19:21	5.0		1:CL=37
030	231_30	SAMPLE	248107-001	Water	201880	08/19/13 19:38	50.0		1:CL=23
031	231_31	X	BLK		201880	08/19/13 19:56	1.0		
032	231_32	MS	QC702648	Water	201880	08/19/13 20:13	5.0	1	1:CL=69
033	231_33	MSD	QC702649	Water	201880	08/19/13 20:30	5.0	1	1:CL=69
034	231_34	CCV	M		201880	08/19/13 20:48	1.0	1	
035	231_35	CCB			201880	08/19/13 21:05	1.0		
036	231_36	X	BLK		201880	08/19/13 21:23	1.0		
037	231_37	X	BLK		201880	08/19/13 21:40	1.0		
038	231_38	X	BLK		201880	08/19/13 21:57	1.0		
039	231_39	X	BLK		201880	08/19/13 22:15	1.0		
040	231_40	X	SHUT DOWN		201880	08/19/13 22:32	1.0		

RDG 08/19/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 7 through 19.

VQ 08/20/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 20 through 40.

RDG: 08/19/13 VQ: 08/20/13 EAH: 08/20/13

Standards used: 1=S22689 2=S20822

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 633334680

Instrument : IC04  
 Method : EPA 300.0

Begun : 08/20/13 10:00  
 SOP Version : ANIONS\_300\_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
007	232_07	X	AS22 100X			08/20/13 10:00	1.0		
008	232_08	X	BLK			08/20/13 10:17	1.0		
009	232_09	CCV	L			08/20/13 10:35	1.0	1	
010	232_10	CCB				08/20/13 11:02	1.0		
011	232_11	LCS	QC702258	Soil	201794	08/20/13 12:00	1.0	1	
012	232_12	X	QC702257		201794	08/20/13 13:01	1.0		
013	232_13	SAMPLE	248111-016	Soil	201794	08/20/13 13:18	5.0		1:NO3N=6.2
014	232_14	SAMPLE	248111-016	Soil	201794	08/20/13 13:35	1.0		2:CL=35
015	232_15	BLANK	QC702257	Soil	201794	08/20/13 13:53	1.0		
016	232_16	CCV	M		201794	08/20/13 14:10	1.0	1	
017	232_17	CCB			201794	08/20/13 14:27	1.0		
018	232_18	SAMPLE	248111-016	Soil	201794	08/20/13 14:44	10.0		
019	232_19	MSS	248030-002	Soil	201794	08/20/13 15:02	1.0		
020	232_20	SAMPLE	248030-003	Soil	201794	08/20/13 15:19	1.0		
021	232_21	SAMPLE	248030-011	Soil	201794	08/20/13 15:36	1.0		2:PO4=210
022	232_22	SAMPLE	248030-012	Soil	201794	08/20/13 15:54	1.0		
023	232_23	SAMPLE	248030-014	Soil	201794	08/20/13 16:11	1.0		1:CL=31
024	232_24	SAMPLE	248030-015	Soil	201794	08/20/13 16:29	1.0		
025	232_25	SAMPLE	248030-036	Soil	201794	08/20/13 16:46	1.0		
026	232_26	SAMPLE	248030-011	Soil	201794	08/20/13 17:03	5.0		1:SO4=220
027	232_27	X	BLK		201794	08/20/13 17:21	1.0		
028	232_28	CCV	H		201794	08/20/13 17:38	1.0	1	
029	232_29	CCB			201794	08/20/13 17:56	1.0		
030	232_30	MS	QC702259	Soil	201794	08/20/13 18:13	1.0	1	
031	232_31	MSD	QC702260	Soil	201794	08/20/13 18:31	1.0	1	
032	232_32	CCV	M		201794	08/20/13 18:48	1.0	1	
033	232_33	CCB			201794	08/20/13 19:05	1.0		
034	232_34	X	BLK		201794	08/20/13 19:22	1.0		
035	232_35	X	BLK		201794	08/20/13 19:40	1.0		
036	232_36	X	BLK		201794	08/20/13 19:57	1.0		
037	232_37	X	BLK		201794	08/20/13 20:15	1.0		
038	232_38	X	BLK		201794	08/20/13 20:32	1.0		
039	232_39	X	BLK		201794	08/20/13 20:49	1.0		
040	232_40	X	SHUT DOWN		201794	08/20/13 21:07	1.0		

VQ 08/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 7 through 40.

Analyst: VO Date: 08/21/13 Reviewer: EAH Date: 08/22/13

Standards used: 1=S22689

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 633336020

Instrument : IC04  
 Method : EPA 300.0

Begun : 08/21/13 08:20  
 SOP Version : ANIONS\_300\_rv8

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
007	233_7	X	AS22 100X			08/21/13 08:20	1.0		
008	233_8	X	BLK			08/21/13 08:37	1.0		
009	233_9	X	BLK			08/21/13 08:54	1.0		
010	233_10	CCV	L			08/21/13 09:12	1.0	1	
011	233_11	CCB				08/21/13 09:39	1.0		
012	233_12	MS	QC702259	Soil	201794	08/21/13 09:57	1.0	1	
013	233_13	MSD	QC702260	Soil	201794	08/21/13 10:14	1.0	1	
014	233_14	CCV	M		201794	08/21/13 10:59	1.0	1	
015	233_15	CCB			201794	08/21/13 11:16	1.0		
016	233_16	BLANK	QC703006	Water	201966	08/21/13 11:34	1.0		
017	233_17	BS	QC703007	Water	201966	08/21/13 11:51	1.0	1	
018	233_18	BSD	QC703008	Water	201966	08/21/13 12:37	1.0	1	
019	233_19	SAMPLE	247848-009	Water	201966	08/21/13 13:22	10.0		
020	233_20	SAMPLE	247848-009	Water	201966	08/21/13 13:40	1.0		1:CL=44
021	233_21	SAMPLE	247848-012	Water	201966	08/21/13 13:57	1.0		2:CL=59
022	233_22	X	BLK		201966	08/21/13 14:22	1.0		
023	233_23	SAMPLE	247848-012	Water	201966	08/21/13 14:39	5.0		
024	233_24	SAMPLE	247848-029	Water	201966	08/21/13 14:57	1.0		
025	233_25	SAMPLE	247848-030	Water	201966	08/21/13 15:14	1.0		
026	233_26	CCV	H		201966	08/21/13 15:31	1.0	1	
027	233_27	CCB			201966	08/21/13 15:49	1.0		
028	233_28	CCV	H		201966	08/21/13 16:06	1.0	1	
029	233_29	CCB			201966	08/21/13 16:23	1.0		
030	233_30	X	BLK		201966	08/21/13 17:59	1.0		
031	233_31	X	BLK		201966	08/21/13 18:17	1.0		
032	233_32	X	BLK		201966	08/21/13 18:34	1.0		
033	233_33	X	BLK		201966	08/21/13 18:52	1.0		
034	233_34	X	BLK		201966	08/21/13 19:09	1.0		
035	233_35	X	BLK		201966	08/21/13 19:26	1.0		
036	233_36	X	SHUT DOWN		201966	08/21/13 19:44	1.0		

VQ 08/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 7 through 36.

Analyst: VO Date: 08/22/13 Reviewer: EAH Date: 08/22/13

Standards used: 1=S22689

Analysis:  Anions EPA 300 / EPA 9056  
 Perchlorate (ClO<sub>4</sub>) EPA 314  
 Cr6+ EPA 7199

Batch#: 201794  
 Date Started: \_\_\_\_\_  
 Prep Chemist: PDG

**BK 3116**  
 Page 100

Sample #	Sample Weight (g)	Extract Vol (mL)	Conductivity (umhos/cm)	Filters Used	Comments
1 248030-002 I	1.03	10mL	NA	S	MS
2 003 H	1.03				
3 011 D	1.04				
4 012 D	1.01				
5 014 I	1.03				
6 015 H	1.01				
7 016 A	1.01				
8 WP AC192257	1.02				
9 LIS 58	1.01				
10 MS 59	1.01				
11 MSD 60	0.99				
PDG 08/16/13					

LK PDG 8/16/13  
 100x Eluent Reagent ID: IC94 ELUENT 8/12/13 PDG Initials/Date: PDG 8/16/13  
 BS/BSD Spiked with .4 mL of WS# : 527659  
 MS/MSD Spiked with .2 mL of WS# :  
 Filters Used: Ag: Onguard-Ag NA  
 H: Onguard-H  
 P: Onguard-P  
 R: Onguard-RP  
 S: 0.45um or 0.22 um (circle one) 0.22 CARTOLINA # 21999103  
 PDG 8/16/13

Paul A. Gray 8/16/13  
 Extraction Chemist / Date

Continued from page /  
 Continued on page /

PDG 8/16/13  
 Reviewed by / Date

Laboratory Job Number 248030

ANALYTICAL REPORT

Wet Chemistry

Matrix: Water

Total Cyanide			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	201907
Field ID:	IA-40	Sampled:	08/15/13
Matrix:	Water	Received:	08/15/13
Units:	mg/L	Analyzed:	08/20/13
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	248030-038	ND	0.01
BLANK	QC702768	ND	0.01

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Cyanide			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	SM4500CN-E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	201907
MSS Lab ID:	247993-006	Sampled:	08/13/13
Matrix:	Water	Received:	08/14/13
Units:	mg/L	Analyzed:	08/20/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC702769	<0.01000	0.2000	0.1826	91	66-120		
MSD	QC702770		0.2000	0.1956	98	66-120	7	28
LCS	QC702771		0.2000	0.1993	100	71-122		

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories    Sample Batch Report

Batch Number: 201907	Analysis : CYANIDE
Date Started: 20-AUG-2013	Bgroup : N/A
Batched by : Dennis McCanna	Department : Wet Chemistry

Sample	Type	Client	Matrix	Analyses	Due Date
247848-016		QC-PE Samples	Water	CYANIDE	22-AUG-2013
247993-006		Union Sanitary Dis	Water	CYANIDE	20-AUG-2013
248030-038		Weston Solutions	Water	CYANIDE	21-AUG-2013
QC702768	BLANK		Water	CYANIDE	
QC702769	MS	of 247993-006	Water	CYANIDE	
QC702770	MSD	of 247993-006	Water	CYANIDE	
QC702771	LCS		Water	CYANIDE	



Concentration Results

Date: 8/20/2013 Time: 1:29:47 PM  
 Instrument: PerkinElmer Lambda 25 Serial No: 101N5091105  
 Method: CN 0611  
 Ordinate mode: Single wavelength  
 Slit: UV/VIS: 1.00 nm  
 Baseline: No correction ( 0.00 0.00 )  
 Result filename: 201907.RCO  
 Autotzero performed: 8/20/2013 1:29:42 PM  
 Analyst: 0.00 [analyst]

Wavelength(s)	Sample ID	Ordinate	Factor	Concentration	Sample Info
578.0	0.0 ICB	0.0004	1.0000	0.0003 mg/L	DM
578.0	0.0 ICV	0.3271	1.0000	0.2137 mg/L	
578.0	0.0 MB	0.0074	1.0000	0.0048 mg/L	
578.0	0.0 LCS	0.3050	1.0000	0.1993 mg/L	
578.0	0.0 848 16	0.1370	1.0000	0.0895 mg/L	
578.0	0.0 993 6	0.0046	1.0000	0.0030 mg/L	
578.0	0.0 993 6MS	0.2795	1.0000	0.1826 mg/L	
578.0	0.0 993 6MSD	0.2994	1.0000	0.1956 mg/L	
578.0	0.0 030 38	0.0052	1.0000	0.0034 mg/L	
578.0	0.0 CCV	0.3254	1.0000	0.2126 mg/L	
578.0	0.0 CCB	0.0002	1.0000	0.0001 mg/L	

CALIBRATION

Date: 8/20/2013 Time: 1:29:43 PM  
 Instrument: PerkinElmer Lambda 25 Serial No: 101N5091105  
 Method: CN 0611  
 Ordinate mode: Single wavelength  
 Baseline: No correction ( 0.00 0.00 )  
 Analyst: WETCHEM

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Wavelength(s)	Sample ID	Concentration	Ord. value	Comment
578.0	0.0	cn-0611.A01 0.0000 mg/L	-0.000	ACTUAL ICAL DATE: 6/9/11
578.0	0.0	cn-0611.A02 0.0050 mg/L	0.0079	OTHER DATES ARE PRINT DATES
578.0	0.0	cn 0611.A03 0.0100 mg/L	0.0151	S17476
578.0	0.0	cn 0611.A04 0.0200 mg/L	0.0310	BJP
578.0	0.0	cn 0611.A05 0.0400 mg/L	0.0617	
578.0	0.0	cn 0611.A06 0.0800 mg/L	0.1227	
578.0	0.0	cn 0611.A07 0.1200 mg/L	0.1855	
578.0	0.0	cn 0611.A08 0.2000 mg/L	0.3064	
578.0	0.0	cn 0611.A09 0.3000 mg/L	0.4582	

---

Equation:  $y = 1.530726e+00 * x$

Residual error: 0.000794

Correlation coefficient: 0.999987



Hexavalent Chromium			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7196A
Analyte:	Hexavalent Chromium	Batch#:	201771
Field ID:	IA-40	Chemist:	NJT
Matrix:	Water	Sampled:	08/15/13 13:45
Units:	mg/L	Received:	08/15/13
Diln Fac:	1.000	Analyzed:	08/15/13 17:06

Type	Lab ID	Result	RL
SAMPLE	248030-038	ND	0.01
BLANK	QC702160	ND	0.01

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Hexavalent Chromium			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7196A
Analyte:	Hexavalent Chromium	Batch#:	201771
Field ID:	IA-40	Chemist:	NJT
MSS Lab ID:	248030-038	Sampled:	08/15/13 13:45
Matrix:	Water	Received:	08/15/13
Units:	mg/L	Analyzed:	08/15/13 17:06
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC702161		1.000	0.9500	95	90-110		
MS	QC702162	<0.01000	1.000	0.9740	97	85-115		
MSD	QC702163		1.000	0.9820	98	85-115	1	20

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories    Sample Batch Report

Batch Number: 201771  
 Date Started: 15-AUG-2013  
 Batched by : Nate J Topie

Analysis : HEX CR  
 Bgroup : N/A  
 Department : Wet Chemistry

Sample	Type	Client	Matrix	Analyses	Due Date
247848-035		QC-PE Samples	Water	HEX CR	22-AUG-2013
248030-038		Weston Solutions	Water	HEX CR	21-AUG-2013
QC702160	BLANK		Water	HEX CR	
QC702161	LCS		Water	HEX CR	
QC702162	MS	of 248030-038	Water	HEX CR	
QC702163	MSD	of 248030-038	Water	HEX CR	

Analysis: **Hexavalent Chromium**  
 Method: **EPA 7196A / SMWW 3500 Cr-D**  
 Instrument: Hach DR 2800  
 Wavelength: 540 nm (1 cm cell)  
 SOP#: hexcr\_h2o\_rv 10.doc  
 Revision: 14.1 Effective: 23 May 2011

Analyst: NJT  
 Prep & Analysis Date: 8/15/2013  
 Batch Number: 201771  
 Matrix: Water

**INITIAL CALIBRATION**

Calibration Date: 2/7/2013

mg/L	Absorbance	RF		
0.010	0.009	0.900	Correlation Coefficient:	0.9998
0.025	0.024	0.960		
0.050	0.049	0.980	Average Response:	0.939
0.100	0.096	0.960	%RSD:	3.6
0.250	0.239	0.956		
0.750	0.693	0.924		
1.250	1.116	0.893		

**CALIBRATION VERIFICATION DATA**

	Dilution Factor	Raw Result (mg/L)	REPORT (mg/L)	Spike (mg/L)	Recovery	Reporting Limit (mg/L)
ICV/ LCS	1.00	0.950	0.950	1.000	95%	0.01
ICB/ MB	1.00	0.100	ND			0.01
CCV	1.00	0.952	0.952	1.000	95%	0.01
CCB	1.00	0.101	ND			0.01
	1.00		ND	1.000	0%	0.01
	1.00		ND			0.01
	1.00		ND	1.000	0%	0.01
	1.00		ND			0.01

All samples brought to final vol. of 4.75ml

ICV / CCV Recovery Limits: 90 - 110%

SAMPLES & BATCH QC	Vol Colored (mL)	Sample Conc (mg/L)	Color Blk Conc (mg/L)	Raw Result (mg/L)	REPORT (mg/L)	Reporting Limit (mg/L)	Total DF	Std Conc (mg/L)	Vol Added (mL)	Spike @ (mg/L)	Recovery, %	RPD, %
MB	4.75	0.000		0.100	ND	0.01	1.00					
LCS/BS	4.75	0.950		0.950	0.950	0.01	1.00	100	0.0475	1.000	95	
248030-038	4.75	0.001		0.101	ND	0.01	1.00					
MS	4.75	0.974		0.174	0.974	0.01	1.00	100	0.0475	1.000	97	
MSD/SDUP	4.75	0.982		0.182	0.982	0.01	1.00	100	0.0475	1.000	98	1

RPD, %	Recovery, %	QC Limits
20	90	110 LCS
48	85	115 MS/MSD

247848-035	4.75	0.167		0.67	0.167	0.01	1.00					
248030-038	4.75	0.001		0.101	ND	0.01	1.00					

Reviewed by / Date: \_\_\_\_\_

Curtis & Tompkins, Ltd.  
 F:\inorganic\data\AUG 2013\Hex Cr Water-201771



pH			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 9040C
Analyte:	pH	Diln Fac:	1.000
Field ID:	IA-40	Batch#:	201755
Lab ID:	248030-038	Sampled:	08/15/13 13:45
Matrix:	Water	Received:	08/15/13
Units:	SU	Analyzed:	08/15/13 17:02

Result	RL
4.8	1.0

RL= Reporting Limit

Batch QC Report

pH			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 9040C
Analyte:	pH	Units:	SU
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
Type:	SDUP	Batch#:	201755
MSS Lab ID:	248023-004	Sampled:	08/15/13 13:28
Lab ID:	QC702087	Received:	08/15/13
Matrix:	Water	Analyzed:	08/15/13 15:43

MSS Result	Result	RL	RPD	Lim
7.290	7.380	1.000	1	20

RL= Reporting Limit

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories      Sample Batch Report

Batch Number: 201755	Analysis : PH
Date Started: 15-AUG-2013	Bgroup : N/A
Batched by : Kevin Riley	Department : Wet Chemistry

Sample	Type	Client	Matrix	Analyses	Due Date
248023-004		Water Resources En	Water	PH	21-AUG-2013
248030-038		Weston Solutions	Water	PH	21-AUG-2013
QC702087	SDUP	of 248023-004	Water	PH	



Laboratory Job Number 248030

ANALYTICAL REPORT

Wet Chemistry

Matrix: Soil

Hexavalent Chromium			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3060A
Project#:	20074.063.095.1340	Analysis:	EPA 7196A
Analyte:	Hexavalent Chromium	Batch#:	201894
Matrix:	Soil	Chemist:	NJT
Units:	mg/Kg	Received:	08/15/13
Basis:	dry	Prepared:	08/19/13 18:00
Diln Fac:	1.000	Analyzed:	08/19/13 18:20

Field ID	Type	Lab ID	Result	RL	Moisture	Sampled
IA-08A	SAMPLE	248030-002	ND	0.42	5%	08/15/13 09:30
IA-08B	SAMPLE	248030-003	ND	0.46	13%	08/15/13 09:35
IA-10A	SAMPLE	248030-011	ND	0.43	8%	08/15/13 10:30
IA-10B	SAMPLE	248030-012	ND	0.47	14%	08/15/13 10:35
IA-14A	SAMPLE	248030-014	ND	0.44	9%	08/15/13 11:05
IA-14B	SAMPLE	248030-015	ND	0.47	15%	08/15/13 11:10
IA-29A	SAMPLE	248030-036	ND	0.43	6%	08/15/13 13:15
	BLANK	QC702706	ND	0.40		

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Hexavalent Chromium			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3060A
Project#:	20074.063.095.1340	Analysis:	EPA 7196A
Analyte:	Hexavalent Chromium	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	201894
MSS Lab ID:	248111-019	Sampled:	08/19/13
Matrix:	Soil	Received:	08/19/13
Units:	mg/Kg	Prepared:	08/19/13 18:00
Basis:	as received	Analyzed:	08/19/13 18:20

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
LCS	QC702707		40.00	41.08		103	80-120		
SDUP	QC702708	63.99		63.40	0.4000			1	50
SSPIKE	QC702709	63.99	41.32	100.8		89	75-125		

RL= Reporting Limit

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories      Sample Batch Report

Batch Number: 201894  
 Date Started: 19-AUG-2013  
 Batched by : Nate J Topie

Analysis : 3060/7196  
 Bgroup : N/A  
 Department : Wet Chemistry

Sample	Type	Client	Matrix	Analyses	Due Date
248030-002		Weston Solutions	Soil	3060/7196	21-AUG-2013
248030-003		Weston Solutions	Soil	3060/7196	21-AUG-2013
248030-011		Weston Solutions	Soil	3060/7196	21-AUG-2013
248030-012		Weston Solutions	Soil	3060/7196	21-AUG-2013
248030-014		Weston Solutions	Soil	3060/7196	21-AUG-2013
248030-015		Weston Solutions	Soil	3060/7196	21-AUG-2013
248030-036		Weston Solutions	Soil	3060/7196	21-AUG-2013
248037-001		Tetra Tech EMI	Miscell.	3060/7196	20-AUG-2013
248037-002		Tetra Tech EMI	Miscell.	3060/7196	20-AUG-2013
248111-019		QC-PE Samples	Soil	3060/7196	29-AUG-2013
QC702706	BLANK		Soil	3060/7196	
QC702707	LCS		Soil	3060/7196	
QC702708	SDUP	of 248111-019	Soil	3060/7196	
QC702709	SSPIKE	of 248111-019	Soil	3060/7196	



Analysis: **Hexavalent Chromium**  
 Method: **EPA 3060/7196**  
 Instrument: Hach DR 2800  
 Wavelength: 540 nm  
 SOP#: hexcr\_soil\_rv 7.doc  
 Revision: 17.0 Effective: 13 Dec 2010

Analyst: NJT  
 Prep Date: 8/19/2013  
 Analysis Date: 8/19/2013  
 Batch Number: 201894  
 Matrix: Soil

**INITIAL CALIBRATION**

2/7/2013

mg/L	ABS	Rf		
0.000	0.000	NA	Correlation Coefficient:	0.99979
0.010	0.009	0.900		
0.025	0.024	0.960	Average Response Factor:	0.939
0.050	0.049	0.980	%RSD:	3.57
0.100	0.096	0.960		
0.250	0.239	0.956		
0.750	0.693	0.924		
1.250	1.116	0.893		

**CALIBRATION VERIFICATION DATA**

	Conc (mg/L)	True (mg/L)	Recovery	Recovery Limits	RL (mg/L)
ICV	0.966	1.0000	97%	90 - 110%	0.01
ICB	0.000	0.0000			0.01
CCV	0.969	1.0000	97%	90 - 110%	0.01
CCB	-0.001	0.0000			0.01
CCV	0.968	1.0000	97%	90 - 110%	0.01
CCB	-0.001	0.0000			0.01
		1.0000		90 - 110%	0.01
		0.0000			0.01

**SAMPLE & BATCH QC DATA**

Sample #	Sample Mass (g)	Final Digest Volume (mL)	Volume Used (mL)	Sample Conc	Color Blk Conc	Total DF	RESULT (mg/kg)	Reporting Limit (mg/Kg)	Spike Vol (mL)	Mass Spk Added (mg)	WS Conc (mg/L)	Spike (mg/Kg)	Rec,%	RPD,%
MB	1.25	50	4.75	0.000		1.0	ND	0.4						
LCS/BS	1.25	50	4.75	1.027		1.0	41.08	0.4	0.05		1000	40.00	103	
	1.25	50	4.75						0.05		1000			
248111-019	1.26	50	2.75	0.941		1.7	63.99	0.7						
SDUP	1.24	50	2.75	0.903		1.7	63.40	0.7						1
SSPIKE (sol)	1.21	50	1	0.497		4.9	100.78	2.0	0.05		1000	41.32	89	
SSPIKE (insoi)	1.24	50	0.1	0.411		47.9	801.27	19.2		6.8		882.31	84	
SSPIKE (post)	1.26	50	1	1.200		4.7	224.40	1.9	0.0475		100	188.49	85	
248030-002	1.25	50	4.75	0.013	0.005	1.0	ND	0.4						
248030-003	1.22	50	4.75	0.008		1.0	ND	0.4						
248030-011	1.25	50	4.75	0.011	0.006	1.0	ND	0.4						
248030-012	1.22	50	4.75	0.012	0.005	1.0	ND	0.4						
248030-014	1.21	50	4.75	0.023	0.018	1.0	ND	0.4						
248030-015	1.25	50	4.75	0.060	0.051	1.0	ND	0.4						
248030-036	1.23	50	4.75	0.003		1.0	ND	0.4						
248037-001	1.24	50	4.75	0.097	0.002	1.0	3.86	0.4						
248037-002	1.27	50	4.75	0.004		1.0	ND	0.4						
248111-019	1.26	50	2.75	0.941		1.7	63.99	0.7						

QC Limits	RPD	Recovery
LCS/ BS/ BSD	20	80 - 120
Pre MS/ MSD	30	75 - 125
Post MS/MSD	30	85 - 115

Total Cyanide			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	201946
Matrix:	Soil	Chemist:	DM
Units:	mg/Kg	Sampled:	08/15/13
Basis:	dry	Received:	08/15/13
Diln Fac:	1.000	Analyzed:	08/21/13

Field ID	Type	Lab ID	Result	RL	Moisture
IA-08A	SAMPLE	248030-002	ND	1.1	5%
IA-08B	SAMPLE	248030-003	ND	1.1	13%
IA-10A	SAMPLE	248030-011	ND	1.1	8%
IA-10B	SAMPLE	248030-012	ND	1.2	14%
IA-14A	SAMPLE	248030-014	1.2	1.1	9%
IA-14B	SAMPLE	248030-015	1.5	1.2	15%
IA-29A	SAMPLE	248030-036	ND	1.1	6%
	BLANK	QC702928	ND	1.0	

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Cyanide			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	SM4500CN-E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	IA-08A	Batch#:	201946
MSS Lab ID:	248030-002	Chemist:	DM
Matrix:	Soil	Sampled:	08/15/13
Units:	mg/Kg	Received:	08/15/13
Basis:	dry	Analyzed:	08/21/13

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	Moisture	RPD	Lim
MS	QC702929	<1.053	9.926	9.737	98	75-125	5%		
MSD	QC702930		10.32	9.257	90	75-125	5%	9	50
LCS	QC702931		9.520	9.457	99	80-120			

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories    Sample Batch Report

Batch Number: 201946	Analysis : CYANIDE
Date Started: 21-AUG-2013	Bgroup : N/A
Batched by : Dennis McCanna	Department : Wet Chemistry

Sample	Type	Client	Matrix	Analyses	Due Date
209736 024		MDL Studies	Soil	CYANIDE	16-JUL-2013
248030 002		Weston Solutions	Soil	CYANIDE	21-AUG-2013
248030-003		Weston Solutions	Soil	CYANIDE	21-AUG-2013
248030-011		Weston Solutions	Soil	CYANIDE	21-AUG-2013
248030-012		Weston Solutions	Soil	CYANIDE	21-AUG-2013
248030 014		Weston Solutions	Soil	CYANIDE	21-AUG-2013
248030 015		Weston Solutions	Soil	CYANIDE	21-AUG-2013
248030 036		Weston Solutions	Soil	CYANIDE	21-AUG-2013
248111 005		QC-PE Samples	Soil	CYANIDE	29-AUG-2013
QC702928	BLANK		Soil	CYANIDE	
QC702929	MS	of 248030-002	Soil	CYANIDE	
QC702930	MSD	of 248030-002	Soil	CYANIDE	
QC702931	LCS		Soil	CYANIDE	

Cyanide  
 SMA500CNE  
 Perkin Elmer LAMBDA 25  
 Wavelength 578 nm  
 SOP# CN 335 r 8 doc  
 Revision 5.0 Effective 15 Jun 2011

8/21/2013  
 8/21/2013  
 Batch 201946  
 Mar. x SOIL

CONTINUING CALIBRATION DATA

ICV	True (mg/L)	Conc (mg/L)	Recovery	CV Limits
ICV	0.2000	0.2042	102%	90 - 110%
ICB	0.0000	0.0001		
CCV	0.2000	0.2031	102%	90 - 110%
CCB	0.0000	0.0001		
CCV	0.2000	0.2026	101%	90 - 110%
CCB	0.0000	0.0003		
CCV	0.2000		0%	fail 90 - 110%
CCB	0.0000			

SAMPLE & BATCH QC DATA

Sample ID	Sample Distilled (g)	Colored (mL)	Instrument Dilution	Conc	Report mg/Kg	Reporting Limit (mg/Kg)	Total Dr Added (mL)	Vol Spike Std Conc (mg/L)	Spiked @ (mg/Kg)	% Rec	% RPD
248030-2	1.03	10.0	1.00	0.0013	ND	0.97	0.97	0.5	20.0	9.43	98
MS	1.06	10.0	1.00	0.1961	9.250	0.94	0.94	0.5	20.0	9.80	90
MSD/DUP	1.02	10.0	1.00	0.1794	8.794	0.98	0.98	0.5	20.0	9.80	90
248030-3	1.04	10.0	1.00	0.0019	ND	0.96	0.96				
248030-11	1.08	10.0	1.00	0.0027	ND	0.94	0.94				
248030-12	1.12	10.0	1.00	0.0195	ND	0.89	0.89				
248030-14	1.08	10.0	1.00	0.0230	1.065	0.93	0.93				
248030-15	1.04	10.0	1.00	0.0239	1.245	0.96	0.96				
248111-5	1.03	0.5	1.00	0.0805	78.155	19.42	19.42				
209796-24	1.03	10.0	1.00	0.0054	ND	0.97	0.97				

QC Limits	RPD	Recovery
LC9/BS/BSO	20	80 - 120
MS/MSD	30	70 - 130

$0.054 \times 50 \div 1.03g = 0.26 \text{ mg/kg}$

Reviewed By / Date \_\_\_\_\_

Curtis & Tompkins, Ltd  
 Cyanide Soil

Concentration Results

Date: 8/21/2013 Time: 10:45:58 AM  
 Instrument: PerkinElmer Lambda 25 Serial No: 101N5091105  
 Method: CN 0611  
 Ordinate mode: Single wavelength  
 Slit: UV/VIS: 1.00 nm  
 Baseline: No correction ( 0.00 0.00 )  
 Result Filename: 201946.RCO  
 Autozero performed: 8/21/2013 10:45:51 AM  
 Analyst: 0.00 [analyst]

Wavelength(s)	Sample ID	Ordinate	Factor	Concentration	Sample Info
578.0	0.0	ICB	0.0001	1.0000 0.0001 mg/L	DM
578.0	0.0	ICV	0.3126	1.0000 0.2042 mg/L	
578.0	0.0	MB	0.0070	1.0000 0.0046 mg/L	
578.0	0.0	LCS	0.3041	1.0000 0.1986 mg/L	
578.0	0.0	736 24	0.0082	1.0000 0.0054 mg/L	
578.0	0.0	030 2	0.0019	1.0000 0.0013 mg/L	
578.0	0.0	030 2MS	0.3001	1.0000 0.1961 mg/L	
578.0	0.0	030 2MSD	0.2745	1.0000 0.1794 mg/L	
578.0	0.0	030 3	0.0030	1.0000 0.0019 mg/L	
578.0	0.0	030 11	0.0042	1.0000 0.0027 mg/L	
578.0	0.0	030 12	0.0298	1.0000 0.0195 mg/L	
578.0	0.0	030 14	0.0353	1.0000 0.0230 mg/L	
578.0	0.0	CCV	0.3110	1.0000 0.2031 mg/L	
578.0	0.0	CCB	0.0002	1.0000 0.0001 mg/L	
578.0	0.0	030 15	0.0396	1.0000 0.0259 mg/L	
578.0	0.0	030 36	0.0035	1.0000 0.0023 mg/L	
578.0	0.0	111 5	0.1232	1.0000 0.0805 mg/L	
578.0	0.0	CCV	0.3101	1.0000 0.2026 mg/L	
578.0	0.0	CCB	0.0005	1.0000 0.0003 mg/L	
578.0	0.0		0.0000	1.0000 0.0000* mg/L	Sample skipped
578.0	0.0		0.0000	1.0000 0.0000* mg/L	Sample skipped
578.0	0.0		0.0000	1.0000 0.0000* mg/L	Sample skipped

CALIBRATION

Date: 8/21/2013 Time: 10:45:51 AM  
 Instrument: PerkinElmer Lambda 25 Serial No: 101N5091105  
 Method: CN 0611  
 Ordinate mode: Single wavelength  
 Baseline: No correction ( 0.00 0.00 )  
 Analyst: WETCHEM

Wavelength(s)	Sample ID	Concentration	Ord. value	Comment
578.0	0.0	cn-0611.A01 0.0000 mg/L	-0.000	ACTUAL ICAL DATE: 6/9/11
578.0	0.0	cn-0611.A02 0.0050 mg/L	0.0079	OTHER DATES ARE PRINT DATES
578.0	0.0	cn-0611.A03 0.0100 mg/L	0.0151	S17476
578.0	0.0	cn-0611.A04 0.0200 mg/L	0.0310	BJP
578.0	0.0	cn-0611.A05 0.0400 mg/L	0.0617	
578.0	0.0	cn-0611.A06 0.0800 mg/L	0.1227	
578.0	0.0	cn-0611.A07 0.1200 mg/L	0.1855	
578.0	0.0	cn-0611.A08 0.2000 mg/L	0.3064	
578.0	0.0	cn-0611.A09 0.3000 mg/L	0.4582	

Equation:  $y = 1.530726e+00 * x$

Residual error: 0.000794

Correlation coefficient: 0.999987

LIMS Batch #: 201946

Matrix: soil

page: 48

BK 3434

on Begun (date & time): 08.15 8.21.13  
 Distilled by (initials): UXM

Spike Std LIMS #: S 22922

Intermediate Std Conc (mg/L): 20 - 2ml → 10ml = 4mg/L  
 Std Vol Added to LCS/MS/MSD (mL): 0.5 ↑ 50mL  
 Std Vol Added to ICV/CCV (mL): 0.1 ↑ 10mL

ervation & Interference Checks:  
 1.25N NaOH ID: ---  
 Ascorbic Acid Mfg/Lot: ---  
 BiNO<sub>3</sub>\*5H<sub>2</sub>O ID: ---  
 ce ID (Soils only): ---

0.25N NaOH ID: EMD B03608913  
 Sulfamic Acid ID: EMD TEADZEMS  
 1:1 H<sub>2</sub>SO<sub>4</sub> ID: Baker K67037  
 Magnesium Chloride ID: Ricca 1110423

Sample #	Container ID	pH	Cl S2 (+/-)*	Sample Distilled (mL or g)	Final Vol (mL)	Vol (mL) Colored	Comments
1CB		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
1CV		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
MB		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.02	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
LCS		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.05	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
209736-24		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.03	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
248030-2	H	<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.03	50	<input type="checkbox"/> 10 <input type="checkbox"/>	4mg/L x 0.03ml ÷ 1.03g = 0.117mg/kg
-2MS	✓	<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.06	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
-2KS	✓	<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.02	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
-3	G	<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.04	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
-11	E	<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.06	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
-12	✓	<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.12	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
-14	H	<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.08	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
CCV		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
CCB		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
248030-15	I	<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.04	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
-36	E	<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.08	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
24811-5	A	<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 1.03	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
CCV		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
CCB		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	
		<input type="checkbox"/> >12		<input type="checkbox"/> 50 <input type="checkbox"/>	50	<input type="checkbox"/> 10 <input type="checkbox"/>	

Colored (date & time): 10:35 8.21.13  
 Analyzed by (initials): UXM

**Color Reagents:**  
 Acetate Buffer ID: Ricca 1108601  
 Chloramine-T ID: Baker 08619  
 Pyridine-Barbaturic Acid ID: LAB CHEM 284-13

UXM 8.21.13  
 Analyst / Date

[Signature] 8.21.13  
 Reviewed by / Date

Percent Moisture Summary Report

Batch: 201865  
 Date: 08/19/13  
 Method: CLP SOW 390  
 Analyst: NCD

Sample	Tare (g)	Wet (g)	Dry (g)	Percent Solids	Percent Moisture
248030-018	11.3303	18.2361	18.1272	98	2
248030-020	11.4026	17.4693	17.2839	97	3
248030-021	11.1124	17.2794	16.7662	92	8
248030-022	11.0660	18.1804	17.8000	95	5
248030-023	11.3344	17.4632	16.8703	90	10
248030-024	11.4306	18.1481	17.4674	90	10
248030-025	11.3689	18.6054	18.5041	99	1
248030-026	10.8774	17.0776	17.0483	100	0
248030-027	10.9849	17.5750	17.1044	93	7
248030-028	11.3789	18.9679	18.1891	90	10
248030-029	10.9194	18.9092	16.9081	75	25
248030-030	11.3546	17.6393	15.6773	69	31
248030-031	11.3838	17.6866	14.2423	45	55
248030-032	11.0741	17.2911	13.9968	47	53
248030-033	11.6621	19.5673	18.2669	84	16
248030-034	11.3655	19.6305	19.2447	95	5
248030-035	11.2508	18.6732	17.9064	90	10
248030-036	11.3051	17.9433	17.5195	94	6
248030-037	11.2579	17.8825	17.3820	92	8
248030-039	11.0640	17.5890	17.5208	99	1
QC702581	11.1005	17.2939	17.2059	99	1
of 248030-018			RPD:	0.2%	10.4%

Moisture LOG

Curtis & Tompkins, Ltd.

LIMS Batch #: 201865  
 Date: 8/19/13

Page: 67  
 Benchbook#: BK 3459  
**Scale Used**  
 Leachates Analytical  
 \_\_\_\_\_

Sample # / Letter	Dish #	Dish Weight (g)	Sample + Dish Wt (g)	Final Weight (g)	*Comments	
BIR	VSA	11.0858	Ø	11.0850		
248030-001B	A10	11.4026	17.4693	17.2839	-20	
	<del>022A</del> A55	11.0660	18.1804	17.8000	-072	
	-021 E	ZMB	11.1124	17.2794	16.7662	
	-023A	H08	11.3344	17.4632	16.8703	
	-024V	C25	11.4306	18.1481	17.4674	
	-025B	E06	11.3689	18.6054	18.5041	
	-026	ACT	10.8774	17.0776	17.0483	
	-027V	BBB	10.9849	17.5750	17.1044	
	-028A	D32	11.3789	18.9679	18.1891	
	-029 B	106	10.9194	18.9092	16.9081	
	-030 B	C24	11.3546	17.6393	15.6773	
	-031	B13	11.3838	17.6866	14.2423	
	-032V	PER	11.0741	17.2911	13.9968	
	-033A	RHM	11.6621	19.5673	18.2669	
	-034 D	CTR	11.3655	19.6305	19.2447	
	-035 D	B15B	11.2508	18.6732	17.9064	
	-036 E	XXX	11.3051	17.9433	17.5195	
	-037 A	K10	11.2579	17.8825	17.3820	
	-039 D	B19	11.0640	17.5890	17.5208	
	-018 G	A03	11.3365	18.2361	18.1272	
SDA	-018 V	H1Z	11.1005	17.2939	17.2059	
	WDS	8/19/2013				

Date/ Time IN: 8/19/2013 12:06 PM  
 Temp (C) IN: 104°C  
 Date/ Time OUT: 8/20/2013 8:20 AM  
 Temp (C) OUT: 104°C

Gilly 6/2 8/19/2013  
 Extraction Chemist      Date

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

Date	ANALYST	0.2000	0.5000 <sup>ND</sup>	1.0000	2.0000	5.0000	10.0000	20.0000	50.0000	100.0000	Set
<del>7-19-75</del>	<del>ND</del>	<del>0.2000</del>	<del>0.4990</del>	<del>1.0000</del>	<del>2.0000</del>	<del>4.9997</del>	<del>10.0001</del>	<del>ND</del>	<del>7-19-75</del>		
7-19-75	ND	0.2000	0.5000	1.0000	2.0000	4.9998	10.0001	20.0000	49.9992	100.9991	A306
7-21-75	ND	0.2001	0.5005	1.0003	2.0003	4.9998	10.0004	19.9998	49.9991	99.9985	A306
7-25-75	ND	0.2002	0.4999	0.9999	2.0002	5.0000	9.9999	19.9996	49.9990	99.9990	A306
7-24-75	ND	0.2000	0.5000	1.0001	2.0000	5.0001	10.0000	19.9999	49.9996	99.9995	A306
7-25-75	ND	0.2000	0.5000	1.0000	2.0000	4.9998	9.9998	19.9999	49.9995	99.9995	A306
7-26-75	ND	0.2000	0.4998	0.9999	2.0000	5.0000	9.9999	19.9999	49.9990	99.9995	A306
7-28-75	vv	0.2000	0.5000	1.0000	2.0000	5.0000	10.0000	19.9999	49.9995	99.9991	A306
7-29-75	ND	0.2001	0.5000	1.0001	2.0002	5.0000	10.0000	19.9998	49.9995	99.9991	A306
7-30-75	ND	0.2001	0.5000	0.9999	1.9999	4.9999	9.9998	19.9998	49.9991	99.9979	A306
7-31-75	ND	0.1999	0.4999	0.9999	1.9999	4.9999	9.9998	19.9999	49.9997	99.9991	A306
8-1-75	ND	0.1999	0.5000	0.9999	2.0001	4.9997	9.9997	19.9999	49.9990	99.9996	A306
8-2-75	ND	0.2000	0.5002	1.0000	1.9999	5.0000	9.9998	19.9996	49.9992	99.9997	A306
8-3-75	ND	0.2001	0.5000	1.0000	2.0001	5.0000	9.9999	19.9996	49.9990	99.9979	A306
8-5-75	ND	0.2002	0.4999	1.0002	2.0000	5.0001	10.0000	20.0000	49.9997	99.9992	A306
8-6-75	ND	0.2001	0.5000	1.0002	2.0000	5.0000	9.9998	19.9999	49.9994	99.9986	A306
8-7-75	ND	0.2001	0.5000	1.0000	2.0000	4.9999	9.9999	19.9998	49.9990	99.9987	A306
8-8-75	ND	0.1998	0.5000	0.9998	1.9999	5.0000	10.0000	19.9998	49.9994	99.9981	A306
8-9-75	ND	0.1998	0.4998	0.9998	1.9999	4.9998	9.9998	19.9998	49.9995	99.9980	A306
8-10-75	vv	0.2000	0.5000	1.0000	2.0002	5.0001	10.0001	19.9998	49.9998	99.9993	A306
8-12-75	ND	0.2000	0.5000	1.0001	2.0001	4.9998	10.0000	19.9999	49.9998	99.9991	A306
8-13-75	ND	0.1998	0.5000	1.0000	2.0000	5.0000	10.0000	19.9999	49.9998	99.9993	A306
8-14-75	ND	0.2000	0.5000	0.9998	1.9999	4.9999	9.9998	20.0000	49.9991	99.9990	A306
8-15-75	ND	0.1999	0.5001	1.0000	2.0001	4.9999	10.0001	20.0002	49.9998	99.9993	A306
8-16-75	ND	0.2000	0.5000	1.0000	1.9999	5.0000	10.0000	20.0000	49.9998	99.9996	A306
8-18-75	vv	0.2000	0.5000	1.0000	2.0000	5.0001	10.0002	20.0000	49.9996	99.9993	A306
8-19-75	ND	0.2000	0.5000	1.0000	2.0000	5.0000	9.9999	19.9999	49.9998	99.9993	A306
8-20-75	ND	0.1999	0.4999	0.9999	1.9999	5.0000	9.9999	19.9999	49.9990	99.9985	A306

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

Percent Moisture Summary Report

Batch: 201873  
 Date: 08/19/13  
 Method: CLP SOW 390  
 Analyst: NCD

Sample	Tare (g)	Wet (g)	Dry (g)	Percent Solids	Percent Moisture
248030-001	10.9557	17.5003	17.3569	98	2
248030-002	11.3519	17.2659	16.9860	95	5
248030-003	11.3892	17.7409	16.8906	87	13
248030-004	11.3758	18.7696	17.9194	89	11
248030-005	11.3136	17.6228	16.4862	82	18
248030-006	11.0818	18.7267	17.9557	90	10
248030-007	11.2263	17.1826	16.5606	90	10
248030-011	11.0428	17.2570	16.7779	92	8
248030-012	11.0039	19.3090	18.1663	86	14
248030-013	11.2694	17.3145	17.0430	96	4
248030-014	11.3828	18.7819	18.1458	91	9
248030-015	11.3441	18.4261	17.3463	85	15
248030-016	11.1104	17.6805	17.2527	93	7
248030-017	11.3640	18.0750	17.7010	94	6
248030-019	11.6761	17.7466	17.5676	97	3
248030-040	11.3243	18.4868	18.3960	99	1
248030-041	11.3370	17.2385	17.1683	99	1
248030-042	11.4751	17.5607	17.4889	99	1
248030-043	11.3920	17.0246	17.0003	100	0
248030-044	11.4659	17.1241	17.0963	100	0
QC702623	10.8908	18.6643	17.1865	81	19
of 248030-005			RPD:	1.2%	5.4%

Moisture LOG

Curtis & Tompkins, Ltd.

LIMS Batch #: 201873  
 Date: 8/19/2017

Page: 68  
 Benchbook#: BK 3459  
 Scale Used  
 Leachates Analytical

Sample # / Letter	Dish #	Dish Weight (g)	Sample + Dish Wt (g)	Final Weight (g)	*Comments
BLK	51L	11.1320	Ø	11.1318	
248050-002H	TEC	11.3519	17.2659	16.9860	
-003 V	CS3	11.3892	17.7409	16.8906	
-005 B	CTS	11.3136	17.6228	16.4862	
-011 D	VII	11.0428	17.2570	16.7779	
-012 D	VAN	11.6039	19.3090	18.1663	
-013 B	TRK	11.2694	17.3145	17.0430	
-014 F	E01	11.3828	18.7819	18.1458	
-015 V	CT14	11.3441	18.4261	17.3463	
-016 B	IV	11.1104	17.6805	17.2527	
-017 E	K08	11.3640	18.0750	17.7010	
-040 A	K01	11.3243	18.4868	18.3960	
-041 B	A05	11.3370	17.28 <sup>NO</sup> 17.2505	17.1683	17.2385
-042 A	B20	11.4751	17.5607	17.4889	
-044 A	B16	11.4659	17.1241	17.0963	
SDVP -005 B	ULI	10.8908	18.6643	17.1865	
-043 D	M3	11.3920	17.0246	17.0005	
-019 B	ZAA	11.6761	17.7466	17.5676	
-001 A	B20	10.9557	17.5003	17.3569	add at 1:40 pm
-004 B	K07	11.3758	18.7696	17.9194	
-006 D	JP8	11.0818	18.7267	17.9557	
-007 D	CT9	11.2263	17.1826	16.5606	↓
WJW 8/19/2017					

Date/ Time IN: 8/19/2017 12:43pm  
 Temp (C) IN: 104°C  
 Date/ Time OUT: 8/20/2017 6:47am  
 Temp (C) OUT: 104°C

[Signature] 8/19/2017  
 Extraction Chemist Date

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

Date	ANALYST	0.2000	0.5000	1.0000	2.0000	5.0000	10.0000	20.0000	100.0000	Set
<del>7-19-75</del>	<del>ND</del>	<del>0.2000</del>	<del>0.4990</del>	<del>1.0000</del>	<del>2.0000</del>	<del>4.9997</del>	<del>10.0000</del>	<del>ND</del>	<del>7-19-75</del>	
7-19-15 ND		0.2000	0.5000	1.0000	2.0000	4.9998	10.0001	20.0000	49.9992	100.9991 AS06
7-20-15 ND		0.2001	0.5005	1.0003	2.0005	5.0001	10.0001	19.9998	49.9991	99.9985 AS06
7-25-15 ND		0.2002	0.4999	0.9997	2.0002	5.0000	9.9999	19.9996	49.9990	99.9990 AS06
7-24-15 ND		0.2000	0.5000	1.0001	2.0000	5.0001	10.0000	19.9999	49.9996	99.9995 AS06
7-25-15 ND		0.2000	0.5000	1.0000	2.0000	4.9998	9.9998	19.9999	49.9995	99.9995 AS06
7-26-15 ND		0.2000	0.4998	0.9999	2.0000	5.0000	9.9999	19.9999	49.9990	99.9995 AS06
7-28-13 vv		0.2000	0.5000	1.0000	2.0000	5.0000	10.0000	19.9999	49.9995	99.9991 AS06
7-29-15 ND		0.2001	0.5000	1.0001	2.0002	5.0000	10.0000	19.9998	49.9995	99.9991 AS06
7-30-15 ND		0.2001	0.5000	0.9999	1.9999	4.9999	9.9998	19.9998	49.9991	99.9979 AS06
7-31-15 ND		0.1999	0.4999	0.9999	1.9999	4.9999	9.9998	19.9999	49.9997	99.9991 AS06
8-1-15 ND		0.19999	0.5000	0.9999	2.0001	4.9997	9.9997	19.9999	49.9990	99.9996 AS06
8-2-15 ND		0.2000	0.5002	1.0000	1.9999	5.0000	9.9998	19.9996	49.9992	99.9997 AS06
8-3-15 ND		0.2001	0.5000	1.0000	2.0001	5.0000	9.9999	19.9996	49.9990	99.9979 AS06
8-5-15 ND		0.2002	0.4999	1.0002	2.0000	5.0001	10.0000	20.0000	49.9997	99.9992 AS06
8-6-15 ND		0.2001	0.5000	1.0002	2.0000	5.0000	9.9998	19.9999	49.9994	99.9986 AS06
8-7-15 ND		0.2001	0.5000	1.0000	2.0000	4.9999	9.9999	19.9998	49.9990	99.9987 AS06
8-8-15 ND		0.1998	0.5000	0.9998	1.9999	5.0000	10.0000	19.9996	49.9994	99.9981 AS06
8-9-15 ND		0.1998	0.4998	0.9998	1.9999	4.9998	9.9998	19.9998	49.9985	99.9980 AS06
8-10-13 vv		0.2000	0.5000	1.0000	2.0002	5.0001	10.0001	19.9998	49.9998	99.9993 AS06
8-12-15 ND		0.2000	0.5000	1.0001	2.0001	4.9998	10.0000	19.9999	49.9998	99.9991 AS06
8-13-15 ND		0.1998	0.5000	1.0000	2.0000	5.0000	10.0000	19.9999	49.9998	99.9993 AS06
8-14-15 ND		0.2000	0.5000	0.9998	1.9999	4.9999	9.9998	20.0000	49.9991	99.9990 AS06
8-15-15 ND		0.1999	0.5001	1.0000	2.0001	4.9999	10.0001	20.0002	49.9995	99.9993 AS06
8-16-15 ND		0.2000	0.5000	1.0000	1.9999	5.0000	10.0000	20.0000	49.9998	99.9996 AS06
8-18-13 vv		0.2000	0.5000	1.0000	2.0000	5.0001	10.0002	20.0000	49.9996	99.9993 AS06
8-19-15 ND		0.2000	0.5000	1.0000	2.0000	5.0000	9.9999	19.9999	49.9998	99.9995 AS06
8-20-15 ND		0.1999	0.4999	0.9999	1.9999	5.0000	9.9999	19.9999	49.9990	99.9985 AS06

Continued on Page

Read and Understood By

Signed

Date

Signature

Date

Percent Moisture Summary Report

Batch: 201881  
 Date: 08/19/13  
 Method: CLP SOW 390  
 Analyst: NCD

Sample	Tare (g)	Wet (g)	Dry (g)	Percent Solids	Percent Moisture
248022-001	11.4070	17.5987	15.7814	71	29
248022-002	11.3702	17.0661	16.7284	94	6
248024-002	11.6564	18.0861	17.0535	84	16
248024-003	11.2449	18.0375	16.3071	75	25
248024-004	10.9786	18.4377	16.4361	73	27
248024-005	10.9200	17.7854	16.6766	84	16
248024-006	11.3277	18.9703	18.1768	90	10
248030-008	11.3816	18.0296	17.2114	88	12
248030-009	11.2024	18.5068	17.9077	92	8
248030-010	11.3210	17.2655	16.9607	95	5
248046-001	11.3672	17.6962	17.4112	95	5
248046-002	11.2193	17.9075	17.5595	95	5
248046-003	11.3165	17.3730	17.2108	97	3
248046-004	10.8666	17.8667	17.4662	94	6
248046-005	11.3308	18.1058	17.8881	97	3
248046-006	11.0932	17.6825	17.1706	92	8
248112-001	11.3903	17.5662	17.3492	96	4
248112-002	11.0081	17.6613	17.3306	95	5
QC702650	11.3485	18.4039	17.8062	92	8
of 248046-006			RPD:	0.8%	8.7%

Moisture LOG

Curtis & Tompkins, Ltd.

LIMS Batch #: 201881  
 Date: 8/19/2013

Page: 69  
 Benchbook#: BK 3459

Scale Used  
 Leachates Analytical

Sample # / Letter	Dish #	Dish Weight (g)	Sample + Dish Wt (g)	Final Weight (g)	*Comments
B11	B11	11.3477	Ø	11.3469	
248030-010B	VCM	11.3210	17.2655	16.9607	
↓ -009A	HHB	11.2024	18.5068	17.9077	
✓ -009D	CT17	11.3816	18.0296	17.2114	
5 248024-002	VIET	11.6564	18.0461	17.0535	comp 2 c+d
↓ -003	CT19	11.7449	18.0375	16.3071	comp 3 c+d
↓ -001	12A	16.9786	18.4377	16.4361	comp 4 c+d
↓ -005	12B	10.9200	17.7854	16.6766	comp 5 c+d
✓ -006	E09	11.3277	18.9703	18.1768	comp 6 c+d
10 218112-001R	CM	11.3903	17.5662	17.3492	
↓ -002B	B13	11.0081	17.6613	17.3306	
248046-001F	C21	11.3672	17.6962	17.4112	
↓ -002	HND	11.2193	17.9075	17.5595	
↓ -003	SLA	11.3165	17.3730	17.2108	
↓ -004	HML	10.8666	17.8667	17.4662	
↓ -005	C28	11.3308	18.1058	17.8889	
✓ -006V	B123	11.0932	17.6825	17.1706	
248022-001A	E02	11.4070	17.5987	15.7814	
↓ -002A	Z00	11.3702	17.0661	16.7281	
20 248046-006F	CT29	11.3485	18.4039	17.8062	
NCD 8/19/2013					

Date/ Time IN: 8/19/2013 3:25 pm  
 Temp (C) IN: 104°C  
 Date/ Time OUT: 8/20/2013 8:43 am  
 Temp (C) OUT: 104°C

[Signature] 8/19/2013  
 Extraction Chemist      Date

\_\_\_\_\_  
 Reviewed by                      Date

Date	ANALYST	0.2000	0.5000	1.0000	2.0000	5.0000	10.0000	20.0000	50.0000	100.0000	SET
<del>7-19-13</del>	<del>ND</del>	<del>0.2000</del>	<del>0.4999</del>	<del>1.0000</del>	<del>2.0000</del>	<del>4.9999</del>	<del>10.0000</del>	<del>ND</del>	<del>7-19-13</del>		
7-19-13 ND		0.2000	0.5000	1.0000	2.0000	4.9998	10.0001	20.0000	49.9992	100.9991	A306
7-24-13 ND		0.2001	0.5005	1.0003	2.0005	5.0004	10.0004	19.9998	49.9991	99.9985	A306
7-25-13 ND		0.2002	0.4999	0.9999	2.0002	5.0000	9.9999	19.9996	49.9990	99.9990	A306
7-24-13 ND		0.2000	0.5000	1.0001	2.0000	5.0001	10.0000	19.9999	49.9996	99.9995	A306
7-25-13 ND		0.2000	0.5000	1.0000	2.0000	4.9998	9.9999	19.9999	49.9995	99.9995	A306
7-26-13 ND		0.2000	0.4998	0.9999	2.0000	5.0000	9.9999	19.9999	49.9990	99.9995	A306
7-28-13 vV		0.2000	0.5000	1.0000	2.0000	5.0000	10.0000	19.9999	49.9995	99.9991	A306
7-29-13 ND		0.2001	0.5000	1.0001	2.0002	5.0000	10.0000	19.9998	49.9995	99.9991	A306
7-30-13 ND		0.2001	0.5000	0.9999	1.9999	4.9999	9.9998	19.9998	49.9991	99.9979	A306
7-31-13 ND		0.1999	0.4999	0.9999	1.9999	4.9999	9.9998	19.9999	49.9997	99.9991	A306
8-1-13 ND		0.19999	0.5000	0.9999	2.0001	4.9997	9.9997	19.9999	49.9990	99.9996	A306
8-2-13 ND		0.2000	0.5002	1.0000	1.9999	5.0000	9.9998	19.9996	49.9992	99.9997	A306
8-3-13 ND		0.2001	0.5000	1.0000	2.0001	5.0000	9.9999	19.9996	49.9990	99.9979	A306
8-5-13 ND		0.2002	0.4999	1.0002	2.0000	5.0001	10.0000	20.0000	49.9997	99.9992	A306
8-6-13 ND		0.2001	0.5000	1.0002	2.0000	5.0000	9.9998	19.9999	49.9994	99.9986	A306
8-7-13 ND		0.2001	0.5000	1.0000	2.0000	4.9999	9.9999	19.9998	49.9990	99.9987	A306
8-8-13 ND		0.1998	0.5000	0.9998	1.9999	5.0000	10.0000	19.9996	49.9994	99.9981	A306
8-9-13 ND		0.1998	0.4998	0.9998	1.9999	4.9998	9.9998	19.9998	49.9995	99.9980	A306
8-10-13 vV		0.2000	0.5000	1.0000	2.0002	5.0001	10.0001	19.9998	49.9998	99.9993	A306
8-12-13 ND		0.2000	0.5000	1.0001	2.0001	4.9998	10.0000	19.9999	49.9999	99.9991	A306
8-13-13 ND		0.1998	0.5000	1.0000	2.0000	5.0000	10.0000	19.9999	49.9998	99.9993	A306
8-14-13 ND		0.2000	0.5000	0.9998	1.9999	4.9999	9.9998	20.0000	49.9991	99.9990	A306
8-15-13 ND		0.1999	0.5001	1.0000	2.0001	4.9999	10.0001	20.0002	49.9995	99.9993	A306
8-16-13 ND		0.2000	0.5000	1.0000	1.9999	5.0000	10.0002	20.0000	49.9998	99.9996	A306
8-18-13 vV		0.2000	0.5000	1.0000	2.0000	5.0001	10.0002	20.0000	49.9996	99.9993	A306
8-19-13 ND		0.2000	0.5000	1.0000	2.0000	5.0000	9.9999	19.9999	49.9999	99.9995	A306
8-20-13 ND		0.1999	0.4999	0.9999	1.9999	5.0000	9.9999	19.9999	49.9990	99.9985	A306

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

pH			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 9045D
Analyte:	pH	Batch#:	201818
Matrix:	Soil	Received:	08/15/13
Units:	SU	Prepared:	08/16/13 15:53
Diln Fac:	1.000	Analyzed:	08/16/13 17:33

Field ID	Lab ID	Result	RL	Sampled
IA-08A	248030-002	7.7	1.0	08/15/13 09:30
IA-08B	248030-003	7.2	1.0	08/15/13 09:35
IA-10A	248030-011	8.2	1.0	08/15/13 10:30
IA-10B	248030-012	7.4	1.0	08/15/13 10:35
IA-14A	248030-014	11.4	1.0	08/15/13 11:05
IA-14B	248030-015	8.0	1.0	08/15/13 11:10
IA-29A	248030-036	7.8	1.0	08/15/13 13:15

RL= Reporting Limit

## Batch QC Report

pH			
Lab #:	248030	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 9045D
Analyte:	pH	Diln Fac:	1.000
Field ID:	IA-10A	Batch#:	201818
Type:	SDUP	Sampled:	08/15/13 10:30
MSS Lab ID:	248030-011	Received:	08/15/13
Lab ID:	QC702385	Prepared:	08/16/13 15:53
Matrix:	Soil	Analyzed:	08/16/13 17:33
Units:	SU		

MSS Result	Result	RL	RPD	Lim
8.230	8.330	1.000	1	20

RL= Reporting Limit

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Sample Batch Report

Batch Number: 201818  
 Date Started: 16-AUG-2013  
 Batched by : Kevin Riley

Analysis : PH  
 Bgroup : N/A  
 Department : Wet Chemistry

Sample	Type	Client	Matrix	Analyses	Due Date
248030-002		Weston Solutions	Soil	PH	21-AUG-2013
248030-003		Weston Solutions	Soil	PH	21-AUG-2013
248030-011		Weston Solutions	Soil	PH	21-AUG-2013
248030-012		Weston Solutions	Soil	PH	21-AUG-2013
248030-014		Weston Solutions	Soil	PH	21-AUG-2013
248030-015		Weston Solutions	Soil	PH	21-AUG-2013
248030-036		Weston Solutions	Soil	PH	21-AUG-2013
QC702385	SDUP	of 248030-011	Soil	PH	

**pH Analysis Benchbook**

**Curtis & Tompkins, Ltd.**

LIMS Batch #: 201818  
 Matrix: Soil  
 Analyst: PR

Date: 16/10/13  
 Time: 1733  
 Meter ID: 0102 / 0401  
Prepared 1553

Benchbook#: **BK 3440**  
 Page: 100

Method (check one):  Water (EPA 9040c/ SM4500H+B)  Soil (EPA 9045c)

Cal Std-1 ph: 9.17 LIMS#: S20287 / S19699 Slope: 98.0 / 97.2  
 Cal Std-2 ph: 7.11 LIMS#: S19699 / S20288 (slope limits: 92 - 102)  
 Cal Std-3 ph: 10.1245 LIMS#: S20286 / S22423 Balance ID: 102101  
 (soils only)

Run	Sample #	Container ID	pH (S.U.)	2nd Reading* (water only)	Soil Prep Wt(g)/Vol(mL)	Comments
1	CCV		7.09 / 10.05			S21989 / S21626
	248020-002	H	7.65		19.9775 / 20	
	-003	G	7.17		20.192	
	-011	E	8.23		19.912	
5	Soil 248001	E	8.33		20.1571	RPO = 6.208
	248030-012	D	7.44		19.9857	
	-014	I	11.42		19.9169	
	-015	I	7.96		20.1919	
	-036	D	7.76		20.0738	
10	CCV		7.09 / 10.10			
15						
20						
25						

\* 2nd aliquot must be within 0.1 SU

PR 16/10/13  
 Analyst / Date

John Smith  
 Reviewed by / Date

DATE	AUXILIARY	0.0200g	0.5000g	2.0000g	10.0000g	50.0000g	100.0000g	SET #	LEVEL
24 JUN 13	NJT	0.0199	0.5000	2.0000	10.0001	50.0000	100.0001	HNS596/40417	✓
25 JUN 13	KR	0.0200	0.5001	2.0000	10.0001	50.0001	100.0001	HNS596/40417	✓
26 JUN 13	KR	0.0199	0.5000	2.0000	10.0000	50.0001	100.0000	HNS596/40417	✓
27 JUN 13	KR	0.0200	0.5000	2.0000	10.0000	49.9999	100.0001	HNS596/40417	✓
01 JUL 13	KR	0.0200	0.5000	2.0000	10.0000	50.0000	100.0000	HNS596/40417	✓
02 JUL 13	NJT	0.0201	0.4999	1.9999	9.9999	49.9999	100.0001	HNS596/40417	✓
03 JUL 13	KR	0.0199	0.5000	2.0000	10.0000	50.0001	100.0001	HNS596/40417	✓
05 JUL 13	KR	0.0200	0.5000	2.0001	10.0000	50.0001	99.9999	HNS596/40417	✓
08 JUL 13	KR	0.0200	0.5000	2.0000	10.0000	50.0001	100.0001	HNS596/40417	✓
09 JUL 13	KR	0.0200	0.5001	2.0000	10.0000	50.0001	100.0002	HNS596/40417	✓
10 JUL 13	NJT	0.0201	0.4999	2.0000	10.0001	50.0001	100.0002	HNS596/40417	✓
11 JUL 13	KR	0.0200	0.5000	2.0000	10.0000	50.0000	100.0001	HNS596/40417	✓
12 JUL 13	KR	0.0200	0.5000	2.0000	10.0000	50.0001	100.0001	HNS596/40417	✓
16 JUL 13	KR	0.0200	0.5001	2.0000	10.0001	50.0000	100.0000	HNS596/40417	✓
18 JUL 13	KR	0.0200	0.5000	2.0000	10.0000	50.0001	100.0000	HNS596/40417	✓
19 JUL 13	KR	0.0200	0.5001	2.0000	10.0001	50.0002	100.0002	HNS596/40417	✓
22 JUL 13	KR	0.0200	0.5000	2.0000	10.0001	50.0001	100.0001	HNS596/40417	✓
23 JUL 13	KR	0.0201	0.5001	2.0000	10.0002	50.0000	100.0002	HNS596/40417	✓
24 JUL 13	KR	0.0200	0.5000	2.0000	10.0000	50.0002	100.0002	HNS596/40417	✓
25 JUL 13	NJT	0.0201	0.5001	2.0001	10.0001	50.0000	100.0001	HNS596/40417	✓
29 JUL 13	KR	0.0200	0.5002	2.0000	10.0001	50.0001	100.0001	HNS596/35298	✓
31 JUL 13	KR	0.0200	0.5001	2.0000	10.0000	50.0001	100.0002	HNS596/35298	✓
01 AUG 13	KR	0.0200	0.5001	2.0000	10.0001	50.0000	100.0002	HNS596/40417	✓
02 AUG 13	KR	0.0200	0.5000	2.0000	10.0001	49.9999	100.0002	HNS596/40417	✓
05 AUG 13	KR	0.0201	0.5000	2.0001	10.0000	50.0002	99.9999	HNS596/40417	✓
06 AUG 13	KR	0.0200	0.5000	2.0001	10.0001	50.0000	100.0001	HNS596/40417	✓
07 AUG 13	KR	0.0200	0.5000	2.0000	10.0001	50.0000	100.0000	HNS596/40417	✓
08 AUG 13	KR	0.0200	0.5001	2.0001	10.0001	50.0001	100.0001	HNS596/40417	✓
09 AUG 13	KR	0.0200	0.5000	2.0001	10.0000	50.0001	100.0000	HNS596/40417	✓
13 Aug 13	NJT	0.0200	0.4999	2.0000	10.0000	50.0001	100.0002	HNS596/40417	✓
15 AUG 13	KR	0.0200	0.5000	2.0000	10.0000	50.0001	99.9999	HNS596/40417	✓
16 AUG 13	KR	0.0200	0.5001	2.0000	10.0001	50.0000	100.0002	HNS596/40417	✓

Continued on Page

Read and Understood By

Signature

Date

Signature

Date

Laboratory Job Number 248030

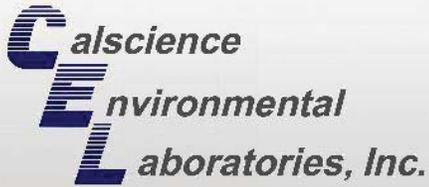
ANALYTICAL REPORT

Subcontracted Products

Laboratory Job Number 248030

Subcontracted Products

Cal Science



Supplemental Report 1

The original report has been revised to include the Level III deliverables package.



# CALSCIENCE

## WORK ORDER NUMBER: 13-08-1263

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** Curtis & Tompkins, Ltd.

**Client Project Name:** 248030

**Attention:** Isabelle Choy  
2323 Fifth Street  
Berkeley, CA 94710-2407

*Vikas Patel*

Approved for release on 10/04/2013 by:  
Vikas Patel  
Project Manager

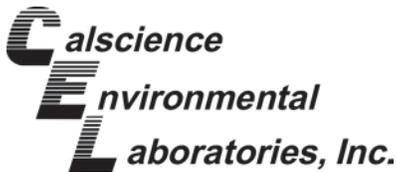
ResultLink ▶

Email your PM ▶



Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

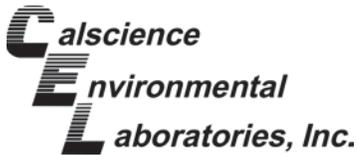




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Work Order Number: 13-08-1263

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## Work Order Narrative

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Work Order: 13-08-1263

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### **Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 08/17/13. They were assigned to Work Order 13-08-1263.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

### **Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

### **Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

### **Additional Comments:**

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

### **Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

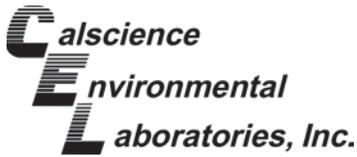
## QC Association Summary

Work Order: 13-08-1263

Page 1 of 1

<u>Client Sample ID</u>	<u>Method Name</u>	<u>Type</u>	<u>Ext Name</u>	<u>Instrument</u>	<u>MS/MSD/SDP</u>	<u>LCS/LCSD</u>
IA-14A	Organotins by Krone et al.		EPA 3550B (M)	GC/MS JJJ	130821S04A	130821L04
IA-14B	Organotins by Krone et al.		EPA 3550B (M)	GC/MS JJJ	130821S04A	130821L04
IA-16	Organotins by Krone et al.		EPA 3550B (M)	GC/MS JJJ	130821S04A	130821L04
IA-17	Organotins by Krone et al.		EPA 3550B (M)	GC/MS JJJ	130821S04A	130821L04
IA-17	Organotins by Krone et al.	R	EPA 3550B (M)	GC/MS JJJ	130821S04A	130821L04
IA-23D	Organotins by Krone et al.		EPA 3550B (M)	GC/MS JJJ	130821S04A	130821L04
IA-38D	Organotins by Krone et al.		EPA 3550B (M)	GC/MS JJJ	130821S04A	130821L04
IA-25D	Organotins by Krone et al.		EPA 3550B (M)	GC/MS JJJ	130821S04A	130821L04
IA-32D	Organotins by Krone et al.		EPA 3550B (M)	GC/MS JJJ	130821S04A	130821L04

R = Rerun



## Detections Summary

Client: Curtis & Tompkins, Ltd.  
2323 Fifth Street  
Berkeley, CA 94710-2407

Work Order: 13-08-1263  
Project Name: 248030  
Received: 08/17/13

Attn: Isabelle Choy

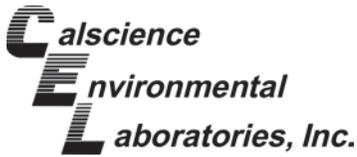
Page 1 of 1

### Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
IA-14A (13-08-1263-1)						
Dibutyltin	24		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Monobutyltin	22		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Tributyltin	5.4		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
IA-16 (13-08-1263-3)						
Dibutyltin	17		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Monobutyltin	6.4		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Tributyltin	3.4		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
IA-17 (13-08-1263-4)						
Dibutyltin	470	E	3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Dibutyltin	690		30	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Monobutyltin	220	E	3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Monobutyltin	330		30	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Tributyltin	49		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
IA-23D (13-08-1263-5)						
Dibutyltin	89		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Monobutyltin	12		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Tributyltin	13		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
IA-38D (13-08-1263-6)						
Dibutyltin	48		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Monobutyltin	5.3		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Tributyltin	7.3		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
IA-25D (13-08-1263-7)						
Dibutyltin	14		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Tributyltin	4.3		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
IA-32D (13-08-1263-8)						
Dibutyltin	37		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)
Tributyltin	5.5		3.0	ug/kg	Organotins by Krone et al.	EPA 3550B (M)

Subcontracted analyses, if any, are not included in this summary.

\* MDL is shown



## Analytical Report

Curtis & Tompkins, Ltd.  
2323 Fifth Street  
Berkeley, CA 94710-2407

Date Received: 08/17/13  
Work Order: 13-08-1263  
Preparation: EPA 3550B (M)  
Method: Organotins by Krone et al.  
Units: ug/kg

Project: 248030

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-14A	13-08-1263-1-A	08/15/13 11:05	Solid	GC/MS JJJ	08/21/13	08/27/13 15:15	130821L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	24	3.0	0.65	1	
Monobutyltin	22	3.0	0.65	1	
Tetrabutyltin	ND	3.0	0.77	1	
Tributyltin	5.4	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	255	48-126	2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-14B	13-08-1263-2-A	08/15/13 11:10	Solid	GC/MS JJJ	08/21/13	08/27/13 15:45	130821L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	3.0	0.65	1	
Monobutyltin	ND	3.0	0.65	1	
Tetrabutyltin	ND	3.0	0.77	1	
Tributyltin	ND	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	99	48-126	

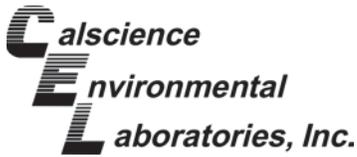
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-16	13-08-1263-3-A	08/15/13 12:35	Solid	GC/MS JJJ	08/21/13	08/26/13 20:48	130821L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	17	3.0	0.65	1	
Monobutyltin	6.4	3.0	0.65	1	
Tetrabutyltin	ND	3.0	0.77	1	
Tributyltin	3.4	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	131	48-126	2,7

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Curtis & Tompkins, Ltd.  
2323 Fifth Street  
Berkeley, CA 94710-2407

Date Received: 08/17/13  
Work Order: 13-08-1263  
Preparation: EPA 3550B (M)  
Method: Organotins by Krone et al.  
Units: ug/kg

Project: 248030

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-17	13-08-1263-4-A	08/15/13 12:40	Solid	GC/MS JJJ	08/21/13	08/27/13 16:15	130821L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	470	3.0	0.65	1	E
Monobutyltin	220	3.0	0.65	1	E
Tetrabutyltin	ND	3.0	0.77	1	
Tributyltin	49	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	144	48-126	2,7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-17	13-08-1263-4-A	08/15/13 12:40	Solid	GC/MS JJJ	08/21/13	08/28/13 11:38	130821L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	690	30	6.5	10	
Monobutyltin	330	30	6.5	10	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	106	48-126	

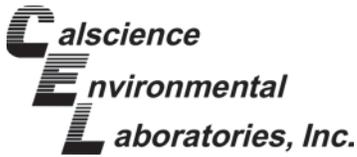
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-23D	13-08-1263-5-A	08/15/13 12:50	Solid	GC/MS JJJ	08/21/13	08/27/13 16:46	130821L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	89	3.0	0.65	1	
Monobutyltin	12	3.0	0.65	1	
Tetrabutyltin	ND	3.0	0.77	1	
Tributyltin	13	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	84	48-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Curtis & Tompkins, Ltd.  
2323 Fifth Street  
Berkeley, CA 94710-2407

Date Received: 08/17/13  
Work Order: 13-08-1263  
Preparation: EPA 3550B (M)  
Method: Organotins by Krone et al.  
Units: ug/kg

Project: 248030

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-38D	13-08-1263-6-A	08/15/13 13:10	Solid	GC/MS JJJ	08/21/13	08/27/13 17:16	130821L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	48	3.0	0.65	1	
Monobutyltin	5.3	3.0	0.65	1	
Tetrabutyltin	ND	3.0	0.77	1	
Tributyltin	7.3	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	72	48-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-25D	13-08-1263-7-A	08/15/13 12:55	Solid	GC/MS JJJ	08/21/13	08/27/13 17:46	130821L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	14	3.0	0.65	1	
Monobutyltin	ND	3.0	0.65	1	
Tetrabutyltin	ND	3.0	0.77	1	
Tributyltin	4.3	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	57	48-126	

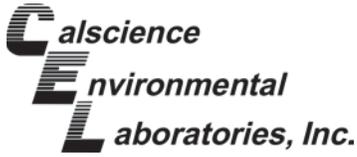
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
IA-32D	13-08-1263-8-A	08/15/13 13:00	Solid	GC/MS JJJ	08/21/13	08/27/13 18:16	130821L04

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	37	3.0	0.65	1	
Monobutyltin	ND	3.0	0.65	1	
Tetrabutyltin	ND	3.0	0.77	1	
Tributyltin	5.5	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	59	48-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Curtis & Tompkins, Ltd.  
 2323 Fifth Street  
 Berkeley, CA 94710-2407

Date Received: 08/17/13  
 Work Order: 13-08-1263  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.  
 Units: ug/kg

Project: 248030

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-07-016-1055	N/A	Solid	GC/MS JJJ	08/21/13	08/27/13 14:15	130821L04

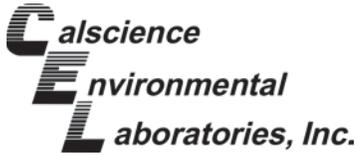
Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Dibutyltin	ND	3.0	0.65	1	
Monobutyltin	ND	3.0	0.65	1	
Tetrabutyltin	ND	3.0	0.77	1	
Tributyltin	ND	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	62	48-126	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

Curtis & Tompkins, Ltd.  
2323 Fifth Street  
Berkeley, CA 94710-2407

Date Received: 08/17/13  
Work Order: 13-08-1263  
Preparation: EPA 3550B (M)  
Method: Organotins by Krone et al.

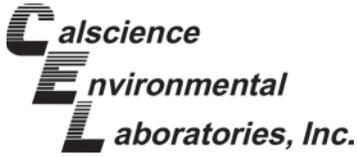
Project: 248030

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Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>IA-16</b>	<b>Solid</b>		<b>GC/MS JJJ</b>	<b>08/21/13</b>	<b>08/26/13 19:49</b>	<b>130821S04A</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	79.73	80	71.49	71	79-175	11	0-31	3
Tributyltin	3.409	100.0	91.98	89	82.83	79	69-135	10	0-29	


  
Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



**Spike/Spike Duplicate - Surrogate**

Curtis & Tompkins, Ltd.  
 2323 Fifth Street  
 Berkeley, CA 94710-2407

Date Received: 08/17/13  
 Work Order: 13-08-1263  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

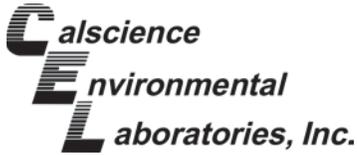
Project: 248030

Page 2 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number		
<b>IA-16</b>	<b>Solid</b>	<b>GC/MS JJJ</b>	<b>08/21/13</b>	<b>08/26/13 19:49</b>	<b>130821S04A</b>		
<u>Parameter</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Tripentyltin	50.00	133.3	133	127.9	128	48-126	2

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits



Quality Control - LCS

Curtis & Tompkins, Ltd.  
 2323 Fifth Street  
 Berkeley, CA 94710-2407

Date Received: 08/17/13  
 Work Order: 13-08-1263  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

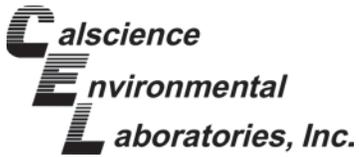
Project: 248030

Page 1 of 2

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-07-016-1055</b>	<b>Solid</b>	<b>GC/MS JJJ</b>	<b>08/27/13 14:45</b>	<b>130821L04</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Tetrabutyltin	100.0	93.55	94	79-151	
Tributyltin	100.0	99.43	99	51-129	



RPD: Relative Percent Difference. CL: Control Limits



## LCS Only - Surrogate

Curtis & Tompkins, Ltd.  
2323 Fifth Street  
Berkeley, CA 94710-2407

Date Received: 08/17/13  
Work Order: 13-08-1263  
Preparation: EPA 3550B (M)  
Method: Organotins by Krone et al.

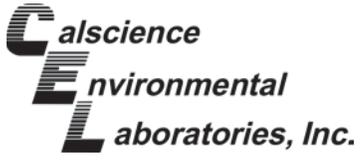
Project: 248030

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Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
<b>099-07-016-1055</b>	<b>Solid</b>	<b>GC/MS JJJ</b>	<b>08/21/13 00:00</b>	<b>08/27/13 14:45</b>	<b>130821L04</b>
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Tripentyltin	50.00	95.02	95	48-126	


  
Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Sample Analysis Summary Report

Work Order: 13-08-1263

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
Organotins by Krone et al.	EPA 3550B (M)	513	GC/MS JJJ	1

  
Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

## Glossary of Terms and Qualifiers

Work Order: 13-08-1263

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Laboratory Job Number 248030

Subcontracted Products

Forensic Analytical



# Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

Curtis & Tompkins Ltd  
Project Manager  
2323 Fifth St.

Berkeley, CA 94710

**Client ID:** 1137  
**Report Number:** N005590  
**Date Received:** 08/16/13  
**Date Analyzed:** 08/21/13  
**Date Printed:** 08/21/13

**Job ID/Site:** 248030 - 900 Innes Avenue

**FALI Job ID:** 1137  
**Total Samples Submitted:** 11  
**Total Samples Analyzed:** 11

**PLM Report Number:** N/A

## Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

<b>IA-08A</b>	11415225	<b>Brown Soil</b>
---------------	----------	-------------------

### Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Matrix percentage of entire	100
Percent asbestos in matrix:	< 0.25
Visual estimation percentage:	<1
Asbestos type(s) detected:	Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 0.25%.

<b>IA-11A</b>	11415226	<b>Grey Soil</b>
---------------	----------	------------------

### Point Count Results:

Number of asbestos points counted:	2
Number of non-empty points:	400
Matrix percentage of entire	100
Percent asbestos in matrix:	0.50
Visual estimation percentage:	<1
Asbestos type(s) detected:	Chrysotile

Comment:



# Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

Curtis & Tompkins Ltd  
Project Manager  
2323 Fifth St.

Berkeley, CA 94710

**Client ID:** 1137  
**Report Number:** N005590  
**Date Received:** 08/16/13  
**Date Analyzed:** 08/21/13  
**Date Printed:** 08/21/13

**Job ID/Site:** 248030 - 900 Innes Avenue

**FALI Job ID:** 1137  
**Total Samples Submitted:** 11  
**Total Samples Analyzed:** 11

**PLM Report Number:** N/A

### Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

**IA-04**                      11415227                      **Brown Soil**

*Point Count Results:*

Number of asbestos points counted:	0
Number of non-empty points:	400
Matrix percentage of entire	100
Percent asbestos in matrix:	< 0.25
Visual estimation percentage:	<1
Asbestos type(s) detected:	Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 0.25%.

**IA-37**                      11415228                      **Brown Soil**

*Point Count Results:*

Number of asbestos points counted:	0
Number of non-empty points:	400
Matrix percentage of entire	100
Percent asbestos in matrix:	< 0.25
Visual estimation percentage:	<1
Asbestos type(s) detected:	Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 0.25%.



# Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

Curtis & Tompkins Ltd  
Project Manager  
2323 Fifth St.

Berkeley, CA 94710

**Client ID:** 1137  
**Report Number:** N005590  
**Date Received:** 08/16/13  
**Date Analyzed:** 08/21/13  
**Date Printed:** 08/21/13

**Job ID/Site:** 248030 - 900 Innes Avenue

**FALI Job ID:** 1137  
**Total Samples Submitted:** 11  
**Total Samples Analyzed:** 11

**PLM Report Number:** N/A

### Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

**IA-7** 11415229 **Brown Soil**

*Visual Estimation Results:*

Matrix percentage of entire 100  
Visual estimation percentage: None Detected  
Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

**IA-6** 11415230 **Brown Soil**

*Visual Estimation Results:*

Matrix percentage of entire 100  
Visual estimation percentage: None Detected  
Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

**IA-9** 11415231 **Brown Soil**

*Point Count Results:*

Number of asbestos points counted: 0  
Number of non-empty points: 400  
Matrix percentage of entire 100  
Percent asbestos in matrix: < 0.25  
Visual estimation percentage: <1  
Asbestos type(s) detected: Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 0.25%.



# Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

Curtis & Tompkins Ltd  
Project Manager  
2323 Fifth St.

Berkeley, CA 94710

**Client ID:** 1137  
**Report Number:** N005590  
**Date Received:** 08/16/13  
**Date Analyzed:** 08/21/13  
**Date Printed:** 08/21/13

**Job ID/Site:** 248030 - 900 Innes Avenue

**FALI Job ID:** 1137  
**Total Samples Submitted:** 11  
**Total Samples Analyzed:** 11

**PLM Report Number:** N/A

### Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

**IA-34**                      11415232                      **Brown Soil**

*Point Count Results:*

Number of asbestos points counted:	0
Number of non-empty points:	400
Matrix percentage of entire	100
Percent asbestos in matrix:	< 0.25
Visual estimation percentage:	<1
Asbestos type(s) detected:	Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 0.25%.

**IA-15**                      11415233                      **Brown Soil**

*Point Count Results:*

Number of asbestos points counted:	0
Number of non-empty points:	400
Matrix percentage of entire	100
Percent asbestos in matrix:	< 0.25
Visual estimation percentage:	<1
Asbestos type(s) detected:	Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 0.25%.



# Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

Curtis & Tompkins Ltd  
Project Manager  
2323 Fifth St.

Berkeley, CA 94710

**Client ID:** 1137  
**Report Number:** N005590  
**Date Received:** 08/16/13  
**Date Analyzed:** 08/21/13  
**Date Printed:** 08/21/13

**Job ID/Site:** 248030 - 900 Innes Avenue

**FALI Job ID:** 1137  
**Total Samples Submitted:** 11  
**Total Samples Analyzed:** 11

**PLM Report Number:** N/A

### Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

**IA-12**                                      11415234                                      **Black Soil**

*Visual Estimation Results:*

Matrix percentage of entire                                      100  
Visual estimation percentage:                                      None Detected  
Asbestos type(s) detected:                                      None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

**IA-27**                                      11415235                                      **Brown Soil**

*Point Count Results:*

Number of asbestos points counted:                                      0  
Number of non-empty points:                                      400  
Matrix percentage of entire                                      100  
Percent asbestos in matrix:                                      < 0.25  
Visual estimation percentage:                                      <1  
Asbestos type(s) detected:                                      Chrysotile

Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 0.25%.



# Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

Curtis & Tompkins Ltd  
Project Manager  
2323 Fifth St.

Berkeley, CA 94710

**Client ID:** 1137  
**Report Number:** N005590  
**Date Received:** 08/16/13  
**Date Analyzed:** 08/21/13  
**Date Printed:** 08/21/13

**Job ID/Site:** 248030 - 900 Innes Avenue

**FALI Job ID:** 1137  
**Total Samples Submitted:** 11  
**Total Samples Analyzed:** 11

**PLM Report Number:** N/A

### Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 0.25%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

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**ct** Curtis & Tompkins, Ltd.  
Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 248085  
ANALYTICAL REPORT

Weston Solutions  
1340 Treat Blvd  
Walnut Creek, CA 94597

Project : 20074.063.095.1340  
Location : 900 Innes Avenue  
Level : III

<u>Sample ID</u>	<u>Lab ID</u>
IA-13D	248085-001
IA-19D	248085-002
IA-21D	248085-003

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature:   
Isabelle Choy  
Project Manager  
(510) 486-0900

Date: 09/04/2013

NELAP # 01107CA

### CASE NARRATIVE

Laboratory number: 248085  
Client: Weston Solutions  
Project: 20074.063.095.1340  
Location: 900 Innes Avenue  
Request Date: 08/16/13  
Samples Received: 08/16/13

This data package contains sample and QC results for three sediment samples, requested for the above referenced project on 08/16/13. See attached cooler receipt form for any sample receipt problems or discrepancies.

#### TPH-Extractables by GC (EPA 8015B):

High response was observed for motor oil C24-C36 in the CCV analyzed 08/22/13 15:48.

High response was observed for diesel C10-C24 in the CCV analyzed 08/22/13 22:58.

IA-13D (lab # 248085-001) and IA-21D (lab # 248085-003) were diluted due to the dark and viscous nature of the sample extracts.

No other analytical problems were encountered.

#### Semivolatile Organics by GC/MS (EPA 8270C):

IA-13D (lab # 248085-001) was diluted due to the dark and viscous nature of the sample extract.

No other analytical problems were encountered.

#### PCBs (EPA 8082):

All samples underwent sulfuric acid cleanup using EPA Method 3665A.

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B.

No analytical problems were encountered.

#### Metals (EPA 6010B and EPA 7471A):

Low recovery was observed for mercury in the MSD of IA-30 (lab # 248030-043); the associated RPD was within limits.

Low recoveries were observed for silver and barium in the MSD of IA-13D (lab # 248085-001); these low recoveries were confirmed by re-analysis. High recoveries were observed for a number of analytes in the MS/MSD of IA-13D (lab # 248085-001); these high recoveries were confirmed by re-analysis, and the associated RPDs were within limits. High RPD was observed for silver; the RPD was acceptable in the BS/BSD, and this analyte was not detected at or above the RL in the associated samples.

### CASE NARRATIVE

Laboratory number: 248085  
Client: Weston Solutions  
Project: 20074.063.095.1340  
Location: 900 Innes Avenue  
Request Date: 08/16/13  
Samples Received: 08/16/13

#### Metals (EPA 6010B and EPA 7471A):

Low recovery was observed for silver in the post digest spike of IA-13D (lab # 248085-001).

Responses exceeding the instrument's linear range were observed for copper, lead, and zinc in the MS/MSD of IA-13D (lab # 248085-001).

High % difference was observed for cadmium in the serial dilution of IA-13D (lab # 248085-001).

No other analytical problems were encountered.

#### Moisture (ASTM D2216/CLP):

No analytical problems were encountered.

#### Organotins (PSEP):

Cal Science in Garden Grove, CA performed the analysis (NELAP certified). Please see the Cal Science case narrative.

## Chain of Custody



**COOLER RECEIPT CHECKLIST**



Login # 248085 Date Received 8/16/13 Number of coolers 1  
 Client WESTON SOLUTIONS Project 400 INVAS AVENUE

Date Opened 8/16/13 By (print) MS (sign) [Signature]  
 Date Logged in 8 By (print) [Signature] (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) \_\_\_\_\_ YES  NO

Shipping info \_\_\_\_\_

2A. Were custody seals present? ....  YES (circle) on cooler on samples  NO  
 How many \_\_\_\_\_ Name \_\_\_\_\_ Date \_\_\_\_\_

2B. Were custody seals intact upon arrival? \_\_\_\_\_ YES NO  N/A

3. Were custody papers dry and intact when received? \_\_\_\_\_  YES NO

4. Were custody papers filled out properly (ink, signed, etc)? \_\_\_\_\_  YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) \_\_\_\_\_  YES NO

6. Indicate the packing in cooler: (if other, describe) \_\_\_\_\_

- Bubble Wrap  Foam blocks  Bags  None
- Cloth material  Cardboard  Styrofoam  Paper towels

7. Temperature documentation: \* Notify PM if temperature exceeds 6°C

Type of ice used:  Wet  Blue/Gel  None Temp(°C) \_\_\_\_\_

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES  NO

If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? \_\_\_\_\_  YES NO

10. Are there any missing / extra samples? \_\_\_\_\_ YES  NO

11. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_  YES NO

12. Are sample labels present, in good condition and complete? \_\_\_\_\_  YES NO

13. Do the sample labels agree with custody papers? \_\_\_\_\_  YES NO

14. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_  YES NO

15. Are the samples appropriately preserved? \_\_\_\_\_ YES NO  N/A

16. Did you check preservatives for all bottles for each sample? \_\_\_\_\_ YES NO  N/A

17. Did you document your preservative check? \_\_\_\_\_ YES NO  N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? \_\_\_\_\_ YES NO  N/A

19. Did you change the hold time in LIMS for preserved terracores? \_\_\_\_\_ YES NO  N/A

20. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES NO  N/A

21. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES NO

If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

**COMMENTS**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Laboratory Job Number 248085

ANALYTICAL REPORT

TPH-Extractables by GC

Matrix: Miscell.

Total Extractable Hydrocarbons			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Units:	mg/Kg	Sampled:	08/16/13
Basis:	dry	Received:	08/16/13
Batch#:	201972	Prepared:	08/21/13

Field ID:	IA-13D	Moisture:	49%
Type:	SAMPLE	Diln Fac:	3.000
Lab ID:	248085-001	Chemist:	SFL
Matrix:	Miscell.	Analyzed:	08/23/13

Analyte	Result	RL
Diesel C10-C24	470 Y	5.9
Motor Oil C24-C36	980	30

Surrogate	%REC	Limits
o-Terphenyl	89	62-136

Field ID:	IA-19D	Moisture:	63%
Type:	SAMPLE	Diln Fac:	1.000
Lab ID:	248085-002	Chemist:	SFL
Matrix:	Miscell.	Analyzed:	08/23/13

Analyte	Result	RL
Diesel C10-C24	86 Y	2.7
Motor Oil C24-C36	250	14

Surrogate	%REC	Limits
o-Terphenyl	103	62-136

Field ID:	IA-21D	Moisture:	67%
Type:	SAMPLE	Diln Fac:	1.000
Lab ID:	248085-003	Chemist:	SFL
Matrix:	Miscell.	Analyzed:	08/23/13

Analyte	Result	RL
Diesel C10-C24	40 Y	3.0
Motor Oil C24-C36	110	15

Surrogate	%REC	Limits
o-Terphenyl	91	62-136

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC703021	Chemist:	JDG
Matrix:	Soil	Analyzed:	08/22/13

Analyte	Result	RL
Diesel C10-C24	ND	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	105	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Type:	LCS	Batch#:	201972
Lab ID:	QC703022	Chemist:	JDG
Matrix:	Soil	Prepared:	08/21/13
Units:	mg/Kg	Analyzed:	08/22/13
Diln Fac:	1.000		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.27	38.91	77	62-130

Surrogate	%REC	Limits
o-Terphenyl	92	62-136

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	201972
MSS Lab ID:	248150-003	Chemist:	JDG
Matrix:	Miscell.	Sampled:	08/19/13
Units:	mg/Kg	Received:	08/19/13
Basis:	as received	Prepared:	08/21/13
Diln Fac:	3.000	Analyzed:	08/23/13

Type: MS Lab ID: QC703023

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	2.870	49.77	38.37	71	39-148

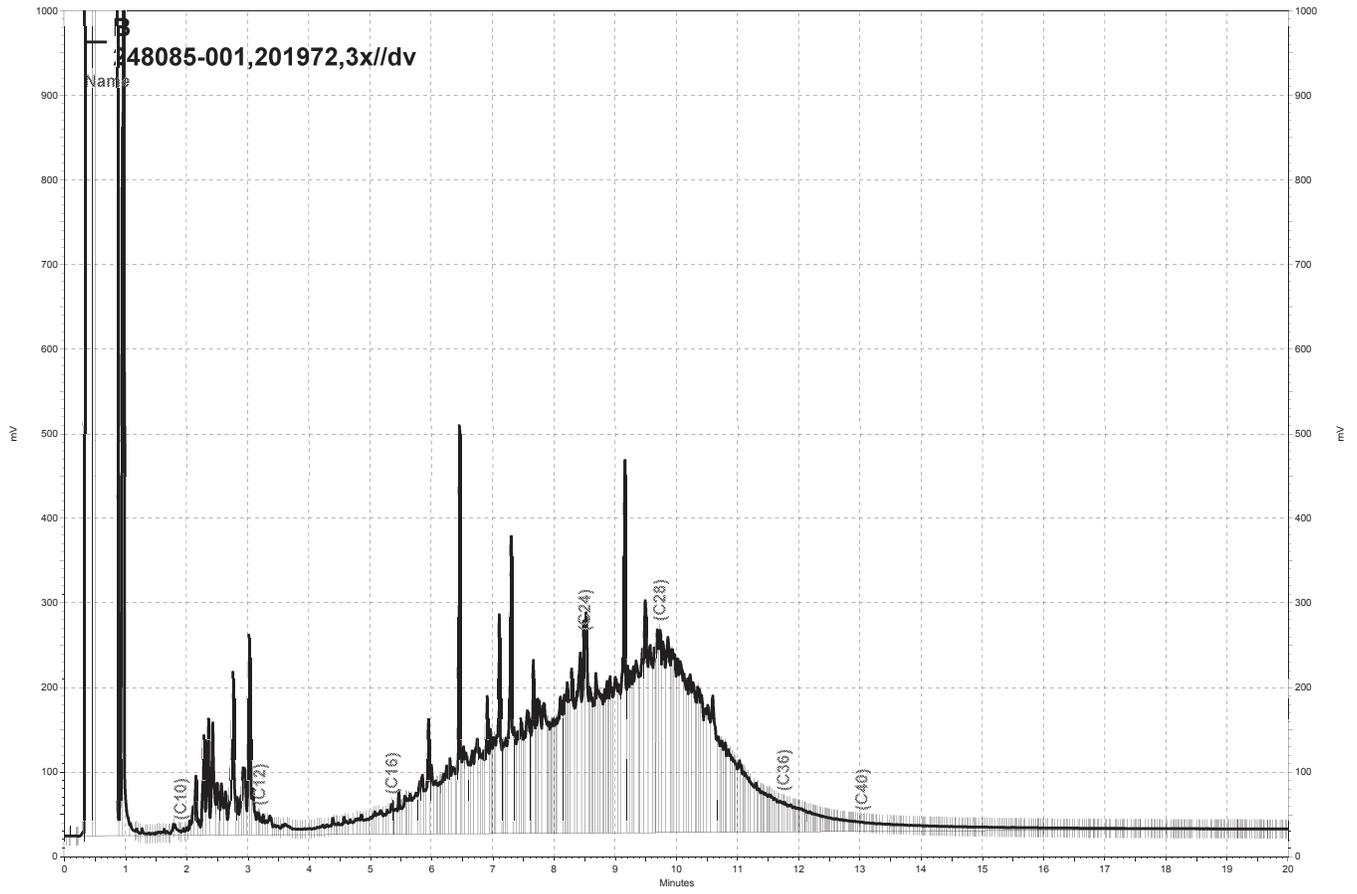
Surrogate	%REC	Limits
o-Terphenyl	86	62-136

Type: MSD Lab ID: QC703024

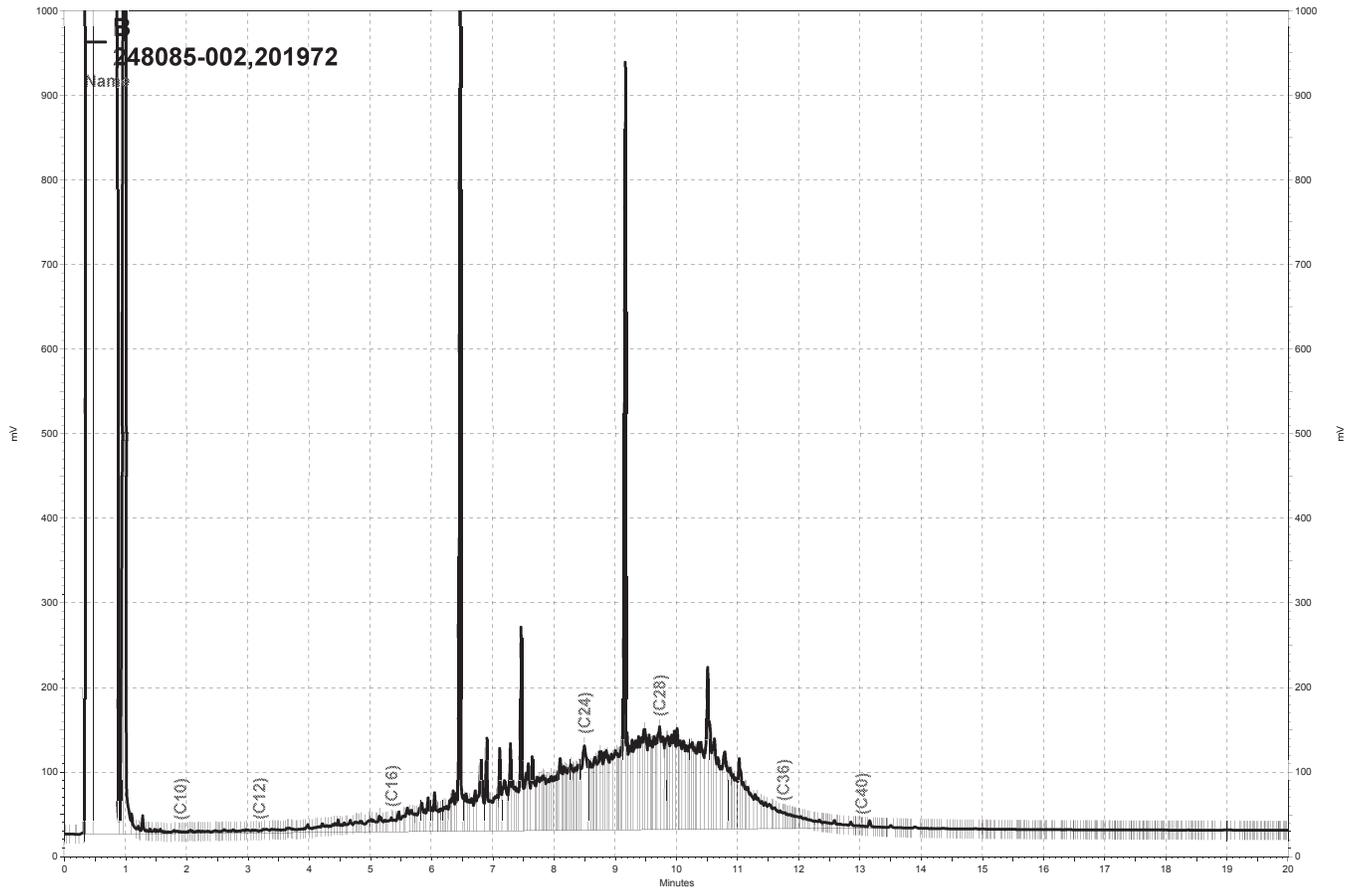
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.93	36.25	67	39-148	6	45

Surrogate	%REC	Limits
o-Terphenyl	93	62-136

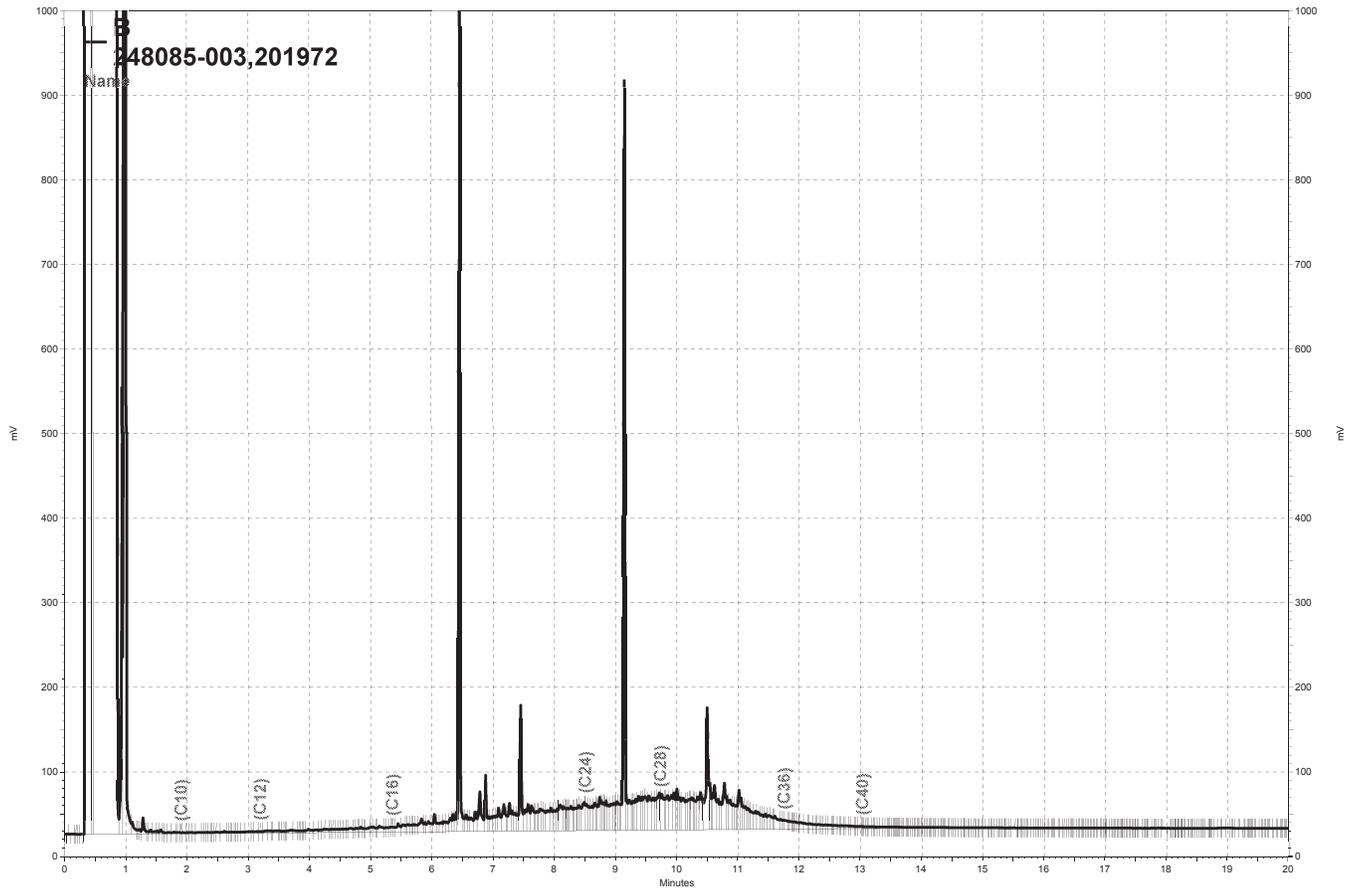
RPD= Relative Percent Difference



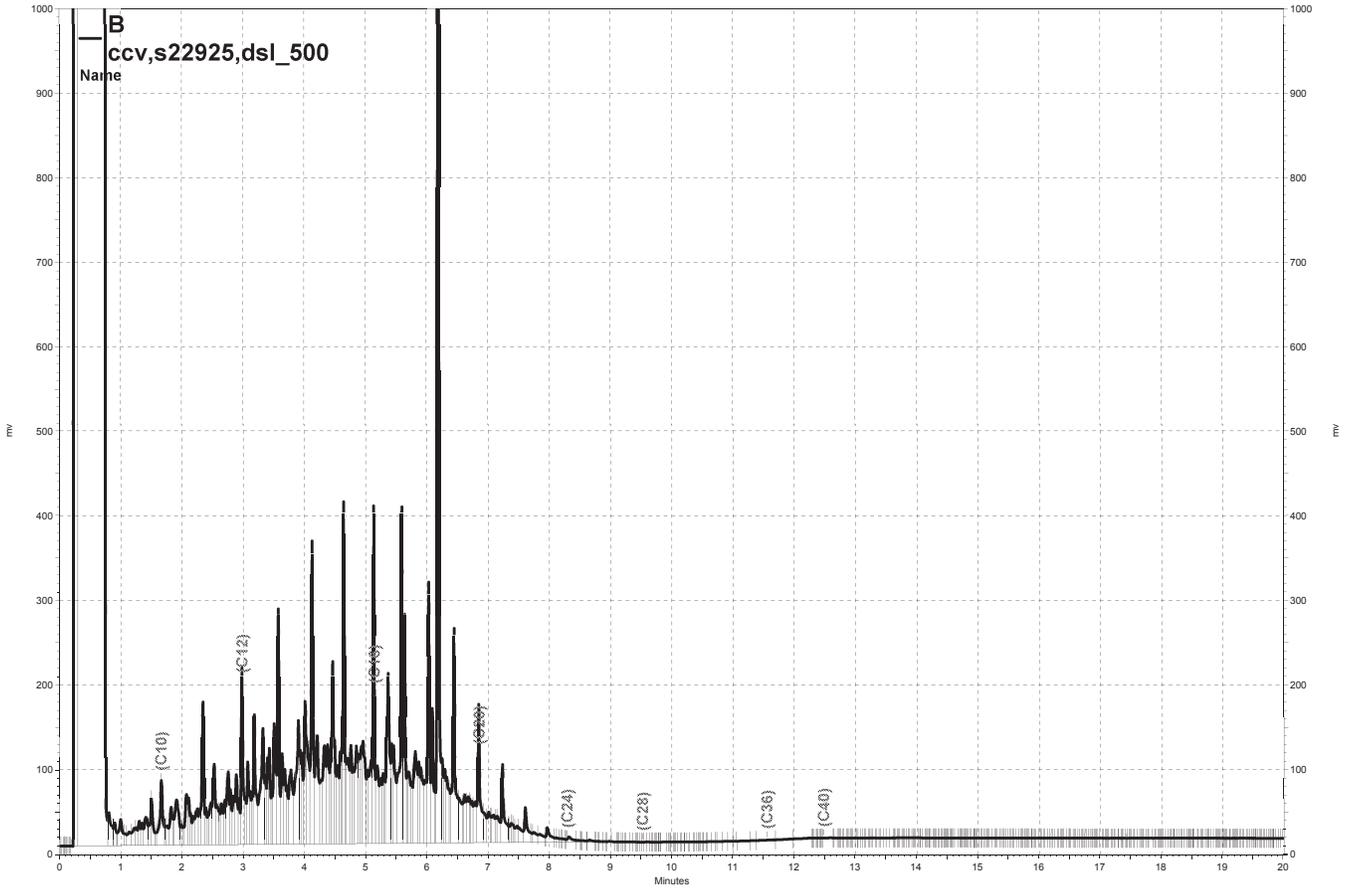
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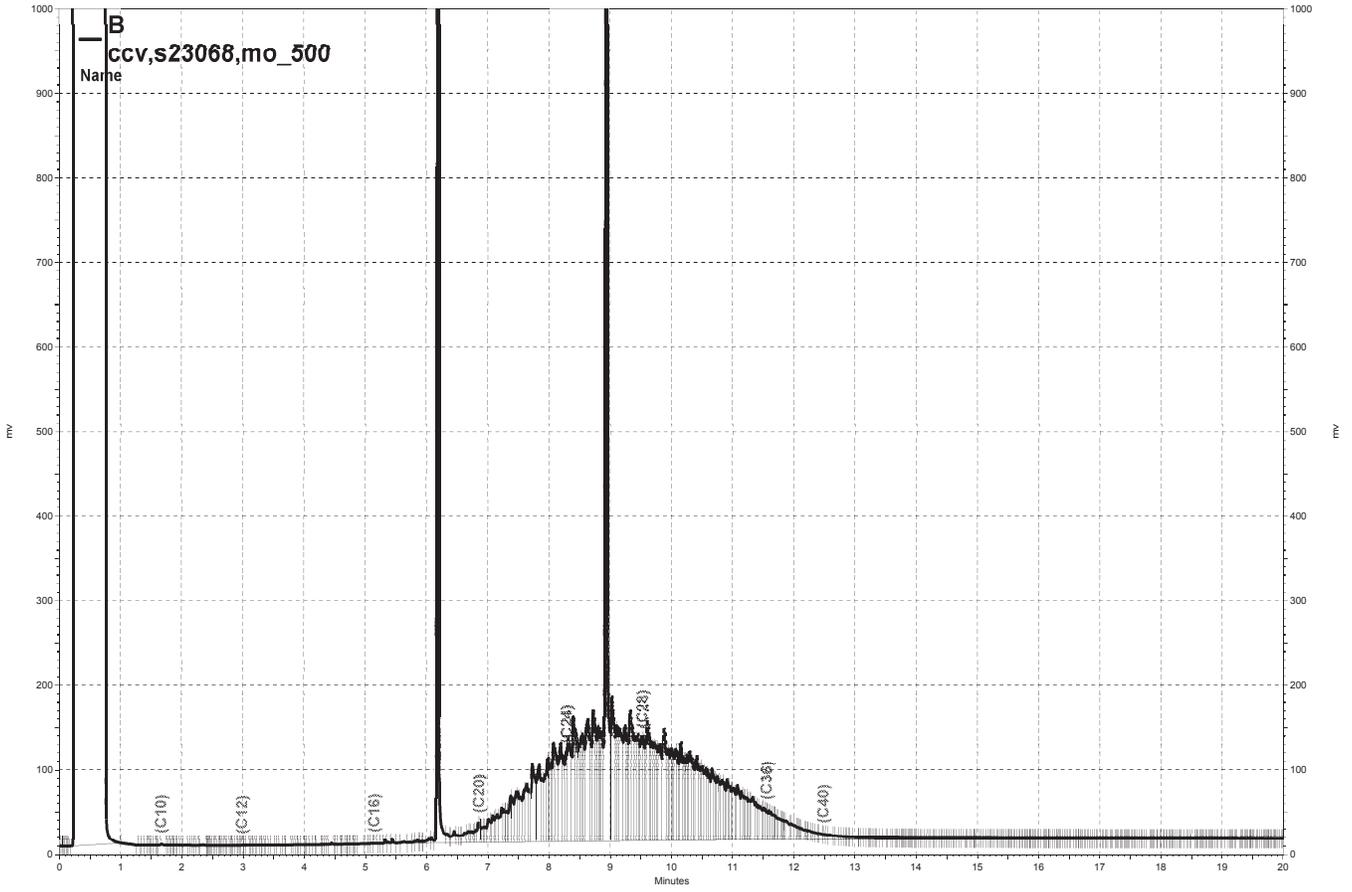
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— \\Lims\gdrive\ezchrom\Projects\GC15B\Data\234b016, B



— \\Lims\gdrive\ezchrom\Projects\GC15B\Data\234b017, B

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 GCSV Miscell.: EPA 8015B

Inst : GC14B  
 Calnum : 223242707001  
 Units : mg/L

Name : OTPHEX\_168  
 Date : 17-JUN-2013 15:53  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Std
L1	168_005	223242707005	HEX OTP_5	17-JUN-2013 15:53	S22417
L2	168_006	223242707006	HEX OTP_10	17-JUN-2013 16:22	S22418
L3	168_007	223242707007	HEX OTP_25	17-JUN-2013 16:51	S22419
L4	168_008	223242707008	HEX OTP_50	17-JUN-2013 17:19	S22420
L5	168_009	223242707009	HEX OTP_100	17-JUN-2013 17:48	S22421
L6	168_010	223242707010	HEX OTP_200	17-JUN-2013 18:16	S22422

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
o-Terphenyl	B	34126	33364	32977	33049	32593	31712	AVRG		3.03E-5		32970	2	0.995	20		

Spiked Amounts / Drifts	Ch	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D	%D
o-Terphenyl	B	5.0000	10.000	25.000	50.000	100.00	200.00	4	1	0	0	100.00	-1	-4

JDG 06/18/13 [Hexacosane B]: Samples requiring Hexacosane will not be analyzed on this instrument.  
 JDG 06/18/13 : Corrected automatically drawn baseline in multiple levels.

Analyst: JDG Date: 06/18/13 Reviewer: EAH Date: 06/18/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 GCSV Miscell.: EPA 8015B

Inst : GC14B  
 Calnum : 223242707002  
 Units : mg/L

Name : DSL\_168  
 Date : 17-JUN-2013 19:13  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	168_012	223242707012	DSL_10	17-JUN-2013 19:13	S22008
L2	168_013	223242707013	DSL_100	17-JUN-2013 19:42	S22009
L3	168_014	223242707014	DSL_500	17-JUN-2013 20:10	S22010
L4	168_015	223242707015	DSL_1000	17-JUN-2013 20:39	S22011
L5	168_016	223242707016	DSL_5000	17-JUN-2013 21:07	S22007

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
Diesel C10-C24	B	38681	32029	30567	31028	30636	AVRG		3.07E-5		32588	11		0.995	20	

Spiked Amounts / Drifts	Ch	L1	L2	L3	L4	L5	%D	%D	%D	%D	%D
Diesel C10-C24	B	10.000	100.00	19	500.00	1000.0	-2	-6	-5	5000.0	-6

JDG 06/18/13 : Corrected automatically drawn baseline in DSL\_10 (168\_012).

Analyst: JDG Date: 06/18/13 Reviewer: EAH Date: 06/18/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 GCSV Miscell.  
EPA 8015B

Inst : GC14B  
Calnum : 223242707002

Name : DSL\_168  
Cal Date : 17-JUN-2013

ICV 223242707018 (168\_018 17-JUN-2013) stds: S22427

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	B	500.0	453.7	mg/L	-9	15	

Analyst: JDG

Date: 06/18/13

Reviewer: EAH

Date: 06/18/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 GCSV Miscell.: EPA 8015B

Inst : GC14B  
 Calnum : 223242707003  
 Units : mg/L

Name : MO\_168  
 Date : 18-JUN-2013 00:00  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stdcs
L1	168_022	223242707022	MO_50	18-JUN-2013 00:00	S21419
L2	168_023	223242707023	MO_250	18-JUN-2013 00:28	S21418
L3	168_024	223242707024	MO_500	18-JUN-2013 00:57	S21417
L4	168_025	223242707025	MO_1000	18-JUN-2013 01:25	S21416
L5	168_026	223242707026	MO_2500	18-JUN-2013 01:54	S21415 (2X)
L6	168_027	223242707027	MO_5000	18-JUN-2013 02:23	S21415

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	MnR^2	MxRSD	Flg
Motor Oil C24-C36	B	17765	18358	18613	18167	16775	16346	AVRG		5.66E-5		17671	5	0.995	20	

Spiked Amounts / Drifts	Ch	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D	%D	%D	%D
Motor Oil C24-C36	B	50.000	250.00	1	250.00	4	500.00	5	1000.0	3	2500.0	L5	-5	5000.0	L6	-7

EAH 06/18/13 : Corrected automatically drawn baseline in all levels.

Analyst: JDG Date: 06/18/13 Reviewer: EAH Date: 06/18/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 GCSV Miscell.: EPA 8015B

Inst : GC15B  
 Calnum : 163115627001  
 Units : mg/L

Name : OTPHEX\_079  
 Date : 20-MAR-2013 13:31  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	079a004	163115627004	HEXOTP_5	20-MAR-2013 13:31	S21251
L2	079a005	163115627005	HEXOTP_10	20-MAR-2013 13:58	S21252
L3	079a006	163115627006	HEXOTP_25	20-MAR-2013 14:26	S21253
L4	079a007	163115627007	HEXOTP_50	20-MAR-2013 14:54	S21254
L5	079a008	163115627008	HEXOTP_100	20-MAR-2013 15:22	S21255
L6	079a009	163115627009	HEXOTP_200	20-MAR-2013 15:50	S21256

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
o-Terphenyl	56733	56252	56202	54053	56023	54329	AVRG		1.80E-5		55599	2		0.995	20	

Spiked Amounts / Drifts	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D	%D
o-Terphenyl	5.0000		2	10.000	1	25.000	1	50.000	-3	100.00	1	200.00	-2

Analyst: JDG Date: 03/21/13 Reviewer: EAH Date: 03/21/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 GCSV Miscell.: EPA 8015B

Inst : GC15B  
 Calnum : 163115627002  
 Units : mg/L

Name : DSL\_079  
 Date : 20-MAR-2013 16:46  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	079a011	163115627011	DSL_10	20-MAR-2013 16:46	S21990
L2	079a012	163115627012	DSL_100	20-MAR-2013 17:14	S21991
L3	079a013	163115627013	DSL_500	20-MAR-2013 17:42	S21992
L4	079a014	163115627014	DSL_1000	20-MAR-2013 18:09	S21993
L5	079a015	163115627015	DSL_5000	20-MAR-2013 18:37	S21246

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
Diesel C10-C24	42050	48707	50538	53472	52593	AVRG		2.02E-5		49472	9		0.995	20	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D		
Diesel C10-C24	10.000	-15		100.00	-2	500.00	2	1000.0	8	5000.0	6

JDG 03/21/13 : Corrected automatically drawn baseline in multiple levels.

Analyst: SFL Date: 03/21/13 Reviewer: EAH Date: 03/21/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 GCSV Miscell.  
EPA 8015B

Inst : GC15B  
Calnum : 163115627002

Name : DSL\_079  
Cal Date : 20-MAR-2013

ICV 163115627017 (079a017 20-MAR-2013) stds: S21688

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	477.9	mg/L	-4	15	

Analyst: JDG

Date: 03/21/13

Reviewer: EAH

Date: 03/21/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 GCSV Miscell.: EPA 8015B

Inst : GC15B  
 Calnum : 163202056001  
 Units : mg/L

Name : MO\_140  
 Date : 20-MAY-2013 17:33  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stdts
L1	140b015	163202056015	MO_25	20-MAY-2013 17:33	S21419 (2X)
L2	140b016	163202056016	MO_50	20-MAY-2013 18:01	S21419
L3	140b017	163202056017	MO_250	20-MAY-2013 18:28	S21418
L4	140b018	163202056018	MO_500	20-MAY-2013 18:56	S21417
L5	140b019	163202056019	MO_1000	20-MAY-2013 19:23	S21416
L6	140b020	163202056020	MO_2500	20-MAY-2013 19:51	S21415 (2X)
L7	140b021	163202056021	MO_5000	20-MAY-2013 20:19	S21415

Analyte	L1	L2	L3	L4	L5	L6	L7	Type	a0	a1	a2	Avg	r^2	%RSD	MnR^2	MxRSD	Flg
Motor Oil C24-C36	33963	35915	35125	36858	36003	31433	26229	AVRG		2.97E-5		33647	11	0.995	20		

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D
Motor Oil C24-C36	25.000	1	50.000	7	250.00	4	500.00	10	1000.0	7	2500.0	-7	5000.0	-22

JDG 05/21/13 : Corrected automatically drawn baseline in multiple levels.

JDG: 05/21/13 SFL: 05/21/13 EAH: 05/21/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 GCSV Miscell.: EPA 8015B

Inst : GC17A  
 Calnum : 173318755001  
 Units : mg/L

Name : HEXOTP\_221  
 Date : 09-AUG-2013 19:49  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	221a005	173318755005	HEXOTP_5	09-AUG-2013 19:49	S22417
L2	221a006	173318755006	HEXOTP_10	09-AUG-2013 20:16	S22418
L3	221a007	173318755007	HEXOTP_25	09-AUG-2013 20:44	S22419
L4	221a008	173318755008	HEXOTP_50	09-AUG-2013 21:12	S22420
L5	221a009	173318755009	HEXOTP_100	09-AUG-2013 21:40	S22421
L6	221a010	173318755010	HEXOTP_200	09-AUG-2013 22:08	S22422

Analyte	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
o-Terphenyl	69212	69538	68457	68573	69462	69496	AVRG		1.45E-5		69123	1	0.995	20		

Spiked Amounts / Drifts	L1	L2	L3	L4	L5	L6	%D	%D	%D	%D	%D	%D				
o-Terphenyl	5.0000	10.000	25.000	50.000	100.00	200.00	0	-1	-1	-1	100.00	0	0	200.00	1	1

JDG 08/12/13 : Corrected automatically drawn baseline in all levels.

Analyst: JDG Date: 08/12/13 Reviewer: EAH Date: 08/12/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 GCSV Miscell.: EPA 8015B

Inst : GC17A  
 Calnum : 173318755002  
 Units : mg/L

Name : DSL\_221  
 Date : 09-AUG-2013 23:05  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	221a012	173318755012	DSL_10	09-AUG-2013 23:05	S22008
L2	221a013	173318755013	DSL_100	09-AUG-2013 23:32	S22009
L3	221a014	173318755014	DSL_500	10-AUG-2013 00:00	S22010
L4	221a015	173318755015	DSL_1000	10-AUG-2013 00:28	S22011
L5	221a016	173318755016	DSL_5000	10-AUG-2013 00:56	S22007

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	MnR^2	MxRSD	Flg
Diesel C10-C24	55028	59398	62313	62467	63290	AVRG		1.65E-5		60499	6		0.995	20	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D
Diesel C10-C24	10.000	100.00	-2	500.00	3	1000.0	3	5000.0	5

JDG 08/12/13 : Corrected automatically drawn baseline in DSL\_10 (221a012).

Analyst: JDG Date: 08/12/13 Reviewer: EAH Date: 08/12/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVRG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 GCSV Miscell.  
EPA 8015B

Inst : GC17A  
Calnum : 173318755002

Name : DSL\_221  
Cal Date : 09-AUG-2013

ICV 173318755018 (221a018 10-AUG-2013) stds: S22925

Analyte	Spiked	Quant	Units	%D	Max	Flags
Diesel C10-C24	500.0	499.5	mg/L	0	15	

Analyst: JDG

Date: 08/12/13

Reviewer: EAH

Date: 08/12/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 GCSV Miscell.  
EPA 8015B

Inst : GC14B                      Run Name : MO\_500                      IDF : 1.0  
 Seqnum : 223337426023              File : 234\_023                      Time : 22-AUG-2013 22:43  
 Standards: S23068

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	17320	500.0	490.1	mg/L	-2	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	37627	50.00	57.06	mg/L	14	15	

Analyst: JDG                      Date: 08/23/13                      Reviewer: SFL                      Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 GCSV Miscell.  
EPA 8015B

Inst : GC14B Run Name : DSL\_500 IDF : 1.0  
Seqnum : 223337426024 File : 234\_024 Time : 22-AUG-2013 23:12  
Standards: S22925

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	33629	500.0	516.0	mg/L	3	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	37483	50.00	56.84	mg/L	14	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/23/13 Reviewer: SFL Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 GCSV Miscell.  
EPA 8015B

Inst : GC14B Run Name : MO\_500 IDF : 1.0  
Seqnum : 223337426038 File : 234\_038 Time : 23-AUG-2013 05:56  
Standards: S23068

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Motor Oil C24-C36	B	223242707003	18-JUN-2013	17671	15227	500.0	430.8	mg/L	-14	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	33571	50.00	50.91	mg/L	2	15	

JDG 08/23/13 : Manually integrated fuel hump.

Analyst: JDG Date: 08/23/13 Reviewer: SFL Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 GCSV Miscell.  
 EPA 8015B

Inst : GC14B Run Name : DSL\_1000 IDF : 1.0  
 Seqnum : 223337426039 File : 234\_039 Time : 23-AUG-2013 06:24  
 Standards: S22926

Analyte	Ch	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
				RF/CF	RF/CF						
Diesel C10-C24	B	223242707002	17-JUN-2013	32588	30890	1000	947.9	mg/L	-5	15	
o-Terphenyl	B	223242707001	17-JUN-2013	32970	35086	50.00	53.21	mg/L	6	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/23/13 Reviewer: SFL Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 GCSV Miscell.  
EPA 8015B

Inst : GC15B Run Name : DSL\_500 IDF : 1.0  
Seqnum : 163337427016 File : 234b016 Time : 22-AUG-2013 15:20  
Standards: S22925

Analyte	Cal	Caldate	Avg		Spiked	Quant	Units	%D	Max %D	Flags
			RF/CF	RF/CF						
Diesel C10-C24	163115627002	20-MAR-2013	49472	54871	500.0	554.6	mg/L	11	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	61185	50.00	55.02	mg/L	10	15	

SFL 08/22/13 : Corrected automatically drawn baseline.

Analyst: SFL Date: 08/22/13 Reviewer: EAH Date: 08/22/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 GCSV Miscell.  
EPA 8015B

Inst : GC15B Run Name : MO\_500 IDF : 1.0  
Seqnum : 163337427017 File : 234b017 Time : 22-AUG-2013 15:48  
Standards: S23068

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	163202056001	20-MAY-2013	33647	39242	500.0	583.2	mg/L	17	15	c+ ***
o-Terphenyl	163115627001	20-MAR-2013	55599	68691	50.00	61.77	mg/L	24	15	c+

SFL 08/22/13 : Corrected automatically drawn baseline.

SFL 08/22/13 : CCV within 20%.

Analyst: SFL Date: 08/22/13 Reviewer: JDG Date: 08/23/13

+ = high bias c = CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 GCSV Miscell.  
 EPA 8015B

Inst : GC15B Run Name : DSL\_250 IDF : 1.0  
 Seqnum : 163337427032 File : 234b032 Time : 22-AUG-2013 22:58  
 Standards: S22924

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	163115627002	20-MAR-2013	49472	57668	250.0	291.4	mg/L	17	15	c+ ***
o-Terphenyl	163115627001	20-MAR-2013	55599	65226	50.00	58.66	mg/L	17	15	c+

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/23/13 Reviewer: EAH Date: 08/23/13

+=high bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 GCSV Miscell.  
EPA 8015B

Inst : GC15B Run Name : MO\_500 IDF : 1.0  
Seqnum : 163337427033 File : 234b033 Time : 22-AUG-2013 23:26  
Standards: S23068

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Motor Oil C24-C36	163202056001	20-MAY-2013	33647	38774	500.0	576.2	mg/L	15	15	
o-Terphenyl	163115627001	20-MAR-2013	55599	67598	50.00	60.79	mg/L	22	15	c+

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/23/13 Reviewer: EAH Date: 08/23/13

+=high bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 GCSV Miscell.  
 EPA 8015B

Inst : GC17A Run Name : DSL\_250 IDF : 1.0  
 Seqnum : 173335999065 File : 233a065 Time : 22-AUG-2013 21:45  
 Standards: S22924

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	173318755002	09-AUG-2013	60499	58025	250.0	239.8	mg/L	-4	15	
o-Terphenyl	173318755001	09-AUG-2013	69123	65662	50.00	47.50	mg/L	-5	15	

JDG 08/23/13 : Separated from coeluting peak.

Analyst: JDG Date: 08/23/13 Reviewer: SFL Date: 08/23/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 GCSV Miscell.  
 EPA 8015B

Inst : GC17A Run Name : DSL\_500 IDF : 1.0  
 Seqnum : 173335999080 File : 233a080 Time : 23-AUG-2013 04:43  
 Standards: S22925

Analyte	Cal	Caldate	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Diesel C10-C24	173318755002	09-AUG-2013	60499	52773	500.0	436.1	mg/L	-13	15	
o-Terphenyl	173318755001	09-AUG-2013	69123	59302	50.00	42.90	mg/L	-14	15	

JDG 08/23/13 : Corrected automatically drawn baseline.

Analyst: JDG Date: 08/23/13 Reviewer: SFL Date: 08/23/13

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163115627

Instrument : GC15B  
 Method : EPA 8015B

Begun : 03/20/13 11:42  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	079a001	X	IB			03/20/13 11:42	1.0	
002	079a002	X	IB			03/20/13 12:09	1.0	
003	079a003	IB	CALIB			03/20/13 13:03	1.0	
004	079a004	ICAL	HEXOTP_5			03/20/13 13:31	1.0	1
005	079a005	ICAL	HEXOTP_10			03/20/13 13:58	1.0	2
006	079a006	ICAL	HEXOTP_25			03/20/13 14:26	1.0	3
007	079a007	ICAL	HEXOTP_50			03/20/13 14:54	1.0	4
008	079a008	ICAL	HEXOTP_100			03/20/13 15:22	1.0	5
009	079a009	ICAL	HEXOTP_200			03/20/13 15:50	1.0	6
010	079a010	IB	CALIB			03/20/13 16:18	1.0	
011	079a011	ICAL	DSL_10			03/20/13 16:46	1.0	7
012	079a012	ICAL	DSL_100			03/20/13 17:14	1.0	8
013	079a013	ICAL	DSL_500			03/20/13 17:42	1.0	9
014	079a014	ICAL	DSL_1000			03/20/13 18:09	1.0	10
015	079a015	ICAL	DSL_5000			03/20/13 18:37	1.0	11
016	079a016	IB	CALIB			03/20/13 19:05	1.0	
017	079a017	ICV	DSL_500			03/20/13 19:33	1.0	12
018	079a018	X	ICV			03/20/13 20:01	1.0	12
019	079a019	IB	CALIB			03/20/13 20:28	1.0	
020	079a020	ICAL	MO_25			03/20/13 20:56	1.0	13
021	079a021	ICAL	MO_50			03/20/13 21:24	1.0	13
022	079a022	ICAL	MO_250			03/20/13 21:51	1.0	14
023	079a023	ICAL	MO_500			03/20/13 22:19	1.0	15
024	079a024	ICAL	MO_1000			03/20/13 22:47	1.0	16
025	079a025	ICAL	MO_2500			03/20/13 23:15	1.0	17
026	079a026	ICAL	MO_5000			03/20/13 23:43	1.0	17
027	079a027	IB	CALIB			03/21/13 00:10	1.0	
028	079a028	ICAL	JP5_10			03/21/13 00:38	1.0	18
029	079a029	ICAL	JP5_100			03/21/13 01:06	1.0	19
030	079a030	ICAL	JP5_500			03/21/13 01:33	1.0	20
031	079a031	ICAL	JP5_1500			03/21/13 02:01	1.0	21
032	079a032	ICAL	JP5_2500			03/21/13 02:29	1.0	22
033	079a033	ICAL	JP5_5000			03/21/13 02:56	1.0	23
034	079a034	IB	CALIB			03/21/13 03:24	1.0	
035	079a035	ICAL	BUNK_50			03/21/13 03:52	1.0	24
036	079a036	ICAL	BUNK_250			03/21/13 04:20	1.0	25
037	079a037	ICAL	BUNK_500			03/21/13 04:48	1.0	26
038	079a038	ICAL	BUNK_1250			03/21/13 05:15	1.0	27
039	079a039	ICAL	BUNK_2500			03/21/13 05:43	1.0	28
040	079a040	ICAL	BUNK_5000			03/21/13 06:11	1.0	29
041	079a041	IB	CALIB			03/21/13 06:39	1.0	
042	079a042	CMARKER	C8-C50			03/21/13 07:07	1.0	30
043	079a043	IB	CALIB			03/21/13 07:36	1.0	

JDG 03/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 43.

Standards used: 1=S21251 2=S21252 3=S21253 4=S21254 5=S21255 6=S21256 7=S21990 8=S21991 9=S21992 10=S21993 11=S21246  
 12=S21688 13=S21419 14=S21418 15=S21417 16=S21416 17=S21415 18=S21282 19=S21283 20=S21284 21=S21285 22=S21286  
 23=S21281 24=S21289 25=S21290 26=S21291 27=S21292 28=S21293 29=S21287 30=S21686

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163202056

Instrument : GC15B  
 Method : EPA 8015B

Begun : 05/20/13 07:36  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	140b001	X	IB			05/20/13 07:36	1.0	
002	140b002	X	CMARKER			05/20/13 08:05	1.0	1
003	140b003	CCV	DSL_500			05/20/13 08:32	1.0	2
004	140b004	CCV	MO_500			05/20/13 09:00	1.0	3
005	140b005	X	CMARKER			05/20/13 09:39	1.0	1
006	140b006	X	IB			05/20/13 13:34	1.0	
007	140b007	X	CMARKER			05/20/13 14:01	1.0	1
010	140b010	X	C8-C50			05/20/13 14:59	1.0	1
011	140b011	CCV	MO_500			05/20/13 15:27	1.0	3
012	140b012	CCV	DSL_500			05/20/13 15:54	1.0	2
013	140b013	CCV	MO_500			05/20/13 16:26	1.0	3
014	140b014	IB	CALIB			05/20/13 17:06	1.0	
015	140b015	ICAL	MO_25			05/20/13 17:33	1.0	4
016	140b016	ICAL	MO_50			05/20/13 18:01	1.0	4
017	140b017	ICAL	MO_250			05/20/13 18:28	1.0	5
018	140b018	ICAL	MO_500			05/20/13 18:56	1.0	6
019	140b019	ICAL	MO_1000			05/20/13 19:23	1.0	7
020	140b020	ICAL	MO_2500			05/20/13 19:51	1.0	8
021	140b021	ICAL	MO_5000			05/20/13 20:19	1.0	8
022	140b022	IB	CALIB			05/20/13 20:47	1.0	
023	140b023	CMARKER	C8-C50			05/20/13 21:14	1.0	1
024	140b024	IB	CALIB			05/20/13 21:42	1.0	

JDG 05/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 24.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 163337427

Instrument : GC15B Begun : 08/22/13 07:47  
 Method : EPA 8015B SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	234b001	X	IB				08/22/13 07:47	1.0	
002	234b002	X	CMARKER				08/22/13 08:15	1.0	1
003	234b003	X	DSL_250				08/22/13 08:43	1.0	2
004	234b004	X	MO_500				08/22/13 09:11	1.0	3
005	234b005	X	JP5_250				08/22/13 09:39	1.0	4
006	234b006	CCV	DSL_250				08/22/13 10:24	1.0	2
007	234b007	CCV	MO_500				08/22/13 10:52	1.0	3
008	234b008	CCV	JP5_250				08/22/13 11:20	1.0	4
009	234b009	SAMPLE	248050-015		Soil	201970	08/22/13 11:56	1.0	
010	234b010	SAMPLE	248050-014		Soil	201970	08/22/13 12:23	1.0	
011	234b011	SAMPLE	248050-013		Soil	201970	08/22/13 12:51	1.0	
012	234b012	SAMPLE	248030-034		Soil	201939	08/22/13 13:19	2.0	
013	234b013	SAMPLE	248028-001		Soil	201879	08/22/13 13:47	20.0	
014	234b014	MS	QC703082		Soil	201970	08/22/13 14:22	5.0	
015	234b015	MSD	QC703083		Soil	201970	08/22/13 14:50	5.0	
016	234b016	CCV	DSL_500				08/22/13 15:20	1.0	5
017	234b017	CCV	MO_500				08/22/13 15:48	1.0	3
018	234b018	CCV	JP5_250				08/22/13 16:16	1.0	4
019	234b019	CCV	MINOIL_500				08/22/13 16:52	1.0	6
020	234b020	BLANK	QC703021		Soil	201972	08/22/13 17:25	1.0	
021	234b021	SAMPLE	248097-002	S	Soil	201972	08/22/13 17:53	1.0	
022	234b022	SAMPLE	248097-003	S	Soil	201972	08/22/13 18:20	1.0	
023	234b023	SAMPLE	248097-004	S	Soil	201972	08/22/13 18:48	1.0	
024	234b024	SAMPLE	248097-005	S	Soil	201972	08/22/13 19:15	1.0	
025	234b025	SAMPLE	248097-006	S	Soil	201972	08/22/13 19:43	1.0	
026	234b026	SAMPLE	248097-007	S	Soil	201972	08/22/13 20:11	1.0	
027	234b027	SAMPLE	248097-008	S	Soil	201972	08/22/13 20:39	1.0	
028	234b028	SAMPLE	248152-007		Miscell.	201972	08/22/13 21:07	1.0	
029	234b029	SAMPLE	248122-001		Soil	201972	08/22/13 21:35	1.0	
030	234b030	SAMPLE	248149-005		Soil	201972	08/22/13 22:02	3.0	
031	234b031	X	CMARKER				08/22/13 22:30	1.0	1
032	234b032	CCV	DSL_250				08/22/13 22:58	1.0	2
033	234b033	CCV	MO_500				08/22/13 23:26	1.0	3
034	234b034	CCV	JP5_250				08/22/13 23:54	1.0	4
035	234b035	CCV	MINOIL_500				08/23/13 00:22	1.0	6
036	234b036	BLANK	QC703093	S	Water	201985	08/23/13 00:50	1.0	
037	234b037	LCS	QC703094	S	Water	201985	08/23/13 01:18	1.0	
038	234b038	MSS	248104-001	S	Water	201985	08/23/13 01:45	1.0	
039	234b039	MS	QC703095	S	Water	201985	08/23/13 02:13	1.0	
040	234b040	MSD	QC703096	S	Water	201985	08/23/13 02:41	1.0	
041	234b041	SAMPLE	248163-001	S	Water	201985	08/23/13 03:08	1.0	
042	234b042	CCV	DSL_500				08/23/13 03:36	1.0	5
043	234b043	CCV	MO_500				08/23/13 04:04	1.0	3
044	234b044	CCV	JP5_250				08/23/13 04:32	1.0	4

SFL 08/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

JDG 08/23/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 20 through 44.

Standards used: 1=S22576 2=S22924 3=S23068 4=S22349 5=S22925 6=S22848

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 173318755

Instrument : GC17A  
 Method : EPA 8015B

Begun : 08/09/13 08:35  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	221a001	X	IB			08/09/13 08:35	1.0	
002	221a002	X	CMARKER			08/09/13 17:11	1.0	1
003	221a003	X	IB			08/09/13 17:39	1.0	
004	221a004	IB	CALIB			08/09/13 19:21	1.0	
005	221a005	ICAL	HEXOTP_5			08/09/13 19:49	1.0	2
006	221a006	ICAL	HEXOTP_10			08/09/13 20:16	1.0	3
007	221a007	ICAL	HEXOTP_25			08/09/13 20:44	1.0	4
008	221a008	ICAL	HEXOTP_50			08/09/13 21:12	1.0	5
009	221a009	ICAL	HEXOTP_100			08/09/13 21:40	1.0	6
010	221a010	ICAL	HEXOTP_200			08/09/13 22:08	1.0	7
011	221a011	IB	CALIB			08/09/13 22:36	1.0	
012	221a012	ICAL	DSL_10			08/09/13 23:05	1.0	8
013	221a013	ICAL	DSL_100			08/09/13 23:32	1.0	9
014	221a014	ICAL	DSL_500			08/10/13 00:00	1.0	10
015	221a015	ICAL	DSL_1000			08/10/13 00:28	1.0	11
016	221a016	ICAL	DSL_5000			08/10/13 00:56	1.0	12
017	221a017	IB	CALIB			08/10/13 01:24	1.0	
018	221a018	ICV	DSL_500			08/10/13 01:52	1.0	13
019	221a019	X	ICV			08/10/13 02:20	1.0	13
020	221a020	IB	CALIB			08/10/13 02:48	1.0	
021	221a021	ICAL	MO_25			08/10/13 03:16	1.0	14
022	221a022	ICAL	MO_50			08/10/13 03:44	1.0	14
023	221a023	ICAL	MO_250			08/10/13 04:12	1.0	15
024	221a024	ICAL	MO_500			08/10/13 04:40	1.0	16
025	221a025	ICAL	MO_1000			08/10/13 05:08	1.0	17
026	221a026	ICAL	MO_2500			08/10/13 05:36	1.0	18
027	221a027	ICAL	MO_5000			08/10/13 06:04	1.0	18
028	221a028	IB	CALIB			08/10/13 06:32	1.0	
029	221a029	ICAL	JETA_10			08/10/13 07:00	1.0	19
030	221a030	ICAL	JETA_100			08/10/13 07:28	1.0	20
031	221a031	ICAL	JETA_500			08/10/13 07:55	1.0	21
032	221a032	ICAL	JETA_1000			08/10/13 08:23	1.0	22
033	221a033	ICAL	JETA_2000			08/10/13 08:51	1.0	23
034	221a034	ICAL	JETA_3000			08/10/13 09:19	1.0	24
035	221a035	IB	CALIB			08/10/13 09:47	1.0	
036	221a036	X	JP5_10			08/10/13 10:15	1.0	25
037	221a037	ICAL	JP5_100			08/10/13 10:43	1.0	26
038	221a038	ICAL	JP5_500			08/10/13 11:11	1.0	27
039	221a039	ICAL	JP5_1500			08/10/13 11:38	1.0	28
040	221a040	ICAL	JP5_2500			08/10/13 12:06	1.0	29
041	221a041	ICAL	JP5_5000			08/10/13 12:34	1.0	30
042	221a042	IB	CALIB			08/10/13 13:02	1.0	
043	221a043	ICAL	BUNK_50			08/10/13 13:30	1.0	31
044	221a044	ICAL	BUNK_250			08/10/13 13:57	1.0	32
045	221a045	ICAL	BUNK_500			08/10/13 14:25	1.0	33
046	221a046	ICAL	BUNK_1250			08/10/13 14:53	1.0	34
047	221a047	ICAL	BUNK_2500			08/10/13 15:20	1.0	35
048	221a048	ICAL	BUNK_5000			08/10/13 15:48	1.0	36
049	221a049	IB	CALIB			08/10/13 16:15	1.0	
050	221a050	CMARKER	C8-C50			08/10/13 16:43	1.0	1
051	221a051	IB	CALIB			08/10/13 17:10	1.0	
052	221a052	ICAL	JP5_10			08/12/13 11:55	1.0	25



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 173335999

Instrument : GC17A  
 Method : EPA 8015B

Begun : 08/21/13 07:59  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	233a001	X	IB				08/21/13 07:59	1.0		
002	233a002	X	CMARKER				08/21/13 08:27	1.0	1	
003	233a003	CCV	DSL_250				08/21/13 11:28	1.0	2	
004	233a004	CCV	MO_500				08/21/13 11:55	1.0	3	
005	233a005	CCV	JP5_250				08/21/13 15:15	1.0	4	
006	233a006	BLANK	QC702960	S	Soil	201956	08/21/13 17:39	1.0		
007	233a007	LCS	QC702961	S	Soil	201956	08/21/13 18:06	1.0		
008	233a008	MSS	248046-002	S	Soil	201956	08/21/13 18:34	1.0		
009	233a009	MS	QC702962	S	Soil	201956	08/21/13 19:01	1.0		2:BUNKC:12-40=9100
010	233a010	MSD	QC702963	S	Soil	201956	08/21/13 19:28	1.0		
011	233a011	SAMPLE	248039-006	S	Soil	201956	08/21/13 19:56	10.0		
012	233a012	SAMPLE	248039-007	S	Soil	201956	08/21/13 20:24	10.0		
013	233a013	SAMPLE	248039-008	S	Soil	201956	08/21/13 20:51	10.0		
014	233a014	X	IB				08/21/13 21:19	1.0		
015	233a015	SAMPLE	248046-001	S	Soil	201956	08/21/13 21:47	1.0		
016	233a016	SAMPLE	248046-003	S	Soil	201956	08/21/13 22:14	1.0		
017	233a017	SAMPLE	248046-004	S	Soil	201956	08/21/13 22:42	1.0		
018	233a018	SAMPLE	248046-005	S	Soil	201956	08/21/13 23:10	1.0		
019	233a019	CCV	DSL_1000				08/21/13 23:38	1.0	5	
020	233a020	CCV	MO_500				08/22/13 00:06	1.0	3	
021	233a021	CCV	JP5_250				08/22/13 00:34	1.0	4	
022	233a022	SAMPLE	248047-001	S	Soil	201956	08/22/13 01:01	5.0		
023	233a023	SAMPLE	248047-006	S	Soil	201956	08/22/13 01:29	5.0		
024	233a024	X	IB				08/22/13 01:57	1.0		
025	233a025	SAMPLE	248046-006	S	Soil	201956	08/22/13 02:25	1.0		
026	233a026	SAMPLE	248047-002	S	Soil	201956	08/22/13 02:53	1.0		
027	233a027	SAMPLE	248047-003	S	Soil	201956	08/22/13 03:20	1.0		
028	233a028	SAMPLE	248047-004	S	Soil	201956	08/22/13 03:48	1.0		
029	233a029	SAMPLE	248047-005	S	Soil	201956	08/22/13 04:16	1.0		
030	233a030	SAMPLE	248048-001	S	Soil	201956	08/22/13 04:44	1.0		
031	233a031	SAMPLE	248048-002	S	Soil	201956	08/22/13 05:11	1.0		
032	233a032	SAMPLE	248048-003	S	Soil	201956	08/22/13 05:39	1.0		
033	233a033	X	CMARKER				08/22/13 06:07	1.0	1	
034	233a034	CCV	DSL_250				08/22/13 06:34	1.0	2	
035	233a035	CCV	MO_500				08/22/13 07:02	1.0	3	
036	233a036	CCV	JP5_250				08/22/13 07:30	1.0	4	
037	233a037	SAMPLE	248105-006	S	Water	201935	08/22/13 07:58	1.0		
038	233a038	SAMPLE	248105-007	S	Water	201935	08/22/13 08:26	1.0		
039	233a039	SAMPLE	248048-004	S	Soil	201956	08/22/13 08:54	1.0		
040	233a040	CCV	DSL_1000				08/22/13 09:49	1.0	5	
041	233a041	CCV	MO_500				08/22/13 10:17	1.0	3	
042	233a042	CCV	JP5_250				08/22/13 10:45	1.0	4	
043	233a043	BLANK	QC703080	S	Soil	201970	08/22/13 11:13	1.0		
044	233a044	BLANK	QC703080		Soil	201970	08/22/13 11:41	1.0		
045	233a045	LCS	QC703081	S	Soil	201970	08/22/13 12:09	1.0		
046	233a046	MSS	248143-001		Soil	201970	08/22/13 12:37	5.0		
047	233a047	X	IB				08/22/13 13:04	1.0		
048	233a048	BLANK	QC702862		Water	201935	08/22/13 13:32	1.0		
049	233a049	BLANK	QC702862	S	Water	201935	08/22/13 14:00	1.0		
050	233a050	SAMPLE	248047-002	S	Soil	201956	08/22/13 14:28	1.0		
051	233a051	CCV	DSL_500				08/22/13 14:57	1.0	6	
052	233a052	CCV	MO_500				08/22/13 15:24	1.0	3	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 173335999

Instrument : GC17A  
 Method : EPA 8015B

Begun : 08/21/13 07:59  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
053	233a053	CCV	JP5_250				08/22/13 15:52	1.0	4	
054	233a054	SAMPLE	248103-001	S	Water	201935	08/22/13 16:41	1.0		
055	233a055	SAMPLE	248103-002	S	Water	201935	08/22/13 17:09	1.0		
056	233a056	SAMPLE	248048-006	S	Soil	201970	08/22/13 17:36	1.0		
057	233a057	SAMPLE	248048-007	S	Soil	201970	08/22/13 18:04	1.0		
058	233a058	SAMPLE	248048-008	S	Soil	201970	08/22/13 18:31	1.0		
059	233a059	SAMPLE	248048-009	S	Soil	201970	08/22/13 18:59	1.0		
060	233a060	SAMPLE	248048-010	S	Soil	201970	08/22/13 19:26	1.0		
061	233a061	SAMPLE	248048-012	S	Soil	201970	08/22/13 19:54	1.0		
062	233a062	SAMPLE	248048-005	S	Soil	201970	08/22/13 20:21	3.0		
063	233a063	SAMPLE	248048-011	S	Soil	201970	08/22/13 20:49	3.0		
064	233a064	X	CMARKER				08/22/13 21:17	1.0	1	
065	233a065	CCV	DSL_250				08/22/13 21:45	1.0	2	
066	233a066	CCV	MO_500				08/22/13 22:13	1.0	3	
067	233a067	CCV	JP5_250				08/22/13 22:41	1.0	4	
068	233a068	BLANK	QC703021	S	Soil	201972	08/22/13 23:09	1.0		
069	233a069	LCS	QC703022	S	Soil	201972	08/22/13 23:37	1.0		
070	233a070	MSS	248150-003		Miscell.	201972	08/23/13 00:05	3.0		
071	233a071	MS	QC703023		Miscell.	201972	08/23/13 00:32	3.0		
072	233a072	MSD	QC703024		Miscell.	201972	08/23/13 01:00	3.0		
073	233a073	SAMPLE	248097-001	S	Soil	201972	08/23/13 01:28	1.0		
074	233a074	SAMPLE	248098-001	S	Soil	201970	08/23/13 01:56	1.0		
075	233a075	SAMPLE	248098-002	S	Soil	201970	08/23/13 02:24	1.0		
076	233a076	SAMPLE	248098-003	S	Soil	201970	08/23/13 02:52	1.0		
077	233a077	SAMPLE	248098-004	S	Soil	201970	08/23/13 03:20	1.0		
078	233a078	SAMPLE	248100-001	S	Soil	201970	08/23/13 03:48	1.0		
079	233a079	SAMPLE	248100-002	S	Soil	201970	08/23/13 04:15	1.0		
080	233a080	CCV	DSL_500				08/23/13 04:43	1.0	6	
081	233a081	CCV	MO_500				08/23/13 05:11	1.0	3	
082	233a082	CCV	JP5_250				08/23/13 05:39	1.0	4	
083	233a083	SAMPLE	248150-001		Miscell.	201972	08/23/13 06:07	5.0		
084	233a084	SAMPLE	248150-002		Miscell.	201972	08/23/13 06:35	3.0		
085	233a085	SAMPLE	248151-001		Soil	201972	08/23/13 07:03	5.0		
086	233a086	SAMPLE	248151-002		Soil	201972	08/23/13 07:31	10.0		
087	233a087	X	IB				08/23/13 07:59	1.0		
088	233a088	SAMPLE	248152-008		Miscell.	201972	08/23/13 08:27	1.0		7:BUNKC:12-40=46000
089	233a089	X	IB				08/23/13 08:55	1.0		
090	233a090	BLANK	QC703348	S	Soil	202046	08/23/13 09:23	1.0		
091	233a091	BLANK	QC703348		Soil	202046	08/23/13 09:51	1.0		
092	233a092	LCS	QC703349	S	Soil	202046	08/23/13 10:19	1.0		
093	233a093	SAMPLE	248030-034		Soil	202046	08/23/13 10:47	20.0		
094	233a094	MSS	248260-001		Soil	202046	08/23/13 11:15	2.0		
095	233a095	MS	QC703350		Soil	202046	08/23/13 11:43	2.0		
096	233a096	X	IB				08/23/13 12:10	1.0		
097	233a097	MSD	QC703351		Soil	202046	08/23/13 12:55	2.0		
098	233a098	CCV	DSL_1000				08/23/13 13:23	1.0	5	
099	233a099	CCV	MO_500				08/23/13 13:50	1.0	3	
100	233a100	CCV	DSL_1000				08/23/13 15:03	1.0	5	
101	233a101	CCV	MO_500				08/23/13 15:31	1.0	3	

JDG 08/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 39.



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 223242707

Instrument : GC14B  
 Method : EPA 8015B

Begun : 06/17/13 13:07  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	168_001	X	IB			06/17/13 13:07	1.0	
002	168_002	X	IB			06/17/13 13:35	1.0	
003	168_003	X	CMARKER			06/17/13 14:04	1.0	1
004	168_004	IB	CALIB			06/17/13 15:24	1.0	
005	168_005	ICAL	HEX OTP_5			06/17/13 15:53	1.0	2
006	168_006	ICAL	HEX OTP_10			06/17/13 16:22	1.0	3
007	168_007	ICAL	HEX OTP_25			06/17/13 16:51	1.0	4
008	168_008	ICAL	HEX OTP_50			06/17/13 17:19	1.0	5
009	168_009	ICAL	HEX OTP_100			06/17/13 17:48	1.0	6
010	168_010	ICAL	HEX OTP_200			06/17/13 18:16	1.0	7
011	168_011	IB	CALIB			06/17/13 18:45	1.0	
012	168_012	ICAL	DSL_10			06/17/13 19:13	1.0	8
013	168_013	ICAL	DSL_100			06/17/13 19:42	1.0	9
014	168_014	ICAL	DSL_500			06/17/13 20:10	1.0	10
015	168_015	ICAL	DSL_1000			06/17/13 20:39	1.0	11
016	168_016	ICAL	DSL_5000			06/17/13 21:07	1.0	12
017	168_017	IB	CALIB			06/17/13 21:36	1.0	
018	168_018	ICV	DSL_500			06/17/13 22:05	1.0	13
019	168_019	X	ICV			06/17/13 22:33	1.0	13
020	168_020	IB	CALIB			06/17/13 23:02	1.0	
021	168_021	ICAL	MO_25			06/17/13 23:31	1.0	14
022	168_022	ICAL	MO_50			06/18/13 00:00	1.0	14
023	168_023	ICAL	MO_250			06/18/13 00:28	1.0	15
024	168_024	ICAL	MO_500			06/18/13 00:57	1.0	16
025	168_025	ICAL	MO_1000			06/18/13 01:25	1.0	17
026	168_026	ICAL	MO_2500			06/18/13 01:54	1.0	18
027	168_027	ICAL	MO_5000			06/18/13 02:23	1.0	18
028	168_028	IB	CALIB			06/18/13 02:51	1.0	
029	168_029	ICAL	JETA_10			06/18/13 03:20	1.0	19
030	168_030	ICAL	JETA_100			06/18/13 03:49	1.0	20
031	168_031	ICAL	JETA_500			06/18/13 04:17	1.0	21
032	168_032	ICAL	JETA_1000			06/18/13 04:46	1.0	22
033	168_033	ICAL	JETA_2000			06/18/13 05:14	1.0	23
034	168_034	ICAL	JETA_3000			06/18/13 05:43	1.0	24
035	168_035	IB	CALIB			06/18/13 06:11	1.0	
036	168_036	CMARKER	C8-C50			06/18/13 06:40	1.0	1
037	168_037	IB	CALIB			06/18/13 07:08	1.0	

JDG 06/18/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 37.

Standards used: 1=S22576 2=S22417 3=S22418 4=S22419 5=S22420 6=S22421 7=S22422 8=S22008 9=S22009 10=S22010 11=S22011  
 12=S22007 13=S22427 14=S21419 15=S21418 16=S21417 17=S21416 18=S21415 19=S22220 20=S22221 21=S22222 22=S22223  
 23=S22224 24=S22225

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 223337426

Instrument : GC14B  
 Method : EPA 8015B

Begun : 08/22/13 07:46  
 SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
001	234_001	X	IB				08/22/13 07:46	1.0	
002	234_002	X	CMARKER				08/22/13 08:14	1.0	1
003	234_003	X	MO_500				08/22/13 08:43	1.0	2
004	234_004	X	DSL_1000				08/22/13 09:12	1.0	3
005	234_005	X	CMARKER				08/22/13 10:37	1.0	1
006	234_006	X	IB				08/22/13 12:13	1.0	
007	234_007	CMARKER	C8-C50				08/22/13 12:42	1.0	1
008	234_008	CCV	MO_500				08/22/13 13:11	1.0	2
009	234_009	CCV	DSL_1000				08/22/13 13:40	1.0	3
010	234_010	MSS	248030-026		Soil	201939	08/22/13 16:30	10.0	
011	234_011	SAMPLE	248030-028		Soil	201939	08/22/13 16:58	5.0	
012	234_012	SAMPLE	248030-027		Soil	201939	08/22/13 17:27	10.0	
013	234_013	X	IB				08/22/13 17:55	1.0	
014	234_014	SAMPLE	248030-029		Soil	201939	08/22/13 18:24	20.0	
015	234_015	SAMPLE	248030-030		Soil	201939	08/22/13 18:53	20.0	
016	234_016	SAMPLE	248030-031		Soil	201939	08/22/13 19:21	2.0	
017	234_017	X	IB				08/22/13 19:50	1.0	
018	234_018	SAMPLE	248030-036		Soil	201939	08/22/13 20:18	20.0	
019	234_019	SAMPLE	248030-037		Soil	201939	08/22/13 20:47	20.0	
020	234_020	SAMPLE	248030-032		Soil	201939	08/22/13 21:16	2.0	
021	234_021	X	IB				08/22/13 21:45	1.0	
022	234_022	SAMPLE	248030-039		Soil	201939	08/22/13 22:14	20.0	
023	234_023	CCV	MO_500				08/22/13 22:43	1.0	2
024	234_024	CCV	DSL_500				08/22/13 23:12	1.0	4
025	234_025	SAMPLE	248030-040		Soil	201939	08/22/13 23:41	5.0	
026	234_026	SAMPLE	248030-041		Soil	201939	08/23/13 00:09	10.0	
027	234_027	SAMPLE	248030-042		Soil	201939	08/23/13 00:38	20.0	
028	234_028	X	IB				08/23/13 01:07	1.0	
029	234_029	SAMPLE	248030-043		Soil	201939	08/23/13 01:36	5.0	
030	234_030	SAMPLE	248030-044		Soil	201939	08/23/13 02:05	5.0	
031	234_031	SAMPLE	248084-001		Soil	201970	08/23/13 02:34	20.0	
032	234_032	SAMPLE	248085-001		Miscell.	201972	08/23/13 03:03	3.0	1:BUNKC:12-40=5100
033	234_033	X	IB				08/23/13 03:32	1.0	
034	234_034	SAMPLE	248085-002		Miscell.	201972	08/23/13 04:01	1.0	
035	234_035	SAMPLE	248085-003		Miscell.	201972	08/23/13 04:29	1.0	
036	234_036	SAMPLE	248109-002		Soil	201970	08/23/13 04:58	1.0	
037	234_037	X	CMARKER				08/23/13 05:27	1.0	1
038	234_038	CCV	MO_500				08/23/13 05:56	1.0	2
039	234_039	CCV	DSL_1000				08/23/13 06:24	1.0	3
040	234_040	SAMPLE	248105-008	S	Water	201985	08/23/13 06:53	1.0	
041	234_041	SAMPLE	248105-009	S	Water	201985	08/23/13 07:22	1.0	
042	234_042	SAMPLE	248105-010	S	Water	201985	08/23/13 07:51	1.0	
043	234_043	SAMPLE	248105-011	S	Water	201985	08/23/13 08:20	1.0	
044	234_044	SAMPLE	248105-012	S	Water	201985	08/23/13 08:49	1.0	
045	234_045	SAMPLE	248105-013	S	Water	201985	08/23/13 09:18	1.0	
046	234_046	SAMPLE	248105-014	S	Water	201985	08/23/13 09:46	1.0	
047	234_047	CCV	MO_500				08/23/13 10:15	1.0	2
048	234_048	CCV	DSL_250				08/23/13 10:44	1.0	5
049	234_049	LCS	QC703094	S	Water	201985	08/23/13 12:13	1.0	
050	234_050	BLANK	QC703348	S	Soil	202046	08/23/13 12:41	1.0	
051	234_051	CCV	JP5_250				08/23/13 13:15	1.0	6
052	234_052	BLANK	QC703348	S	Soil	202046	08/23/13 13:46	1.0	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 223337426

Instrument : GC14B Begun : 08/22/13 07:46  
 Method : EPA 8015B SOP Version : TEH\_rv17

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
053	234_053	SAMPLE	248097-007	S	Soil	201972	08/23/13 14:14	1.0	
054	234_054	CCV	DSL_500				08/23/13 14:43	1.0	4
055	234_055	CCV	MO_500				08/23/13 15:12	1.0	2
056	234_056	CCV	JP5_250				08/23/13 15:41	1.0	6
057	234_057	BLANK	QC703348		Soil	202046	08/23/13 18:25	1.0	
058	234_058	SAMPLE	248122-001		Soil	201972	08/23/13 18:54	1.0	
059	234_059	SAMPLE	248150-001		Miscell.	201972	08/23/13 19:22	5.0	
060	234_060	SAMPLE	248150-002		Miscell.	201972	08/23/13 19:51	3.0	
061	234_061	SAMPLE	248151-001		Soil	201972	08/23/13 20:20	5.0	
062	234_062	SAMPLE	248030-034		Soil	202046	08/23/13 20:48	20.0	
063	234_063	X	IB				08/23/13 21:17	1.0	
064	234_064	SAMPLE	248152-007		Miscell.	201972	08/23/13 21:46	1.0	
065	234_065	SAMPLE	248152-008		Miscell.	201972	08/23/13 22:14	10.0	2:BUNKC:12-40=6500
066	234_066	SAMPLE	248151-002		Soil	201972	08/23/13 22:43	10.0	
067	234_067	X	CMARKER				08/23/13 23:12	1.0	1
068	234_068	CCV	MO_500				08/23/13 23:41	1.0	2
069	234_069	CCV	DSL_1000				08/24/13 00:10	1.0	3
070	234_070	X	CCV				08/24/13 00:38	1.0	2
071	234_071	X	CCV				08/24/13 01:07	1.0	3

JDG 08/23/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 49.

JDG 08/23/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 50 through 56.

SFL 08/24/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 57 through 71.

Standards used: 1=S22576 2=S23068 3=S22926 4=S22925 5=S22924 6=S22349

SAMPLE PREPARATION SUMMARY

Batch # : 201972  
 Started By : TFB  
 Method : 3550B  
 Spike #1 ID : S23042

Prep Date : 21-AUG-2013 18:00  
 Spike #2 ID : S22987

Analysis : TEH  
 Finished By : CPK  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248085-001		Miscell.	49.61	5	1	0.1008		1				TEHM	
248085-002		Miscell.	50	5	1	0.1000		1				TEHM	
248085-003		Miscell.	50.14	5	1	0.09972		1				TEHM	
248097-001		Soil	50.03	5	1	0.09994		1			3630C	TEHM	
248097-002		Soil	50.46	5	1	0.09909		1			3630C	TEHM	
248097-003		Soil	49.66	5	1	0.1007		1			3630C	TEHM	
248097-004		Soil	50.43	5	1	0.09915		1			3630C	TEHM	
248097-005		Soil	50.13	5	1	0.09974		1			3630C	TEHM	
248097-006		Soil	49.66	5	1	0.1007		1			3630C	TEHM	
248097-007		Soil	49.65	5	1	0.1007		1			3630C	TEHM	
248097-008		Soil	50.26	5	1	0.09948		1			3630C	TEHM	
248122-001		Soil	49.81	5	1	0.1004		1				TEHM	
248149-005		Soil	49.64	5	1	0.1007		1				TEH	
248150-001		Miscell.	50.09	5	1	0.09982		1				TEHM	
248150-002		Miscell.	50.47	5	1	0.09907		1				TEHM	
248150-003		Miscell.	49.88	5	1	0.1002		1				TEHM	
248151-001		Soil	50.06	5	1	0.09988		1				TEHM	
248151-002		Soil	49.75	10	1	0.201		1				TEHM	
248152-007		Miscell.	50.25	5	1	0.0995		1				TEHM	
248152-008		Miscell.	49.6	10	1	0.2016		1				TEHM	
QC703021	BLANK	Soil	50.33	5	1	0.09934		1			3630C		
QC703022	LCS	Soil	49.73	5	1	0.1005		1	1		3630C		
QC703023	MS	Miscell.	50.23	5	1	0.09954		1	1				
QC703024	MSD	Miscell.	50.07	5	1	0.09986		1	1				

Analyst: JDG

Date: 08/23/13

Reviewer: SFL

Date: 08/23/13

LIMS Batch No: 201972  
 LIMS Analysis TEH/M  
 Date Extracted: 8/21/13

Extraction Method:

- Shaker Table
- EPA 3550 Sonication
- \_\_\_\_\_

Cleanup Method (if necessary):  
 EPA 3630 Silica Gel

LIM  
LJ  
De

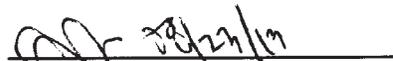
Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Cleanup (x if needed)	Comments
248085-001	B	49.61	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
↓ -002	↓	50.00	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
↓ -003	↓	50.14	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
248097-001	F	50.03	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>	X	
5 ↓ -002	↓	50.46	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
↓ -003	↓	49.66	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
↓ -004	↓	50.43	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
↓ -005	↓	50.13	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
↓ -006	↓	49.44	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
10 ↓ -007	↓	49.65	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
↓ -008	↓	50.26	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>	↓	
248122-001	B	49.81	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
248149-005	comp	49.64	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
248150-001	E	50.09	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
15 ↓ -002	↓	50.47	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
↓ -003	↓	49.88	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		MGS
248151-001	E	50.06	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
↓ -002	↓	49.75	<input type="checkbox"/> 5.0 <input checked="" type="checkbox"/> 10 mL		
248152-007	A	50.25	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
20 ↓ -008	↓	49.60	<input type="checkbox"/> 5.0 <input checked="" type="checkbox"/> 10 mL		
MB GC703021		50.33	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>	X	
LCS	2	49.73	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>	↓	
MS	3	50.23	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
MSD	4	50.07	<input checked="" type="checkbox"/> 5.0 <input type="checkbox"/>		
			<input type="checkbox"/> 5.0 <input type="checkbox"/>		

Mfg & Lot # / LIMS # / Time Date/Initials

Baked, solvent-rinsed granular Na2SO4 weighed out for QC samples	EMVJ116	OK 8/21/13
Samples were dried with CH2Cl2-rinsed powdered Na2SO4	↓	↓
1.0 mL of Surrogate solution was added to all samples	S23042B	
1.0 mL of Spike solution was added to all spikes	S22987C	
1:1 CH2Cl2 (lot# EMS3123):Acetone(lot# EMS2216) was added to all	✓	
Solvent added at (time)	1800	
<input checked="" type="checkbox"/> Sonicated 3 times w/ ≥100mL <input type="checkbox"/> placed on Shaker Table at:	✓	
taken off Shaker Table at:	N/A	
Extracts filtered through baked, rinsed powdered Na2SO4	EMVJ116	
Concentrated to final volume at temperature (degrees C)	100	
Relinquished to TEH Department	✓	↓

  
 8/21/13  
 Extraction Chemist / Date

Continued from page \_\_\_\_\_  
 Continued on page \_\_\_\_\_

  
 Reviewed by / Date

L  
A  
E

Prep Chemist: CPK  
 Cleanup Date: 8/21/13

Benchbook # **BK 3463**  
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Sample #	Extraction Batch#	Initial Volume (mL)	Final Volume (mL)	Comments
248048-W5	201970	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W6		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W7		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W8		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W9		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W10		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W11		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W12		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
248090-W1		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W2		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W3		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W4		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
24810-W1		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W2		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
MB QC703080		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
LCS ↓ 1		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
248087-W1	201972	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W2		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W3		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W4		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W5		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W6		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W7		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
-W8		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
MB QC703021		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
LCS ↓ 2		<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	
		<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	

*CPK* 08/23/13

Extracts were cleaned up using C&T assembled 1.0 g columns  
 Extracts were cleaned up using      g cartridges  
 Extracts were eluted with 4.0 mL CH<sub>2</sub>Cl<sub>2</sub>  
 Concentrated to volumes as noted above

Mfg & Lot # / Time / Program	Initials / Date
6027026	CPK 8/21/13
NA	↓
CM57053	↓
↓	↓

*[Signature]* 8/21/13  
 Extraction Chemist / Date

Continued from page       
 Continued on page     

*[Signature]* 08/23/13  
 Reviewed by / Date

TITLE

PROJECT

DATE

Continued from page		Sample ID	Weight(g)	Analysis	Batch#	Comments
		248048-W5	A 50.06	TEKA	201970	
		W6	50.07			
		W7	49.94			
		W8	49.82			
		W9	49.84			
		W10	50.33			
		W11	50.01			
		W12	49.93			
		248090-013	Comp 50.30			Comp 1-4 @ 30g each
		-014	49.65			5-8
		-015	50.15			9-12
		248084-W1	A 49.64			
		248098-W1	F 50.33			
		-W2	49.99			
		-W3	50.22			
		-W4	50.41			
		248100-W1	49.73			
		248100-W2	49.64			
		248109-W2	B 49.81			
		248143-W1	C 49.85			
		MB	NA 49.69			EMVLIB
		LCS	49.66			248143-W1
		MS	C 49.80			
		MSD	49.63			
		248085-W1	B 49.61 /			
		248085-W2	50.00 /			
		248085-W3	50.14 /			
		248097-W1	F 50.03 /			
		-W2	50.46 /			
		-W3	49.66 /			
		W4	50.47 /			
		W5	50.13 /			
		W6	49.66 /			
		W8	49.85 / 50.26 /			
		248126-W1	B 50.26 / 49.81 /			
		248149-W5	49.67 /			Comp 1-4 @ 50g each
		248150-W1	E 50.09 /			
		W2	50.47 /			
		W3	49.88 /			
		248151-W1	E 50.06 /			
		-W2	49.75 /			
		248152-W7	A 50.75 /			
		-W8	49.60 /			
		248150-W5	50.33 /			
		LCS	49.73 /			
		MS	50.23 /			
		MSD	50.07 /			
SIGNATURE		MB				DATE
DISCLOSED TO AND UNDERSTOOD BY						DATE

TEKA 201972  
201972

Comp 1-4 @ 30g each  
5-8  
9-12

EMVLIB  
248143-W1

Comp 1-4 @ 50g each

Continued to page

EMVLIB

248150-W5

OPK 01/21/13

PROPRIETARY INFORMATION

TITLE

PROJECT

DATE

Continued from page

SAMPLE ID	Weight	ANALYSIS	Batch	Comments			
248046-001 F	50.32	TEH		MSS			
2	50.12						
3	50.11						
4	50.46						
5	49.51						
6	49.77						
248039-005 comp	50.47				TEH		comp 248039-005 B.G.D EFG 6 7 8 df 30 g ea
6	49.94						
7	50.01						
8	50.42						
248047-001 A	49.80						
2	50.16						
3	49.88						
4	50.03						
5	49.82						
6	49.57						
248048-001	49.97	TEH		EMVL 11B 248046-002			
2	49.72						
3	49.52						
4	49.84						
MB	50.21						
LS	50.42						
MS	50.11						
MSD	49.95						
248097-007 F	49.65				DEH/M	AP26 82113 201978	8/21/13

Continued to page

SIGNATURE

DATE

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

Laboratory Job Number 248085

ANALYTICAL REPORT

Semivolatile Organics by GC/MS

Matrix: Miscell.

**Polynuclear Aromatics by GC/MS**

Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-13D	Batch#:	201931
Lab ID:	248085-001	Chemist:	LLH
Matrix:	Miscell.	Sampled:	08/16/13
Units:	ug/Kg	Received:	08/16/13
Basis:	dry	Prepared:	08/20/13
Diln Fac:	3.000	Analyzed:	08/22/13

Moisture: 49%

Analyte	Result	RL
Naphthalene	ND	390
Acenaphthylene	ND	390
Acenaphthene	ND	390
Fluorene	ND	390
Phenanthrene	700	390
Anthracene	450	390
Fluoranthene	980	390
Pyrene	3,500	390
Benzo(a)anthracene	650	390
Chrysene	1,200	390
Benzo(b)fluoranthene	2,500	390
Benzo(k)fluoranthene	860	390
Benzo(a)pyrene	1,500	390
Indeno(1,2,3-cd)pyrene	610	390
Dibenz(a,h)anthracene	ND	390
Benzo(g,h,i)perylene	590	390

Surrogate	%REC	Limits
Nitrobenzene-d5	84	49-120
2-Fluorobiphenyl	94	52-120
Terphenyl-d14	103	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-19D	Batch#:	201931
Lab ID:	248085-002	Chemist:	LLH
Matrix:	Miscell.	Sampled:	08/16/13
Units:	ug/Kg	Received:	08/16/13
Basis:	dry	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/22/13

Moisture: 63%

Analyte	Result	RL
Naphthalene	ND	360
Acenaphthylene	ND	360
Acenaphthene	ND	360
Fluorene	ND	360
Phenanthrene	ND	360
Anthracene	ND	360
Fluoranthene	460	360
Pyrene	640	360
Benzo(a)anthracene	ND	360
Chrysene	ND	360
Benzo(b)fluoranthene	570	360
Benzo(k)fluoranthene	ND	360
Benzo(a)pyrene	440	360
Indeno(1,2,3-cd)pyrene	ND	360
Dibenz(a,h)anthracene	ND	360
Benzo(g,h,i)perylene	ND	360

Surrogate	%REC	Limits
Nitrobenzene-d5	68	49-120
2-Fluorobiphenyl	78	52-120
Terphenyl-d14	82	48-120

ND= Not Detected  
 RL= Reporting Limit

**Polynuclear Aromatics by GC/MS**

Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Field ID:	IA-21D	Batch#:	201931
Lab ID:	248085-003	Chemist:	KMH
Matrix:	Miscell.	Sampled:	08/16/13
Units:	ug/Kg	Received:	08/16/13
Basis:	dry	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/22/13

Moisture: 67%

Analyte	Result	RL
Naphthalene	ND	200
Acenaphthylene	ND	200
Acenaphthene	ND	200
Fluorene	ND	200
Phenanthrene	ND	200
Anthracene	ND	200
Fluoranthene	220	200
Pyrene	380	200
Benzo(a)anthracene	ND	200
Chrysene	ND	200
Benzo(b)fluoranthene	270	200
Benzo(k)fluoranthene	ND	200
Benzo(a)pyrene	230	200
Indeno(1,2,3-cd)pyrene	ND	200
Dibenz(a,h)anthracene	ND	200
Benzo(g,h,i)perylene	ND	200

Surrogate	%REC	Limits
Nitrobenzene-d5	65	49-120
2-Fluorobiphenyl	68	52-120
Terphenyl-d14	78	48-120

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Polynuclear Aromatics by GC/MS			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Type:	BLANK	Batch#:	201931
Lab ID:	QC702848	Chemist:	KMH
Matrix:	Soil	Prepared:	08/20/13
Units:	ug/Kg	Analyzed:	08/21/13
Diln Fac:	1.000		

Analyte	Result	RL
Naphthalene	ND	66
Acenaphthylene	ND	66
Acenaphthene	ND	66
Fluorene	ND	66
Phenanthrene	ND	66
Anthracene	ND	66
Fluoranthene	ND	66
Pyrene	ND	66
Benzo(a)anthracene	ND	66
Chrysene	ND	66
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
Nitrobenzene-d5	69	49-120
2-Fluorobiphenyl	72	52-120
Terphenyl-d14	64	48-120

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Polynuclear Aromatics by GC/MS			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8270C
Type:	LCS	Batch#:	201931
Lab ID:	QC702849	Chemist:	KMH
Matrix:	Soil	Prepared:	08/20/13
Units:	ug/Kg	Analyzed:	08/21/13
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Naphthalene	998.7	818.0	82	58-120
Acenaphthylene	998.7	833.0	83	58-120
Acenaphthene	998.7	773.3	77	57-120
Fluorene	998.7	836.9	84	61-120
Phenanthrene	998.7	816.0	82	61-120
Anthracene	998.7	837.0	84	61-120
Fluoranthene	998.7	866.1	87	64-120
Pyrene	998.7	791.3	79	60-120
Benzo(a)anthracene	998.7	799.2	80	61-120
Chrysene	998.7	827.7	83	62-120
Benzo(b)fluoranthene	998.7	753.1	75	61-120
Benzo(k)fluoranthene	998.7	801.2	80	59-120
Benzo(a)pyrene	998.7	785.2	79	63-120
Indeno(1,2,3-cd)pyrene	998.7	853.4	85	59-120
Dibenz(a,h)anthracene	998.7	835.9	84	60-120
Benzo(g,h,i)perylene	998.7	873.4	87	57-120

Surrogate	%REC	Limits
Nitrobenzene-d5	80	49-120
2-Fluorobiphenyl	72	52-120
Terphenyl-d14	71	48-120

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS DFTPP TUNE FOR 248085 MSBNA Miscell.  
EPA 8270C

Inst : MSBNA05                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 543222414002              File : xf302                      Time : 03-JUN-2013 13:33

Standards: S21994

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	218750	50.18	
68	< 2% of mass 69	0	0.00	
69		270130	100.00	
70	< 2% of mass 69	1387	0.51	
127	40% - 60% of mass 198	244032	55.98	
197	< 1% of mass 198	0	0.00	
198		435925	100.00	
199	5% - 9% of mass 198	31029	7.12	
275	10% - 30% of mass 198	112986	25.92	
365	> 1% of mass 198	12177	2.79	
441	Present, < mass 443	60290	79.66	
442	> 40% and < 100% of mass 198	379242	87.00	
443	17% - 23% of mass 442	75688	19.96	

Analyst:   KMH                        Date:   06/04/13                        Reviewer:   LW                        Date:   06/07/13

PEM Report

File Name : G:\msbna05\060313\XF302.D  
 Date Acquired : 3 Jun 2013 1:33 pm  
 Sample Name : TUN,S21994  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA05 BNA DFTPP/PEM  
 Inst. Name : MSBNA05  
 AcquisitionMeth: DFTPP05.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.106	5.38	611867
Benzidine	0.745	7.24	2795176
4,4'-DDT		8.26	1655991
4,4'-DDE		7.47	3473
4,4'-DDD		7.88	52161
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	3%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.1	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248085 MSBNA Miscell.  
EPA 8270C

Inst : MSBNA05                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 543336162001              File : xh101                      Time : 21-AUG-2013 10:42

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	163476	52.61	
68	< 2% of mass 69	0	0.00	
69		205333	100.00	
70	< 2% of mass 69	629	0.31	
127	40% - 60% of mass 198	170688	54.93	
197	< 1% of mass 198	0	0.00	
198		310741	100.00	
199	5% - 9% of mass 198	22122	7.12	
275	10% - 30% of mass 198	81501	26.23	
365	> 1% of mass 198	8047	2.59	
441	Present, < mass 443	33949	87.58	
442	> 40% and < 100% of mass 198	195776	63.00	
443	17% - 23% of mass 442	38762	19.80	

Analyst:   KMH                        Date:   08/21/13                        Reviewer:   LLH                        Date:   08/21/13

PEM Report

File Name : G:\msbna05\082113\XHL01.D  
 Date Acquired : 21 Aug 2013 10:42 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA05 BNA DFTPP/PEM  
 Inst. Name : MSBNA05  
 AcquisitionMeth: DFTPP05.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.037	5.41	169447
Benzidine	0.678	7.25	2291392
4,4'-DDT		8.26	1023297
4,4'-DDE		7.47	7449
4,4'-DDD		7.89	87074
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	8%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.0	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248085 MSBNA Miscell.  
EPA 8270C

Inst : MSBNA06                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 553242752005              File : yfh05                      Time : 17-JUN-2013 16:55

Standards: S21994

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	199998	48.18	
68	< 2% of mass 69	0	0.00	
69		152921	100.00	
70	< 2% of mass 69	522	0.34	
127	40% - 60% of mass 198	181568	43.74	
197	< 1% of mass 198	0	0.00	
198		415082	100.00	
199	5% - 9% of mass 198	27840	6.71	
275	10% - 30% of mass 198	98754	23.79	
365	> 1% of mass 198	12622	3.04	
441	Present, < mass 443	50610	81.60	
442	> 40% and < 100% of mass 198	317034	76.38	
443	17% - 23% of mass 442	62021	19.56	

Analyst:   KMH                        Date:   06/18/13                        Reviewer:   LW                        Date:   06/19/13

PEM Report

File Name : G:\msbna06\061713\YFH05.D  
 Date Acquired : 17 Jun 2013 4:55 pm  
 Sample Name : TUN,S21994  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA06 BNA DFTPP/PEM  
 Inst. Name : MSBNA06  
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	0.841	5.56	654841
Benzidine	0.634	7.43	3142381
4,4'-DDT		8.46	1692094
4,4'-DDE		7.67	3968
4,4'-DDD		8.08	37549
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	2%	PASS
Tailing: Pentachlorophenol	8270C <5.0	0.8	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.6	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 248085 MSBNA Miscell.  
EPA 8270C

Inst : MSBNA06                      Run Name : DFTPP/PEM                      IDF : 1.0  
Seqnum : 553337587001              File : yhm01                      Time : 22-AUG-2013 10:27

Standards: S22578

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	121191	45.64	
68	< 2% of mass 69	0	0.00	
69		98266	100.00	
70	< 2% of mass 69	551	0.56	
127	40% - 60% of mass 198	127080	47.85	
197	< 1% of mass 198	0	0.00	
198		265557	100.00	
199	5% - 9% of mass 198	18389	6.92	
275	10% - 30% of mass 198	61962	23.33	
365	> 1% of mass 198	7454	2.81	
441	Present, < mass 443	36914	80.61	
442	> 40% and < 100% of mass 198	235200	88.57	
443	17% - 23% of mass 442	45794	19.47	

Analyst: LLH                      Date: 08/22/13                      Reviewer: KMH                      Date: 08/22/13

PEM Report

File Name : G:\msbna06\082213\YHM01.D  
 Date Acquired : 22 Aug 2013 10:27 am  
 Sample Name : TUN,S22578  
 Misc. Info : DFTPP/PEM  
 Calib. Title : MSBNA06 BNA DFTPP/PEM  
 Inst. Name : MSBNA06  
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.176	5.33	285601
Benzidine	0.534	7.19	2151573
4,4'-DDT		8.21	914872
4,4'-DDE		7.42	7010
4,4'-DDD		7.83	63336
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	7%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.2	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.5	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 MSBNA Miscell.: EPA 8270C

Inst : MSBNA05  
 Calnum : 543222414001  
 Units : ug/mL

Name : 6PTBNA5  
 Date : 03-JUN-2013 15:00  
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	xf303	543222414003	ICAL1 03-JUN-2013 15:00	S22456
L2	xf304	543222414004	ICAL2 03-JUN-2013 15:37	S22457
L3	xf305	543222414005	ICAL3 03-JUN-2013 16:13	S22458
L4	xf306	543222414006	ICAL4 03-JUN-2013 16:49	S22459
L5	xf307	543222414007	ICAL5 03-JUN-2013 17:27	S22460
L6	xf308	543222414008	ICAL6 03-JUN-2013 18:04	S22461
L7	xf309	543222414009	ICAL7 03-JUN-2013 18:40	S22462
L8	xf310	543222414010	ICAL8 03-JUN-2013 19:16	S22463
L9	xf311	543222414011	ICAL9 03-JUN-2013 19:54	S22464

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r <sup>2</sup> %RSD	Max %RSD	Min RF	Min r <sup>2</sup>	Flg
Naphthalene	1.2614	1.2486	1.1830	1.1391	1.1188	1.0931	0.9857	0.9432	0.9009	AVRG	0.91150	0.91150		1.0971	12	15	0.05	0.99	
Acenaphthylene	2.1224	2.0796	1.9621	1.8568	1.8497	1.8088	1.6689	1.5923	1.5478	AVRG	0.54583	0.54583		1.8321	11	15	0.05	0.99	
Acenaphthene	1.2365	1.2581	1.2651	1.2414	1.2366	1.2308	1.0984	1.0692	1.0414	AVRG	0.84288	0.84288		1.1864	8	15	0.05	0.99	
Fluorene	1.5457	1.5402	1.5116	1.4031	1.3706	1.3478m	1.2408	1.1894	1.1457	AVRG	0.73201	0.73201		1.3661	11	15	0.05	0.99	
Phenanthrene	1.3186	1.2756	1.2247	1.1558	1.1084	1.1010m	0.9933	0.9503m	0.9152	AVRG	0.89615	0.89615		1.1159	13	15	0.05	0.99	
Anthracene	1.3548	1.2935	1.2272	1.1756	1.1366	1.1300	1.0118	0.9641	0.9193	AVRG	0.88123	0.88123		1.1348	13	15	0.05	0.99	
Fluoranthene	1.5030	1.4919	1.3903	1.3786	1.3513	1.3403	1.2027	1.1611	1.1096	AVRG	0.75449	0.75449		1.3254	11	15	0.05	0.99	
Pyrene	1.4223	1.3574	1.3290	1.3167	1.2909	1.2758	1.1857	1.1343	1.1078	AVRG	0.78809	0.78809		1.2689	8	15	0.05	0.99	
Benzo(a)anthracene	1.3459	1.2981	1.3014	1.2483	1.2364	1.2289m	1.1862	1.1417m	1.1322	AVRG	0.80941	0.80941		1.2355	6	15	0.05	0.99	
Chrysene	1.1578	1.1162	1.1447	1.1001	1.0873	1.0903	1.0250	0.9963	0.9907m	AVRG	0.92703	0.92703		1.0787	6	15	0.05	0.99	
Benzo(b)fluoranthene	1.1366	1.1277	1.1923	1.1864	1.1871	1.1967m	1.2484	1.2529m	1.3529m	AVRG	0.82713	0.82713		1.2090	6	15	0.05	0.99	
Benzo(k)fluoranthene	1.0965	1.1203	1.1333	1.1023	1.1278	1.1272	1.0778	1.0458m	0.9025	AVRG	0.92465	0.92465		1.0815	7	15	0.05	0.99	
Benzo(a)pyrene	1.0022	1.0087	1.0613	1.0463	1.0643	1.0759m	1.0853	1.0822	1.1046	AVRG	0.94431	0.94431		1.0590	3	15	0.05	0.99	
Indeno(1,2,3-cd)pyrene	1.0939	1.1076	1.1756	1.2049	1.2274	1.2555	1.3012	1.3098	1.3404	AVRG	0.81697	0.81697		1.2240	7	15	0.05	0.99	
Dibenz(a,h)anthracene	0.9160	0.9248	1.0237	1.0272	1.0430	1.0535	1.0911	1.0934	1.1176	AVRG	0.96875	0.96875		1.0323	7	15	0.05	0.99	
Benzo(g,h,i)perylene	0.9661	0.9235	0.9246	0.9318	0.9684	0.9983	1.0348	1.0426	1.0634	AVRG	1.01654	1.01654		0.9837	5	15	0.05	0.99	
Nitrobenzene-d5	0.5106	0.5301	0.5405	0.5435	0.5461	0.5544	0.5395	0.5414	0.5536	AVRG	1.85197	1.85197		0.5400	2	15	0.05	0.99	
2-Fluorobiphenyl	1.6929	1.6203	1.5263	1.4595	1.4218	1.3774	1.2617	1.2090	1.1553	AVRG	0.70731	0.70731		1.4138	13	15	0.05	0.99	
Terphenyl-d14	1.0816	1.0532	1.0268	1.0057	1.0180	1.0113	0.9403	0.8943	0.8554	AVRG	1.01275	1.01275		0.9874	8	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Naphthalene	2.0000	15	5.0000	14	10.000	8	16.000	4	20.000	4	25.000	0	40.000	-10	50.000	-14	60.000	-18
Acenaphthylene	2.0000	16	5.0000	14	10.000	7	16.000	1	20.000	1	25.000	-1	40.000	-9	50.000	-13	60.000	-16
Acenaphthene	2.0000	4	5.0000	6	10.000	7	16.000	5	20.000	4	25.000	4	40.000	-7	50.000	-10	60.000	-12
Fluorene	2.0000	13	5.0000	13	10.000	11	16.000	3	20.000	0	25.000	-1	40.000	-9	50.000	-13	60.000	-16
Phenanthrene	2.0000	18	5.0000	14	10.000	10	16.000	4	20.000	-1	25.000	-1	40.000	-11	50.000	-15	60.000	-18
Anthracene	2.0000	19	5.0000	14	10.000	8	16.000	4	20.000	0	25.000	0	40.000	-11	50.000	-15	60.000	-19
Fluoranthene	2.0000	13	5.0000	13	10.000	5	16.000	4	20.000	2	25.000	1	40.000	-9	50.000	-12	60.000	-16
Pyrene	2.0000	12	5.0000	7	10.000	5	16.000	4	20.000	2	25.000	1	40.000	-7	50.000	-11	60.000	-13
Benzo(a)anthracene	2.0000	9	5.0000	5	10.000	5	16.000	1	20.000	0	25.000	-1	40.000	-4	50.000	-8	60.000	-8
Chrysene	2.0000	7	5.0000	3	10.000	6	16.000	2	20.000	1	25.000	1	40.000	-5	50.000	-8	60.000	-8
Benzo(b)fluoranthene	2.0000	-6	5.0000	-7	10.000	-1	16.000	-2	20.000	-2	25.000	-1	40.000	3	50.000	4	60.000	12
Benzo(k)fluoranthene	2.0000	1	5.0000	4	10.000	5	16.000	2	20.000	4	25.000	4	40.000	0	50.000	-3	60.000	-17
Benzo(a)pyrene	2.0000	-5	5.0000	-5	10.000	0	16.000	-1	20.000	1	25.000	2	40.000	2	50.000	2	60.000	4
Indeno(1,2,3-cd)pyrene	2.0000	-11	5.0000	-10	10.000	-4	16.000	-2	20.000	0	25.000	3	40.000	6	50.000	7	60.000	10
Dibenz(a,h)anthracene	2.0000	-11	5.0000	-10	10.000	-1	16.000	0	20.000	1	25.000	2	40.000	6	50.000	6	60.000	8
Benzo(g,h,i)perylene	2.0000	-2	5.0000	-6	10.000	-6	16.000	-5	20.000	-2	25.000	1	40.000	5	50.000	6	60.000	8
Nitrobenzene-d5	2.0000	-5	5.0000	-2	10.000	0	16.000	1	20.000	1	25.000	3	40.000	0	50.000	0	60.000	3
2-Fluorobiphenyl	2.0000	20	5.0000	15	10.000	8	16.000	3	20.000	1	25.000	-3	40.000	-11	50.000	-14	60.000	-18
Terphenyl-d14	2.0000	10	5.0000	7	10.000	4	16.000	2	20.000	3	25.000	2	40.000	-5	50.000	-9	60.000	-13

KMH 06/04/13 [Aniline]: Picked or reassigned peak in all levels.

KMH 06/04/13 [2-Nitrophenol]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [bis(2-Chloroethoxy)methane]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [4-Chloroaniline]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [2,4,5-Trichlorophenol]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [Benzidine]: Picked or reassigned peak in all levels.

KMH 06/04/13 [Pyridine]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [4-Nitroaniline]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [Benzoic acid]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [3-Nitroaniline]: Corrected automatically drawn baseline in ICAL3 (xf305).

KMH 06/04/13 [Carbazole]: Corrected automatically drawn baseline in multiple levels.

KMH 06/04/13 [Phenanthrene-d10]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [2,4,6-Trichlorophenol]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Fluorene]: Picked or reassigned peak in ICAL6 (xf308).  
KMH 06/04/13 [Phenanthrene]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(a)anthracene]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(b)fluoranthene]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(a)pyrene]: Picked or reassigned peak in ICAL6 (xf308).  
KMH 06/04/13 [bis(2-Chloroethyl)ether]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/04/13 [4-Methylphenol]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/04/13 [bis(2-Ethylhexyl)phthalate]: Picked or reassigned peak in multiple levels.  
KMH 06/04/13 [Benzo(k)fluoranthene]: Corrected automatically drawn baseline in ICAL8 (xf310).  
KMH 06/04/13 [Phenol]: Picked or reassigned peak in ICAL9 (xf311).  
KMH 06/04/13 [Chrysene]: Corrected automatically drawn baseline in ICAL9 (xf311).

Analyst: KMH

Date: 06/04/13

Reviewer: LW

Date: 06/07/13

m>manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor

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543222414001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 MSBNA Miscell.  
EPA 8270C

Inst : MSBNA05  
Calnum : 543222414001

Name : 6PTBNA5  
Cal Date : 03-JUN-2013

ICV 543222414012 (xf312 03-JUN-2013) stds: S22440

Analyte	Spiked	Quant	Units	%D	Max	Flags
Naphthalene	40.00	35.35	ug/mL	-12	30	
Acenaphthylene	40.00	35.35	ug/mL	-12	30	
Acenaphthene	40.00	37.09	ug/mL	-7	20	
Fluorene	40.00	36.03	ug/mL	-10	30	
Phenanthrene	40.00	35.87	ug/mL	-10	30	
Anthracene	40.00	35.76	ug/mL	-11	30	
Fluoranthene	40.00	35.55	ug/mL	-11	20	
Pyrene	40.00	36.86	ug/mL	-8	30	
Benzo(a)anthracene	40.00	37.62	ug/mL	-6	30	
Chrysene	40.00	36.24	ug/mL	-9	30	
Benzo(b)fluoranthene	40.00	40.29	ug/mL	1	30	
Benzo(k)fluoranthene	40.00	40.63	ug/mL	2	30	
Benzo(a)pyrene	40.00	43.20	ug/mL	8	20	
Indeno(1,2,3-cd)pyrene	40.00	41.23	ug/mL	3	30	
Dibenz(a,h)anthracene	40.00	39.91	ug/mL	0	30	
Benzo(g,h,i)perylene	40.00	39.94	ug/mL	0	30	

Analyst: KMH

Date: 06/04/13

Reviewer: LW

Date: 06/07/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 MSBNA Miscell.: EPA 8270C

Inst : MSBNA06  
 Calnum : 553242752001  
 Units : ug/mL

Name : 6PTBNA6  
 Date : 17-JUN-2013 17:55  
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	Yfh06 553242752006	ICAL1	17-JUN-2013 17:55	S22456
L2	Yfh07 553242752007	ICAL2	17-JUN-2013 18:30	S22457
L3	Yfh08 553242752008	ICAL3	17-JUN-2013 19:05	S22458
L4	Yfh09 553242752009	ICAL4	17-JUN-2013 19:40	S22459
L5	Yfh10 553242752010	ICAL5	17-JUN-2013 20:15	S22460
L6	Yfh11 553242752011	ICAL6	17-JUN-2013 20:50	S22461
L7	Yfh12 553242752012	ICAL7	17-JUN-2013 21:26	S22462
L8	Yfh13 553242752013	ICAL8	17-JUN-2013 22:03	S22463
L9	Yfh14 553242752014	ICAL9	17-JUN-2013 22:38	S22464

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min %RSD	Min r^2	Flg
Naphthalene	1.1451	1.1209	1.1191	1.0209	1.0160	1.0256	0.9728	0.9239	0.8949	AVRG	0.97413	0.97413		1.0266	9	15	0.05	0.99	
Acenaphthylene	2.3068	2.1641	2.2708	2.0376	2.0834	2.0002	1.8191	1.7194	1.7144	AVRG	0.49683	0.49683		2.0127	11	15	0.05	0.99	
Acenaphthene	1.2630	1.2054	1.2683	1.2504	1.2555	1.2293	1.0749	1.0087	1.0146	AVRG	0.85145	0.85145		1.1745	9	15	0.05	0.99	
Fluorene	1.7194	1.5889	1.5896	1.4747	1.4381	1.4046	1.3325	1.2987	1.2128	AVRG	0.68916	0.68916		1.4510	11	15	0.05	0.99	
Phenanthrene	1.1779	1.1091	1.1266	1.0426	1.0005	0.9955	0.9415	0.9017	0.8714	AVRG	0.98179	0.98179		1.0185	10	15	0.05	0.99	
Anthracene	1.1768	1.1318	1.1584	1.0744	1.0898	0.9877	0.9615	0.8804	0.8768	AVRG	0.96384	0.96384		1.0375	11	15	0.05	0.99	
Fluoranthene	1.5513	1.3915	1.5853	1.4226	1.4228	1.4312	1.3006	1.2445	1.2242	AVRG	0.71576	0.71576		1.3971	9	15	0.05	0.99	
Pyrene	1.3829	1.3515	1.3488	1.2780	1.2903	1.2658	1.1821	1.1581	1.1058	AVRG	0.79202	0.79202		1.2626	8	15	0.05	0.99	
Benzo(a)anthracene	1.3007	1.2124	1.2011	1.1570m	1.1373	1.1198	1.0828	1.0558	1.0486	AVRG	0.87248	0.87248		1.1462	7	15	0.05	0.99	
Chrysene	1.1035	1.0889	1.1276	1.0538	1.0508	1.0354	1.0290	1.0254	1.0383m	AVRG	0.94214	0.94214		1.0614	3	15	0.05	0.99	
Benzo(b)fluoranthene	1.1164	1.1569	1.1240	1.1995	1.1187	1.1363	1.1841	1.2419	1.2735	AVRG	0.85298	0.85298		1.1724	5	15	0.05	0.99	
Benzo(k)fluoranthene	1.1107	1.1228	1.0693	1.1206	1.0777	1.0657	0.9828	1.0282m	0.9143m	AVRG	0.94816	0.94816		1.0547	7	15	0.05	0.99	
Benzo(a)pyrene	1.0307	0.9158	1.0694	1.0796	1.0549	1.0237	1.0285	1.0583	1.0525	AVRG	0.96635	0.96635		1.0348	5	15	0.05	0.99	
Indeno(1,2,3-cd)pyrene	1.1186m	1.0903	1.1574m	1.2044	1.1917	1.2105	1.1655	1.2605	1.2400	AVRG	0.84596	0.84596		1.1821	5	15	0.05	0.99	
Dibenz(a,h)anthracene	0.9365m	0.9234m	0.9826	1.0049	1.0028	0.9835	0.9611	1.0134	1.0032	AVRG	1.02140	1.02140		0.9790	3	15	0.05	0.99	
Benzo(g,h,i)perylene	0.9341	0.9256	0.9742	0.9838	0.9922	0.9794	0.9798	1.0340	1.0086	AVRG	1.02136	1.02136		0.9791	3	15	0.05	0.99	
Nitrobenzene-d5	0.3068	0.3444	0.3760	0.3629	0.3827m	0.3729	0.3738	0.3660	0.3529	AVRG	2.77903	2.77903		0.3598	6	15	0.05	0.99	
2-Fluorobiphenyl	1.8916	1.6963	1.6807	1.5937	1.5259	1.4984	1.3997	1.3757	1.3335	AVRG	0.64306	0.64306		1.5551	12	15	0.05	0.99	
Terphenyl-d14	1.0567	1.0019	1.0451	0.9776	1.0062	0.9793	0.9262	0.8951	0.8742	AVRG	1.02713	1.02713		0.9736	7	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Naphthalene	2.0000	12	5.0000	9	10.000	9	16.000	-1	20.000	-1	25.000	0	40.000	-5	50.000	-10	60.000	-13
Acenaphthylene	2.0000	15	5.0000	8	10.000	13	16.000	1	20.000	4	25.000	-1	40.000	-10	50.000	-15	60.000	-15
Acenaphthene	2.0000	8	5.0000	3	10.000	8	16.000	6	20.000	7	25.000	5	40.000	-8	50.000	-14	60.000	-14
Fluorene	2.0000	18	5.0000	9	10.000	10	16.000	2	20.000	-1	25.000	-3	40.000	-8	50.000	-10	60.000	-16
Phenanthrene	2.0000	16	5.0000	9	10.000	11	16.000	2	20.000	-2	25.000	-2	40.000	-8	50.000	-11	60.000	-14
Anthracene	2.0000	13	5.0000	9	10.000	12	16.000	4	20.000	5	25.000	-5	40.000	-7	50.000	-15	60.000	-15
Fluoranthene	2.0000	11	5.0000	0	10.000	13	16.000	2	20.000	2	25.000	2	40.000	-7	50.000	-11	60.000	-12
Pyrene	2.0000	10	5.0000	7	10.000	7	16.000	1	20.000	2	25.000	0	40.000	-6	50.000	-8	60.000	-12
Benzo(a)anthracene	2.0000	13	5.0000	6	10.000	5	16.000	1	20.000	-1	25.000	-2	40.000	-6	50.000	-8	60.000	-9
Chrysene	2.0000	4	5.0000	3	10.000	6	16.000	-1	20.000	-1	25.000	-2	40.000	-3	50.000	-3	60.000	-2
Benzo(b)fluoranthene	2.0000	-5	5.0000	-1	10.000	-4	16.000	2	20.000	-5	25.000	-3	40.000	1	50.000	6	60.000	9
Benzo(k)fluoranthene	2.0000	5	5.0000	6	10.000	1	16.000	6	20.000	2	25.000	1	40.000	-7	50.000	-3	60.000	-13
Benzo(a)pyrene	2.0000	0	5.0000	-11	10.000	3	16.000	4	20.000	2	25.000	-1	40.000	-1	50.000	2	60.000	2
Indeno(1,2,3-cd)pyrene	2.0000	-5	5.0000	-8	10.000	-2	16.000	2	20.000	1	25.000	2	40.000	-1	50.000	7	60.000	5
Dibenz(a,h)anthracene	2.0000	-4	5.0000	-6	10.000	0	16.000	3	20.000	2	25.000	0	40.000	-2	50.000	4	60.000	2
Benzo(g,h,i)perylene	2.0000	-5	5.0000	-5	10.000	0	16.000	0	20.000	1	25.000	0	40.000	0	50.000	6	60.000	3
Nitrobenzene-d5	2.0000	-15	5.0000	-4	10.000	5	16.000	1	20.000	6	25.000	4	40.000	4	50.000	2	60.000	-2
2-Fluorobiphenyl	2.0000	22	5.0000	9	10.000	8	16.000	2	20.000	-2	25.000	-4	40.000	-10	50.000	-12	60.000	-14
Terphenyl-d14	2.0000	9	5.0000	3	10.000	7	16.000	0	20.000	3	25.000	1	40.000	-5	50.000	-8	60.000	-10

KMH 06/18/13 [1,4-Dichlorobenzene-d4]: Picked or reassigned peak in multiple levels.

KMH 06/18/13 [Pyridine]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [N-Nitrosodimethylamine]: Corrected automatically drawn baseline in ICAL1 (yfh06).

KMH 06/18/13 [Aniline]: Picked or reassigned peak in all levels.

KMH 06/18/13 [bis(2-Chloroethyl)ether]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [2,4,5-Trichlorophenol]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [Indeno(1,2,3-cd)pyrene]: Combined split peak in multiple levels.

KMH 06/18/13 [Dibenz(a,h)anthracene]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [Benzoic acid]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [4-Chloroaniline]: Corrected automatically drawn baseline in multiple levels.

KMH 06/18/13 [N-Nitroso-di-n-propylamine]: Picked or reassigned peak in multiple levels.

KMH 06/18/13 [bis(2-Chloroisopropyl) ether]: Corrected automatically drawn baseline in ICAL4 (yfh09).  
KMH 06/18/13 [3-Nitroaniline]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/18/13 [4-Nitrophenol]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/18/13 [4,6-Dinitro-2-methylphenol]: Corrected automatically drawn baseline in ICAL4 (yfh09).  
KMH 06/18/13 [Benzo(a)anthracene]: Corrected automatically drawn baseline in ICAL4 (yfh09).  
KMH 06/18/13 [Nitrobenzene-d5]: Corrected automatically drawn baseline in ICAL5 (yfh10).  
KMH 06/18/13 [2,4-Dimethylphenol]: Corrected automatically drawn baseline in multiple levels.  
KMH 06/18/13 [Nitrobenzene]: Corrected automatically drawn baseline in ICAL6 (yfh11).  
KMH 06/18/13 [Phenol]: Corrected automatically drawn baseline in ICAL7 (yfh12).  
KMH 06/18/13 [4-Methylphenol]: Combined split peak in multiple levels.  
KMH 06/18/13 [N-Nitroso-di-n-propylamine]: Corrected automatically drawn baseline in ICAL7 (yfh12).  
KMH 06/18/13 [Benzo(k)fluoranthene]: Picked or reassigned peak in multiple levels.  
KMH 06/18/13 [2-Nitrophenol]: Corrected automatically drawn baseline in ICAL9 (yfh14).  
KMH 06/18/13 [2,4-Dichlorophenol]: Corrected automatically drawn baseline in ICAL9 (yfh14).  
KMH 06/18/13 [Resorcinol]: Combined split peak in ICAL9 (yfh14).  
KMH 06/18/13 [4-Nitrophenol]: Picked or reassigned peak in ICAL9 (yfh14).  
KMH 06/18/13 [Chrysene]: Corrected automatically drawn baseline in ICAL9 (yfh14).  
KMH 07/30/13 : PCP fails D method in tune and fails low in ccv, cut 2 loops and primed  
KMH 07/31/13 : PCP still tailing cut 1 more loop, passing

Analyst: KMH Date: 06/18/13 Reviewer: LW Date: 06/19/13

m=manual integration

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor

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553242752001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 MSBNA Miscell.  
EPA 8270C

Inst : MSBNA06  
Calnum : 553242752001

Name : 6PTBNA6  
Cal Date : 17-JUN-2013

ICV 553242752015 (yfh15 17-JUN-2013) stds: S22440

Analyte	Spiked	Quant	Units	%D	Max	Flags
Naphthalene	40.00	35.34	ug/mL	-12	30	
Acenaphthylene	40.00	36.01	ug/mL	-10	30	
Acenaphthene	40.00	36.42	ug/mL	-9	20	
Fluorene	40.00	34.69	ug/mL	-13	30	
Phenanthrene	40.00	35.56	ug/mL	-11	30	
Anthracene	40.00	34.72	ug/mL	-13	30	
Fluoranthene	40.00	35.90	ug/mL	-10	20	
Pyrene	40.00	37.79	ug/mL	-6	30	
Benzo(a)anthracene	40.00	38.81	ug/mL	-3	30	
Chrysene	40.00	37.70	ug/mL	-6	30	
Benzo(b)fluoranthene	40.00	40.96	ug/mL	2	30	
Benzo(k)fluoranthene	40.00	37.65	ug/mL	-6	30	
Benzo(a)pyrene	40.00	42.60	ug/mL	7	20	
Indeno(1,2,3-cd)pyrene	40.00	40.71	ug/mL	2	30	
Dibenz(a,h)anthracene	40.00	38.78	ug/mL	-3	30	
Benzo(g,h,i)perylene	40.00	38.66	ug/mL	-3	30	

Analyst: KMH

Date: 06/18/13

Reviewer: LW

Date: 06/19/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 MSBNA Miscell.  
EPA 8270C

Inst : MSBNA05 IDF : 1.0  
 Seqnum : 543336162002 File : xh102 Time : 21-AUG-2013 11:05  
 Cal : 543222414001 Caldate : 03-JUN-2013  
 Standards: S22460

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.0971	1.1623	20.00	21.19	ug/mL	6	30	0.0500	
Acenaphthylene	1.8321	2.0190	20.00	22.04	ug/mL	10	30	0.0500	
Acenaphthene	1.1864	1.1960	20.00	20.16	ug/mL	1	20	0.0500	
Fluorene	1.3661	1.4885	20.00	21.79	ug/mL	9	30	0.0500	
Phenanthrene	1.1159	1.1375	20.00	20.39	ug/mL	2	30	0.0500	
Anthracene	1.1348	1.2054	20.00	21.24	ug/mL	6	30	0.0500	
Fluoranthene	1.3254	1.4377	20.00	21.69	ug/mL	8	20	0.0500	
Pyrene	1.2689	1.3384	20.00	21.09	ug/mL	5	30	0.0500	
Benzo(a)anthracene	1.2355	1.2973	20.00	21.00	ug/mL	5	30	0.0500	
Chrysene	1.0787	1.1784	20.00	21.85	ug/mL	9	30	0.0500	
Benzo(b)fluoranthene	1.2090	1.2385	20.00	20.49	ug/mL	2	30	0.0500	
Benzo(k)fluoranthene	1.0815	1.1535	20.00	21.33	ug/mL	7	30	0.0500	m
Benzo(a)pyrene	1.0590	1.1105	20.00	20.97	ug/mL	5	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2240	1.3701	20.00	22.39	ug/mL	12	30	0.0500	
Dibenz(a,h)anthracene	1.0323	1.1476	20.00	22.24	ug/mL	11	30	0.0500	
Benzo(g,h,i)perylene	0.9837	1.0442	20.00	21.23	ug/mL	6	30	0.0500	
Nitrobenzene-d5	0.5400	0.5785	20.00	21.43	ug/mL	7	30	0.0500	
2-Fluorobiphenyl	1.4138	1.5552	20.00	22.00	ug/mL	10	30	0.0500	
Terphenyl-d14	0.9874	1.0555	20.00	21.38	ug/mL	7	30	0.0500	

KMH 08/21/13 [Aniline]: Picked or reassigned peak.

KMH 08/21/13 [4-Nitroaniline]: Picked or reassigned peak.

KMH 08/21/13 [Benzo(k)fluoranthene]: Picked or reassigned peak.

KMH 08/21/13 [3-Nitroaniline]: Corrected automatically drawn baseline.

Analyst: KMH Date: 08/21/13 Reviewer: LLH Date: 08/21/13

m=manual integration

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 MSBNA Miscell.  
EPA 8270C

Inst : MSBNA06 IDF : 1.0  
 Seqnum : 553337587002 File : yhm02 Time : 22-AUG-2013 10:44  
 Cal : 553242752001 Caldate : 17-JUN-2013  
 Standards: S22459

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Naphthalene	1.0266	0.9853	16.00	15.36	ug/mL	-4	30	0.0500	
Acenaphthylene	2.0127	1.9772	16.00	15.72	ug/mL	-2	30	0.0500	
Acenaphthene	1.1745	1.0613	16.00	14.46	ug/mL	-10	20	0.0500	
Fluorene	1.4510	1.3370	16.00	14.74	ug/mL	-8	30	0.0500	
Phenanthrene	1.0185	1.0492	16.00	16.48	ug/mL	3	30	0.0500	
Anthracene	1.0375	1.0949	16.00	16.88	ug/mL	6	30	0.0500	
Fluoranthene	1.3971	1.3928	16.00	15.95	ug/mL	0	20	0.0500	
Pyrene	1.2626	1.3193	16.00	16.72	ug/mL	4	30	0.0500	
Benzo(a)anthracene	1.1462	1.1147	16.00	15.56	ug/mL	-3	30	0.0500	
Chrysene	1.0614	1.0409	16.00	15.69	ug/mL	-2	30	0.0500	
Benzo(b)fluoranthene	1.1724	1.1394	16.00	15.55	ug/mL	-3	30	0.0500	
Benzo(k)fluoranthene	1.0547	1.0662	16.00	16.17	ug/mL	1	30	0.0500	
Benzo(a)pyrene	1.0348	1.0514	16.00	16.26	ug/mL	2	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.1821	1.2245	16.00	16.57	ug/mL	4	30	0.0500	
Dibenz(a,h)anthracene	0.9790	1.0110	16.00	16.52	ug/mL	3	30	0.0500	
Benzo(g,h,i)perylene	0.9791	0.9351	16.00	15.28	ug/mL	-4	30	0.0500	
Nitrobenzene-d5	0.3598	0.3247	16.00	14.44	ug/mL	-10	30	0.0500	
2-Fluorobiphenyl	1.5551	1.4668	16.00	15.09	ug/mL	-6	30	0.0500	
Terphenyl-d14	0.9736	0.9845	16.00	16.18	ug/mL	1	30	0.0500	

LLH 08/22/13 [Aniline]: Picked or reassigned peak.  
 LLH 08/22/13 [N-Nitroso-di-n-propylamine]: Picked or reassigned peak.  
 LLH 08/22/13 [Nitrobenzene]: Picked or reassigned peak.  
 LLH 08/22/13 [2,4-Dimethylphenol]: Picked or reassigned peak.  
 LLH 08/22/13 [4-Nitroaniline]: Corrected automatically drawn baseline.

Analyst: LLH Date: 08/22/13 Reviewer: KMH Date: 08/22/13

## Logbooks & Sequences

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 543336162

Date : 08/21/13  
 Sequence : MSBNA05 xhl

Reference : xhl02  
 Analyzed : 08/21/13 11:05

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
	CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+R1CV	STD	859112	6.13	2883753	7.62	1717569	9.77	2921315	11.61	3059454	15.02	3377019	17.98
	LOWER LIMIT		429556	5.63	1441877	7.12	858785	9.27	1460658	11.11	1529727	14.52	1688510	17.48
	UPPER LIMIT		1718224	6.63	5767506	8.12	3435138	10.27	5842630	12.11	6118908	15.52	6754038	18.48
002	CCV		859112	6.13	2883753	7.62	1717569	9.77	2921315	11.61	3059454	15.02	3377019	17.98
003	BLANK	QC702848	1142663	6.13	3583105	7.61	2103838	9.77	3280750	11.61	3968465	15.02	4257754	17.98
004	LCS	QC702849	1114310	6.13	3329443	7.62	2062805	9.77	3312429	11.61	3842784	15.02	4349051	17.99
005	LCS	QC702849	933977	6.13	2900293	7.62	1767257	9.77	2897107	11.61	3219084	15.02	3654529	17.99
006	SAMPLE	248106-001	1030293	6.12	3162110	7.61	1785616	9.77	2845550	11.62	2939115	15.04	3432662	18.03
007	SAMPLE	248106-001	1038057	6.12	3200148	7.61	1832077	9.77	2950634	11.61	3101578	15.03	3531523	18.01
008	SAMPLE	248113-001	1110820	6.13	3313030	7.62	2099784	9.77	1324583 *	11.62	3802918	15.04	4193337	18.01
009	SAMPLE	248163-001	1131183	6.12	3173953	7.62	1789128	9.77	3003868	11.61	3445824	15.02	1162643 *	17.98
011	SAMPLE	248113-001	1005467	6.12	3097297	7.61	1885140	9.77	3020757	11.61	3610148	15.02	3842671	17.98
012	SAMPLE	248163-001	1040514	6.12	3161900	7.61	1861187	9.77	3042624	11.61	3600776	15.01	3433025	17.98
013	MSS	248030-018	1046009	6.12	3354122	7.61	1969018	9.77	3206136	11.61	3649103	15.02	3864301	17.98
014	SAMPLE	248030-040	1077260	6.12	3427822	7.61	2064150	9.76	3276125	11.61	3645440	15.02	3851630	17.98
015	SAMPLE	248030-041	1062950	6.12	3457347	7.61	2057963	9.77	3320952	11.61	3708844	15.02	3879403	17.99
016	SAMPLE	248030-042	1071094	6.12	3412071	7.61	2044138	9.77	3324102	11.61	366881	15.03	3779212	18.00
017	SAMPLE	248030-043	1078059	6.12	3404832	7.61	2057837	9.77	3304290	11.61	3661863	15.02	3809156	17.99
018	SAMPLE	248030-044	1083318	6.12	3422587	7.61	2071867	9.77	3298881	11.61	3678278	15.02	3766375	17.99

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 553337587

Date : 08/22/13  
 Sequence : MSBNA06 yhm

Reference : yhm02  
 Analyzed : 08/22/13 10:44

#	Type	Sample ID	DCEZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV/CCV/ICV/LCS+RCCV+R1CV STD	207055	5.93	747356	7.42	436758	9.57	807244	11.42	833298	14.77	896654	17.52
	LOWER LIMIT		103528	5.43	373678	6.92	218379	9.07	403622	10.92	416649	14.27	448327	17.02
	UPPER LIMIT		414110	6.43	1494712	7.92	873516	10.07	1614488	11.92	1666596	15.27	1793308	18.02
002	CCV		207055	5.93	747356	7.42	436758	9.57	807244	11.42	833298	14.77	896654	17.52
003	SAMPLE	248030-027	214419	5.93	751041	7.42	409189	9.57	584209	11.41	640909	14.77	662270	17.53
004	SAMPLE	248030-028	232462	5.93	837547	7.42	459428	9.57	785058	11.41	777791	14.76	737175	17.51
005	SAMPLE	248030-030	225454	5.93	834403	7.42	460289	9.57	766693	11.41	797225	14.76	751954	17.51
006	SAMPLE	248085-001	211645	5.93	710861	7.42	424280	9.57	634705	11.42	594317	14.78	525160	17.55
007	SAMPLE	248085-002	214872	5.94	809860	7.42	461641	9.57	709322	11.41	693361	14.77	646585	17.53
008	SAMPLE	248085-003	213823	5.94	804605	7.42	455800	9.57	725740	11.42	683311	14.77	666529	17.53

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 543222414

Instrument : MSBNA05 Begun : 06/03/13 10:54  
 Method : EPA 8270C SOP Version : bna\_rv.12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	xf301	TUN	DFTPP/PEM			06/03/13 10:54	1.0	1
002	xf302	TUN	DFTPP/PEM			06/03/13 13:33	1.0	1
003	xf303	ICAL	ICAL1			06/03/13 15:00	1.0	2
004	xf304	ICAL	ICAL2			06/03/13 15:37	1.0	3
005	xf305	ICAL	ICAL3			06/03/13 16:13	1.0	4
006	xf306	ICAL	ICAL4			06/03/13 16:49	1.0	5
007	xf307	ICAL	ICAL5			06/03/13 17:27	1.0	6
008	xf308	ICAL	ICAL6			06/03/13 18:04	1.0	7
009	xf309	ICAL	ICAL7			06/03/13 18:40	1.0	8
010	xf310	ICAL	ICAL8			06/03/13 19:16	1.0	9
011	xf311	ICAL	ICAL9			06/03/13 19:54	1.0	10
012	xf312	ICV	ICV			06/03/13 20:29	1.0	11

KMH 06/04/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 12.



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 553242752

Instrument : MSBNA06 Begun : 06/17/13 13:52  
 Method : EPA 8270C SOP Version : bna\_rv.12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	yfh01	TUN	DFTPP/PEM			06/17/13 13:52	1.0	1	t
002	yfh02	TUN	DFTPP/PEM			06/17/13 15:31	1.0	1	t
003	yfh03	CCV				06/17/13 15:56	1.0	2	cc- cc+ cs t
004	yfh04	TUN	DFTPP/PEM			06/17/13 16:28	1.0	1	t
005	yfh05	TUN	DFTPP/PEM			06/17/13 16:55	1.0	1	
006	yfh06	ICAL	ICAL1			06/17/13 17:55	1.0	3	
007	yfh07	ICAL	ICAL2			06/17/13 18:30	1.0	4	
008	yfh08	ICAL	ICAL3			06/17/13 19:05	1.0	5	
009	yfh09	ICAL	ICAL4			06/17/13 19:40	1.0	2	
010	yfh10	ICAL	ICAL5			06/17/13 20:15	1.0	6	
011	yfh11	ICAL	ICAL6			06/17/13 20:50	1.0	7	
012	yfh12	ICAL	ICAL7			06/17/13 21:26	1.0	8	
013	yfh13	ICAL	ICAL8			06/17/13 22:03	1.0	9	
014	yfh14	ICAL	ICAL9			06/17/13 22:38	1.0	10	
015	yfh15	ICV	ICV			06/17/13 23:13	1.0	11	

LLH 06/17/13 : adjusted tune after run 4

KMH 06/18/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 15.

Standards used: 1=S21994 2=S22459 3=S22456 4=S22457 5=S22458 6=S22460 7=S22461 8=S22462 9=S22463 10=S22464 11=S22440

Flags used: +=high bias -=low bias cc=CCV CCC failure cs=CCV SPCC failure t=tune failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 553337587

Instrument : MSBNA06 Begun : 08/22/13 10:27  
 Method : EPA 8270C SOP Version : bna\_rv.12

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	yhm01	TUN	DFTPP/PEM			08/22/13 10:27	1.0	1
002	yhm02	CCV				08/22/13 10:44	1.0	2
003	yhm03	SAMPLE	248030-027	Soil	201864	08/22/13 11:20	5.0	3
004	yhm04	SAMPLE	248030-028	Soil	201864	08/22/13 11:57	10.0	3
005	yhm05	SAMPLE	248030-030	Soil	201864	08/22/13 12:34	10.0	3
006	yhm06	SAMPLE	248085-001	Miscell.	201931	08/22/13 13:12	3.0	3
007	yhm07	SAMPLE	248085-002	Miscell.	201931	08/22/13 13:50	1.0	3
008	yhm08	SAMPLE	248085-003	Miscell.	201931	08/22/13 14:30	1.0	3

KMH 08/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 8.

SAMPLE PREPARATION SUMMARY

Batch # : 201931  
 Started By : CPK  
 Method : 3550B  
 Spike #1 ID : S23002

Prep Date : 20-AUG-2013 16:00  
 SOP Version : 8270\_3550\_rv14  
 Spike #2 ID : S23045

Analysis : 8100  
 Finished By : CPK  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-018		Soil	29.81	2.5	1	0.08386		.4				8100	mss
248030-040		Soil	29.73	1	1	0.03364		.4				8100	
248030-041		Soil	29.77	2.5	1	0.08398		.4				8100	
248030-042		Soil	29.71	2.5	1	0.08415		.4				8100	
248030-043		Soil	29.98	1	1	0.03336		.4				8100	
248030-044		Soil	30.18	1	1	0.03313		.4				8100	
248085-001		Miscell.	30.08	1	1	0.03324		.4				8100	
248085-002		Miscell.	30.03	2	1	0.0666		.4				8100	
248085-003		Miscell.	30.24	1	1	0.03307		.4				8100	
248109-002		Soil	30.15	1	1	0.03317		.4				8270	
248111-001		Soil	30	1	1	0.03333		.4				8270	
QC702848	BLANK	Soil	30.23	1	1	0.03308		.4				8100	
QC702849	LCS	Soil	30.04	1	1	0.03329		.4	1			8100	
QC702850	MS	Soil	29.88	1	1	0.03347		.4	1			8100	
QC702851	MSD	Soil	29.76	1	1	0.0336		.4	1			8100	

KMH 08/22/13 : Matrix spikes QC702850, QC702851 (batch 201931) were not reported because the parent sample required a dilution that would have diluted out the spikes.

Analyst:     KMH    

Date:     08/22/13    

Reviewer:     LLH    

Date:     08/22/13

**BNA Soil Prep Log**

Curtis & Tompkins, Ltd.

LIMS Batch No: 201931  
 LIMS Analysis: 8270  
 Date Extracted: 8/20/13

Extraction Method:  
 EPA 3550b Sonication  
 Other \_\_\_\_\_

Page: 3 **BK 3465**  
 Cleanup Method (if necessary):  
 EPA 3640a GPC  
 Other \_\_\_\_\_

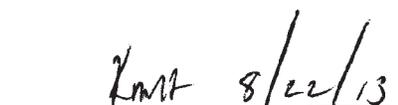
Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Cleanup (x if needed)	Comments
248030-018	A	29.81	<input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> 2.5		
↓ -040	A	29.73	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
↓ -041	B	29.77	<input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> 2.5		
↓ -042	A	29.71	<input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> 2.5		
5 ↓ -043	D	29.98	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
↓ -044	A	30.18	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
7 248085-001	B	30.08	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
↓ -002	↓	30.03	<input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> 2.0		
↓ -003	↓	30.24	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
10 248109-002	A	30.15	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
248111-001	↓	30.00	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
MB QC 702849	NA	30.23	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
LCS ↓ 50	↓	30.04	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
MS ↓ 51	A	29.88	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
15 MSD ↓ 52	↓	29.76	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
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			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		
			<input type="checkbox"/> 1.0 <input type="checkbox"/>		

Baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed granular Na<sub>2</sub>SO<sub>4</sub> used for QC & to dry samples  
0.4 mL of surrogate solution was added to all samples  
1.0 mL of matrix spiking solution was added to all spikes  
 ≥100mL 1:1 CH<sub>2</sub>Cl<sub>2</sub>:Acetone was added to all: CH<sub>2</sub>Cl<sub>2</sub>  
 Acetone  
**Solvent was added at (time)**  
 sonicated 3 times w/ ≥100mL  soxhlet extractors on at:  
 soxhlets off at:  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub> rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 Concentrated to final volume at temperature (degrees C)  
 Relinquished to BNA department

Mfg & Lot# / LIMS # / Time	Date/Initials
CMVLI13	LOK/20/13
S23022B	
S23045C	
CM53123	
CM53032	
1600	
✓	
NA	
CMVLI13	
100°	
✓	

  
 Extraction Chemist / Date

Continued from page /  
 Continued on page /

  
 Reviewed by / Date

TITLE Soil Aliquot

PROJECT

DATE

Continued from page

Sample ID	Weight (g)	Analysis	Batch #	Comments
248030-026 B	49.79	TEHM		MSS
27	49.71			
28 A	49.76			
29 B	50.38			
30	50.20			
31	50.02			
32	50.42			
33 A	49.71			
34 D	50.09			
35	50.42			
36	50.00			
37 A	50.15			
39 D	49.57			
40 A	49.55			
41 B	50.36			
42 A	50.07			
43 D	49.67			
MB	NA			
LCS	50.36			
MS	B			
MSD	50.27			
248030-044 A	49.59			
248030-044 A	49.60			
248030-018 A	29.61	0270/0100		
-040 A	29.73			
-041 B	29.77			
-042 A	29.71			
-043 D	29.95			
-044 A	70.18			
248085-001 B	30.08			
-002	30.03			
-003	30.24			
248109-002 A	30.15			
248111-001 A	30.00			
MB	30.23			
LCS	30.04			
MS	29.38			
MSD	29.76			

EMVLIIB  
 ↓  
 248030-026B  
 ↓  
 K218/0113/  
 MSS  
~~MSS~~ CRK 8/22/13

EMVLIIB  
 ↓  
 248030-044  
 ↓  
 CRK 8/22/13

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

DISCLOSED TO AND UNDERSTOOD BY \_\_\_\_\_ DATE \_\_\_\_\_

Continued to page

PROPRIETARY INFORMATION

Laboratory Job Number 248085

ANALYTICAL REPORT

PCBs

Matrix: Miscell.

### Polychlorinated Biphenyls (PCBs)

Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Units:	ug/Kg	Chemist:	MA
Basis:	dry	Sampled:	08/16/13
Batch#:	201896	Received:	08/16/13

Field ID:	IA-13D	Moisture:	49%
Type:	SAMPLE	Diln Fac:	10.00
Lab ID:	248085-001	Prepared:	08/20/13
Matrix:	Miscell.	Analyzed:	08/21/13

Analyte	Result	RL
Aroclor-1016	ND	160
Aroclor-1221	ND	320
Aroclor-1232	ND	160
Aroclor-1242	ND	160
Aroclor-1248	ND	160
Aroclor-1254	ND	160
Aroclor-1260	2,700	160

Surrogate	%REC	Limits
TCMX	DO	66-142
Decachlorobiphenyl	DO	43-139

Field ID:	IA-19D	Moisture:	63%
Type:	SAMPLE	Diln Fac:	1.000
Lab ID:	248085-002	Prepared:	08/20/13
Matrix:	Miscell.	Analyzed:	08/20/13

Analyte	Result	RL
Aroclor-1016	ND	32
Aroclor-1221	ND	65
Aroclor-1232	ND	32
Aroclor-1242	ND	32
Aroclor-1248	ND	32
Aroclor-1254	300	32
Aroclor-1260	300	32

Surrogate	%REC	Limits
TCMX	96	66-142
Decachlorobiphenyl	61	43-139

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

### Polychlorinated Biphenyls (PCBs)

Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Units:	ug/Kg	Chemist:	MA
Basis:	dry	Sampled:	08/16/13
Batch#:	201896	Received:	08/16/13

Field ID: IA-21D	Moisture: 67%
Type: SAMPLE	Diln Fac: 1.000
Lab ID: 248085-003	Prepared: 08/20/13
Matrix: Miscell.	Analyzed: 08/20/13

Analyte	Result	RL
Aroclor-1016	ND	36
Aroclor-1221	ND	73
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	130	36

Surrogate	%REC	Limits
TCMX	94	66-142
Decachlorobiphenyl	63	43-139

Type: BLANK	Diln Fac: 1.000
Lab ID: QC702714	Prepared: 08/19/13
Matrix: Soil	Analyzed: 08/20/13

Analyte	Result	RL
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%REC	Limits
TCMX	89	66-142
Decachlorobiphenyl	73	43-139

DO= Diluted Out  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Type:	LCS	Batch#:	201896
Lab ID:	QC702715	Chemist:	MA
Matrix:	Soil	Prepared:	08/19/13
Units:	ug/Kg	Analyzed:	08/20/13
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	167.2	152.2	91	64-143
Aroclor-1260	167.2	161.2	96	58-146

Surrogate	%REC	Limits
TCMX	92	66-142
Decachlorobiphenyl	83	43-139

## Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8082
Field ID:	ZZZZZZZZZZ	Batch#:	201896
MSS Lab ID:	248123-001	Chemist:	MA
Matrix:	Soil	Sampled:	08/19/13
Units:	ug/Kg	Received:	08/19/13
Basis:	as received	Prepared:	08/19/13
Diln Fac:	1.000	Analyzed:	08/20/13

Type: MS Lab ID: QC702716

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<2.986	167.8	152.0	91	58-155
Aroclor-1260	<0.9786	167.8	129.4	77	35-159

Surrogate	%REC	Limits
TCMX	97	66-142
Decachlorobiphenyl	58	43-139

Type: MSD Lab ID: QC702717

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	167.2	173.5	104	58-155	14	44
Aroclor-1260	167.2	167.3	100	35-159	26	53

Surrogate	%REC	Limits
TCMX	103	66-142
Decachlorobiphenyl	75	43-139

RPD= Relative Percent Difference

Confirmation Report for 248085 PCBS Miscell.  
Curtis & Tompkins Laboratories

Units: ug/Kg

Lab ID	Client ID	Analyte	Result	Confirmation	RPD	%D
248085-001	IA-13D	Aroclor-1260	2728	2519	8	-8
248085-002	IA-19D	Aroclor-1254	296.3	403.5	31	36
248085-002	IA-19D	Aroclor-1260	301.0	201.6	40	-33
248085-003	IA-21D	Aroclor-1260	132.4	114.0	15	-14

**Initial & Continuing Calibration Data**

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 PCBs Miscell.: EPA 8082

Inst : GC06  
 Calnum : 203310428001  
 Units : pg/uL

Name : 1660\_215  
 Date : 03-AUG-2013 19:46  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	215_010	203310428010	PCB10_2	03-AUG-2013 19:46	S22289
L2	215_011	203310428011	PCB25_5	03-AUG-2013 20:14	S22295
L3	215_012	203310428012	PCB100_20	03-AUG-2013 20:41	S22814
L4	215_013	203310428013	PCB250_50	03-AUG-2013 21:09	S22538
L5	215_014	203310428014	PCB500_100	03-AUG-2013 21:36	S22292
L6	215_015	203310428015	PCB750_150	03-AUG-2013 22:04	S22293

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r <sup>2</sup>	MnR <sup>2</sup>	MxRSD	Flg
Aroclor-1016 Peak # 1	A	670.70	809.88	468.39	454.49	463.90		LNLR	-8.2749	0.00221		573.47	0.999	.99	20	
Aroclor-1016 Peak # 2	A	912.60	1040.8	568.53	599.34	615.98		LNLR	-5.1559	0.00166		747.45	0.998	.99	20	
Aroclor-1016 Peak # 3	A	566.70	607.84	364.41	365.12	383.45		LNLR	-4.3223	0.00266		457.50	0.998	.99	20	
Aroclor-1016 Peak # 4	A	329.90	344.60	210.06	197.71	208.72		LNLR	-6.8221	0.00492		258.20	0.998	.99	20	
Aroclor-1016 Peak # 5	A	436.20	517.72	296.08	300.18	315.37		LNLR	-4.1333	0.00324		373.11	0.998	.99	20	
Aroclor-1260 Peak # 1	A	1795.2	1890.3	1010.2	993.22	1013.0		LNLR	-10.372	0.00102		1340.4	0.998	.99	20	
Aroclor-1260 Peak # 2	A	1161.7	1243.0	730.32	733.99	771.76		LNLR	-4.5133	0.00132		928.15	0.998	.99	20	
Aroclor-1260 Peak # 3	A	1231.9	1090.8	610.99	616.54	661.80		LNLR	-4.9890	0.00155		842.40	0.996	.99	20	
Aroclor-1260 Peak # 4	A	2629.0	2771.5	1493.9	1564.3	1661.8		LNLR	-3.6707	6.16E-4		2024.1	0.997	.99	20	
Aroclor-1260 Peak # 5	A	901.10	1114.5	666.60	722.13	782.03	938.58	AVRG	0.00117			854.15	19	.99	20	
TCMX	A	15409	17325	10258	10494	11086		LNLR	-0.5741	9.20E-5		12914	0.998	.99	20	
Decachlorobiphenyl	A	21758	23799	12846	13162	12847		LNLR	-2.2682	7.97E-5		16882	0.999	.99	20	
Aroclor-1016 Peak # 1	B	10365	8018.4	4497.1	4905.3	5447.6		LNLR	0.29925	1.88E-4		6646.7	0.994	.99	20	
Aroclor-1016 Peak # 2	B	3632.3	2887.5	1908.7	2149.6	2354.3		LNLR	3.94351	4.30E-4		2586.5	0.996	.99	20	
Aroclor-1016 Peak # 3	B	1020.5	2336.9	1403.1	1438.3	1649.7		LNLR	5.88554	6.14E-4		1569.7	0.994	.99	20	
Aroclor-1016 Peak # 4	B	2048.1	1733.6	1067.3	1139.7	1204.0		LNLR	-1.8185	8.46E-4		1438.5	0.997	.99	20	
Aroclor-1016 Peak # 5	B	3920.6	3310.2	2032.1	1974.8	2323.5		LNLR	1.74075	4.42E-4		2712.2	0.991	.99	20	
Aroclor-1260 Peak # 1	B	15923	15484	8233.9	8821.0	9875.4	11051	LNLR	13.0990	9.26E-5		11565	0.991	.99	20	
Aroclor-1260 Peak # 2	B	12457	13167	6835.2	7281.0	8061.6		LNLR	-0.5442	1.27E-4		9560.5	0.994	.99	20	
Aroclor-1260 Peak # 3	B	9850.2	10173	6348.4	7406.0	7565.5	8837.5	AVRG				8363.4	18	.99	20	
Aroclor-1260 Peak # 4	B	10572	10659	6064.1	6266.0	6384.5		LNLR	-6.6889	1.60E-4		7989.1	0.998	.99	20	
Aroclor-1260 Peak # 5	B	23787	22899	12303	13638	14071		LNLR	-3.8669	7.24E-5		17339	0.997	.99	20	
TCMX	B	109531	119002	71918	68164	68396	75613	LNLR	0.19654	1.37E-5		85437	0.995	.99	20	
Decachlorobiphenyl	B	154628	177668	92536	93871	93661	104499	LNLR	0.38974	9.90E-6		119477	0.994	.99	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aroclor-1016 Peak # 1	A	10.000	-35	25.000	46	100.00	-5	250.00	-3	500.00	1		
Aroclor-1016 Peak # 2	A	10.000	0	25.000	52	100.00	-11	250.00	-3	500.00	1		
Aroclor-1016 Peak # 3	A	10.000	8	25.000	45	100.00	-7	250.00	-4	500.00	1		
Aroclor-1016 Peak # 4	A	10.000	-6	25.000	42	100.00	-3	250.00	-5	500.00	1		
Aroclor-1016 Peak # 5	A	10.000	0	25.000	51	100.00	-8	250.00	-4	500.00	1		
Aroclor-1260 Peak # 1	A	10.000	-21	25.000	51	100.00	-8	250.00	-3	500.00	1		
Aroclor-1260 Peak # 2	A	10.000	9	25.000	47	100.00	-8	250.00	-5	500.00	1		
Aroclor-1260 Peak # 3	A	10.000	41	25.000	49	100.00	-10	250.00	-6	500.00	2		
Aroclor-1260 Peak # 4	A	10.000	25	25.000	56	100.00	-12	250.00	-5	500.00	2		
Aroclor-1260 Peak # 5	A	10.000	5	25.000	30	100.00	-22	250.00	-15	500.00	-8	750.00	10
TCMX	A	2.0000	13	5.0000	48	20.000	-9	50.000	-5	100.00	1		
Decachlorobiphenyl	A	2.0000	-40	5.0000	44	20.000	-9	50.000	0	100.00	0		
Aroclor-1016 Peak # 1	B	10.000	98	25.000	52	100.00	-15	250.00	-8	500.00	2		
Aroclor-1016 Peak # 2	B	10.000	95	25.000	40	100.00	-14	250.00	-6	500.00	2		
Aroclor-1016 Peak # 3	B	10.000	22	25.000	67	100.00	-8	250.00	-9	500.00	2		
Aroclor-1016 Peak # 4	B	10.000	55	25.000	39	100.00	-12	250.00	-4	500.00	1		
Aroclor-1016 Peak # 5	B	10.000	91	25.000	53	100.00	-8	250.00	-12	500.00	3		
Aroclor-1260 Peak # 1	B	10.000	179	25.000	96	100.00	-11	250.00	-13	500.00	-6	750.00	4
Aroclor-1260 Peak # 2	B	10.000	53	25.000	65	100.00	-14	250.00	-8	500.00	2		
Aroclor-1260 Peak # 3	B	10.000	18	25.000	22	100.00	-24	250.00	-11	500.00	-10	750.00	6
Aroclor-1260 Peak # 4	B	10.000	2	25.000	44	100.00	-10	250.00	-2	500.00	1		
Aroclor-1260 Peak # 5	B	10.000	34	25.000	50	100.00	-15	250.00	-3	500.00	1		
TCMX	B	2.0000	60	5.0000	67	20.000	-1	50.000	-6	100.00	-6	150.00	3
Decachlorobiphenyl	B	2.0000	73	5.0000	84	20.000	-6	50.000	-6	100.00	-7	150.00	4

MA 08/06/13 : Corrected automatically drawn baseline in all levels.

MA 08/06/13 : Dropped high points to improve %rsd/r^2

Analyst: MA Date: 08/06/13 Reviewer: EAH Date: 08/07/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor; LINR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 PCBS Miscell.  
EPA 8082

Inst : GC06  
Calnum : 203310428001

Name : 1660\_215  
Cal Date : 03-AUG-2013

ICV 203310428018 (215\_018 03-AUG-2013) stds: S22989

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aroclor-1016	A	250.0	242.1	pg/uL	-3	15	
Aroclor-1260	A	250.0	224.9	pg/uL	-10	15	
Aroclor-1016	B	250.0	223.7	pg/uL	-11	15	
Aroclor-1260	B	250.0	219.5	pg/uL	-12	15	

Analyst: MA

Date: 08/06/13

Reviewer: EAH

Date: 08/06/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 PCBs Miscell.: EPA 8082

Inst : GC06  
 Calnum : 203327421001  
 Units : pg/uL

Name : 2154\_227\_7pt  
 Date : 15-AUG-2013 14:32

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	227_008	203327421008	AR2154_10	15-AUG-2013 14:59	S22503
L2	227_009	203327421009	AR2154_50	15-AUG-2013 15:27	S22504 (2X)
L3	227_010	203327421010	AR2154_100	15-AUG-2013 15:55	S22504
L4	227_011	203327421011	AR2154_125	15-AUG-2013 16:22	S22505 (2X)
L5	227_012	203327421012	AR2154_250	15-AUG-2013 16:50	S22505
L6	227_013	203327421013	AR2154_500	15-AUG-2013 17:17	S22506
L7	227_014	203327421014	AR2154_1000	15-AUG-2013 17:45	S22507

Analyte	Ch	L1	L2	L3	L4	L5	L6	L7	Type	X	a0	a1	a2	Avg	r <sup>2</sup>	MnR <sup>2</sup>	MxRSD	Flg
Aroclor-1221 Peak # 1	A	47.200	53.160	52.290	52.192	53.212	66.976	54.079	AVRG	R	0.01846	0.01846		54.158	11	.99	20	
Aroclor-1221 Peak # 2	A	146.90	144.94	147.32	149.82	137.89	170.17	126.66	AVRG	R	0.00684	0.00684		146.24	9	.99	20	
Aroclor-1221 Peak # 3	A	100.50	95.940	95.260	96.320	91.708	112.17	83.748	AVRG	R	0.01036	0.01036		96.521	9	.99	20	
Aroclor-1221 Peak # 4	A	420.90	396.14	386.30	385.06	355.91	415.23	303.26	AVRG	R	0.00263	0.00263		380.40	11	.99	20	
Aroclor-1221 Peak # 5	A	38.600	43.940	43.080	45.864	47.700	57.092	44.183	AVRG	R	0.02184	0.02184		45.780	12	.99	20	
Aroclor-1254 Peak # 1	A	541.20	488.92	467.84	471.06	426.36	490.79	370.79	AVRG	R	0.00215	0.00215		465.28	12	.99	20	
Aroclor-1254 Peak # 2	A	747.60	692.24	671.11	689.79	599.00	680.44	514.71	AVRG	R	0.00152	0.00152		656.41	12	.99	20	
Aroclor-1254 Peak # 3	A	731.00	473.54	468.59	511.70	431.31	530.17		AVRG	R	0.00191	0.00191		524.38	20	.99	20	
Aroclor-1254 Peak # 4	A	1014.9	829.42	877.03	863.38	777.62	877.78	671.04	AVRG	R	0.00118	0.00118		844.45	12	.99	20	
Aroclor-1254 Peak # 5	A	787.30	756.38	715.42	792.66	679.49	760.65	601.05	AVRG	R	0.00137	0.00137		727.56	9	.99	20	
Aroclor-1221 Peak # 1	B	985.00	481.46	529.56	583.21	650.81	791.25		QUAD	A	1429.16	485.747	0.606896	670.21	1.000	.99	20	
Aroclor-1221 Peak # 2	B	263.90	301.12	331.96	297.35	329.14	328.56	283.39	AVRG	R	0.00328	0.00328		305.06	9	.99	20	
Aroclor-1221 Peak # 3	B	2320.5	1706.1	1574.7	1459.0	1453.0	1656.2	1339.7	AVRG	R	6.08E-4	6.08E-4		1644.2	20	.99	20	
Aroclor-1221 Peak # 4	B	234.10	121.66	216.91	183.10	317.75	301.25	246.08	QUAD	A	-11216	376.804	-0.11870	231.55	0.995	.99	20	
Aroclor-1221 Peak # 5	B	263.90	372.84	345.39	455.51	362.91	487.80	404.97	AVRG	R	0.00260	0.00260		384.76	19	.99	20	
Aroclor-1254 Peak # 1	B	3618.5	3958.5	4198.2	4335.1	3979.3	4697.7	3553.6	AVRG	R	2.47E-4	2.47E-4		4048.7	10	.99	20	
Aroclor-1254 Peak # 2	B	5920.2	5931.8	5999.2	6210.1	5367.3	6514.3	4861.9	AVRG	R	1.73E-4	1.73E-4		5786.4	9	.99	20	
Aroclor-1254 Peak # 3	B	2749.9	4348.5	3742.9	3821.2	3300.7	4233.8	3245.1	AVRG	R	2.75E-4	2.75E-4		3634.6	16	.99	20	
Aroclor-1254 Peak # 4	B	5110.9	6476.1	6651.4	6947.0	6077.5	7935.3	5934.5	AVRG	R	1.55E-4	1.55E-4		6447.5	14	.99	20	
Aroclor-1254 Peak # 5	B	4631.7	6391.8	6553.6	6494.2	6227.8	7452.1	6115.4	AVRG	R	1.60E-4	1.60E-4		6266.7	13	.99	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D
Aroclor-1221 Peak # 1	A	10.000	-13	50.000	-2	100.00	-3	125.00	-4	250.00	-2	500.00	24	1000.0	0
Aroclor-1221 Peak # 2	A	10.000	0	50.000	-1	100.00	1	125.00	2	250.00	-6	500.00	16	1000.0	-13
Aroclor-1221 Peak # 3	A	10.000	4	50.000	-1	100.00	-1	125.00	0	250.00	-5	500.00	16	1000.0	-13
Aroclor-1221 Peak # 4	A	10.000	11	50.000	4	100.00	2	125.00	1	250.00	-6	500.00	9	1000.0	-20
Aroclor-1221 Peak # 5	A	10.000	-16	50.000	-4	100.00	-6	125.00	0	250.00	4	500.00	25	1000.0	-3
Aroclor-1254 Peak # 1	A	10.000	16	50.000	5	100.00	1	125.00	1	250.00	-8	500.00	5	1000.0	-20
Aroclor-1254 Peak # 2	A	10.000	14	50.000	5	100.00	2	125.00	5	250.00	-9	500.00	4	1000.0	-22
Aroclor-1254 Peak # 3	A	10.000	39	50.000	-10	100.00	-11	125.00	-2	250.00	-18	500.00	1		
Aroclor-1254 Peak # 4	A	10.000	20	50.000	-2	100.00	4	125.00	2	250.00	-8	500.00	4	1000.0	-21
Aroclor-1254 Peak # 5	A	10.000	8	50.000	4	100.00	-2	125.00	9	250.00	-7	500.00	5	1000.0	-17
Aroclor-1221 Peak # 1	B	10.000	70	50.000	-12	100.00	-5	125.00	2	250.00	1	500.00	0		
Aroclor-1221 Peak # 2	B	10.000	-13	50.000	-1	100.00	9	125.00	-3	250.00	8	500.00	8	1000.0	-7
Aroclor-1221 Peak # 3	B	10.000	41	50.000	4	100.00	-4	125.00	-11	250.00	-12	500.00	1	1000.0	-19
Aroclor-1221 Peak # 4	B	10.000	264	50.000	-7	100.00	-10	125.00	-25	250.00	5	500.00	2	1000.0	-1
Aroclor-1221 Peak # 5	B	10.000	-31	50.000	-3	100.00	-10	125.00	18	250.00	-6	500.00	27	1000.0	5
Aroclor-1254 Peak # 1	B	10.000	-11	50.000	-2	100.00	4	125.00	7	250.00	-2	500.00	16	1000.0	-12
Aroclor-1254 Peak # 2	B	10.000	2	50.000	3	100.00	-2	125.00	7	250.00	-7	500.00	13	1000.0	-16
Aroclor-1254 Peak # 3	B	10.000	-24	50.000	20	100.00	3	125.00	5	250.00	-9	500.00	16	1000.0	-11
Aroclor-1254 Peak # 4	B	10.000	-21	50.000	0	100.00	3	125.00	8	250.00	-6	500.00	23	1000.0	-8
Aroclor-1254 Peak # 5	B	10.000	-26	50.000	2	100.00	5	125.00	4	250.00	-1	500.00	19	1000.0	-2

MA 08/16/13 : Corrected automatically drawn baseline in all levels.

MA 08/16/13 : Changed fit type and dropped high point to improve %rsd/r^2

Analyst: MA

Date: 08/16/13

Reviewer: EAH

Date: 08/16/13

K=A: Instrument response = a0 + amount \* a1 + amount^2 \* a2 (invert equation before quantitating); X=R: Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor; QUAD=Quadratic regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 PCBS Miscell.  
EPA 8082

Inst : GC06  
Calnum : 203327421001

Name : 2154\_227\_7pt  
Cal Date : 15-AUG-2013

ICV 203327421016 (227\_016 15-AUG-2013) stds: S22107  
ICV 203327421018 (227\_018 15-AUG-2013) stds: S22058

Analyte	Ch	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Aroclor-1221	A	203327421018	250.0	242.8	pg/uL	-3	15	
Aroclor-1254	A	203327421016	250.0	222.9	pg/uL	-11	15	
Aroclor-1221	B	203327421018	250.0	218.0	pg/uL	-13	15	
Aroclor-1254	B	203327421016	250.0	238.0	pg/uL	-5	15	

203327421016: Analyst: MA Date: 08/16/13 Reviewer: EAH Date: 08/16/13  
203327421018: Analyst: MA Date: 08/16/13 Reviewer: EAH Date: 08/16/13

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 PCBs Miscell.: EPA 8082

Inst : GC16  
 Calnum : 233295617001  
 Units : pg/u1

Name : 1660\_205  
 Date : 24-JUL-2013 14:28  
 X Axis : R

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	205_013	233295617013	PCB10_2	24-JUL-2013 14:28	S22289
L2	205_014	233295617014	PCB25_5	24-JUL-2013 14:57	S22295
L3	205_015	233295617015	PCB100_20	24-JUL-2013 15:25	S22814
L4	205_016	233295617016	PCB250_50	24-JUL-2013 15:54	S22538
L5	205_017	233295617017	PCB500_100	24-JUL-2013 16:22	S22292
L6	205_018	233295617018	PCB750_150	24-JUL-2013 16:50	S22293

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r <sup>2</sup>	MnR <sup>2</sup>	MxRSD	Flg
Aroclor-1016 Peak # 1	A	3611.6	3951.7	2402.6	2374.7	2357.9	2562.6	LNLR	0.37747	4.01E-4		2876.9	0.996	.99	20	
Aroclor-1016 Peak # 2	A	4858.6	5828.2	3582.5	3407.9	3504.6	3818.2	LNLR	2.56080	2.69E-4		4166.7	0.996	.99	20	
Aroclor-1016 Peak # 3	A	2943.8	3259.8	2004.5	1979.7	2027.8	2248.9	LNLR	5.17808	4.57E-4		2410.8	0.995	.99	20	
Aroclor-1016 Peak # 4	A	1791.7	1871.8	1084.0	1163.0	1112.6	1239.7	LNLR	2.07365	8.32E-4		1377.1	0.995	.99	20	
Aroclor-1016 Peak # 5	A	2714.4	2847.6	1669.2	1689.4	1694.0	1875.1	LNLR	3.19403	5.49E-4		2081.6	0.995	.99	20	
Aroclor-1260 Peak # 1	A	10210	10125	5588.4	5262.6	5035.7	5407.1	LNLR	-9.0538	1.92E-4		6938.2	0.997	.99	20	
Aroclor-1260 Peak # 2	A	6722.8	7046.8	3963.8	3683.4	3629.2	3956.9	LNLR	-4.5667	2.62E-4		4833.8	0.996	.99	20	
Aroclor-1260 Peak # 3	A	6072.9	5900.6	3341.4	3282.8	3259.5	3545.6	LNLR	-1.7481	2.91E-4		4233.8	0.996	.99	20	
Aroclor-1260 Peak # 4	A	14084	14253	7870.5	7487.4	7272.6	7902.6	LNLR	-5.6929	1.31E-4		9811.7	0.996	.99	20	
Aroclor-1260 Peak # 5	A	5387.7	6541.3	3658.1	3472.5	3447.4	3972.5	LNLR	3.34560	2.62E-4		4413.3	0.991	.99	20	
TCMX	A	93261	99878	58558	56099	56280	60950	LNLR	-0.2467	1.69E-5		70838	0.996	.99	20	
Decachlorobiphenyl	A	99294	107355	56079	51113	47340	50676	LNLR	-3.0414	2.06E-5		68643	0.997	.99	20	
Aroclor-1016 Peak # 1	B	452.00	532.52	322.90	329.31	360.13	411.40	AVRG	0.00249	0.00249		401.38	20	.99	20	
Aroclor-1016 Peak # 2	B	493.70	684.00	419.91	430.60	450.09	527.79	AVRG	0.00200	0.00200		501.01	20	.99	20	
Aroclor-1016 Peak # 3	B	347.70	403.36	245.08	257.44	271.33	310.04	AVRG	0.00327	0.00327		305.82	20	.99	20	
Aroclor-1016 Peak # 4	B	427.80	458.64	284.55	295.69	321.61	365.80	AVRG	0.00279	0.00279		359.01	20	.99	20	
Aroclor-1016 Peak # 5	B	490.90	546.08	337.95	360.64	390.46	462.99	AVRG	0.00232	0.00232		431.50	19	.99	20	
Aroclor-1260 Peak # 1	B	1595.0	1708.4	1001.7	1066.1	1127.1		LNLR	-1.4617	9.02E-4		1299.6	0.997	.99	20	
Aroclor-1260 Peak # 2	B	1200.9	1406.3	882.56	938.77	1005.7	1170.9	AVRG		9.08E-4		1100.9	18	.99	20	
Aroclor-1260 Peak # 3	B	1106.2	1168.0	699.86	739.57	793.46		LNLR	-0.3562	0.00128		901.42	0.997	.99	20	
Aroclor-1260 Peak # 4	B	2255.3	2540.5	1546.6	1701.9	1843.4	2285.0	AVRG		4.93E-4		2028.8	19	.99	20	
Aroclor-1260 Peak # 5	B	1077.3	1130.5	718.67	788.51	875.29	1045.3	AVRG		0.00106		939.26	18	.99	20	
TCMX	B	13403	14707	9004.7	10218	11515	13681	AVRG		8.27E-5		12088	18	.99	20	
Decachlorobiphenyl	B	20838	24063	14107	14591	15279	17300	LNLR	2.02068	5.94E-5		17696	0.992	.99	20	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aroclor-1016 Peak # 1	A	10.000	49	25.000	60	100.00	-3	250.00	-5	500.00	-5	750.00	3
Aroclor-1016 Peak # 2	A	10.000	56	25.000	67	100.00	-1	250.00	-7	500.00	-5	750.00	3
Aroclor-1016 Peak # 3	A	10.000	86	25.000	70	100.00	-3	250.00	-7	500.00	-6	750.00	4
Aroclor-1016 Peak # 4	A	10.000	70	25.000	64	100.00	-8	250.00	-2	500.00	-7	750.00	3
Aroclor-1016 Peak # 5	A	10.000	81	25.000	69	100.00	-5	250.00	-6	500.00	-6	750.00	3
Aroclor-1260 Peak # 1	A	10.000	5	25.000	58	100.00	-2	250.00	-3	500.00	-5	750.00	3
Aroclor-1260 Peak # 2	A	10.000	31	25.000	66	100.00	-1	250.00	-5	500.00	-6	750.00	3
Aroclor-1260 Peak # 3	A	10.000	59	25.000	65	100.00	-4	250.00	-5	500.00	-5	750.00	3
Aroclor-1260 Peak # 4	A	10.000	28	25.000	64	100.00	-2	250.00	-4	500.00	-6	750.00	3
Aroclor-1260 Peak # 5	A	10.000	75	25.000	85	100.00	-1	250.00	-8	500.00	-9	750.00	5
TCMX	A	2.0000	45	5.0000	64	20.000	-2	50.000	-6	100.00	-5	150.00	3
Decachlorobiphenyl	A	2.0000	-47	5.0000	60	20.000	0	50.000	-1	100.00	-5	150.00	2
Aroclor-1016 Peak # 1	B	10.000	13	25.000	33	100.00	-20	250.00	-18	500.00	-10	750.00	2
Aroclor-1016 Peak # 2	B	10.000	-1	25.000	37	100.00	-16	250.00	-14	500.00	-10	750.00	5
Aroclor-1016 Peak # 3	B	10.000	14	25.000	32	100.00	-20	250.00	-16	500.00	-11	750.00	1
Aroclor-1016 Peak # 4	B	10.000	19	25.000	28	100.00	-21	250.00	-18	500.00	-10	750.00	2
Aroclor-1016 Peak # 5	B	10.000	14	25.000	27	100.00	-22	250.00	-16	500.00	-10	750.00	7
Aroclor-1260 Peak # 1	B	10.000	29	25.000	48	100.00	-11	250.00	-4	500.00	1		
Aroclor-1260 Peak # 2	B	10.000	9	25.000	28	100.00	-20	250.00	-15	500.00	-9	750.00	6
Aroclor-1260 Peak # 3	B	10.000	38	25.000	48	100.00	-11	250.00	-5	500.00	2		
Aroclor-1260 Peak # 4	B	10.000	11	25.000	25	100.00	-24	250.00	-16	500.00	-9	750.00	13
Aroclor-1260 Peak # 5	B	10.000	15	25.000	20	100.00	-23	250.00	-16	500.00	-7	750.00	11
TCMX	B	2.0000	11	5.0000	22	20.000	-26	50.000	-15	100.00	-5	150.00	13
Decachlorobiphenyl	B	2.0000	125	5.0000	83	20.000	-6	50.000	-9	100.00	-7	150.00	4

MA 07/25/13 : Corrected automatically drawn baseline in all levels.

Analyst: MA

Date: 07/25/13

Reviewer: EAH

Date: 07/25/13

Instrument amount = a0 + response \* a1 + response^2 \* a2; AVG=Average response factor; LINR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 PCBS Miscell.  
EPA 8082

Inst : GC16  
Calnum : 233295617001

Name : 1660\_205  
Cal Date : 24-JUL-2013

ICV 233295617021 (205\_021 24-JUL-2013) stds: S22309

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aroclor-1016	A	250.0	267.6	pg/ul	7	15	
Aroclor-1260	A	250.0	271.4	pg/ul	9	15	
Aroclor-1016	B	250.0	231.5	pg/ul	-7	15	
Aroclor-1260	B	250.0	249.1	pg/ul	0	15	

Analyst: MA

Date: 07/25/13

Reviewer: EAH

Date: 07/25/13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 PCBS Miscell.  
EPA 8082

Inst : GC06 Run Name : PCB250\_50 IDF : 1.0  
 Seqnum : 203334626002 File : 232\_002 Time : 20-AUG-2013 09:34  
 Cal : 203310428001 Caldate : 03-AUG-2013  
 Standards: S22538

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			250.0	276.2	pg/uL	10	15	
Aroclor-1260	A			250.0	261.0	pg/uL	4	15	
TCMX	A	12914	12248	50.00	55.74	pg/uL	11	15	
Decachlorobiphenyl	A	16882	13005	50.00	49.58	pg/uL	-1	15	
Aroclor-1016	B			250.0	290.9	pg/uL	<b>16</b>	15	c+ ***
Aroclor-1260	B			250.0	265.8	pg/uL	6	15	
TCMX	B	85437	88273	50.00	60.51	pg/uL	<b>21</b>	15	c+
Decachlorobiphenyl	B	119477	108831	50.00	54.28	pg/uL	9	15	

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/20/13 Reviewer: TFB Date: 08/20/13

+ = high bias c = CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 PCBS Miscell.  
EPA 8082

Inst : GC06 Run Name : PCB100\_20 IDF : 1.0  
 Seqnum : 203334626011 File : 232\_011 Time : 20-AUG-2013 15:21  
 Cal : 203310428001 Caldate : 03-AUG-2013  
 Standards: S22814

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			100.0	105.7	pg/uL	6	15	
Aroclor-1260	A			100.0	94.36	pg/uL	-6	15	
TCMX	A	12914	11541	20.00	20.65	pg/uL	3	15	
Decachlorobiphenyl	A	16882	7969.0	20.00	10.44	pg/uL	-48	15	c-
Aroclor-1016	B			100.0	137.9	pg/uL	38	15	c+ ***
Aroclor-1260	B			100.0	103.4	pg/uL	3	15	
TCMX	B	85437	94398	20.00	26.00	pg/uL	30	15	c+
Decachlorobiphenyl	B	119477	51017	20.00	10.49	pg/uL	-48	15	c-

TFB 08/20/13 : run not used

MA 08/20/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/20/13 Reviewer: TFB Date: 08/21/13

+ = high bias - = low bias c = CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 PCBS Miscell.  
EPA 8082

Inst : GC06 Run Name : AR2154\_250 IDF : 1.0  
 Seqnum : 203334626012 File : 232\_012 Time : 20-AUG-2013 17:41  
 Cal : 203327421001 Caldate : 15-AUG-2013  
 Standards: S22505

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1221	A	250.0	246.8	pg/uL	-1	15	
Aroclor-1254	A	250.0	269.4	pg/uL	8	15	
Aroclor-1221	B	250.0	317.8	pg/uL	<b>27</b>	15	c+ ***
Aroclor-1254	B	250.0	307.8	pg/uL	<b>23</b>	15	c+ ***

MA 08/21/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/21/13 Reviewer: EAH Date: 08/21/13

+=high bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 PCBS Miscell.  
EPA 8082

Inst : GC06 Run Name : PCB250\_50 IDF : 1.0  
 Seqnum : 203334626024 File : 232\_024 Time : 20-AUG-2013 23:12  
 Cal : 203310428001 Caldate : 03-AUG-2013  
 Standards: S22538

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			250.0	247.6	pg/uL	-1	15	
Aroclor-1260	A			250.0	230.6	pg/uL	-8	15	
TCMX	A	12914	11311	50.00	51.43	pg/uL	3	15	
Decachlorobiphenyl	A	16882	10060	50.00	37.83	pg/uL	<b>-24</b>	15	c-
Aroclor-1016	B			250.0	251.9	pg/uL	1	15	
Aroclor-1260	B			250.0	238.9	pg/uL	-4	15	
TCMX	B	85437	78658	50.00	53.94	pg/uL	8	15	
Decachlorobiphenyl	B	119477	80145	50.00	40.08	pg/uL	<b>-20</b>	15	c-

MA 08/21/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/21/13 Reviewer: TFB Date: 08/21/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 PCBS Miscell.  
EPA 8082

Inst : GC06 Run Name : AR2154\_250 IDF : 1.0  
 Seqnum : 203334626026 File : 232\_026 Time : 21-AUG-2013 00:07  
 Cal : 203327421001 Caldate : 15-AUG-2013  
 Standards: S22505

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1221	A	250.0	227.7	pg/uL	-9	15	
Aroclor-1254	A	250.0	224.9	pg/uL	-10	15	
Aroclor-1221	B	250.0	189.9	pg/uL	<b>-24</b>	15	c- ***
Aroclor-1254	B	250.0	239.7	pg/uL	-4	15	

MA 08/21/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/21/13 Reviewer: EAH Date: 08/21/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 PCBS Miscell.  
EPA 8082

Inst : GC16 Run Name : PCB250\_50 IDF : 1.0  
 Seqnum : 233336005002 File : 233\_002 Time : 21-AUG-2013 08:34  
 Cal : 233295617001 Caldate : 24-JUL-2013  
 Standards: S22538

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			250.0	260.6	pg/ul	4	15	
Aroclor-1260	A			250.0	212.2	pg/ul	-15	15	
TCMX	A	70838	63984	50.00	53.83	pg/ul	8	15	
Decachlorobiphenyl	A	68643	37974	50.00	36.10	pg/ul	-28	15	c-
Aroclor-1016	B			250.0	229.5	pg/ul	-8	15	
Aroclor-1260	B			250.0	214.2	pg/ul	-14	15	
TCMX	B	12088	12067	50.00	49.91	pg/ul	0	15	
Decachlorobiphenyl	B	17696	12305	50.00	38.60	pg/ul	-23	15	c-

MA 08/22/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/22/13 Reviewer: EAH Date: 08/22/13

--low bias c=CCV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 PCBS Miscell.  
EPA 8082

Inst : GC16 Run Name : PCB100\_20 IDF : 1.0  
 Seqnum : 233336005014 File : 233\_014 Time : 21-AUG-2013 18:09  
 Cal : 233295617001 Caldate : 24-JUL-2013  
 Standards: S22814

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aroclor-1016	A			100.0	101.0	pg/ul	1	15	
Aroclor-1260	A			100.0	96.47	pg/ul	-4	15	
TCMX	A	70838	66086	20.00	22.10	pg/ul	10	15	
Decachlorobiphenyl	A	68643	39804	20.00	13.37	pg/ul	-33	15	c-
Aroclor-1016	B			100.0	91.84	pg/ul	-8	15	
Aroclor-1260	B			100.0	87.26	pg/ul	-13	15	
TCMX	B	12088	11183	20.00	18.50	pg/ul	-7	15	
Decachlorobiphenyl	B	17696	11507	20.00	15.70	pg/ul	-21	15	c-

MA 08/22/13 : Corrected automatically drawn baseline.

Analyst: MA Date: 08/22/13 Reviewer: EAH Date: 08/22/13

--low bias c=CCV

## Logbooks & Sequences

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 203310428

Instrument : GC06  
 Method : EPA 8082

Begun : 08/03/13 13:48  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	215_001	X	HEX			08/03/13 13:48	1.0	
002	215_002	CCV	PCB250_50			08/03/13 14:15	1.0	1
003	215_003	LOD	216647-037	Soil	200792	08/03/13 16:15	1.0	
004	215_004	SAMPLE	216647-038	Soil	200792	08/03/13 16:43	1.0	
005	215_005	CCV	PCB100_20			08/03/13 17:49	1.0	2
007	215_007	X	HEX			08/03/13 18:23	1.0	
008	215_008	X	HEX			08/03/13 18:51	1.0	
009	215_009	IB	CAL			08/03/13 19:19	1.0	
010	215_010	ICAL	PCB10_2			08/03/13 19:46	1.0	3
011	215_011	ICAL	PCB25_5			08/03/13 20:14	1.0	4
012	215_012	ICAL	PCB100_20			08/03/13 20:41	1.0	2
013	215_013	ICAL	PCB250_50			08/03/13 21:09	1.0	1
014	215_014	ICAL	PCB500_100			08/03/13 21:36	1.0	5
015	215_015	ICAL	PCB750_150			08/03/13 22:04	1.0	6
016	215_016	ICAL	PCB1000_200			08/03/13 22:31	1.0	7
017	215_017	X	HEX			08/03/13 22:59	1.0	
018	215_018	ICV	ULTRA_1660			08/03/13 23:27	1.0	8
019	215_019	X	ICV			08/03/13 23:54	1.0	8

MA 08/06/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.



CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 203334626

Instrument : GC06  
 Method : EPA 8082

Begun : 08/20/13 09:06  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	232_001	X	HEX			08/20/13 09:06	1.0	
002	232_002	CCV	PCB250_50			08/20/13 09:34	1.0	1
003	232_003	CCV	AR2154_250			08/20/13 11:21	1.0	2
004	232_004	BLANK	QC702714	Soil	201896	08/20/13 11:49	1.0	
005	232_005	LCS	QC702715	Soil	201896	08/20/13 12:17	1.0	
006	232_006	SAMPLE	248030-021	Soil	201896	08/20/13 12:44	1.0	
007	232_007	MSS	248123-001	Soil	201896	08/20/13 13:12	1.0	
008	232_008	MSS	248030-034	Soil	201867	08/20/13 13:51	1.0	
009	232_009	MS	QC702596	Soil	201867	08/20/13 14:19	1.0	
010	232_010	MSD	QC702597	Soil	201867	08/20/13 14:46	1.0	
011	232_011	CCV	PCB100_20			08/20/13 15:21	1.0	3
012	232_012	CCV	AR2154_250			08/20/13 17:41	1.0	2
013	232_013	CCV	PCB1268_250			08/20/13 18:09	1.0	4
014	232_014	MS	QC702716	Soil	201896	08/20/13 18:36	1.0	
015	232_015	MSD	QC702717	Soil	201896	08/20/13 19:04	1.0	
016	232_016	SAMPLE	248030-021	Soil	201896	08/20/13 19:31	1.0	
017	232_017	SAMPLE	248030-033	Soil	201867	08/20/13 19:59	1.0	
018	232_018	SAMPLE	248030-043	Soil	201867	08/20/13 20:26	5.0	
019	232_019	MSS	248039-009	Soil	201867	08/20/13 20:54	1.0	
020	232_020	SAMPLE	248030-035	Soil	201867	08/20/13 21:22	1.0	2:PCB1016#4=1200
021	232_021	SAMPLE	248085-001	Miscell.	201896	08/20/13 21:49	1.0	6:PCB1260#1=1100
022	232_022	SAMPLE	248085-002	Miscell.	201896	08/20/13 22:17	1.0	1:PCB1221#3=42000
023	232_023	SAMPLE	248085-003	Miscell.	201896	08/20/13 22:44	1.0	
024	232_024	CCV	PCB250_50			08/20/13 23:12	1.0	1
025	232_025	CCV	PCB250_50			08/20/13 23:39	1.0	1
026	232_026	CCV	AR2154_250			08/21/13 00:07	1.0	2
027	232_027	CCV	PCB1268_250			08/21/13 00:35	1.0	4
028	232_028	SAMPLE	248133-003	Soil	201896	08/21/13 01:02	1.0	
029	232_029	SAMPLE	248133-004	Soil	201896	08/21/13 01:30	1.0	
030	232_030	SAMPLE	248133-005	Soil	201896	08/21/13 01:57	1.0	
031	232_031	SAMPLE	248133-006	Soil	201896	08/21/13 02:25	1.0	
032	232_032	SAMPLE	248143-001	Soil	201896	08/21/13 02:52	1.0	
033	232_033	SAMPLE	248149-005	Soil	201896	08/21/13 03:20	1.0	
034	232_034	CCV	PCB100_20			08/21/13 03:48	1.0	3
035	232_035	X	CCV			08/21/13 04:15	1.0	3
036	232_036	CCV	AR2154_250			08/21/13 04:43	1.0	2

MA 08/21/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 36.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 233295617

Instrument : GC16  
 Method : EPA 8082

Begun : 07/24/13 06:57  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	205_001	X	HEX			07/24/13 06:57	1.0	
002	205_002	CCV	PCB250_50			07/24/13 07:25	1.0	1
003	205_003	CCV	PCB100_20			07/24/13 08:17	1.0	2
004	205_004	X	PRIMER			07/24/13 10:13	1.0	
005	205_005	X	PRIMER			07/24/13 10:42	1.0	
006	205_006	X	PRIMER			07/24/13 11:10	1.0	
007	205_007	X	PRIMER			07/24/13 11:38	1.0	
008	205_008	X	HEX			07/24/13 12:06	1.0	
009	205_009	X	HEX			07/24/13 12:35	1.0	
010	205_010	X	HEX			07/24/13 13:03	1.0	
011	205_011	X	HEX			07/24/13 13:32	1.0	
012	205_012	IB	CAL			07/24/13 14:00	1.0	
013	205_013	ICAL	PCB10_2			07/24/13 14:28	1.0	3
014	205_014	ICAL	PCB25_5			07/24/13 14:57	1.0	4
015	205_015	ICAL	PCB100_20			07/24/13 15:25	1.0	2
016	205_016	ICAL	PCB250_50			07/24/13 15:54	1.0	1
017	205_017	ICAL	PCB500_100			07/24/13 16:22	1.0	5
018	205_018	ICAL	PCB750_150			07/24/13 16:50	1.0	6
019	205_019	ICAL	PCB1000_200			07/24/13 17:19	1.0	7
020	205_020	X	HEX			07/24/13 17:47	1.0	
021	205_021	ICV	ULTRA_1660			07/24/13 18:16	1.0	8
022	205_022	X	ICV			07/24/13 18:44	1.0	8
023	205_023	X	HEX			07/24/13 19:13	1.0	
024	205_024	X	HEX			07/24/13 19:41	1.0	
025	205_025	IB	CAL			07/24/13 20:10	1.0	
026	205_026	ICAL	AR1242_10			07/24/13 20:38	1.0	9
027	205_027	ICAL	AR1242_100			07/24/13 21:07	1.0	10
028	205_028	ICAL	AR1242_100			07/24/13 21:35	1.0	10
029	205_029	ICAL	AR1242_250			07/24/13 22:03	1.0	11
030	205_030	ICAL	AR1242_250			07/24/13 22:32	1.0	11
031	205_031	ICAL	AR1242_500			07/24/13 23:00	1.0	12
032	205_032	ICAL	AR1242_1000			07/24/13 23:29	1.0	13
033	205_033	X	HEX			07/24/13 23:57	1.0	
034	205_034	ICV	ULTRA_1242			07/25/13 00:26	1.0	14
035	205_035	X	ICV			07/25/13 00:54	1.0	14
036	205_036	X	HEX			07/25/13 01:23	1.0	
037	205_037	CCV	PCB100_20			07/25/13 01:51	1.0	2
038	205_038	CCV	AR1242_100			07/25/13 02:20	1.0	10
039	205_039	SAMPLE	246924-009	Water	200611	07/25/13 02:48	1.0	
040	205_040	SAMPLE	247160-075	Soil	200876	07/25/13 03:17	1.0	
041	205_041	SAMPLE	247160-076	Soil	200876	07/25/13 03:45	1.0	
042	205_042	SAMPLE	247160-078	Soil	200876	07/25/13 04:13	1.0	
043	205_043	SAMPLE	247160-079	Soil	200876	07/25/13 04:42	1.0	
044	205_044	SAMPLE	247160-080	Soil	200876	07/25/13 05:10	1.0	
045	205_045	SAMPLE	247160-081	Soil	200876	07/25/13 05:39	1.0	
046	205_046	SAMPLE	247160-087	Soil	200876	07/25/13 06:07	1.0	
047	205_047	SAMPLE	247160-088	Soil	200876	07/25/13 06:36	1.0	
048	205_048	SAMPLE	247160-089	Soil	200876	07/25/13 07:04	1.0	
049	205_049	CCV	PCB250_50			07/25/13 07:32	1.0	1
050	205_050	X	CCV			07/25/13 08:01	1.0	1
051	205_051	CCV	AR1242_250			07/25/13 08:29	1.0	11
052	205_052	CCV	AR1254_250			07/25/13 15:41	1.0	15

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 233295617

Instrument : GC16  
 Method : EPA 8082

Begun : 07/24/13 06:57  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
053	205_053	SAMPLE	247160-082	Soil	200876	07/25/13 16:09	1.0	
054	205_054	SAMPLE	247160-083	Soil	200876	07/25/13 16:37	1.0	
055	205_055	SAMPLE	247160-084	Soil	200876	07/25/13 17:06	1.0	
056	205_056	SAMPLE	247160-085	Soil	200876	07/25/13 17:34	1.0	
057	205_057	SAMPLE	247160-090	Soil	200920	07/25/13 18:02	1.0	
058	205_058	SAMPLE	247160-092	Soil	200920	07/25/13 18:30	1.0	
059	205_059	SAMPLE	247160-093	Soil	200920	07/25/13 18:58	1.0	
060	205_060	CCV	PCB100_20			07/25/13 19:26	1.0	2
061	205_061	X	CCV			07/25/13 19:55	1.0	2
062	205_062	CCV	AR1254_250			07/25/13 20:23	1.0	15

MA 07/26/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 62.

Standards used: 1=S22538 2=S22814 3=S22289 4=S22295 5=S22292 6=S22293 7=S22294 8=S22309 9=S22619 10=S22620 11=S22621  
 12=S22622 13=S22623 14=S22067 15=S22505

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 233336005

Instrument : GC16  
 Method : EPA 8082

Begun : 08/21/13 08:05  
 SOP Version : pcb\_rv.9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	233_001	X	HEX			08/21/13 08:05	1.0		
002	233_002	CCV	PCB250_50			08/21/13 08:34	1.0	1	
003	233_003	CCV	AR1254_250			08/21/13 10:06	1.0	2	
004	233_004	MSS	248102-001	Water	201927	08/21/13 13:10	1.0		
005	233_005	SAMPLE	248102-002	Water	201927	08/21/13 13:38	1.0		
006	233_006	SAMPLE	248102-003	Water	201927	08/21/13 14:06	1.0		
007	233_007	SAMPLE	248102-004	Water	201927	08/21/13 14:35	1.0		
008	233_008	SAMPLE	248102-005	Water	201927	08/21/13 15:03	1.0		
009	233_009	SAMPLE	248113-001	Water	201927	08/21/13 15:31	1.0		
010	233_010	SAMPLE	248085-001	Miscell.	201896	08/21/13 16:15	10.0		
011	233_011	SAMPLE	248150-001	Miscell.	201896	08/21/13 16:44	1.0		
012	233_012	SAMPLE	248151-001	Soil	201896	08/21/13 17:12	10.0		6:PCB1260#1=1300
013	233_013	SAMPLE	248151-002	Soil	201896	08/21/13 17:40	1.0		
014	233_014	CCV	PCB100_20			08/21/13 18:09	1.0	3	
015	233_015	CCV	AR1254_250			08/21/13 18:37	1.0	2	
016	233_016	CCV	AR1248_250			08/21/13 19:05	1.0	4	
017	233_017	SAMPLE	247863-001	Oil	201654	08/21/13 19:34	5.0		
018	233_018	SAMPLE	248111-007	Soil	201896	08/21/13 20:02	10.0		11:PCB1248#1=3300
019	233_019	CCV	PCB250_50			08/21/13 20:31	1.0	1	
020	233_020	CCV	AR1254_250			08/21/13 20:59	1.0	2	
021	233_021	CCV	AR1248_250			08/21/13 21:28	1.0	4	

MA 08/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 21.

SAMPLE PREPARATION SUMMARY

Batch # : 201896  
 Started By : CPK  
 Method : 3550B  
 Spike #1 ID : S22742

Prep Date : 19-AUG-2013 19:45  
 Spike #2 ID : S22713

Analysis : PCB  
 Finished By : CPK  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248030-021		Soil	29.61	25	1	0.8443		1				PCB	
248085-001		Miscell.	30.3	25	1	0.8251		1				PCB	Prepped 20-AUG-2013 11:40
248085-002		Miscell.	30.05	25	1	0.8319		1				PCB	Prepped 20-AUG-2013 11:40
248085-003		Miscell.	30.04	25	1	0.8322		1				PCB	Prepped 20-AUG-2013 11:40
248097-004		Soil	30.45	25	1	0.821		1				PCB	Prepped 20-AUG-2013 11:40
248097-005		Soil	30.42	25	1	0.8218		1				PCB	Prepped 20-AUG-2013 11:40
248097-006		Soil	30.1	25	1	0.8306		1				PCB	Prepped 20-AUG-2013 11:40
248097-007		Soil	30.21	25	1	0.8275		1				PCB	Prepped 20-AUG-2013 11:40
248097-008		Soil	30.07	25	1	0.8314		1				PCB	Prepped 20-AUG-2013 11:40
248111-007		Soil	30.01	25	1	0.8331		1				PCB	See comment 1 below
248123-001		Soil	29.71	25	1	0.8415		1				PCB	
248133-003		Soil	30	25	1	0.8333		1				PCB	Prepped 20-AUG-2013 11:40
248133-004		Soil	30.4	25	1	0.8224		1				PCB	Prepped 20-AUG-2013 11:40
248133-005		Soil	30.38	25	1	0.8229		1				PCB	Prepped 20-AUG-2013 11:40
248133-006		Soil	30.02	25	1	0.8328		1				PCB	Prepped 20-AUG-2013 11:40
248143-001		Soil	30.23	25	1	0.827		1				PCB	Prepped 20-AUG-2013 11:40
248149-005		Soil	30.11	25	1	0.8303		1				PCB	Prepped 20-AUG-2013 11:40
248150-001		Miscell.	30.29	25	1	0.8254		1				PCB	Prepped 20-AUG-2013 11:40
248151-001		Soil	30.26	25	1	0.8262		1				PCB	Prepped 20-AUG-2013 11:40
248151-002		Soil	30.08	25	1	0.8311		1				(rebatched)	Prepped 20-AUG-2013 11:40
QC702714	BLANK	Soil	29.72	25	1	0.8412		1					
QC702715	LCS	Soil	29.9	25	1	0.8361		1	1				
QC702716	MS	Soil	29.79	25	1	0.8392		1	1				
QC702717	MSD	Soil	29.9	25	1	0.8361		1	1				

Comment 1: Prepped 20-AUG-2013 11:40; QC-PE

Analyst: MA Date: 08/21/13 Reviewer: TFB Date: 08/21/13

PCB (8082) Soil Prep Log

Curtis & Tompkins, Ltd.

MS Batch No: 701896  
 LIMS Analysis: PCB  
 Date Extracted: 8/19/13

EPA 3550b Sonication  
 Other \_\_\_\_\_

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 BK3447

Sample #	Container ID	Sample Wt (g)	Final Vol (mL)	Comments
248030-021	E	29.61	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
248123-001	B	29.71	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
MB QC 702714	NA	29.72	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
LC5 ↓ 5	↓	29.90	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
MS ↓ 6	B	29.79	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
MSD ↓ 7	↓	29.90	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
248085-001	B	30.30	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	Added 8/20/13 @ 1140
↓ -002	↓	30.05	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -003	↓	30.04	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
10 248097-004	F	30.45	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -005	↓	30.42	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -006	↓	30.10	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -007	↓	30.21	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -008	↓	30.07	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
15 248111-007	A	30.01	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	QC-PE
248133-003	B	30.00	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -004	↓	30.40	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -005	↓	30.38	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -006	↓	30.02	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
20 248143-001	C	30.23	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
248149-005	comp	30.11	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
248150-001	E	30.29	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
248151-001	↓	30.26	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
↓ -002	↓	30.08	<input checked="" type="checkbox"/> 25.0 <input type="checkbox"/>	
			<input type="checkbox"/> 25.0 <input type="checkbox"/>	MA 8-21-13

Solvent-rinsed granular Na<sub>2</sub>SO<sub>4</sub> weighed out for QC samples dried with CH<sub>2</sub>Cl<sub>2</sub>-rinsed  granular Na<sub>2</sub>SO<sub>4</sub>  powder  
1.0 mL of surrogate solution was added to all samples  
1.0 mL of matrix spiking solution was added to all spikes  
 1:1 CH<sub>2</sub>Cl<sub>2</sub> (lot# EM53123):Acetone (lot# EM52216) was added to all  
 Solvent added at (time)  
 sonicated 3 times w/ ≥100mL  soxhlet extractors on at:  
 Soxhlets off at:  
 Extracts filtered through baked, CH<sub>2</sub>Cl<sub>2</sub>-rinsed powdered Na<sub>2</sub>SO<sub>4</sub>  
 Solvent exchanged with Hexane, Lot#  
 Concentrated to final volume at temperature (degrees C)  
 EPA 3665A Clean-up: vortexed w/ H<sub>2</sub>SO<sub>4</sub> Lot#  
 Centrifuged for 1 min; 5mL transferred to labelled vial  
 Relinquished to PCB group

Mfg & Lot # / LIMS # / Time	Initials / Date
EMVLIIB	CPK 8/19/13
S22 242C	
S22 2907E S22713D	
1945 / 1140	
NA	
EMVLIIB	
EM53067	
100°	
FS170041	
✓	
✓	

  
8/19/13  
 Extraction Chemist / Date

Continued from page \_\_\_\_\_  
 Continued on page \_\_\_\_\_

MA 8-21-13  
 Reviewed by / Date

TITLE Soil Aliquot

PROJECT

DATE

Continued from page

Sample ID	Weight (g)	Analysis	Batch #	Comments
248024-002 D	49.64	TTHM	201079	
↓ -W3 C	49.88			Rocky sample
↓ -W4 D	50.21			
↓ -W5 ↓	49.70			
↓ -W6 ↓	49.93			
248028-W1 B	49.68			
↓ -W2 ↓	49.77			
248030-W1 A	49.82			
↓ -W2 I	50.02			MSS
↓ -W3 G	49.76			
↓ -W4 B	49.82			
↓ -W5 A	49.81			
248112-W1 B	50.23			
↓ -W2 ↓	49.88			
248124-W1 B	50.19			
MB	50.76			EMVLIIB
LCS	49.89			↓
MS	50.22			248030-W5
MSD	<del>49.89</del> 49.58			↓ 8/15/13 CAP
247997-008 F	50.24	TTHM	201079	
248123-001 B	50.47			
248132-W1 A	49.96			
248070-030 E	29.61	PLB		
248123-001 B	29.71		201896	
MB	29.72			MSS
LCS	29.90			EMVLIIB
MS	29.79			↓
MSD	29.90			248123-001
				↓

Continued to page

SIGNATURE

DATE

DISCLOSED TO AND UNDERSTOOD BY

DATE

PROPRIETARY INFORMATION

TITLE Soil Aliquot

PROJECT

DATE

Continued from page

Sample ID	Weight	Analysis	Batch#	Comments
248030-006	49.56	D		
007	50.39	↓		
008	50.12	↓		
009	49.69	A		
010	50.24	B		
011	50.11	F		
012	49.70	↓		
013	49.97	B		
014	49.69	H		
015	49.90	↓		
016	49.00	B		
017	49.86	E		
018	50.17	H		MSS
019	49.81	B		
020	50.18	↓		
021	49.88	E		
022	49.70	A		
023	49.74	↓		
024	50.43	↓		
025	50.25	B		
	49.90			
	50.07			
	50.43	H		
	49.79	↓		
<p>MB CS MS MSD</p> <p>EMVLIB ↓ 248030-08H ↓</p> <p>MB3 8/20/13 201896</p>				
248085-001B	30.30	PCB		WET
↓ -002 ↓	30.05			↓
↓ -003 ↓	30.04			
248097-004F	30.45			
↓ -005 ↓	30.42			
↓ -006 ↓	30.10			
↓ -007 ↓	30.21			
↓ -008 ↓	30.07			
248111-007A	30.01			
248133-003B	30.00			Aliased 247707-005B
↓ -004 ↓	30.40			↓ -006B
↓ -005 ↓	30.38			↓ -007B
↓ -006 ↓	30.02			↓ -008B
248143-001C	30.23			
248149-005comp	30.11			Compd -001B, -002B, -003B, -004B @ 50g each
248150-001E	30.29			
248151-001E	30.26			
↓ -002 ↓	30.08			

SIGNATURE \_\_\_\_\_ DATE 8/20/13

DISCLOSED TO AND UNDERSTOOD BY \_\_\_\_\_ DATE \_\_\_\_\_

PROPRIETARY INFORMATION

REPORTING SUMMARY FOR 248085 PCBS Miscell.

Sample ID	Analyte	Inst ID	Ch	Date & Time
248085-001	Aroclor-1016	GC16	A	08/21/13 16:15
248085-001	Aroclor-1221	GC16	A	08/21/13 16:15
248085-001	Aroclor-1232	GC16	A	08/21/13 16:15
248085-001	Aroclor-1242	GC16	A	08/21/13 16:15
248085-001	Aroclor-1248	GC16	A	08/21/13 16:15
248085-001	Aroclor-1254	GC16	A	08/21/13 16:15
248085-001	Aroclor-1260	GC16	A	08/21/13 16:15
248085-001	TCMX	GC16	A	08/21/13 16:15
248085-001	Decachlorobiphenyl	GC16	A	08/21/13 16:15
248085-002	Aroclor-1016	GC06	A	08/20/13 22:17
248085-002	Aroclor-1221	GC06	A	08/20/13 22:17
248085-002	Aroclor-1232	GC06	A	08/20/13 22:17
248085-002	Aroclor-1242	GC06	A	08/20/13 22:17
248085-002	Aroclor-1248	GC06	A	08/20/13 22:17
248085-002	Aroclor-1254	GC06	A	08/20/13 22:17
248085-002	Aroclor-1260	GC06	B	08/20/13 22:17
248085-002	TCMX	GC06	A	08/20/13 22:17
248085-002	Decachlorobiphenyl	GC06	A	08/20/13 22:17
248085-003	Aroclor-1016	GC06	A	08/20/13 22:44
248085-003	Aroclor-1221	GC06	A	08/20/13 22:44
248085-003	Aroclor-1232	GC06	A	08/20/13 22:44
248085-003	Aroclor-1242	GC06	A	08/20/13 22:44
248085-003	Aroclor-1248	GC06	A	08/20/13 22:44
248085-003	Aroclor-1254	GC06	A	08/20/13 22:44
248085-003	Aroclor-1260	GC06	B	08/20/13 22:44
248085-003	TCMX	GC06	A	08/20/13 22:44
248085-003	Decachlorobiphenyl	GC06	A	08/20/13 22:44
QC702714	Aroclor-1016	GC06	A	08/20/13 11:49
QC702714	Aroclor-1221	GC06	A	08/20/13 11:49
QC702714	Aroclor-1232	GC06	A	08/20/13 11:49
QC702714	Aroclor-1242	GC06	A	08/20/13 11:49
QC702714	Aroclor-1248	GC06	A	08/20/13 11:49
QC702714	Aroclor-1254	GC06	A	08/20/13 11:49
QC702714	Aroclor-1260	GC06	A	08/20/13 11:49
QC702714	TCMX	GC06	A	08/20/13 11:49
QC702714	Decachlorobiphenyl	GC06	A	08/20/13 11:49
QC702715	Aroclor-1016	GC06	A	08/20/13 12:17
QC702715	Aroclor-1260	GC06	A	08/20/13 12:17
QC702715	TCMX	GC06	A	08/20/13 12:17
QC702715	Decachlorobiphenyl	GC06	A	08/20/13 12:17
QC702716	Aroclor-1016	GC06	A	08/20/13 18:36
QC702716	Aroclor-1260	GC06	A	08/20/13 18:36
QC702716	TCMX	GC06	A	08/20/13 18:36
QC702716	Decachlorobiphenyl	GC06	A	08/20/13 18:36
QC702717	Aroclor-1016	GC06	A	08/20/13 19:04
QC702717	Aroclor-1260	GC06	A	08/20/13 19:04
QC702717	TCMX	GC06	A	08/20/13 19:04
QC702717	Decachlorobiphenyl	GC06	A	08/20/13 19:04

Laboratory Job Number 248085

ANALYTICAL REPORT

Metals

Matrix: Miscell.

California Title 22 Metals			
Lab #:	248085	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-13D	Basis:	dry
Lab ID:	248085-001	Sampled:	08/16/13
Matrix:	Miscell.	Received:	08/16/13
Units:	mg/Kg		

Moisture: 49%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	20	1.0	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Arsenic	42	0.52	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Barium	480	0.52	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Beryllium	ND	0.21	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Cadmium	2.4	0.52	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Chromium	110	0.52	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Cobalt	21	0.52	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Copper	3,100	54	100.0		201945	NT	08/21/13	08/22/13	EPA 3050B	EPA 6010B
Lead	1,700	52	100.0		201945	NT	08/21/13	08/22/13	EPA 3050B	EPA 6010B
Mercury	29	3.0	100.0		201904	CRT	08/20/13	08/20/13	METHOD	EPA 7471A
Molybdenum	13	0.52	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Nickel	110	0.52	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Selenium	ND	1.0	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Silver	ND	0.52	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Thallium	ND	1.0	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Vanadium	54	0.52	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Zinc	4,000	210	100.0		201945	NT	08/21/13	08/22/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248085	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-19D	Basis:	dry
Lab ID:	248085-002	Sampled:	08/16/13
Matrix:	Miscell.	Received:	08/16/13
Units:	mg/Kg		

Moisture: 63%

Analyte	Result	RL	Diln Fac	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	4.5	1.5	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Arsenic	33	0.74	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Barium	410	0.74	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Beryllium	0.33	0.30	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Cadmium	2.6	0.74	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Chromium	470	0.74	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Cobalt	46	0.74	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Copper	550	0.77	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Lead	2,600	74	100.0	201945	NT	08/21/13	08/22/13	EPA 3050B	EPA 6010B
Mercury	1.4	0.047	1.000	201904	CRT	08/20/13	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.74	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Nickel	670	0.74	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Selenium	ND	1.5	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Silver	ND	0.74	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Thallium	ND	1.5	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Vanadium	97	0.74	1.000	201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Zinc	2,000	300	100.0	201945	NT	08/21/13	08/22/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

California Title 22 Metals			
Lab #:	248085	Project#:	20074.063.095.1340
Client:	Weston Solutions	Location:	900 Innes Avenue
Field ID:	IA-21D	Basis:	dry
Lab ID:	248085-003	Sampled:	08/16/13
Matrix:	Miscell.	Received:	08/16/13
Units:	mg/Kg		

Moisture: 67%

Analyte	Result	RL	Diln	Fac	Batch#	Chemist	Prepared	Analyzed	Prep	Analysis
Antimony	ND	1.6	1.000		201945	NT	08/21/13	08/22/13	EPA 3050B	EPA 6010B
Arsenic	9.8	0.82	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Barium	510	0.82	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Beryllium	0.39	0.33	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Cadmium	ND	0.82	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Chromium	1,500	0.82	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Cobalt	150	0.82	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Copper	440	0.85	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Lead	600	0.82	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Mercury	0.41	0.050	1.000		201904	CRT	08/20/13	08/20/13	METHOD	EPA 7471A
Molybdenum	ND	0.82	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Nickel	3,100	82	100.0		201945	NT	08/21/13	08/22/13	EPA 3050B	EPA 6010B
Selenium	5.5	1.6	1.000		201945	NT	08/21/13	08/22/13	EPA 3050B	EPA 6010B
Silver	ND	0.82	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Thallium	ND	1.6	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Vanadium	120	0.82	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B
Zinc	520	3.3	1.000		201945	NT	08/21/13	08/21/13	EPA 3050B	EPA 6010B

ND= Not Detected  
 RL= Reporting Limit

Batch QC Report

California Title 22 Metals			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	201904
Lab ID:	QC702756	Chemist:	CRT
Matrix:	Soil	Prepared:	08/20/13
Units:	mg/Kg	Analyzed:	08/20/13

Result	RL
ND	0.017

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	201904
Matrix:	Soil	Chemist:	CRT
Units:	mg/Kg	Prepared:	08/20/13
Diln Fac:	1.000	Analyzed:	08/20/13

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC702757	0.2083	0.2200	106	80-120		
BSD	QC702758	0.2083	0.2183	105	80-120	1	20

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	201904
Field ID:	IA-30	Chemist:	CRT
MSS Lab ID:	248030-043	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Prepared:	08/20/13
Basis:	dry	Analyzed:	08/20/13
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	Moisture	RPD	Lim
MS	QC702759	0.1555	0.1984	0.3270	86	72-135	0%		
MSD	QC702760		0.2155	0.3095	71 *	72-135	0%	10	42

\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

## Batch QC Report

California Title 22 Metals			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	METHOD
Project#:	20074.063.095.1340	Analysis:	EPA 7471A
Analyte:	Mercury	Basis:	dry
Field ID:	ZZZZZZZZZZ	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	201904
MSS Lab ID:	248029-005	Chemist:	CRT
Lab ID:	QC702761	Sampled:	08/15/13
Matrix:	Soil	Received:	08/15/13
Units:	mg/Kg	Analyzed:	08/20/13

MSS Result	MSS RL	Result	RL	Moisture %	Diff	Lim
0.08682	0.02157	ND	0.1079	24%	NC	10

NC= Not Calculated  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Type:	BLANK	Batch#:	201945
Lab ID:	QC702919	Chemist:	NT
Matrix:	Soil	Prepared:	08/21/13
Units:	mg/Kg	Analyzed:	08/21/13
Diln Fac:	1.000		

Analyte	Result	RL
Antimony	ND	0.50
Arsenic	ND	0.25
Barium	ND	0.25
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.25
Cobalt	ND	0.25
Copper	ND	0.26
Lead	ND	0.25
Molybdenum	ND	0.25
Nickel	ND	0.25
Selenium	ND	0.50
Silver	ND	0.25
Thallium	ND	0.50
Vanadium	ND	0.25
Zinc	ND	1.0

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**

California Title 22 Metals			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Matrix:	Soil	Chemist:	NT
Units:	mg/Kg	Prepared:	08/21/13
Diln Fac:	1.000	Analyzed:	08/21/13
Batch#:	201945		

Type: BS Lab ID: QC702920

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	100.1	100	80-120
Arsenic	50.00	51.05	102	80-120
Barium	100.0	103.7	104	80-120
Beryllium	2.500	2.543	102	80-120
Cadmium	10.00	10.46	105	80-120
Chromium	100.0	102.0	102	80-120
Cobalt	25.00	25.31	101	80-120
Copper	12.50	11.98	96	80-120
Lead	100.0	99.29	99	80-120
Molybdenum	20.00	20.10	101	80-120
Nickel	25.00	25.77	103	80-120
Selenium	50.00	50.39	101	80-120
Silver	10.00	8.772	88	80-120
Thallium	50.00	50.35	101	80-120
Vanadium	25.00	25.30	101	80-120
Zinc	25.00	25.98	104	80-120

Type: BSD Lab ID: QC702921

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	103.0	103	80-120	3	20
Arsenic	50.00	52.82	106	80-120	3	20
Barium	100.0	103.8	104	80-120	0	20
Beryllium	2.500	2.572	103	80-120	1	20
Cadmium	10.00	10.54	105	80-120	1	20
Chromium	100.0	103.5	104	80-120	2	20
Cobalt	25.00	25.59	102	80-120	1	20
Copper	12.50	12.09	97	80-120	1	20
Lead	100.0	99.95	100	80-120	1	22
Molybdenum	20.00	20.59	103	80-120	2	20
Nickel	25.00	25.88	104	80-120	0	20
Selenium	50.00	51.77	104	80-120	3	20
Silver	10.00	8.859	89	80-120	1	20
Thallium	50.00	51.93	104	80-120	3	20
Vanadium	25.00	25.58	102	80-120	1	20
Zinc	25.00	26.10	104	80-120	0	20

RPD= Relative Percent Difference



## Batch QC Report

California Title 22 Metals			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	IA-13D	Basis:	dry
Type:	Serial Dilution	Batch#:	201945
MSS Lab ID:	248085-001	Chemist:	NT
Lab ID:	QC702924	Sampled:	08/16/13
Matrix:	Miscell.	Received:	08/16/13
Units:	mg/Kg		

Moisture: 49%

Analyte	MSS Result	MSS RL	Result	RL	% Diff	Lim	Diln	Fac	Analyzed
Antimony	20.11	1.032	18.47	5.160	8	10	5.000		08/21/13
Arsenic	42.24	0.5160	39.94	2.580	5	10	5.000		08/21/13
Barium	479.2	0.5160	506.3	2.580	6	10	5.000		08/21/13
Beryllium	0.1734	0.2064	ND	1.032	NC	10	5.000		08/21/13
Cadmium	2.389	0.5160	2.018 J	2.580	16 *	10	5.000		08/21/13
Chromium	112.0	0.5160	118.2	2.580	6	10	5.000		08/21/13
Cobalt	21.11	0.5160	22.30	2.580	6	10	5.000		08/21/13
Copper	3,101	53.51	3,089	267.6	0	10	500.0		08/22/13
Lead	1,702	51.60	1,755	258.0	3	10	500.0		08/22/13
Molybdenum	13.37	0.5160	13.17	2.580	2	10	5.000		08/21/13
Nickel	110.7	0.5160	117.6	2.580	6	10	5.000		08/21/13
Selenium	0.5056	1.032	ND	5.160	NC	10	5.000		08/21/13
Silver	ND	0.5160	ND	2.580	NC	10	5.000		08/21/13
Thallium	ND	1.032	ND	5.160	NC	10	5.000		08/21/13
Vanadium	54.02	0.5160	55.32	2.580	2	10	5.000		08/21/13
Zinc	3,966	206.4	3,962	1,032	0	10	500.0		08/22/13

\*= Value outside of QC limits; see narrative

J= Estimated value

NC= Not Calculated

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

California Title 22 Metals			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3050B
Project#:	20074.063.095.1340	Analysis:	EPA 6010B
Field ID:	IA-13D	Basis:	dry
Type:	Post Digest Spike	Batch#:	201945
MSS Lab ID:	248085-001	Chemist:	NT
Lab ID:	QC702925	Sampled:	08/16/13
Matrix:	Miscell.	Received:	08/16/13
Units:	mg/Kg		

Moisture: 49%

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln	Fac	Analyzed
Antimony	20.11	206.4	235.9	105	75-125	1.000		08/21/13
Arsenic	42.24	103.2	153.2	108	75-125	1.000		08/21/13
Barium	479.2	206.4	675.5	95	75-125	1.000		08/21/13
Beryllium	0.1734	5.160	5.605	105	75-125	1.000		08/21/13
Cadmium	2.389	20.64	23.09	100	75-125	1.000		08/21/13
Chromium	112.0	206.4	315.8	99	75-125	1.000		08/21/13
Cobalt	21.11	51.60	71.54	98	75-125	1.000		08/21/13
Copper	3,101	2,580	5,690	100	75-125	100.0		08/22/13
Lead	1,702	20,640	22,400	100	75-125	100.0		08/22/13
Molybdenum	13.37	41.28	54.89	101	75-125	1.000		08/21/13
Nickel	110.7	51.60	160.3	96	75-125	1.000		08/21/13
Selenium	0.5056	103.2	108.5	105	75-125	1.000		08/21/13
Silver	<0.1543	20.64	14.00	68 *	75-125	1.000		08/21/13
Thallium	<0.3365	103.2	92.20	89	75-125	1.000		08/21/13
Vanadium	54.02	51.60	105.7	100	75-125	1.000		08/21/13
Zinc	3,966	5,160	9,415	106	75-125	100.0		08/22/13

\*= Value outside of QC limits; see narrative

REPORTING SUMMARY FOR 248085 METALS Miscell.  
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	S B	A S	B A	B E	C D	C R	C O	C U	P B	H G	M O	N I	S E	A G	T L	V	Z N	
248085-001	MET14	08/20/13	12:29	1.0																	
248085-001	MET14	08/20/13	12:51	100.0									+								
248085-001	MET08	08/21/13	17:04	1.0	+	+	+	+	+	+				+	+	+	+	+	+		
248085-001	MET08	08/22/13	08:54	100.0							+	+									+
248085-002	MET14	08/20/13	12:36	1.0										+							
248085-002	MET08	08/21/13	18:18	1.0	+	+	+	+	+	+	+				+	+	+	+	+	+	
248085-002	MET08	08/22/13	09:24	100.0								+									+
248085-003	MET14	08/20/13	12:38	1.0										+							
248085-003	MET08	08/21/13	18:24	1.0		+	+	+	+	+	+	+			+		+	+	+	+	
248085-003	MET08	08/22/13	09:20	1.0	+											+					
248085-003	MET08	08/22/13	09:28	100.0											+						
QC702756	MET14	08/20/13	11:27	1.0										+							
QC702757	MET14	08/20/13	11:30	1.0										+							
QC702758	MET14	08/20/13	11:32	1.0										+							
QC702759	MET14	08/20/13	11:37	1.0										+							
QC702760	MET14	08/20/13	11:39	1.0										+							
QC702761	MET14	08/20/13	12:22	5.0										+							
QC702919	MET08	08/21/13	16:40	1.0	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+
QC702920	MET08	08/21/13	16:55	1.0	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+
QC702921	MET08	08/21/13	16:59	1.0	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+
QC702922	MET08	08/21/13	17:09	1.0	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+
QC702922	MET08	08/26/13	12:27	1.0																	
QC702923	MET08	08/21/13	17:14	1.0	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+
QC702923	MET08	08/26/13	12:33	1.0																	
QC702924	MET08	08/21/13	17:20	5.0	+	+	+	+	+	+					+	+	+	+	+	+	
QC702924	MET08	08/22/13	08:58	500.0								+	+								+
QC702925	MET08	08/21/13	17:24	1.0	+	+	+	+	+	+					+	+	+	+	+	+	
QC702925	MET08	08/22/13	09:02	100.0							+	+									+

ICP Data

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83335936

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/21/13 06:56  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met08_sn_6010	ICALBLK				08/21/13 06:56	1.0		
002	met08_sn_6010	ICAL	CRI5.1			08/21/13 07:01	1.0	1	
003	met08_sn_6010	ICAL	CS100			08/21/13 07:06	1.0	2	
004	met08_sn_6010	ICAL	CS1K			08/21/13 07:10	1.0	3	
005	met08_sn_6010	ICAL	CS10K			08/21/13 07:15	1.0	4	
006	met08_sn_6010	ICAL	CS100K			08/21/13 07:20	1.0	5	
007	met08_sn_6010	ICV				08/21/13 07:25	1.0	6	
008	met08_sn_6010	ICB				08/21/13 07:31	1.0		
009	met08_sn_6010	ICSA				08/21/13 07:36	1.0	7	10:AL=510000
010	met08_sn_6010	ICSAB				08/21/13 07:48	1.0	8	5:AL=500000
011	met08_sn_6010	XCRI				08/21/13 07:53	1.0	9	
012	met08_sn_6010	CRI				08/21/13 07:57	1.0	9	
013	met08_sn_6010	BLANK	QC702684	Miscell.	201889	08/21/13 08:04	1.0		
014	met08_sn_6010	SAMPLE	248123-001	Soil	201889	08/21/13 08:09	1.0		5:FE=380000
015	met08_sn_6010	SAMPLE	248124-001	Soil	201889	08/21/13 08:13	1.0		4:CA=1400000
016	met08_sn_6010	SAMPLE	248124-001	Soil	201889	08/21/13 08:16	1.0		4:CA=1400000
017	met08_sn_6010	SAMPLE	247844-019	Soil	201759	08/21/13 08:19	100.0		
018	met08_sn_6010	SAMPLE	247844-020	Soil	201759	08/21/13 08:23	1.0		4:CA=680000
019	met08_sn_6010	CCV				08/21/13 08:27	1.0	10	
020	met08_sn_6010	CCB				08/21/13 08:32	1.0		
021	met08_sn_6010	ICSAB				08/21/13 08:37	1.0	8	5:AL=500000
022	met08_sn_6010	BLANK	QC702461	Filtrate	201837	08/21/13 08:49	1.0		
023	met08_sn_6010	BS	QC702462	Filtrate	201837	08/21/13 08:54	1.0		
024	met08_sn_6010	BSD	QC702463	Filtrate	201837	08/21/13 08:58	1.0		
025	met08_sn_6010	MSS	247818-001	Filtrate	201837	08/21/13 09:02	1.0		3:CA=200000
026	met08_sn_6010	MS	QC702464	Filtrate	201837	08/21/13 09:07	1.0		
027	met08_sn_6010	MSD	QC702465	Filtrate	201837	08/21/13 09:11	1.0		
028	met08_sn_6010	SER	QC702466	Filtrate	201837	08/21/13 09:16	5.0		
029	met08_sn_6010	PDS	QC702467	Filtrate	201837	08/21/13 09:21	1.0	11 12	
030	met08_sn_6010	SAMPLE	247818-002	Filtrate	201837	08/21/13 09:25	1.0		3:CA=280000
031	met08_sn_6010	SAMPLE	247818-003	Filtrate	201837	08/21/13 09:30	1.0		2:CA=240000
032	met08_sn_6010	CCV				08/21/13 09:35	1.0	10	
033	met08_sn_6010	CCB				08/21/13 09:41	1.0		
034	met08_sn_6010	SAMPLE	247818-005	Filtrate	201837	08/21/13 09:46	1.0		3:NA=320000
035	met08_sn_6010	SAMPLE	247818-006	Filtrate	201837	08/21/13 09:51	1.0		2:NA=190000
036	met08_sn_6010	SAMPLE	247818-007	Filtrate	201837	08/21/13 09:56	1.0		2:NA=430000
037	met08_sn_6010	SAMPLE	247818-008	Filtrate	201837	08/21/13 10:02	1.0		2:CA=210000
038	met08_sn_6010	SAMPLE	247818-009	Filtrate	201837	08/21/13 10:07	1.0		2:NA=270000
039	met08_sn_6010	SAMPLE	247818-010	Filtrate	201837	08/21/13 10:12	1.0		2:NA=400000
040	met08_sn_6010	SAMPLE	247818-011	Filtrate	201837	08/21/13 10:17	1.0		3:NA=450000
041	met08_sn_6010	SAMPLE	247818-012	Filtrate	201837	08/21/13 10:22	1.0		2:CA=280000
042	met08_sn_6010	SAMPLE	247818-013	Filtrate	201837	08/21/13 10:30	1.0		3:CA=430000
043	met08_sn_6010	SAMPLE	247818-021	Filtrate	201837	08/21/13 10:35	1.0		2:NA=200000
044	met08_sn_6010	ICSAB				08/21/13 10:40	1.0	8	5:AL=510000
045	met08_sn_6010	CCV				08/21/13 10:45	1.0	10	
046	met08_sn_6010	CCB				08/21/13 10:51	1.0		
047	met08_sn_6010	SAMPLE	247818-022	Filtrate	201837	08/21/13 10:56	1.0		3:CA=430000
048	met08_sn_6010	SAMPLE	247889-001	Filtrate	201837	08/21/13 11:01	1.0		
049	met08_sn_6010	SAMPLE	247889-002	Filtrate	201837	08/21/13 11:05	1.0		
050	met08_sn_6010	SAMPLE	247889-003	Filtrate	201837	08/21/13 11:10	1.0		
051	met08_sn_6010	BLANK	QC702197	Soil	201779	08/21/13 11:14	1.0		
052	met08_sn_6010	BS	QC702198	Soil	201779	08/21/13 11:19	1.0		

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83335936

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/21/13 06:56  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
053	met08_sn_6010	BSD	QC702199	Soil	201779	08/21/13 11:23	1.0	
054	met08_sn_6010	MSS	247890-002	Soil	201779	08/21/13 11:27	1.0	4:FE=550000
055	met08_sn_6010	MS	QC702200	Soil	201779	08/21/13 11:31	1.0	
056	met08_sn_6010	MSD	QC702201	Soil	201779	08/21/13 11:34	1.0	
057	met08_sn_6010	CCV				08/21/13 11:37	1.0	10
058	met08_sn_6010	CCB				08/21/13 11:43	1.0	
059	met08_sn_6010	SAMPLE	247882-005	Soil	201779	08/21/13 11:48	1.0	3:CA=710000
060	met08_sn_6010	SAMPLE	247890-001	Soil	201779	08/21/13 11:51	1.0	3:FE=530000
061	met08_sn_6010	SAMPLE	247890-003	Soil	201779	08/21/13 11:55	1.0	3:FE=390000
062	met08_sn_6010	SAMPLE	247890-005	Soil	201779	08/21/13 11:58	1.0	4:FE=550000
063	met08_sn_6010	SAMPLE	247890-006	Soil	201779	08/21/13 12:01	1.0	3:FE=520000
064	met08_sn_6010	SAMPLE	247890-007	Soil	201779	08/21/13 12:07	1.0	4:FE=520000
065	met08_sn_6010	SAMPLE	247890-005	Soil	201779	08/21/13 12:10	1.0	4:FE=550000
066	met08_sn_6010	SAMPLE	247890-009	Soil	201779	08/21/13 12:14	1.0	6:FE=430000
067	met08_sn_6010	SAMPLE	247890-010	Soil	201779	08/21/13 12:17	1.0	3:FE=430000
068	met08_sn_6010	SAMPLE	247890-011	Soil	201779	08/21/13 12:20	1.0	4:FE=610000
069	met08_sn_6010	ICSAB				08/21/13 12:24	1.0	8 5:AL=500000
070	met08_sn_6010	CCV				08/21/13 12:29	1.0	10
071	met08_sn_6010	CCB				08/21/13 12:34	1.0	
072	met08_sn_6010	SAMPLE	247890-013	Soil	201779	08/21/13 12:40	1.0	3:FE=510000
073	met08_sn_6010	SAMPLE	247890-014	Soil	201779	08/21/13 12:43	1.0	3:FE=460000
074	met08_sn_6010	SAMPLE	247890-015	Soil	201779	08/21/13 12:46	1.0	3:FE=420000
075	met08_sn_6010	SAMPLE	247890-017	Soil	201779	08/21/13 12:49	1.0	4:FE=500000
076	met08_sn_6010	SAMPLE	247890-018	Soil	201779	08/21/13 12:53	1.0	3:FE=540000
077	met08_sn_6010	SAMPLE	247890-019	Soil	201779	08/21/13 12:56	1.0	3:FE=470000
078	met08_sn_6010	SAMPLE	247890-020	Soil	201779	08/21/13 12:59	1.0	5:FE=460000
079	met08_sn_6010	SAMPLE	247890-021	Soil	201779	08/21/13 13:05	1.0	4:FE=530000
080	met08_sn_6010	SAMPLE	247890-022	Soil	201779	08/21/13 13:08	1.0	4:FE=520000
081	met08_sn_6010	MSS	247926-004	Water	201838	08/21/13 13:12	100.0	
082	met08_sn_6010	CCV				08/21/13 13:16	1.0	10
083	met08_sn_6010	CCB				08/21/13 13:21	1.0	
084	met08_sn_6010	SAMPLE	247902-001	Water	201838	08/21/13 13:26	1.0	1:NA=130000
085	met08_sn_6010	SAMPLE	247902-002	Water	201838	08/21/13 13:30	1.0	3:CA=370000
086	met08_sn_6010	SAMPLE	247904-002	Water	201838	08/21/13 13:35	10.0	
087	met08_sn_6010	SAMPLE	247907-001	Water	201838	08/21/13 13:40	1.0	
088	met08_sn_6010	SAMPLE	247907-001	Water	201838	08/21/13 13:45	10.0	
089	met08_sn_6010	SAMPLE	247918-001	Water	201838	08/21/13 13:50	10.0	
090	met08_sn_6010	SAMPLE	247926-002	Water	201838	08/21/13 13:55	1.0	1:NA=190000
091	met08_sn_6010	SAMPLE	247926-003	Water	201838	08/21/13 13:59	1.0	
092	met08_sn_6010	SAMPLE	247926-005	Water	201838	08/21/13 14:04	1.0	1:NA=180000
093	met08_sn_6010	SAMPLE	247926-007	Water	201838	08/21/13 14:10	1.0	
094	met08_sn_6010	ICSAB				08/21/13 14:15	1.0	8 5:AL=500000
095	met08_sn_6010	CCV				08/21/13 14:20	1.0	10
096	met08_sn_6010	CCB				08/21/13 14:26	1.0	
097	met08_sn_6010	SAMPLE	247932-001	Water	201838	08/21/13 14:31	1.0	1:NA=130000
098	met08_sn_6010	SAMPLE	247986-001	Water	201838	08/21/13 14:35	1.0	1:NA=140000
099	met08_sn_6010	SAMPLE	247988-001	Water	201838	08/21/13 14:39	1.0	
100	met08_sn_6010	BLANK	QC702522	Soil	201848	08/21/13 14:43	1.0	
101	met08_sn_6010	BS	QC702523	Soil	201848	08/21/13 14:48	1.0	
102	met08_sn_6010	BSD	QC702524	Soil	201848	08/21/13 14:53	1.0	
103	met08_sn_6010	MSS	247927-001	Soil	201848	08/21/13 14:57	1.0	3:FE=250000
104	met08_sn_6010	MS	QC702525	Soil	201848	08/21/13 15:00	1.0	1:FE=280000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83335936

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/21/13 06:56  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	met08_sn_6010	MSD	QC702526	Soil	201848	08/21/13 15:03	1.0		
106	met08_sn_6010	SER	QC702527	Soil	201848	08/21/13 15:06	5.0		
107	met08_sn_6010	CCV				08/21/13 15:11	1.0	10	
108	met08_sn_6010	CCB				08/21/13 15:16	1.0		
109	met08_sn_6010	PDS	QC702528	Soil	201848	08/21/13 15:21	1.0	13 14	1:FE=270000
110	met08_sn_6010	SAMPLE	247919-001	Soil	201848	08/21/13 15:24	1.0		3:FE=480000
111	met08_sn_6010	SAMPLE	247919-002	Soil	201848	08/21/13 15:27	1.0		3:FE=540000
112	met08_sn_6010	SAMPLE	247919-003	Soil	201848	08/21/13 15:31	1.0		3:FE=530000
113	met08_sn_6010	SAMPLE	247919-005	Soil	201848	08/21/13 15:34	1.0		3:FE=510000
114	met08_sn_6010	SAMPLE	247919-006	Soil	201848	08/21/13 15:37	1.0		3:FE=470000
115	met08_sn_6010	SAMPLE	247919-007	Soil	201848	08/21/13 15:41	1.0		3:FE=430000
116	met08_sn_6010	SAMPLE	247919-009	Soil	201848	08/21/13 15:44	1.0		4:FE=580000
117	met08_sn_6010	SAMPLE	247919-010	Soil	201848	08/21/13 15:47	1.0		3:FE=520000
118	met08_sn_6010	SAMPLE	247919-011	Soil	201848	08/21/13 15:51	1.0		3:FE=570000
119	met08_sn_6010	ICSAB				08/21/13 15:54	1.0	8	5:AL=510000
120	met08_sn_6010	CCV				08/21/13 15:59	1.0	10	
121	met08_sn_6010	CCB				08/21/13 16:05	1.0		
122	met08_sn_6010	SAMPLE	247919-013	Soil	201848	08/21/13 16:10	1.0		4:FE=580000
123	met08_sn_6010	SAMPLE	247919-014	Soil	201848	08/21/13 16:13	1.0		3:FE=490000
124	met08_sn_6010	SAMPLE	247919-015	Soil	201848	08/21/13 16:17	1.0		3:FE=530000
125	met08_sn_6010	SAMPLE	247927-002	Soil	201848	08/21/13 16:20	1.0		2:FE=320000
126	met08_sn_6010	SAMPLE	247927-003	Soil	201848	08/21/13 16:23	1.0		2:FE=170000
127	met08_sn_6010	SAMPLE	247927-004	Soil	201848	08/21/13 16:26	1.0		1:FE=180000
128	met08_sn_6010	SAMPLE	247930-001	Soil	201848	08/21/13 16:30	1.0		1:FE=140000
129	met08_sn_6010	SAMPLE	247940-001	Soil	201848	08/21/13 16:34	1.0		5:CA=460000
130	met08_sn_6010	SAMPLE	247940-002	Soil	201848	08/21/13 16:37	1.0		3:FE=460000
131	met08_sn_6010	BLANK	QC702919	Soil	201945	08/21/13 16:40	1.0		
132	met08_sn_6010	CCV				08/21/13 16:45	1.0	10	
133	met08_sn_6010	CCB				08/21/13 16:50	1.0		
134	met08_sn_6010	BS	QC702920	Soil	201945	08/21/13 16:55	1.0		
135	met08_sn_6010	BSD	QC702921	Soil	201945	08/21/13 16:59	1.0		
136	met08_sn_6010	MSS	248085-001	Miscell.	201945	08/21/13 17:04	1.0		8:FE=650000
137	met08_sn_6010	MS	QC702922	Miscell.	201945	08/21/13 17:09	1.0		8:FE=750000
138	met08_sn_6010	MSD	QC702923	Miscell.	201945	08/21/13 17:14	1.0		9:FE=2100000
139	met08_sn_6010	SER	QC702924	Miscell.	201945	08/21/13 17:20	5.0		
140	met08_sn_6010	PDS	QC702925	Miscell.	201945	08/21/13 17:24	1.0	13 14	
141	met08_sn_6010	SAMPLE	248143-001	Soil	201945	08/21/13 17:30	1.0		2:FE=240000
142	met08_sn_6010	SAMPLE	248164-001	Soil	201945	08/21/13 17:33	1.0		3:FE=1200000
143	met08_sn_6010	SAMPLE	248164-002	Soil	201945	08/21/13 17:38	1.0		5:FE=3600000
144	met08_sn_6010	ICSAB				08/21/13 17:44	1.0	8	5:MG=520000
145	met08_sn_6010	CCV				08/21/13 17:49	1.0	10	
146	met08_sn_6010	CCB				08/21/13 17:55	1.0		
147	met08_sn_6010	SAMPLE	248050-013	Soil	201945	08/21/13 18:00	1.0		5:FE=350000
148	met08_sn_6010	SAMPLE	248050-014	Soil	201945	08/21/13 18:03	1.0		3:CA=470000
149	met08_sn_6010	SAMPLE	248050-015	Soil	201945	08/21/13 18:07	1.0		5:CA=330000
150	met08_sn_6010	SAMPLE	248084-002	Soil	201945	08/21/13 18:12	1.0		4:FE=280000
151	met08_sn_6010	SAMPLE	248084-003	Soil	201945	08/21/13 18:15	1.0		4:FE=260000
152	met08_sn_6010	SAMPLE	248085-002	Miscell.	201945	08/21/13 18:18	1.0		6:CA=530000
153	met08_sn_6010	SAMPLE	248085-003	Miscell.	201945	08/21/13 18:24	1.0		7:MG=1900000
154	met08_sn_6010	SAMPLE	248097-001	Soil	201945	08/21/13 18:27	1.0		1:FE=180000
155	met08_sn_6010	SAMPLE	248097-002	Soil	201945	08/21/13 18:30	1.0		1:FE=190000
156	met08_sn_6010	SAMPLE	248097-003	Soil	201945	08/21/13 18:34	1.0		2:FE=200000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83335936

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/21/13 06:56  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
157	met08_sn_6010	CCV				08/21/13 18:37	1.0	10	
158	met08_sn_6010	CCB				08/21/13 18:42	1.0		
159	met08_sn_6010	SAMPLE	248097-004	Soil	201945	08/21/13 18:47	1.0		1:FE=170000
160	met08_sn_6010	SAMPLE	248097-005	Soil	201945	08/21/13 18:51	1.0		1:FE=200000
161	met08_sn_6010	SAMPLE	248097-006	Soil	201945	08/21/13 18:54	1.0		1:FE=170000
162	met08_sn_6010	SAMPLE	248097-007	Soil	201945	08/21/13 18:57	1.0		2:FE=300000
163	met08_sn_6010	SAMPLE	248097-008	Soil	201945	08/21/13 19:00	1.0		4:FE=370000
164	met08_sn_6010	SAMPLE	248149-005	Soil	201945	08/21/13 19:04	1.0		4:FE=410000
165	met08_sn_6010	SAMPLE	247890-007	Soil	201779	08/21/13 19:07	1.0		4:FE=530000
166	met08_sn_6010	SAMPLE	247890-009	Soil	201779	08/21/13 19:10	1.0		6:FE=450000
167	met08_sn_6010	SAMPLE	247890-011	Soil	201779	08/21/13 19:14	1.0		4:FE=630000
168	met08_sn_6010	CCV				08/21/13 19:17	1.0	10	
169	met08_sn_6010	CCB				08/21/13 19:22	1.0		
170	met08_sn_6010	ICSAB				08/21/13 19:28	1.0	8	5:MG=520000

NT 08/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 170.

Standards used: 1=S22714 2=S22716 3=S22715 4=S22717 5=S22718 6=S22721 7=S22719 8=S22720 9=S22723 10=S22722 11=S21652  
 12=S21653 13=S22594 14=S22595

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83335936

Date : 08/21/13  
 Sequence : MET08 08/21/13

Reference : met08\_sn\_6010  
 Analyzed : 08/21/13 07:01

#	Type	Sample ID	Y A
		ICAL STD	3273602
		LOWER LIMIT	982080
		UPPER LIMIT	6547203
008	ICB		3353157
009	ICSA		2762975
010	ICSAB		2748355
013	BLANK	QC702684	3380966
014	SAMPLE	248123-001	3130082
015	SAMPLE	248124-001	2808002
016	SAMPLE	248124-001	2804702
017	SAMPLE	247844-019	3386048
018	SAMPLE	247844-020	3023055
019	CCV		3182097
020	CCB		3310870
021	ICSAB		2750239
022	BLANK	QC702461	3440427
023	BS	QC702462	3284831
024	BSD	QC702463	3259852
025	MSS	247818-001	3010051
026	MS	QC702464	2976244
027	MSD	QC702465	3015613
028	SER	QC702466	3182233
029	PDS	QC702467	3006167
030	SAMPLE	247818-002	3066940
031	SAMPLE	247818-003	3028964
032	CCV		3144962
033	CCB		3306370
034	SAMPLE	247818-005	2999791
035	SAMPLE	247818-006	3129523
036	SAMPLE	247818-007	2936727
037	SAMPLE	247818-008	3009283
038	SAMPLE	247818-009	2996069
039	SAMPLE	247818-010	2967534
040	SAMPLE	247818-011	2931504
041	SAMPLE	247818-012	2901179
042	SAMPLE	247818-013	2994601
043	SAMPLE	247818-021	3069426
044	ICSAB		2727568
045	CCV		3201555
046	CCB		3324100
047	SAMPLE	247818-022	3029883
048	SAMPLE	247889-001	3158735
049	SAMPLE	247889-002	3141308
050	SAMPLE	247889-003	3149930
051	BLANK	QC702197	3351177
052	BS	QC702198	3159472
053	BSD	QC702199	3171836
054	MSS	247890-002	3122791
055	MS	QC702200	3157614
056	MSD	QC702201	3165656
057	CCV		3166978

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83335936

Date : 08/21/13  
 Sequence : MET08 08/21/13

Reference : met08\_sn\_6010  
 Analyzed : 08/21/13 07:01

#	Type	Sample ID	Y A
058	CCB		3345940
059	SAMPLE	247882-005	3000286
060	SAMPLE	247890-001	3251631
061	SAMPLE	247890-003	3198074
062	SAMPLE	247890-005	3195509
063	SAMPLE	247890-006	3259273
064	SAMPLE	247890-007	3083723
065	SAMPLE	247890-005	3216303
066	SAMPLE	247890-009	3225404
067	SAMPLE	247890-010	3163364
068	SAMPLE	247890-011	3205499
069	ICSAB		2728612
070	CCV		3170549
071	CCB		3274023
072	SAMPLE	247890-013	3244835
073	SAMPLE	247890-014	3169921
074	SAMPLE	247890-015	3158986
075	SAMPLE	247890-017	3219749
076	SAMPLE	247890-018	3190425
077	SAMPLE	247890-019	3145044
078	SAMPLE	247890-020	3209135
079	SAMPLE	247890-021	3101407
080	SAMPLE	247890-022	3093505
081	MSS	247926-004	3232561
082	CCV		3114206
083	CCB		3255497
084	SAMPLE	247902-001	3074121
085	SAMPLE	247902-002	2905001
087	SAMPLE	247907-001	3111350
088	SAMPLE	247907-001	3222685
090	SAMPLE	247926-002	3002808
091	SAMPLE	247926-003	3194323
092	SAMPLE	247926-005	3084389
093	SAMPLE	247926-007	3257583
094	ICSAB		2728415
095	CCV		3145389
096	CCB		3301620
097	SAMPLE	247932-001	3154551
098	SAMPLE	247986-001	3099518
099	SAMPLE	247988-001	3116622
100	BLANK	QC702522	3365384
101	BS	QC702523	3190531
102	BSD	QC702524	3219975
103	MSS	247927-001	3125644
104	MS	QC702525	3107885
105	MSD	QC702526	3101924
106	SER	QC702527	3218321
107	CCV		3106755
108	CCB		3262592
109	PDS	QC702528	3057406
110	SAMPLE	247919-001	3186706
111	SAMPLE	247919-002	3218363

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83335936

Date : 08/21/13  
 Sequence : MET08 08/21/13

Reference : met08\_sn\_6010  
 Analyzed : 08/21/13 07:01

#	Type	Sample ID	Y A
112	SAMPLE	247919-003	3240211
113	SAMPLE	247919-005	3156134
114	SAMPLE	247919-006	3199291
115	SAMPLE	247919-007	3151786
116	SAMPLE	247919-009	3126896
117	SAMPLE	247919-010	3214926
118	SAMPLE	247919-011	3197117
119	ICSAB		2683220
120	CCV		3100029
121	CCB		3286567
122	SAMPLE	247919-013	3068779
123	SAMPLE	247919-014	3132658
124	SAMPLE	247919-015	3207802
125	SAMPLE	247927-002	3121674
126	SAMPLE	247927-003	3123694
127	SAMPLE	247927-004	3166365
128	SAMPLE	247930-001	3155883
129	SAMPLE	247940-001	3068661
130	SAMPLE	247940-002	3074648
131	BLANK	QC702919	3336412
132	CCV		3131407
133	CCB		3237681
134	BS	QC702920	3152608
135	BSD	QC702921	3091881
136	MSS	248085-001	2887653
137	MS	QC702922	2874073
138	MSD	QC702923	2733351
139	SER	QC702924	3097759
140	PDS	QC702925	2882736
141	SAMPLE	248143-001	3088360
142	SAMPLE	248164-001	3009907
143	SAMPLE	248164-002	2443888
144	ICSAB		2633719
145	CCV		3046259
146	CCB		3220678
147	SAMPLE	248050-013	2968228
148	SAMPLE	248050-014	2962487
149	SAMPLE	248050-015	3027845
150	SAMPLE	248084-002	2963759
151	SAMPLE	248084-003	2973756
152	SAMPLE	248085-002	2833126
153	SAMPLE	248085-003	2647086
154	SAMPLE	248097-001	3113757
155	SAMPLE	248097-002	3089437
156	SAMPLE	248097-003	3070996
157	CCV		3040947
158	CCB		3224240
159	SAMPLE	248097-004	3063132
160	SAMPLE	248097-005	3085698
161	SAMPLE	248097-006	3061056
162	SAMPLE	248097-007	3044558
163	SAMPLE	248097-008	3006951

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83335936

Date : 08/21/13  
 Sequence : MET08 08/21/13

Reference : met08\_sn\_6010  
 Analyzed : 08/21/13 07:01

#	Type	Sample ID	Y A
164	SAMPLE	248149-005	3042805
165	SAMPLE	247890-007	3058887
166	SAMPLE	247890-009	3113244
167	SAMPLE	247890-011	3098831
168	CCV		3033653
169	CCB		3202772
170	ICSAB		2619964

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 METALS Miscell.: EPA 6010B

Inst : MET08  
 Calnum : 83335936001  
 Units : ug/L  
 Date : 21-AUG-2013 06:56  
 X Axis : R  
 Reviewer : ---

Level	File	Seqnum	Sample ID	Analyzed	Std
L1	met08_sn_6010_83335936002	CR15.1	21-AUG-2013 07:01	S22714	
L2	met08_sn_6010_83335936003	CS100	21-AUG-2013 07:06	S22716	
L3	met08_sn_6010_83335936004	CS1K	21-AUG-2013 07:10	S22715	
L4	met08_sn_6010_83335936005	CS10K	21-AUG-2013 07:15	S22717	
L5	met08_sn_6010_83335936006	CS100K	21-AUG-2013 07:20	S22718	

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	35.990	37.188	37.703	38.057		LOR0	0.00000	0.02628		37.235	1.000	0.995	
Arsenic	A	13.860	21.519	22.011	22.172		LOR0	0.00000	0.04511		19.890	1.000	0.995	
Barium	A	371.72	468.08	472.36	460.30		LOR0	0.00000	0.00217		443.11	1.000	0.995	
Beryllium	A	2436.2	5386.1	5471.0			LOR0	0.00000	1.83E-4		4431.1	1.000	0.995	
Cadmium	A	207.32	261.75	267.32	257.53		LOR0	0.00000	0.00388		248.48	1.000	0.995	
Chromium	A	91.680	106.58	106.56	105.96		LOR0	0.00000	0.00944		102.69	1.000	0.995	
Cobalt	A	112.72	135.90	143.24	141.65		LOR0	0.00000	0.00706		133.38	1.000	0.995	
Copper	A	100.32	129.39	136.27	138.38		LOR0	0.00000	0.00723		126.09	1.000	0.995	
Lead	A	55.860	65.101	66.177	65.929		LOR0	0.00000	0.01517		63.267	1.000	0.995	
Molybdenum	A	33.560	41.365	41.640	42.016		LOR0	0.00000	0.02380		39.645	1.000	0.995	
Nickel	A	44.160	55.350	57.095	56.614		LOR0	0.00000	0.01766		53.305	1.000	0.995	
Selenium	A	32.560	31.128	31.377	31.913		LOR0	0.00000	0.03134		31.745	1.000	0.995	
Silver	A	782.62	852.87	864.70	872.30		LOR0	0.00000	0.00115		843.12	1.000	0.995	
Thallium	A	20.020	20.778	21.126	20.729		LOR0	0.00000	0.04823		20.663	1.000	0.995	
Vanadium	A	132.30	182.24	183.50	185.35		LOR0	0.00000	0.00540		170.85	1.000	0.995	
Zinc	A	82.340	85.586	85.363	84.430		LOR0	0.00000	0.01184		84.430	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	-5	100.00	-2	1000.0	-1	10000	0		
Arsenic	A	5.0000	<b>-37</b>	100.00	-3	1000.0	-1	10000	0		
Barium	A	5.0000	-19	100.00	2	1000.0	3	10000	0		
Beryllium	A	2.0000	<b>-55</b>	100.00	-2	1000.0	0				
Cadmium	A	5.0000	-20	100.00	2	1000.0	4	10000	0		
Chromium	A	5.0000	-13	100.00	1	1000.0	1	10000	0		
Cobalt	A	5.0000	-20	100.00	-4	1000.0	1	10000	0		
Copper	A	5.0000	<b>-27</b>	100.00	-6	1000.0	-2	10000	0		
Lead	A	5.0000	-15	100.00	-1	1000.0	0	10000	0		
Molybdenum	A	5.0000	-20	100.00	-2	1000.0	-1	10000	0		
Nickel	A	5.0000	<b>-22</b>	100.00	-2	1000.0	1	10000	0		
Selenium	A	10.000	2	100.00	-2	1000.0	-2	10000	0		
Silver	A	5.0000	-10	100.00	-2	1000.0	-1	2000.0	0		
Thallium	A	10.000	-3	100.00	0	1000.0	2	10000	0		
Vanadium	A	5.0000	<b>-29</b>	100.00	-2	1000.0	-1	10000	0		
Zinc	A	20.000	-2	100.00	1	1000.0	1	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 METALS Miscell.  
 EPA 6010B

Inst : MET08  
 Calnum : 83335936001

Cal Date : 21-AUG-2013

ICV 83335936007 (21-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	4946	ug/L	-1	10	
Arsenic	A	5000	4852	ug/L	-3	10	
Barium	A	5000	5005	ug/L	0	10	
Beryllium	A	500.0	506.5	ug/L	1	10	
Cadmium	A	5000	5039	ug/L	1	10	
Chromium	A	5000	5002	ug/L	0	10	
Cobalt	A	5000	4971	ug/L	-1	10	
Copper	A	5000	4762	ug/L	-5	10	
Lead	A	5000	4871	ug/L	-3	10	
Molybdenum	A	5000	5064	ug/L	1	10	
Nickel	A	5000	4991	ug/L	0	10	
Selenium	A	5000	4905	ug/L	-2	10	
Silver	A	1000	980.1	ug/L	-2	10	
Thallium	A	5000	4905	ug/L	-2	10	
Vanadium	A	5000	4962	ug/L	-1	10	
Zinc	A	5000	4956	ug/L	-1	10	

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
 Seqnum : 83335936009 File : met08\_sn\_6010  
 Cal : 83335936001 Caldate : 21-AUG-2013  
 Standards: S22719 IDF : 1.0 Time : 21-AUG-2013 07:36

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[-3.097]	10.00	ug/L	
Arsenic	A	[-1.904]	5.000	ug/L	!a-
Barium	A	[-0.8076]	5.000	ug/L	!a-
Beryllium	A	[-1.100]	2.000	ug/L	!a-
Cadmium	A	[-2.907]	5.000	ug/L	!a-
Cobalt	A	[-1.497]	5.000	ug/L	!a-
Lead	A	[-1.247]	5.000	ug/L	
Molybdenum	A	[-1.929]	5.000	ug/L	!a-
Selenium	A	[-1.311]	10.00	ug/L	
Silver	A	[1.174]	5.000	ug/L	!a+
Thallium	A	[-8.034]	10.00	ug/L	!a-
Zinc	A	[4.801]	20.00	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19310	ug/L	97
Copper	A	20000	20220	ug/L	101
Manganese	A	20000	18560	ug/L	93
Nickel	A	20000	17880	ug/L	89
Vanadium	A	20000	19660	ug/L	98
Aluminum	R	500000	508600	ug/L	102
Calcium	R	500000	490400	ug/L	98
Iron	R	200000	193200	ug/L	97
Magnesium	R	500000	502100	ug/L	100
Titanium	R	20000	20980	ug/L	105

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	2762975	-15.60

!=warning +=high bias -=low bias a=ICSA

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
 Seqnum : 83335936119  
 Cal : 83335936001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 21-AUG-2013  
 IDF : 1.0  
 Time : 21-AUG-2013 15:54

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	510.0	ug/L	2	20	
Arsenic	A	500.0	501.0	ug/L	0	20	
Barium	A	500.0	524.1	ug/L	5	20	
Beryllium	A	500.0	516.9	ug/L	3	20	
Cadmium	A	1000	995.8	ug/L	0	20	
Chromium	A	500.0	503.4	ug/L	1	20	
Cobalt	A	500.0	458.4	ug/L	-8	20	
Copper	A	500.0	523.4	ug/L	5	20	
Lead	A	1000	928.8	ug/L	-7	20	
Molybdenum	A	500.0	498.1	ug/L	0	20	
Nickel	A	1000	929.7	ug/L	-7	20	
Selenium	A	500.0	492.8	ug/L	-1	20	
Silver	A	1000	1073	ug/L	7	20	
Thallium	A	500.0	429.3	ug/L	-14	20	
Vanadium	A	500.0	528.2	ug/L	6	20	
Zinc	A	1000	970.1	ug/L	-3	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	2683220	-18.03

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83335936120 File : met08\_sn\_6010 Time : 21-AUG-2013 15:59  
 Cal : 83335936001 Caldate : 21-AUG-2013  
 Standards: S22722

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.235	38.950	5000	5118	ug/L	2	10	
Arsenic	A	19.890	22.412	5000	5055	ug/L	1	10	
Barium	A	443.11	470.29	5000	5107	ug/L	2	10	
Beryllium	A	4431.1	5649.1	500.0	516.4	ug/L	3	10	
Cadmium	A	248.48	266.62	5000	5174	ug/L	3	10	
Chromium	A	102.69	107.80	5000	5087	ug/L	2	10	
Cobalt	A	133.38	144.05	5000	5074	ug/L	1	10	
Copper	A	126.09	133.63	5000	4829	ug/L	-3	10	
Lead	A	63.267	65.365	5000	4957	ug/L	-1	10	
Molybdenum	A	39.645	43.264	5000	5149	ug/L	3	10	
Nickel	A	53.305	57.645	5000	5091	ug/L	2	10	
Selenium	A	31.745	32.483	5000	5090	ug/L	2	10	
Silver	A	843.12	860.79	1000	988.6	ug/L	-1	10	
Thallium	A	20.663	21.088	5000	5086	ug/L	2	10	
Vanadium	A	170.85	187.11	5000	5048	ug/L	1	10	
Zinc	A	84.430	85.817	5000	5082	ug/L	2	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	3100029	-5.30

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83335936121 File : met08\_sn\_6010 Time : 21-AUG-2013 16:05  
 Cal : 83335936001 Caldate : 21-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	3286567	0.40

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83335936132 File : met08\_sn\_6010 Time : 21-AUG-2013 16:45  
 Cal : 83335936001 Caldate : 21-AUG-2013  
 Standards: S22722

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.235	38.843	5000	5104	ug/L	2	10	
Arsenic	A	19.890	22.449	5000	5063	ug/L	1	10	
Barium	A	443.11	470.79	5000	5113	ug/L	2	10	
Beryllium	A	4431.1	5630.2	500.0	514.6	ug/L	3	10	
Cadmium	A	248.48	268.61	5000	5213	ug/L	4	10	
Chromium	A	102.69	108.10	5000	5101	ug/L	2	10	
Cobalt	A	133.38	145.35	5000	5120	ug/L	2	10	
Copper	A	126.09	133.20	5000	4814	ug/L	-4	10	
Lead	A	63.267	65.995	5000	5005	ug/L	0	10	
Molybdenum	A	39.645	43.427	5000	5168	ug/L	3	10	
Nickel	A	53.305	58.193	5000	5139	ug/L	3	10	
Selenium	A	31.745	32.824	5000	5144	ug/L	3	10	
Silver	A	843.12	862.56	1000	990.6	ug/L	-1	10	
Thallium	A	20.663	21.084	5000	5085	ug/L	2	10	
Vanadium	A	170.85	186.55	5000	5033	ug/L	1	10	
Zinc	A	84.430	86.961	5000	5149	ug/L	3	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	3131407	-4.34

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83335936133 File : met08\_sn\_6010 Time : 21-AUG-2013 16:50  
 Cal : 83335936001 Caldate : 21-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	3237681	-1.10

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
 Seqnum : 83335936144  
 Cal : 83335936001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 21-AUG-2013  
 IDF : 1.0  
 Time : 21-AUG-2013 17:44

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	543.0	ug/L	9	20	
Arsenic	A	500.0	508.2	ug/L	2	20	
Barium	A	500.0	540.5	ug/L	8	20	
Beryllium	A	500.0	544.7	ug/L	9	20	
Cadmium	A	1000	1016	ug/L	2	20	
Chromium	A	500.0	521.3	ug/L	4	20	
Cobalt	A	500.0	479.5	ug/L	-4	20	
Copper	A	500.0	517.6	ug/L	4	20	
Lead	A	1000	971.0	ug/L	-3	20	
Molybdenum	A	500.0	516.4	ug/L	3	20	
Nickel	A	1000	962.5	ug/L	-4	20	
Selenium	A	500.0	532.1	ug/L	6	20	
Silver	A	1000	1102	ug/L	10	20	
Thallium	A	500.0	451.7	ug/L	-10	20	
Vanadium	A	500.0	548.6	ug/L	10	20	
Zinc	A	1000	1008	ug/L	1	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	2633719	-19.55

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83335936145 File : met08\_sn\_6010 Time : 21-AUG-2013 17:49  
 Cal : 83335936001 Caldate : 21-AUG-2013  
 Standards: S22722

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.235	39.446	5000	5183	ug/L	4	10	
Arsenic	A	19.890	22.766	5000	5134	ug/L	3	10	
Barium	A	443.11	478.15	5000	5193	ug/L	4	10	
Beryllium	A	4431.1	5814.5	500.0	531.5	ug/L	6	10	
Cadmium	A	248.48	266.95	5000	5181	ug/L	4	10	
Chromium	A	102.69	109.97	5000	5189	ug/L	4	10	
Cobalt	A	133.38	146.67	5000	5166	ug/L	3	10	
Copper	A	126.09	129.20	5000	4669	ug/L	-7	10	
Lead	A	63.267	66.069	5000	5010	ug/L	0	10	
Molybdenum	A	39.645	43.631	5000	5193	ug/L	4	10	
Nickel	A	53.305	58.570	5000	5172	ug/L	3	10	
Selenium	A	31.745	33.265	5000	5213	ug/L	4	10	
Silver	A	843.12	873.76	1000	1003	ug/L	0	10	
Thallium	A	20.663	21.665	5000	5225	ug/L	4	10	
Vanadium	A	170.85	188.41	5000	5083	ug/L	2	10	
Zinc	A	84.430	87.378	5000	5174	ug/L	3	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	3046259	-6.94

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
 Seqnum : 83335936146  
 Cal : 83335936001  
 File : met08\_sn\_6010  
 Caldate : 21-AUG-2013  
 IDF : 1.0  
 Time : 21-AUG-2013 17:55

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[2.468]	5.000	1.694	ug/L	!ib
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	3220678	-1.62

!=warning ib=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
 Seqnum : 83335936157  
 Cal : 83335936001  
 Standards: S22722

IDF : 1.0  
 Time : 21-AUG-2013 18:37

File : met08\_sn\_6010  
 Caldate : 21-AUG-2013

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	37.235	39.669	5000	5212	ug/L	4	10	
Arsenic	A	19.890	22.995	5000	5186	ug/L	4	10	
Barium	A	443.11	482.24	5000	5237	ug/L	5	10	
Beryllium	A	4431.1	5841.7	500.0	534.0	ug/L	7	10	
Cadmium	A	248.48	274.19	5000	5321	ug/L	6	10	
Chromium	A	102.69	110.92	5000	5234	ug/L	5	10	
Cobalt	A	133.38	149.14	5000	5253	ug/L	5	10	
Copper	A	126.09	132.69	5000	4795	ug/L	-4	10	
Lead	A	63.267	67.464	5000	5116	ug/L	2	10	
Molybdenum	A	39.645	44.164	5000	5256	ug/L	5	10	
Nickel	A	53.305	59.444	5000	5250	ug/L	5	10	
Selenium	A	31.745	33.849	5000	5304	ug/L	6	10	
Silver	A	843.12	880.28	1000	1011	ug/L	1	10	
Thallium	A	20.663	21.784	5000	5254	ug/L	5	10	
Vanadium	A	170.85	190.19	5000	5131	ug/L	3	10	
Zinc	A	84.430	89.620	5000	5307	ug/L	6	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	3040947	-7.11

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
 Seqnum : 83335936158  
 Cal : 83335936001  
 File : met08\_sn\_6010  
 Caldate : 21-AUG-2013  
 IDF : 1.0  
 Time : 21-AUG-2013 18:42

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	[1.819]	5.000	1.694	ug/L	!ib
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	3224240	-1.51

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
 Seqnum : 83335936170  
 Cal : 83335936001  
 Standards: S22720  
 File : met08\_sn\_6010  
 Caldate : 21-AUG-2013  
 IDF : 1.0  
 Time : 21-AUG-2013 19:28

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	536.2	ug/L	7	20	
Arsenic	A	500.0	536.2	ug/L	7	20	
Barium	A	500.0	546.8	ug/L	9	20	
Beryllium	A	500.0	550.4	ug/L	10	20	
Cadmium	A	1000	1046	ug/L	5	20	
Chromium	A	500.0	528.8	ug/L	6	20	
Cobalt	A	500.0	494.7	ug/L	-1	20	
Copper	A	500.0	523.4	ug/L	5	20	
Lead	A	1000	994.5	ug/L	-1	20	
Molybdenum	A	500.0	526.3	ug/L	5	20	
Nickel	A	1000	980.3	ug/L	-2	20	
Selenium	A	500.0	522.3	ug/L	4	20	
Silver	A	1000	1116	ug/L	12	20	
Thallium	A	500.0	474.7	ug/L	-5	20	
Vanadium	A	500.0	549.3	ug/L	10	20	
Zinc	A	1000	1033	ug/L	3	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3273602	2619964	-19.97

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83337358

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/22/13 06:38  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	met08_sr_6010	ICALBLK				08/22/13 06:38	1.0		
002	met08_sr_6010	ICAL	CRI5.1			08/22/13 06:43	1.0	1	
003	met08_sr_6010	ICAL	CS100			08/22/13 06:48	1.0	2	
004	met08_sr_6010	ICAL	CS1K			08/22/13 06:52	1.0	3	
005	met08_sr_6010	ICAL	CS10K			08/22/13 06:56	1.0	4	
006	met08_sr_6010	ICAL	CS100K			08/22/13 07:02	1.0	5	
007	met08_sr_6010	ICV				08/22/13 07:07	1.0	6	
008	met08_sr_6010	ICB				08/22/13 07:13	1.0		
009	met08_sr_6010	ICSA				08/22/13 07:18	1.0	7	10:AL=500000
010	met08_sr_6010	ICSAB				08/22/13 07:51	1.0	8	5:AL=500000
011	met08_sr_6010	XCRI				08/22/13 07:57	1.0	9	
012	met08_sr_6010	CRI				08/22/13 08:00	1.0	9	
013	met08_sr_6010	BLANK	QC703030	Water	201974	08/22/13 08:04	1.0		
014	met08_sr_6010	BLANK	QC703030	Water	201974	08/22/13 08:09	1.0		
015	met08_sr_6010	BS	QC703031	Water	201974	08/22/13 08:14	1.0		
016	met08_sr_6010	BSD	QC703032	Water	201974	08/22/13 08:18	1.0		
017	met08_sr_6010	MSS	248113-001	Water	201974	08/22/13 08:23	1.0		
018	met08_sr_6010	MS	QC703033	Water	201974	08/22/13 08:27	1.0		
019	met08_sr_6010	MSD	QC703034	Water	201974	08/22/13 08:31	1.0		
020	met08_sr_6010	SER	QC703035	Water	201974	08/22/13 08:35	5.0		
021	met08_sr_6010	PDS	QC703036	Water	201974	08/22/13 08:39	1.0	10 11	
022	met08_sr_6010	CCV				08/22/13 08:44	1.0	12	
023	met08_sr_6010	CCB				08/22/13 08:49	1.0		
024	met08_sr_6010	MSS	248085-001	Miscell.	201945	08/22/13 08:54	100.0		
025	met08_sr_6010	SER	QC702924	Miscell.	201945	08/22/13 08:58	500.0		
026	met08_sr_6010	PDS	QC702925	Miscell.	201945	08/22/13 09:02	100.0	13 14	
027	met08_sr_6010	SAMPLE	248164-001	Soil	201945	08/22/13 09:07	1.0		3:FE=1200000
028	met08_sr_6010	SAMPLE	248164-001	Soil	201945	08/22/13 09:12	100.0		
029	met08_sr_6010	SAMPLE	248164-002	Soil	201945	08/22/13 09:16	100.0		
030	met08_sr_6010	SAMPLE	248085-003	Miscell.	201945	08/22/13 09:20	1.0		6:MG=1800000
031	met08_sr_6010	SAMPLE	248085-002	Miscell.	201945	08/22/13 09:24	100.0		
032	met08_sr_6010	SAMPLE	248085-003	Miscell.	201945	08/22/13 09:28	100.0		
033	met08_sr_6010	SAMPLE	248097-004	Soil	201945	08/22/13 09:32	1.0		1:FE=160000
034	met08_sr_6010	ICSAB				08/22/13 09:35	1.0	8	5:AL=500000
035	met08_sr_6010	CCV				08/22/13 09:41	1.0	12	
036	met08_sr_6010	CCB				08/22/13 09:46	1.0		
037	met08_sr_6010	BLANK	QC702912	Soil	201944	08/22/13 09:51	1.0		
038	met08_sr_6010	BS	QC702913	Soil	201944	08/22/13 09:56	1.0		
039	met08_sr_6010	BSD	QC702914	Soil	201944	08/22/13 10:00	1.0		
040	met08_sr_6010	MSS	248029-005	Soil	201944	08/22/13 10:04	1.0		3:FE=390000
041	met08_sr_6010	MS	QC702915	Soil	201944	08/22/13 10:08	1.0		2:FE=460000
042	met08_sr_6010	MSD	QC702916	Soil	201944	08/22/13 10:14	1.0		2:FE=420000
043	met08_sr_6010	SER	QC702917	Soil	201944	08/22/13 10:19	5.0		
044	met08_sr_6010	PDS	QC702918	Soil	201944	08/22/13 10:23	1.0	13 14	3:FE=400000
045	met08_sr_6010	SAMPLE	248029-006	Soil	201944	08/22/13 10:27	1.0		2:FE=300000
046	met08_sr_6010	SAMPLE	248029-007	Soil	201944	08/22/13 10:30	1.0		2:FE=180000
047	met08_sr_6010	CCV				08/22/13 10:33	1.0	12	
048	met08_sr_6010	CCB				08/22/13 10:39	1.0		
049	met08_sr_6010	SAMPLE	248097-006	Soil	201945	08/22/13 10:44	1.0		1:FE=160000
050	met08_sr_6010	SAMPLE	248097-008	Soil	201945	08/22/13 10:48	1.0		4:FE=350000
051	met08_sr_6010	SAMPLE	247890-013	Soil	201779	08/22/13 10:51	1.0		3:FE=520000
052	met08_sr_6010	SAMPLE	247890-017	Soil	201779	08/22/13 10:55	1.0		4:FE=500000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83337358

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/22/13 06:38  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	met08_sr_6010	SAMPLE	247890-020	Soil	201779	08/22/13 10:58	1.0		5:FE=450000
054	met08_sr_6010	SAMPLE	247890-022	Soil	201779	08/22/13 11:03	1.0		4:FE=510000
055	met08_sr_6010	SAMPLE	247918-001	Water	201838	08/22/13 11:07	1.0		
056	met08_sr_6010	SAMPLE	247919-001	Soil	201848	08/22/13 11:11	1.0		3:FE=470000
057	met08_sr_6010	SAMPLE	247919-005	Soil	201848	08/22/13 11:14	1.0		3:FE=520000
058	met08_sr_6010	SAMPLE	247919-006	Soil	201848	08/22/13 11:17	1.0		3:FE=460000
059	met08_sr_6010	ICSAB				08/22/13 11:21	1.0	8	5:AL=500000
060	met08_sr_6010	CCV				08/22/13 11:26	1.0	12	
061	met08_sr_6010	CCB				08/22/13 11:32	1.0		
062	met08_sr_6010	SAMPLE	247919-007	Soil	201848	08/22/13 11:37	1.0		3:FE=440000
063	met08_sr_6010	SAMPLE	247919-009	Soil	201848	08/22/13 11:40	1.0		4:FE=590000
064	met08_sr_6010	SAMPLE	247919-011	Soil	201848	08/22/13 11:44	1.0		3:FE=570000
065	met08_sr_6010	SAMPLE	247919-013	Soil	201848	08/22/13 11:47	1.0		4:FE=580000
066	met08_sr_6010	SAMPLE	247919-014	Soil	201848	08/22/13 11:50	1.0		3:FE=490000
067	met08_sr_6010	SAMPLE	247978-001	Miscell.	201889	08/22/13 11:54	100.0		3:FE=120000
068	met08_sr_6010	SAMPLE	247961-002	Miscell.	201889	08/22/13 11:58	1.0		1:AS=35000
069	met08_sr_6010	SAMPLE	247961-003	Miscell.	201889	08/22/13 12:03	1.0		3:AL=290000
070	met08_sr_6010	SAMPLE	247961-002	Miscell.	201889	08/22/13 12:10	100.0		
071	met08_sr_6010	SAMPLE	247961-003	Miscell.	201889	08/22/13 12:14	100.0		
072	met08_sr_6010	CCV				08/22/13 12:19	1.0	12	
073	met08_sr_6010	CCB				08/22/13 12:25	1.0		
074	met08_sr_6010	SAMPLE	247961-002	Miscell.	201889	08/22/13 12:30	1.0		1:AS=35000
075	met08_sr_6010	SAMPLE	247961-001	Miscell.	201889	08/22/13 12:35	1.0		2:AL=110000
076	met08_sr_6010	SAMPLE	247961-004	Miscell.	201889	08/22/13 12:41	1.0		
077	met08_sr_6010	SAMPLE	247961-005	Miscell.	201889	08/22/13 12:45	1.0		
078	met08_sr_6010	SAMPLE	247974-001	Miscell.	201889	08/22/13 12:49	1.0		1:CA=2000000
079	met08_sr_6010	BLANK	QC702677	Soil	201888	08/22/13 12:52	1.0		
080	met08_sr_6010	BS	QC702678	Soil	201888	08/22/13 12:58	1.0		
081	met08_sr_6010	BSD	QC702679	Soil	201888	08/22/13 13:02	1.0		
082	met08_sr_6010	MSS	247994-001	Soil	201888	08/22/13 13:06	1.0		2:FE=270000
083	met08_sr_6010	MS	QC702680	Soil	201888	08/22/13 13:09	1.0		1:FE=290000
084	met08_sr_6010	ICSAB				08/22/13 13:12	1.0	8	5:MG=520000
085	met08_sr_6010	CCV				08/22/13 13:18	1.0	12	
086	met08_sr_6010	CCB				08/22/13 13:24	1.0		
087	met08_sr_6010	MSD	QC702681	Soil	201888	08/22/13 13:29	1.0		1:FE=270000
088	met08_sr_6010	SER	QC702682	Soil	201888	08/22/13 13:32	5.0		
089	met08_sr_6010	PDS	QC702683	Soil	201888	08/22/13 13:36	1.0	13 14	1:FE=280000
090	met08_sr_6010	SAMPLE	247994-002	Soil	201888	08/22/13 13:40	1.0		1:FE=160000
091	met08_sr_6010	SAMPLE	247994-003	Soil	201888	08/22/13 13:43	1.0		2:FE=250000
092	met08_sr_6010	SAMPLE	247994-004	Soil	201888	08/22/13 13:46	1.0		6:FE=520000
093	met08_sr_6010	SAMPLE	247994-005	Soil	201888	08/22/13 13:49	1.0		2:FE=220000
094	met08_sr_6010	SAMPLE	247994-006	Soil	201888	08/22/13 13:53	1.0		1:FE=140000
095	met08_sr_6010	SAMPLE	247995-001	Soil	201888	08/22/13 13:57	1.0		2:FE=250000
096	met08_sr_6010	SAMPLE	247995-002	Soil	201888	08/22/13 14:00	1.0		1:FE=170000
097	met08_sr_6010	CCV				08/22/13 14:03	1.0	12	
098	met08_sr_6010	CCB				08/22/13 14:09	1.0		
099	met08_sr_6010	SAMPLE	247995-003	Soil	201888	08/22/13 14:14	1.0		2:FE=230000
100	met08_sr_6010	SAMPLE	247995-004	Soil	201888	08/22/13 14:17	1.0		1:FE=150000
101	met08_sr_6010	SAMPLE	247996-001	Soil	201888	08/22/13 14:20	1.0		5:FE=400000
102	met08_sr_6010	SAMPLE	247996-002	Soil	201888	08/22/13 14:23	1.0		2:FE=240000
103	met08_sr_6010	SAMPLE	247997-001	Soil	201888	08/22/13 14:27	1.0		3:FE=250000
104	met08_sr_6010	SAMPLE	247997-002	Soil	201888	08/22/13 14:30	1.0		2:FE=170000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 83337358

Instrument : MET08  
 Method : EPA 6010B

Begun : 08/22/13 06:38  
 SOP Version : icp metals\_rv9

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	met08_sr_6010	SAMPLE	247997-003	Soil	201888	08/22/13 14:33	1.0		1:FE=190000
106	met08_sr_6010	SAMPLE	247997-004	Soil	201888	08/22/13 14:36	1.0		2:FE=170000
107	met08_sr_6010	SAMPLE	247997-005	Soil	201888	08/22/13 14:39	1.0		6:FE=790000
108	met08_sr_6010	SAMPLE	247997-006	Soil	201888	08/22/13 14:43	1.0		2:FE=210000
109	met08_sr_6010	ICSAB				08/22/13 14:46	1.0	8	5:AL=530000
110	met08_sr_6010	CCV				08/22/13 14:51	1.0	12	
111	met08_sr_6010	CCB				08/22/13 14:57	1.0		
112	met08_sr_6010	SAMPLE	247997-007	Soil	201888	08/22/13 15:02	1.0		4:FE=450000
113	met08_sr_6010	SAMPLE	247997-008	Soil	201888	08/22/13 15:05	1.0		1:FE=160000
114	met08_sr_6010	CCV				08/22/13 15:08	1.0	12	
115	met08_sr_6010	CCB				08/22/13 15:14	1.0		
116	met08_sr_6010	ICSAB				08/22/13 15:19	1.0	8	5:AL=530000

NT 08/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 64.

HDD 08/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 86.

JDB 08/22/13 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 87 through 116.

Standards used: 1=S22714 2=S22716 3=S22715 4=S22717 5=S22718 6=S22721 7=S22719 8=S22720 9=S22723 10=S21652 11=S21653  
 12=S22722 13=S22594 14=S22595

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83337358

Date : 08/22/13  
 Sequence : MET08 08/22/13

Reference : met08\_sr\_6010  
 Analyzed : 08/22/13 06:43

#	Type	Sample ID	Y	A
		ICAL STD	3201402	
		LOWER LIMIT	960421	
		UPPER LIMIT	6402804	
008	ICB		3242188	
009	ICSA		2699420	
010	ICSAB		2720023	
013	BLANK	QC703030	3382568	
014	BLANK	QC703030	3367362	
015	BS	QC703031	3179387	
016	BSD	QC703032	3193842	
017	MSS	248113-001	3274876	
018	MS	QC703033	3174427	
019	MSD	QC703034	3155147	
020	SER	QC703035	3209569	
021	PDS	QC703036	3148919	
022	CCV		3018420	
023	CCB		3267484	
024	MSS	248085-001	3219697	
025	SER	QC702924	3278639	
026	PDS	QC702925	3156637	
027	SAMPLE	248164-001	3063099	
028	SAMPLE	248164-001	3351964	
029	SAMPLE	248164-002	3211503	
030	SAMPLE	248085-003	2687885	
031	SAMPLE	248085-002	3263495	
032	SAMPLE	248085-003	3196017	
033	SAMPLE	248097-004	3155298	
034	ICSAB		2734780	
035	CCV		3127201	
036	CCB		3282330	
037	BLANK	QC702912	3328622	
038	BS	QC702913	3032167	
039	BSD	QC702914	3044074	
041	MS	QC702915	3074470	
042	MSD	QC702916	3046692	
043	SER	QC702917	3203952	
044	PDS	QC702918	3098250	
047	CCV		3139105	
048	CCB		3263127	
049	SAMPLE	248097-006	3140995	
050	SAMPLE	248097-008	3041993	
051	SAMPLE	247890-013	3214544	
052	SAMPLE	247890-017	3225987	
053	SAMPLE	247890-020	3191136	
054	SAMPLE	247890-022	2952319	
056	SAMPLE	247919-001	3114069	
057	SAMPLE	247919-005	3107801	
058	SAMPLE	247919-006	3142999	
059	ICSAB		2705411	
060	CCV		3110010	
061	CCB		3284987	

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83337358

Date : 08/22/13  
 Sequence : MET08 08/22/13

Reference : met08\_sr\_6010  
 Analyzed : 08/22/13 06:43

#	Type	Sample ID	Y A
062	SAMPLE	247919-007	3109465
063	SAMPLE	247919-009	3109042
064	SAMPLE	247919-011	3166591
065	SAMPLE	247919-013	3111333
066	SAMPLE	247919-014	3148078
067	SAMPLE	247978-001	3232043
068	SAMPLE	247961-002	8058505 *
069	SAMPLE	247961-003	3067991
070	SAMPLE	247961-002	3300435
071	SAMPLE	247961-003	3298454
072	CCV		3079657
073	CCB		3228916
074	SAMPLE	247961-002	8041687 *
075	SAMPLE	247961-001	5219821
076	SAMPLE	247961-004	3113795
077	SAMPLE	247961-005	3207650
078	SAMPLE	247974-001	2679915
079	BLANK	QC702677	3207439
080	BS	QC702678	3058273
081	BSD	QC702679	3032618
082	MSS	247994-001	3040790
083	MS	QC702680	2994938
084	ICSAB		2597338
085	CCV		2980195
086	CCB		3140646
087	MSD	QC702681	2951065
088	SER	QC702682	3046389
089	PDS	QC702683	2940376
090	SAMPLE	247994-002	3013772
091	SAMPLE	247994-003	2983343
092	SAMPLE	247994-004	2897910
093	SAMPLE	247994-005	3013082
094	SAMPLE	247994-006	3047176
095	SAMPLE	247995-001	3031329
096	SAMPLE	247995-002	3061633
097	CCV		3008842
098	CCB		3095256
099	SAMPLE	247995-003	2970304
100	SAMPLE	247995-004	2942646
101	SAMPLE	247996-001	2919727
102	SAMPLE	247996-002	3004681
103	SAMPLE	247997-001	2934248
104	SAMPLE	247997-002	3057616
105	SAMPLE	247997-003	3065161
106	SAMPLE	247997-004	3040303
107	SAMPLE	247997-005	2870313
108	SAMPLE	247997-006	2993405
109	ICSAB		2538166
110	CCV		2931133
111	CCB		3041368
112	SAMPLE	247997-007	2998449
113	SAMPLE	247997-008	3001285

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 83337358

Date : 08/22/13  
 Sequence : MET08 08/22/13

Reference : met08\_sr\_6010  
 Analyzed : 08/22/13 06:43

#	Type	Sample ID	Y A
114	CCV		2944577
115	CCB		3133013
116	ICSAB		2558946

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 METALS Miscell.: EPA 6010B

Inst : MET08  
 Calnum : 83337358001  
 Units : ug/L  
 Date : 22-AUG-2013 06:38  
 X Axis : R  
 Reviewer : ---

Level	File	Seqnum	Sample ID	Analyzed	Stds
L1	met08_sr_6010 83337358002	CR15.1	22-AUG-2013 06:43	S22714	
L2	met08_sr_6010 83337358003	CS100	22-AUG-2013 06:48	S22716	
L3	met08_sr_6010 83337358004	CS1K	22-AUG-2013 06:52	S22715	
L4	met08_sr_6010 83337358005	CS10K	22-AUG-2013 06:56	S22717	
L5	met08_sr_6010 83337358006	CS100K	22-AUG-2013 07:02	S22718	

Analyte	Ch	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Antimony	A	36.420	36.755	36.663	37.161		LORO	0.00000	0.02691		36.750	1.000	0.995	
Arsenic	A	20.680	21.347	21.512	21.851		LORO	0.00000	0.04577		21.347	1.000	0.995	
Barium	A	461.92	457.06	452.47	449.42		LORO	0.00000	0.00222		455.22	1.000	0.995	
Beryllium	A	5450.7	5238.3	5305.9			LORO	0.00000	1.88E-4		5331.6	1.000	0.995	
Cadmium	A	260.98	257.62	257.38	249.85		LORO	0.00000	0.00400		256.46	1.000	0.995	
Chromium	A	111.42	104.96	103.91	103.62		LORO	0.00000	0.00965		105.98	1.000	0.995	
Cobalt	A	135.54	133.51	136.91	137.45		LORO	0.00000	0.00728		135.85	1.000	0.995	
Copper	A	143.24	130.61	133.16	135.48		LORO	0.00000	0.00738		135.62	1.000	0.995	
Lead	A	64.960	64.489	64.545	64.091		LORO	0.00000	0.01560		64.521	1.000	0.995	
Molybdenum	A	43.700	41.065	40.802	40.981		LORO	0.00000	0.02440		41.637	1.000	0.995	
Nickel	A	57.240	54.272	55.083	55.077		LORO	0.00000	0.01816		55.418	1.000	0.995	
Selenium	A	33.300	30.237	30.356	31.073		LORO	0.00000	0.03219		31.242	1.000	0.995	
Silver	A	824.78	836.92	836.95	850.87		LORO	0.00000	0.00118		837.38	1.000	0.995	
Thallium	A	19.500	20.480	20.209	19.971		LORO	0.00000	0.05007		20.040	1.000	0.995	
Vanadium	A	192.00	181.35	179.37	180.07		LORO	0.00000	0.00555		183.20	1.000	0.995	
Zinc	A	88.180	84.264	82.200	82.759		LORO	0.00000	0.01208		84.351	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D
Antimony	A	10.000	-2	100.00	-1	1000.0	-1	10000	0		
Arsenic	A	5.0000	-5	100.00	-2	1000.0	-2	10000	0		
Barium	A	5.0000	3	100.00	2	1000.0	1	10000	0		
Beryllium	A	2.0000	3	100.00	-1	1000.0	0				
Cadmium	A	5.0000	4	100.00	3	1000.0	3	10000	0		
Chromium	A	5.0000	8	100.00	1	1000.0	0	10000	0		
Cobalt	A	5.0000	-1	100.00	-3	1000.0	0	10000	0		
Copper	A	5.0000	6	100.00	-4	1000.0	-2	10000	0		
Lead	A	5.0000	1	100.00	1	1000.0	1	10000	0		
Molybdenum	A	5.0000	7	100.00	0	1000.0	0	10000	0		
Nickel	A	5.0000	4	100.00	-1	1000.0	0	10000	0		
Selenium	A	10.000	7	100.00	-3	1000.0	-2	10000	0		
Silver	A	5.0000	-3	100.00	-1	1000.0	-1	2000.0	0		
Thallium	A	10.000	-2	100.00	3	1000.0	1	10000	0		
Vanadium	A	5.0000	7	100.00	1	1000.0	0	10000	0		
Zinc	A	20.000	7	100.00	2	1000.0	-1	10000	0		

Instrument amount = a0 + response \* a1 + response^2 \* a2; LOR0=Linear regression forced thru origin, including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
Calnum : 83337358001

Cal Date : 22-AUG-2013

ICV 83337358007 (22-AUG-2013) stds: S22721

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Antimony	A	5000	5117	ug/L	2	10	
Arsenic	A	5000	5009	ug/L	0	10	
Barium	A	5000	5043	ug/L	1	10	
Beryllium	A	500.0	516.1	ug/L	3	10	
Cadmium	A	5000	5236	ug/L	5	10	
Chromium	A	5000	5028	ug/L	1	10	
Cobalt	A	5000	5054	ug/L	1	10	
Copper	A	5000	4947	ug/L	-1	10	
Lead	A	5000	4985	ug/L	0	10	
Molybdenum	A	5000	5149	ug/L	3	10	
Nickel	A	5000	5077	ug/L	2	10	
Selenium	A	5000	5106	ug/L	2	10	
Silver	A	1000	984.8	ug/L	-2	10	
Thallium	A	5000	5015	ug/L	0	10	
Vanadium	A	5000	5041	ug/L	1	10	
Zinc	A	5000	5058	ug/L	1	10	

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
 Seqnum : 83337358009  
 Cal : 83337358001  
 Standards: S22719  
 File : met08\_sr\_6010  
 Caldate : 22-AUG-2013  
 IDF : 1.0  
 Time : 22-AUG-2013 07:18

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	[1.547]	10.00	ug/L	
Arsenic	A	[4.595]	5.000	ug/L	!a+
Barium	A	[0.6077]	5.000	ug/L	!a+
Beryllium	A	[0.02580]	2.000	ug/L	
Cadmium	A	[-2.008]	5.000	ug/L	!a-
Cobalt	A	[-0.08920]	5.000	ug/L	
Lead	A	[1.081]	5.000	ug/L	
Molybdenum	A	[-1.165]	5.000	ug/L	!a-
Selenium	A	[6.324]	10.00	ug/L	
Silver	A	[1.051]	5.000	ug/L	!a+
Thallium	A	[-8.288]	10.00	ug/L	!a-
Zinc	A	[9.432]	20.00	ug/L	!a+

Interferent	Ch	Spiked	Quant	Units	%Rec
Chromium	A	20000	19400	ug/L	97
Copper	A	20000	20790	ug/L	104
Manganese	A	20000	18360	ug/L	92
Nickel	A	20000	18160	ug/L	91
Vanadium	A	20000	19880	ug/L	99
Aluminum	R	500000	496100	ug/L	99
Calcium	R	500000	475800	ug/L	95
Iron	R	200000	186100	ug/L	93
Magnesium	R	500000	484500	ug/L	97
Titanium	R	20000	20720	ug/L	104

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3201402	2699420	-15.68

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248085 METALS Miscell.  
 EPA 6010B

Inst : MET08  
 Seqnum : 83337358010  
 Cal : 83337358001  
 Standards: S22720

File : met08\_sr\_6010  
 Caldate : 22-AUG-2013

IDF : 1.0  
 Time : 22-AUG-2013 07:51

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	524.2	ug/L	5	20	
Arsenic	A	500.0	525.5	ug/L	5	20	
Barium	A	500.0	518.4	ug/L	4	20	
Beryllium	A	500.0	523.8	ug/L	5	20	
Cadmium	A	1000	1007	ug/L	1	20	
Chromium	A	500.0	503.8	ug/L	1	20	
Cobalt	A	500.0	475.2	ug/L	-5	20	
Copper	A	500.0	533.5	ug/L	7	20	
Lead	A	1000	954.6	ug/L	-5	20	
Molybdenum	A	500.0	512.3	ug/L	2	20	
Nickel	A	1000	936.4	ug/L	-6	20	
Selenium	A	500.0	510.8	ug/L	2	20	
Silver	A	1000	1083	ug/L	8	20	
Thallium	A	500.0	450.8	ug/L	-10	20	
Vanadium	A	500.0	533.7	ug/L	7	20	
Zinc	A	1000	964.8	ug/L	-4	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3201402	2720023	-15.04

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08 File : met08\_sr\_6010 IDF : 1.0  
 Seqnum : 83337358022 Caldate : 22-AUG-2013 Time : 22-AUG-2013 08:44  
 Cal : 83337358001  
 Standards: S22722

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	36.750	38.695	5000	5207	ug/L	4	10	
Arsenic	A	21.347	22.222	5000	5086	ug/L	2	10	
Barium	A	455.22	456.82	5000	5082	ug/L	2	10	
Beryllium	A	5331.6	5543.0	500.0	522.4	ug/L	4	10	r ***
Cadmium	A	256.46	265.53	5000	5312	ug/L	6	10	
Chromium	A	105.98	105.44	5000	5088	ug/L	2	10	
Cobalt	A	135.85	141.28	5000	5129	ug/L	3	10	
Copper	A	135.62	136.18	5000	5027	ug/L	1	10	r ***
Lead	A	64.521	64.885	5000	5062	ug/L	1	10	
Molybdenum	A	41.637	42.688	5000	5209	ug/L	4	10	
Nickel	A	55.418	56.710	5000	5148	ug/L	3	10	
Selenium	A	31.242	32.287	5000	5197	ug/L	4	10	r ***
Silver	A	837.38	845.34	1000	996.8	ug/L	0	10	
Thallium	A	20.040	20.404	5000	5108	ug/L	2	10	
Vanadium	A	183.20	183.13	5000	5085	ug/L	2	10	
Zinc	A	84.351	85.182	5000	5147	ug/L	3	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3201402	3018420	-5.72

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
 Seqnum : 83337358023  
 Cal : 83337358001  
 File : met08\_sr\_6010  
 Caldate : 22-AUG-2013  
 IDF : 1.0  
 Time : 22-AUG-2013 08:49

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	[0.7498]	5.000	0.6302	ug/L	!ib
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3201402	3267484	2.06

!=warning ib=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08  
 Seqnum : 83337358034  
 Cal : 83337358001  
 Standards: S22720  
 File : met08\_sr\_6010  
 Caldate : 22-AUG-2013  
 IDF : 1.0  
 Time : 22-AUG-2013 09:35

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	500.0	500.3	ug/L	0	20	
Arsenic	A	500.0	503.4	ug/L	1	20	
Barium	A	500.0	512.2	ug/L	2	20	
Beryllium	A	500.0	513.0	ug/L	3	20	
Cadmium	A	1000	1003	ug/L	0	20	
Chromium	A	500.0	496.3	ug/L	-1	20	
Cobalt	A	500.0	462.3	ug/L	-8	20	
Copper	A	500.0	538.7	ug/L	8	20	
Lead	A	1000	940.8	ug/L	-6	20	
Molybdenum	A	500.0	501.5	ug/L	0	20	
Nickel	A	1000	926.2	ug/L	-7	20	
Selenium	A	500.0	495.1	ug/L	-1	20	
Silver	A	1000	1065	ug/L	7	20	
Thallium	A	500.0	453.7	ug/L	-9	20	
Vanadium	A	500.0	526.6	ug/L	5	20	
Zinc	A	1000	958.4	ug/L	-4	20	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3201402	2734780	-14.58

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83337358035 File : met08\_sr\_6010 Time : 22-AUG-2013 09:41  
 Cal : 83337358001 Caldate : 22-AUG-2013  
 Standards: S22722

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Antimony	A	36.750	36.900	5000	4966	ug/L	-1	10	
Arsenic	A	21.347	21.003	5000	4807	ug/L	-4	10	
Barium	A	455.22	446.45	5000	4967	ug/L	-1	10	
Beryllium	A	5331.6	5339.5	500.0	503.2	ug/L	1	10	
Cadmium	A	256.46	256.92	5000	5140	ug/L	3	10	
Chromium	A	105.98	102.80	5000	4961	ug/L	-1	10	
Cobalt	A	135.85	136.79	5000	4967	ug/L	-1	10	
Copper	A	135.62	133.61	5000	4932	ug/L	-1	10	
Lead	A	64.521	62.631	5000	4886	ug/L	-2	10	
Molybdenum	A	41.637	41.566	5000	5072	ug/L	1	10	
Nickel	A	55.418	54.995	5000	4993	ug/L	0	10	
Selenium	A	31.242	30.286	5000	4875	ug/L	-3	10	
Silver	A	837.38	825.30	1000	973.2	ug/L	-3	10	
Thallium	A	20.040	19.333	5000	4840	ug/L	-3	10	
Vanadium	A	183.20	179.88	5000	4995	ug/L	0	10	
Zinc	A	84.351	81.832	5000	4944	ug/L	-1	10	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3201402	3127201	-2.32

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 248085 METALS Miscell.  
EPA 6010B

Inst : MET08 IDF : 1.0  
 Seqnum : 83337358036 File : met08\_sr\_6010 Time : 22-AUG-2013 09:46  
 Cal : 83337358001 Caldate : 22-AUG-2013

Analyte	Ch	Quant	IQL	2X MDL	Units	Flags
Antimony	A	ND	10.00	5.145	ug/L	
Arsenic	A	ND	5.000	1.484	ug/L	
Barium	A	ND	5.000	0.5197	ug/L	
Beryllium	A	ND	2.000	0.3016	ug/L	
Cadmium	A	ND	5.000	0.5157	ug/L	
Chromium	A	ND	5.000	1.372	ug/L	
Cobalt	A	ND	5.000	0.2850	ug/L	
Copper	A	ND	5.000	3.132	ug/L	
Lead	A	ND	5.000	1.694	ug/L	
Molybdenum	A	ND	5.000	0.6302	ug/L	
Nickel	A	ND	5.000	1.842	ug/L	
Selenium	A	ND	10.00	6.410	ug/L	
Silver	A	ND	5.000	0.9413	ug/L	
Thallium	A	ND	10.00	4.675	ug/L	
Vanadium	A	ND	5.000	1.648	ug/L	
Zinc	A	ND	20.00	5.223	ug/L	

ISTD (ICAL 002)	Ch	ICAL Abund	Abund	%Drift
Yttrium	A	3201402	3282330	2.53

SAMPLE PREPARATION SUMMARY

Batch # : 201945  
 Started By : VV  
 Method : 3050B  
 Spike #1 ID : S22594

Prep Date : 21-AUG-2013 00:01  
 SOP Version : 3050B\_ICP\_rv13  
 Spike #2 ID : S22595

Analysis : ICAP  
 Finished By : VV  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248050-013		Soil	.93	50	1	53.76						T22/ICP	
248050-014		Soil	1.05	50	1	47.62						T22/ICP	
248050-015		Soil	1.09	50	1	45.87						T22/ICP	
248084-002		Soil	1.01	50	1	49.50						PB	
248084-003		Soil	.95	50	1	52.63						T22/ICP	
248085-001		Miscell.	.95	50	1	52.63						T22/ICP	
248085-002		Miscell.	.91	50	1	54.95						T22/ICP	
248085-003		Miscell.	.92	50	1	54.35						T22/ICP	
248097-001		Soil	.96	50	1	52.08						T22/ICP	
248097-002		Soil	1.1	50	1	45.45						T22/ICP	
248097-003		Soil	1.06	50	1	47.17						T22/ICP	
248097-004		Soil	1.04	50	1	48.08						T22/ICP	
248097-005		Soil	.98	50	1	51.02						T22/ICP	
248097-006		Soil	1.03	50	1	48.54						T22/ICP	
248097-007		Soil	1.1	50	1	45.45						T22/ICP	
248097-008		Soil	.97	50	1	51.55						T22/ICP	
248143-001		Soil	1.1	50	1	45.45						T22/ICP	
248149-005		Soil	1.08	50	1	46.30						T22/ICP	
248164-001		Soil	.91	50	1	54.95						T22/ICP	
248164-002		Soil	.96	50	1	52.08						T22/ICP	
QC702919	BLANK	Soil	1	50	1	50.0							
QC702920	BS	Soil	1	50	1	50.0	.5	.5					
QC702921	BSD	Soil	1	50	1	50.0	.5	.5					
QC702922	MS	Miscell.	.92	50	1	54.35	.5	.5					
QC702923	MSD	Miscell.	1.06	50	1	47.17	.5	.5					
QC702924	SER	Miscell.	.95	50	1	52.63							
QC702925	PDS	Miscell.	.95	50	1	52.63							

Analyst: NT

Date: 08/22/13

Reviewer: HDD

Date: 08/22/13

Soil Digestion for ICP & ICP-MS

Curtis & Tompkins, Ltd.

LIMS Batch #: 20945  
 Date Digested: 08-20-13  
 Digested by: VV

Scale Used  Metals Prep

Digestion Method  EPA 3050b

BK3472  
 Page 20

Lvl.	Sample #	Container ID	Weight of Sample (g)	Final Volume (mL)	Filtered? (y/n)	ID IIC	Comments
	BK 702919		0.8	50 <input type="checkbox"/>	Yes	✓	
	* BS 20		0.8	50 <input type="checkbox"/>		✓	
	* BSD 21		0.8	50 <input type="checkbox"/>		✓	
	* 248085-001 MS		0.92	50 <input type="checkbox"/>		✓	
5	* - 001 MS2D		1.06	50 <input type="checkbox"/>		✓	
IR	248050-013		0.93	50 <input type="checkbox"/>		✓	Comp 001-004, 5 of each.
	- 014		1.05	50 <input type="checkbox"/>		✓	- 005-008
	- 015		1.09	50 <input type="checkbox"/>		✓	- 009-012
IR	248084-002	A	1.01	50 <input type="checkbox"/>		✓	
10	- 003	A	0.95	50 <input type="checkbox"/>		✓	
IR	248085-001	B	0.95	50 <input type="checkbox"/>		✓	
	- 002		0.91	50 <input type="checkbox"/>		✓	
	- 003		0.92	50 <input type="checkbox"/>		✓	
IR	248097-001	F	0.96	50 <input type="checkbox"/>		✓	
15	- 002		1.10	50 <input type="checkbox"/>		✓	
	- 003		1.06	50 <input type="checkbox"/>		✓	
	- 004		1.04	50 <input type="checkbox"/>		✓	
	- 005		0.98	50 <input type="checkbox"/>		✓	
	- 006		1.03	50 <input type="checkbox"/>		✓	
20	- 007		1.10	50 <input type="checkbox"/>		✓	
	- 008		0.97	50 <input type="checkbox"/>		✓	
IR	248143-001	C	1.10	50 <input type="checkbox"/>		✓	
IR	248149-005		1.08	50 <input type="checkbox"/>		✓	Comp 001-004, 5 of each.
IR	248164-001	A	0.91	50 <input type="checkbox"/>		✓	
	- 002		0.96	50 <input type="checkbox"/>		✓	

Digestion tubes, lot# 167909-26d- Reagent ID or LIMS # VV 8-20-13 Initials / Date

0.5 mL of spike solution (Std1) was added to all spikes

0.5 mL of spike solution (Std2) was added to all spikes

Digestion Temperature (°C), Block and Probe Location 95°C C19

Digestion begun at (time) 11:30 PM

1:1 HNO3 3390-082013

concentrated HNO3 3390-JCB

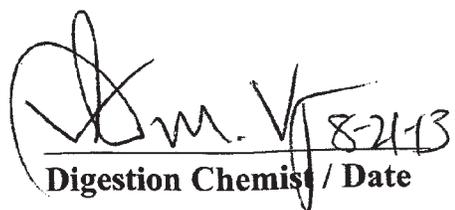
3mL 30% hydrogen peroxide 14468-

concentrated HCl 40741- VV 8-21-13

Digestion ended at (time) 3:30 AM

filtered 9905267-11/11/11

Relinquished to ICP group ICAP

  
 Digestion Chemist / Date VV 8-21-13

Continued from page 8  
 Continued on page 9

Reviewed Online / See LIMS

**Mercury Data**

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 843334735

Instrument : MET14  
 Method : EPA 7470A

Begun : 08/20/13 10:55  
 SOP Version : hg\_water\_rv16

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	201904	ICALBLK	STD01REP1			08/20/13 10:55	1.0		
002	201904	ICAL	STD02REP1			08/20/13 10:57	1.0	1	
003	201904	ICAL	STD03REP1			08/20/13 10:59	1.0	1	
004	201904	ICAL	STD04REP1			08/20/13 11:01	1.0	1	
005	201904	ICAL	STD05REP1			08/20/13 11:04	1.0	1	
006	201904	ICAL	STD06REP1			08/20/13 11:06	1.0	1	
007	201904	ICV				08/20/13 11:23	1.0	2	
008	201904	ICB				08/20/13 11:25	1.0		
009	201904	BLANK	QC702756	Soil	201904	08/20/13 11:27	1.0		
010	201904	BS	QC702757	Soil	201904	08/20/13 11:30	1.0		
011	201904	BSD	QC702758	Soil	201904	08/20/13 11:32	1.0		
012	201904	MSS	248030-043	Soil	201904	08/20/13 11:35	1.0		
013	201904	MS	QC702759	Soil	201904	08/20/13 11:37	1.0		
014	201904	MSD	QC702760	Soil	201904	08/20/13 11:39	1.0		
015	201904	SAMPLE	248030-030	Soil	201904	08/20/13 11:41	1.0		
016	201904	SAMPLE	248030-031	Soil	201904	08/20/13 11:43	1.0		
017	201904	SAMPLE	248030-032	Soil	201904	08/20/13 11:45	1.0		
018	201904	SAMPLE	248030-033	Soil	201904	08/20/13 11:47	1.0		
019	201904	CCV				08/20/13 11:50	1.0	3	
020	201904	CCB				08/20/13 11:52	1.0		
021	201904	SAMPLE	248030-034	Soil	201904	08/20/13 11:54	1.0		
022	201904	SAMPLE	248030-035	Soil	201904	08/20/13 11:57	1.0		1:HG=23
023	201904	SAMPLE	248030-036	Soil	201904	08/20/13 11:59	1.0		
024	201904	SAMPLE	248030-037	Soil	201904	08/20/13 12:01	1.0		1:HG=12
025	201904	SAMPLE	248030-039	Soil	201904	08/20/13 12:03	1.0		
026	201904	SAMPLE	248030-040	Soil	201904	08/20/13 12:06	1.0		
027	201904	SAMPLE	248030-041	Soil	201904	08/20/13 12:08	1.0		
028	201904	SAMPLE	248030-042	Soil	201904	08/20/13 12:10	1.0		
029	201904	SAMPLE	248030-044	Soil	201904	08/20/13 12:12	1.0		1:HG=12
030	201904	MSS	248029-005	Soil	201904	08/20/13 12:15	1.0		
031	201904	CCV				08/20/13 12:17	1.0	3	
032	201904	CCB				08/20/13 12:20	1.0		
033	201904	SER	QC702761	Soil	201904	08/20/13 12:22	5.0		
034	201904	SAMPLE	248029-006	Soil	201904	08/20/13 12:24	1.0		
035	201904	SAMPLE	248029-007	Soil	201904	08/20/13 12:26	1.0		
036	201904	SAMPLE	248085-001	Miscell.	201904	08/20/13 12:29	1.0		1:HG=160
037	201904	SAMPLE	248085-002	Miscell.	201904	08/20/13 12:36	1.0		
038	201904	SAMPLE	248085-003	Miscell.	201904	08/20/13 12:38	1.0		
039	201904	SAMPLE	248030-035	Soil	201904	08/20/13 12:44	10.0		
040	201904	SAMPLE	248030-037	Soil	201904	08/20/13 12:47	10.0		
041	201904	SAMPLE	248030-044	Soil	201904	08/20/13 12:49	10.0		
042	201904	SAMPLE	248085-001	Miscell.	201904	08/20/13 12:51	100.0		
043	201904	CCV				08/20/13 12:53	1.0	3	
044	201904	CCB				08/20/13 12:56	1.0		
045	201904	BLANK	QC702762	Soil	201905	08/20/13 13:00	1.0		
046	201904	BS	QC702763	Soil	201905	08/20/13 13:02	1.0		
047	201904	BSD	QC702764	Soil	201905	08/20/13 13:04	1.0		
048	201904	MSS	248143-001	Soil	201905	08/20/13 13:07	1.0		
049	201904	MS	QC702765	Soil	201905	08/20/13 13:09	1.0		
050	201904	MSD	QC702766	Soil	201905	08/20/13 13:11	1.0		
051	201904	SAMPLE	248039-009	Soil	201905	08/20/13 13:13	1.0		
052	201904	SAMPLE	248123-001	Soil	201905	08/20/13 13:15	1.0		



CURTIS & TOMPKINS INITIAL CALIBRATION FOR 248085 METALS Miscell.: EPA 7470A

Inst : MET14  
 Calnum : 843334735001  
 Units : ug/L  
 Date : 20-AUG-2013 10:55  
 X Axis : R  
 Reviewer : ---  
 Type : SOIL

Level	File	Seqnum	Sample ID	Analyzed	Std
L1	201904	843334735002	STD02REP1	20-AUG-2013 10:57	S23064 (500X)
L2	201904	843334735003	STD03REP1	20-AUG-2013 10:59	S23064 (200X)
L3	201904	843334735004	STD04REP1	20-AUG-2013 11:01	S23064 (50X)
L4	201904	843334735005	STD05REP1	20-AUG-2013 11:04	S23064 (20X)
L5	201904	843334735006	STD06REP1	20-AUG-2013 11:06	S23064 (10X)

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	%RSD	r^2	Mnr^2	Flg
Mercury	1850.0	3020.0	2241.5	2250.6	2112.5	LI NR	-0.0935	4.72E-4		2294.9	0.999	0.999	.99	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D
Mercury	0.2000	0.5000	-59	2.0000	1	5.0000	4	10.000	-1

Instrument amount = a0 + response \* a1 + response^2 \* a2; LI NR=Linear regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 248085 METALS Miscell.  
EPA 7470A

Inst : MET14

Calnum : 843334735001

Cal Date : 20-AUG-2013

Type : SOIL

ICV 843334735007 (20-AUG-2013) stds: S23066

Analyte	Spiked	Quant	Units	%D	Max	Flags
Mercury	5.000	5.210	ug/L	4	10	



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 METALS Miscell.  
 EPA 7470A

Inst : MET14  
 Seqnum : 843334735019 File : 201904  
 Cal : 843334735001 Caldate : 20-AUG-2013  
 Standards: S23067

IDF : 1.0  
 Time : 20-AUG-2013 11:50  
 Caltype : SOIL

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2294.9	2216.6	5.000	5.140	ug/L	3	20	



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 METALS Miscell.  
 EPA 7470A

Inst : MET14  
 Seqnum : 843334735031 File : 201904  
 Cal : 843334735001 Caldate : 20-AUG-2013  
 Standards: S23067

IDF : 1.0  
 Time : 20-AUG-2013 12:17  
 Caltype : SOIL

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2294.9	2146.2	5.000	4.970	ug/L	-1	20	



CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 248085 METALS Miscell.  
 EPA 7470A

Inst : MET14  
 Seqnum : 843334735043 File : 201904  
 Cal : 843334735001 Caldate : 20-AUG-2013  
 Standards: S23067

IDF : 1.0  
 Time : 20-AUG-2013 12:53  
 Caltype : SOIL

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	2294.9	2298.2	5.000	5.330	ug/L	7	20	



SAMPLE PREPARATION SUMMARY

Batch # : 201904  
 Started By : CRT  
 Method : METHOD  
 Spike #1 ID : S23064

Prep Date : 20-AUG-2013 08:30

Analysis : HG  
 Finished By : CRT  
 Units : g

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
248029-005		Soil	.61	50	1	81.97						T22/HG	SER
248029-006		Soil	.58	50	1	86.21						T22/HG	
248029-007		Soil	.63	50	1	79.37						T22/HG	
248030-030		Soil	.55	50	1	90.91						T22/HG	
248030-031		Soil	.6	50	1	83.33						T22/HG	
248030-032		Soil	.59	50	1	84.75						T22/HG	
248030-033		Soil	.6	50	1	83.33						T22/HG	
248030-034		Soil	.62	50	1	80.65						T22/HG	
248030-035		Soil	.65	50	1	76.92						T22/HG	
248030-036		Soil	.59	50	1	84.75						T22/HG	
248030-037		Soil	.57	50	1	87.72						T22/HG	
248030-039		Soil	.63	50	1	79.37						T22/HG	
248030-040		Soil	.6	50	1	83.33						T22/HG	
248030-041		Soil	.59	50	1	84.75						T22/HG	
248030-042		Soil	.6	50	1	83.33						T22/HG	
248030-043		Soil	.64	50	1	78.13						T22/HG	MSS
248030-044		Soil	.55	50	1	90.91						T22/HG	
248085-001		Miscell.	.65	50	1	76.92						T22/HG	
248085-002		Miscell.	.58	50	1	86.21						T22/HG	
248085-003		Miscell.	.61	50	1	81.97						T22/HG	
QC702756	BLANK	Soil	.6	50	1	83.33							
QC702757	BS	Soil	.6	50	1	83.33		1.25					
QC702758	BSD	Soil	.6	50	1	83.33		1.25					
QC702759	MS	Soil	.63	50	1	79.37		1.25					
QC702760	MSD	Soil	.58	50	1	86.21		1.25					
QC702761	SER	Soil	.61	50	1	81.97							

CRT 08/20/13 : MSD QC702760 failed recovery but passed RPD. This suggests that an interference is present in the matrix.

Analyst: CRT

Date: 08/20/13

Reviewer: PRW

Date: 08/26/13

Soil Digestion for Mercury

Curtis & Tompkins, Ltd.

Soi

LIMS Batch #: 201904  
 Date Digested: 9/20/13

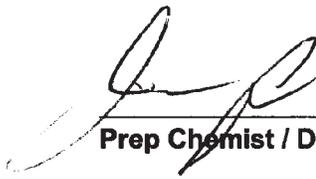
Scale Used  
 Metals Prep  
 Digestion Method  
 EPA 7471A

BK 3460  
 Page 50

LIMS  
 Date C

Sample #	container ID	Sample Weight (g)	Final Volume (mL)	Filtered? (y/n)	Comments
MB GC 702756		0	✓ 50 □	Y	
BS ↓ 57		0	✓ 50 □		
BSD ↓ 58		0	✓ 50 □		
248030-043	D	0.64	✓ 50 □		MSS
MS GC 702759		0.63	✓ 50 □		
MSD ↓ 60		0.58	✓ 50 □		
248030-030	B	0.55	✓ 50 □		
↓ -031	B	0.60	✓ 50 □		
↓ -032	B	0.59	✓ 50 □		
↓ -033	A	0.60	✓ 50 □		
↓ -034	D	0.62	✓ 50 □		
↓ -035	D	0.65	✓ 50 □		
↓ -036	D	0.59	✓ 50 □		
↓ -037	A	0.57	✓ 50 □		
↓ -039 <sup>CR1</sup> 8/22	A	0.61	✓ 50 □		Sample: 24802A-005, SER
↓ -039	D	0.63	✓ 50 □		
↓ -040	A	0.60	✓ 50 □		
↓ -041	B	0.59	✓ 50 □		
↓ -042	A	0.60	✓ 50 □		
↓ -044 <sup>CR1</sup> 8/22	A	0.55	✓ 50 □		
248029-006	↓	0.58	✓ 50 □		
↓ -007	↓	0.63	✓ 50 □		
248085-001	B	0.65	✓ 50 □		
↓ -002	↓	0.58	✓ 50 □		
↓ -003	↓	0.61	✓ 50 □		

Reagent ID/ LIMS# / Time	Initials / Date
Digestion Tubes, Lot #	EK13057
1.25 mL of spike standard was added to all spikes	CR1 8/20/13
<input checked="" type="checkbox"/> CAL digested with this batch	3230 CH
ICAL Source LIMS S#	↓ 65
ICV / CCV LIMS S#	↓ 66/67
Digestion Temperature (°C), Block and Probe Location	96°C   B-47
Digestion Started at (time)	8:30
Aqua Regia Acids (HNO3+ HCl)	8-20
5% KMnO4	8-14
NaCl.hydroxylamine hydrochloride	8-14
Stannous Chloride	8-16
Digestion Completed at (time)	9:00
<input checked="" type="checkbox"/> filtered thru' 0.45 um syringe filter (lot #)	C.S. 30448103

 9/20/13  
 Prep Chemist / Date

Continued from page 1  
 Continued on page 1

Reviewed by / Date

Laboratory Job Number 248085

ANALYTICAL REPORT

Wet Chemistry

Matrix: Miscell.

Percent Moisture Summary Report

Batch: 201918  
 Date: 08/20/13  
 Method: CLP SOW 390  
 Analyst: NCD

Sample	Tare (g)	Wet (g)	Dry (g)	Percent Solids	Percent Moisture
248029-008	10.8651	19.5537	19.1759	96	4
248085-001	11.0651	17.7655	14.4632	51	49
248085-002	11.3159	18.4508	13.9525	37	63
248085-003	11.2219	18.7615	13.6909	33	67
248100-001	11.3371	17.5568	16.9531	90	10
248100-002	11.3508	17.2933	16.8314	92	8
QC702805	11.3767	19.8510	19.1782	92	8
of 248100-002			RPD:	0.2%	2.1%

Moisture LOG

Curtis & Tompkins, Ltd.

LIMS Batch #: 201918  
 Date: 8/20/2013

Page: 72  
 Benchbook#: BK 3459  
**Scale Used**  
 Leachates Analytical

Sample # / Letter	Dish #	Dish Weight (g)	Sample + Dish Wt (g)	Final Weight (g)	*Comments
BLK	A09	11.3983	<del>17.5568</del>	11.3983	
248100-001 F	E09	11.3371	17.5568	16.9531	
-002	CT29	11.3508	17.2933	16.8314	
SDIPV -002	CT17	11.3767	19.8510	19.1782	
248085-001 B	B100	11.0651	17.7655	14.4632	2:30pm added
-002	SLA	11.3159	18.4508	13.9525	↓
-003	HND	11.2219	18.7615	13.6909	↓
248029-008	HNI	10.8651	19.5537	19.1759	add at 3:30 pm
<div style="border: 1px solid black; width: 100%; height: 100%; transform: rotate(-45deg); opacity: 0.5; position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); pointer-events: none;"> <p style="font-size: 2em; margin: 0;">MS 8-21-13</p> </div>					

Date/ Time IN: 8/20/2013 12:50pm  
 Temp (C) IN: 104  
 Date/ Time OUT: 8-21-13 1115  
 Temp (C) OUT: 104

[Signature] 8/20/2013  
 Extraction Chemist      Date

\_\_\_\_\_  
 Reviewed by                      Date

Date	ANALYST	0.2000	0.5000 <sup>ND</sup>	1.0000	2.0000	5.0000	10.0000	20.0000	50.0000	100.0000	Set
<del>7-19-13</del>	<del>ND</del>	<del>0.2000</del>	<del>0.4990</del>	<del>1.0000</del>	<del>2.0000</del>	<del>4.9997</del>	<del>10.0001</del>	<del>19.9998</del>	<del>49.9996</del>	<del>99.9990</del>	<del>ND 7-19-13</del>
7-19-13 ND	0.2000	0.5000	1.0000	2.0000	4.9998	10.0001	20.0000	49.9992	100.9991	AS06	
7-22-13 ND	0.2001	0.5005	1.0003	2.0003	5.0004	10.0004	19.9998	49.9991	99.9985	AS06	
7-25-13 ND	0.2002	0.4999	0.9997	2.0002	5.0000	9.9999	19.9996	49.9990	99.9990	AS06	
7-24-13 ND	0.2000	0.5000	1.0001	2.0000	5.0001	10.0000	19.9999	49.9996	99.9995	AS06	
7-25-13 ND	0.2000	0.5000	1.0000	2.0000	4.9998	9.9999	19.9999	49.9995	99.9995	AS06	
7-26-13 ND	0.2000	0.4998	0.9999	2.0000	5.0000	9.9999	19.9999	49.9990	99.9995	AS06	
7-28-13 v	0.2000	0.5000	1.0000	2.0000	5.0000	10.0000	19.9999	49.9995	99.9991	AS06	
7-29-13 ND	0.2001	0.5000	1.0001	2.0002	5.0000	10.0000	19.9998	49.9995	99.9991	AS06	
7-30-13 ND	0.2001	0.5000	0.9999	1.9999	4.9999	9.9998	19.9998	49.9991	99.9979	AS06	
7-31-13 ND	0.1999	0.4999	0.9999	1.9999	4.9999	9.9998	19.9999	49.9997	99.9991	AS06	
8-1-13 ND	0.1999	0.5000	0.9999	2.0001	4.9997	9.9997	19.9999	49.9990	99.9986	AS06	
8-2-13 ND	0.2000	0.5002	1.0000	1.9999	5.0000	9.9998	19.9996	49.9992	99.9987	AS06	
8-3-13 ND	0.2001	0.5000	1.0000	2.0001	5.0000	9.9999	19.9996	49.9990	99.9979	AS06	
8-5-13 ND	0.2002	0.4999	1.0002	2.0000	5.0001	10.0000	20.0000	49.9997	99.9992	AS06	
8-6-13 ND	0.2001	0.5000	1.0002	2.0000	5.0000	9.9998	19.9999	49.9994	99.9986	AS06	
8-7-13 ND	0.2001	0.5000	1.0000	2.0000	4.9999	9.9999	19.9998	49.9990	99.9987	AS06	
8-8-13 ND	0.1998	0.5000	0.9998	1.9999	5.0000	10.0000	19.9996	49.9994	99.9981	AS06	
8-9-13 ND	0.1998	0.4998	0.9998	1.9999	4.9998	9.9998	19.9998	49.9995	99.9980	AS06	
8-10-13 v	0.2000	0.5000	1.0000	2.0002	5.0001	10.0001	19.9998	49.9998	99.9993	AS06	
8-12-13 ND	0.2000	0.5000	1.0001	2.0001	4.9998	10.0000	19.9999	49.9998	99.9991	AS06	
8-13-13 ND	0.1998	0.5000	1.0000	2.0000	5.0000	10.0000	19.9999	49.9998	99.9993	AS06	
8-14-13 ND	0.2000	0.5000	0.9998	1.9999	4.9999	9.9998	20.0000	49.9991	99.9990	AS06	
8-15-13 ND	0.1999	0.5001	1.0000	2.0001	4.9999	10.0001	20.0002	49.9995	99.9993	AS06	
8-16-13 ND	0.2000	0.5000	1.0000	1.9999	5.0000	10.0000	20.0000	49.9998	99.9996	AS06	
8-18-13 v	0.2000	0.5000	1.0000	2.0000	5.0001	10.0002	20.0000	49.9996	99.9993	AS06	
8-19-13 ND	0.2000	0.5000	1.0000	2.0000	5.0000	9.9999	19.9999	49.9998	99.9995	AS06	
8-20-13 ND	0.1999	0.4999	0.9999	1.9999	5.0000	9.9999	19.9999	49.9990	99.9985	AS06	
8-21-13 v	0.2000	0.5000	1.0000	2.0000	5.0000	10.0000	19.9999	49.9995	99.9988	AS06	

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

Laboratory Job Number 248085

ANALYTICAL REPORT

Subcontracted Products

Laboratory Job Number 248085

Subcontracted Products

Cal Science



**Curtis & Tompkins, Ltd.**  
Analytical Laboratories, Since 1878





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**ANALYTICAL REPORT**

Weston Solutions  
1340 Treat Blvd  
Walnut Creek, CA 94597

Project : 20074.063.095.1340  
Location : 900 Innes Avenue  
Level : III

<u>Sample ID</u>	<u>Lab ID</u>
IA-13D	248085-001
IA-19D	248085-002
IA-21D	248085-003

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: \_\_\_\_\_

Isabelle Choy  
Project Manager  
(510) 486-0900

Date: 09/04/2013

NELAP # 01107CA

## CASE NARRATIVE

Laboratory number: 248085  
Client: Weston Solutions  
Project: 20074.063.095.1340  
Location: 900 Innes Avenue  
Request Date: 08/16/13  
Samples Received: 08/16/13

This data package contains sample and QC results for three sediment samples, requested for the above referenced project on 08/16/13. See attached cooler receipt form for any sample receipt problems or discrepancies.

### TPH-Extractables by GC (EPA 8015B):

High response was observed for motor oil C24-C36 in the CCV analyzed 08/22/13 15:48.

High response was observed for diesel C10-C24 in the CCV analyzed 08/22/13 22:58.

IA-13D (lab # 248085-001) and IA-21D (lab # 248085-003) were diluted due to the dark and viscous nature of the sample extracts.

No other analytical problems were encountered.

### Semivolatile Organics by GC/MS (EPA 8270C):

IA-13D (lab # 248085-001) was diluted due to the dark and viscous nature of the sample extract.

No other analytical problems were encountered.

### PCBs (EPA 8082):

All samples underwent sulfuric acid cleanup using EPA Method 3665A.

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B.

No analytical problems were encountered.

### Metals (EPA 6010B and EPA 7471A):

Low recovery was observed for mercury in the MSD of IA-30 (lab # 248030-043); the associated RPD was within limits.

Low recoveries were observed for silver and barium in the MSD of IA-13D (lab # 248085-001); these low recoveries were confirmed by re-analysis. High recoveries were observed for a number of analytes in the MS/MSD of IA-13D (lab # 248085-001); these high recoveries were confirmed by re-analysis, and the associated RPDs were within limits. High RPD was observed for silver; the RPD was acceptable in the BS/BSD, and this analyte was not detected at or above the RL in the associated samples.

## CASE NARRATIVE

Laboratory number: 248085  
Client: Weston Solutions  
Project: 20074.063.095.1340  
Location: 900 Innes Avenue  
Request Date: 08/16/13  
Samples Received: 08/16/13

### Metals (EPA 6010B and EPA 7471A):

Low recovery was observed for silver in the post digest spike of IA-13D (lab # 248085-001).

Responses exceeding the instrument's linear range were observed for copper, lead, and zinc in the MS/MSD of IA-13D (lab # 248085-001).

High % difference was observed for cadmium in the serial dilution of IA-13D (lab # 248085-001).

No other analytical problems were encountered.

### Moisture (ASTM D2216/CLP):

No analytical problems were encountered.

### Organotins (PSEP):

Cal Science in Garden Grove, CA performed the analysis (NELAP certified). Please see the Cal Science case narrative.

## Chain of Custody

# CHAIN OF CUSTODY

Chain of Custody # \_\_\_\_\_



2323 Fifth Street  
Berkeley, CA 94710  
Phone (510) 486-0900  
Fax (510) 486-0532

C&T LOGIN # 248085

Project No: \_\_\_\_\_  
Project Name: 900 INNES AVE  
Project P. O. No: \_\_\_\_\_  
Report Level:  I  II  III  IV  
Turnaround Time:  RUSH  Standard  
Sampler: IAN BRUCE  
Report To: IAN BRUCE  
Company: WESTON SOLUTIONS  
Telephone: 760 532 8787  
Email: ian.bruce@westonsolutions.com

ANALYTICAL REQUEST	
X	Metals 6010/741
X	TPH-d.m.o 8015
X	PAHs 8270
X	PCBs 0082
X	Organotins

Lab No.	Sample ID.	SAMPLING		MATRIX			# of Containers	CHEMICAL PRESERVATIVE						
		Date Collected	Time Collected	Water	Solid	SED		HCl	H2SO4	HNO3	NaOH	None		
	IA-13D	8/16/13	1030		X		2							X
	IA-19D	8/16/13	1035		X		2							X
	IA-21D	8/16/13	1040		X		2							X

Notes: \_\_\_\_\_

ATTN: ISABELLE CHOY

SAMPLE RECEIPT  
 Intact  
 Cold  
 On Ice  
 Ambient

RELINQUISHED BY: \_\_\_\_\_ DATE: 8/16/13 TIME: 4:55

RECEIVED BY: \_\_\_\_\_ DATE: 8/16/13 TIME: 1:05

**COOLER RECEIPT CHECKLIST**



Curtis & Tompkins, Ltd.

Login # 248085 Date Received 8/16/13 Number of coolers 1  
 Client WESTON SOLUTIONS Project 400 INVAS AVENUE

Date Opened 8/16/13 By (print) MS (sign) [Signature]  
 Date Logged in 8 By (print) [Signature] (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) \_\_\_\_\_ YES  NO

Shipping info \_\_\_\_\_

2A. Were custody seals present? ....  YES (circle) on cooler on samples  NO  
 How many \_\_\_\_\_ Name \_\_\_\_\_ Date \_\_\_\_\_

2B. Were custody seals intact upon arrival? \_\_\_\_\_ YES NO  N/A

3. Were custody papers dry and intact when received? \_\_\_\_\_ YES NO

4. Were custody papers filled out properly (ink, signed, etc)? \_\_\_\_\_ YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) \_\_\_\_\_ YES NO

6. Indicate the packing in cooler: (if other, describe) \_\_\_\_\_

- Bubble Wrap  Foam blocks  Bags  None
- Cloth material  Cardboard  Styrofoam  Paper towels

7. Temperature documentation: \* Notify PM if temperature exceeds 6°C  
 Type of ice used:  Wet  Blue/Gel  None Temp(°C) \_\_\_\_\_

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES  NO  
 If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? \_\_\_\_\_ YES NO

10. Are there any missing / extra samples? \_\_\_\_\_ YES NO

11. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_ YES NO

12. Are sample labels present, in good condition and complete? \_\_\_\_\_ YES NO

13. Do the sample labels agree with custody papers? \_\_\_\_\_ YES NO

14. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_ YES NO

15. Are the samples appropriately preserved? \_\_\_\_\_ YES NO  N/A

16. Did you check preservatives for all bottles for each sample? \_\_\_\_\_ YES NO  N/A

17. Did you document your preservative check? \_\_\_\_\_ YES NO  N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? \_\_\_\_\_ YES NO  N/A

19. Did you change the hold time in LIMS for preserved terracores? \_\_\_\_\_ YES NO  N/A

20. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES NO  N/A

21. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES NO

If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

**COMMENTS**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Laboratory Job Number 248085

ANALYTICAL REPORT

TPH-Extractables by GC

Matrix: Miscell.



Total Extractable Hydrocarbons			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Units:	mg/Kg	Sampled:	08/16/13
Basis:	dry	Received:	08/16/13
Batch#:	201972	Prepared:	08/21/13

Field ID:	IA-13D	Moisture:	49%
Type:	SAMPLE	Diln Fac:	3.000
Lab ID:	248085-001	Chemist:	SFL
Matrix:	Miscell.	Analyzed:	08/23/13

Analyte	Result	RL
Diesel C10-C24	470 Y	5.9
Motor Oil C24-C36	980	30

Surrogate	%REC	Limits
o-Terphenyl	89	62-136

Field ID:	IA-19D	Moisture:	63%
Type:	SAMPLE	Diln Fac:	1.000
Lab ID:	248085-002	Chemist:	SFL
Matrix:	Miscell.	Analyzed:	08/23/13

Analyte	Result	RL
Diesel C10-C24	86 Y	2.7
Motor Oil C24-C36	250	14

Surrogate	%REC	Limits
o-Terphenyl	103	62-136

Field ID:	IA-21D	Moisture:	67%
Type:	SAMPLE	Diln Fac:	1.000
Lab ID:	248085-003	Chemist:	SFL
Matrix:	Miscell.	Analyzed:	08/23/13

Analyte	Result	RL
Diesel C10-C24	40 Y	3.0
Motor Oil C24-C36	110	15

Surrogate	%REC	Limits
o-Terphenyl	91	62-136

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC703021	Chemist:	JDG
Matrix:	Soil	Analyzed:	08/22/13

Analyte	Result	RL
Diesel C10-C24	ND	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	105	62-136

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit



Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Type:	LCS	Batch#:	201972
Lab ID:	QC703022	Chemist:	JDG
Matrix:	Soil	Prepared:	08/21/13
Units:	mg/Kg	Analyzed:	08/22/13
Diln Fac:	1.000		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.27	38.91	77	62-130

Surrogate	%REC	Limits
o-Terphenyl	92	62-136



Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	248085	Location:	900 Innes Avenue
Client:	Weston Solutions	Prep:	EPA 3550B
Project#:	20074.063.095.1340	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	201972
MSS Lab ID:	248150-003	Chemist:	JDG
Matrix:	Miscell.	Sampled:	08/19/13
Units:	mg/Kg	Received:	08/19/13
Basis:	as received	Prepared:	08/21/13
Diln Fac:	3.000	Analyzed:	08/23/13

Type: MS Lab ID: QC703023

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	2.870	49.77	38.37	71	39-148

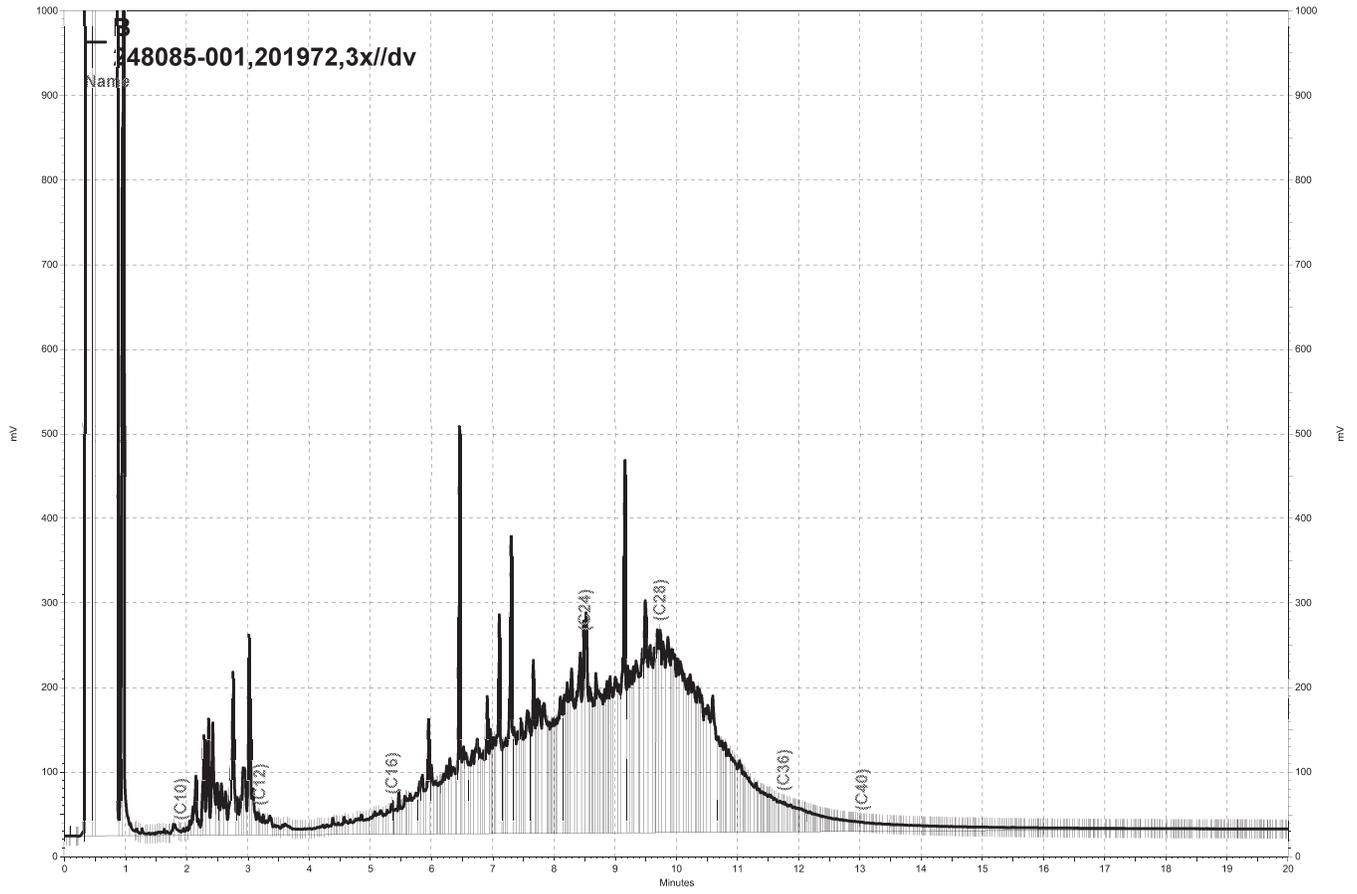
Surrogate	%REC	Limits
o-Terphenyl	86	62-136

Type: MSD Lab ID: QC703024

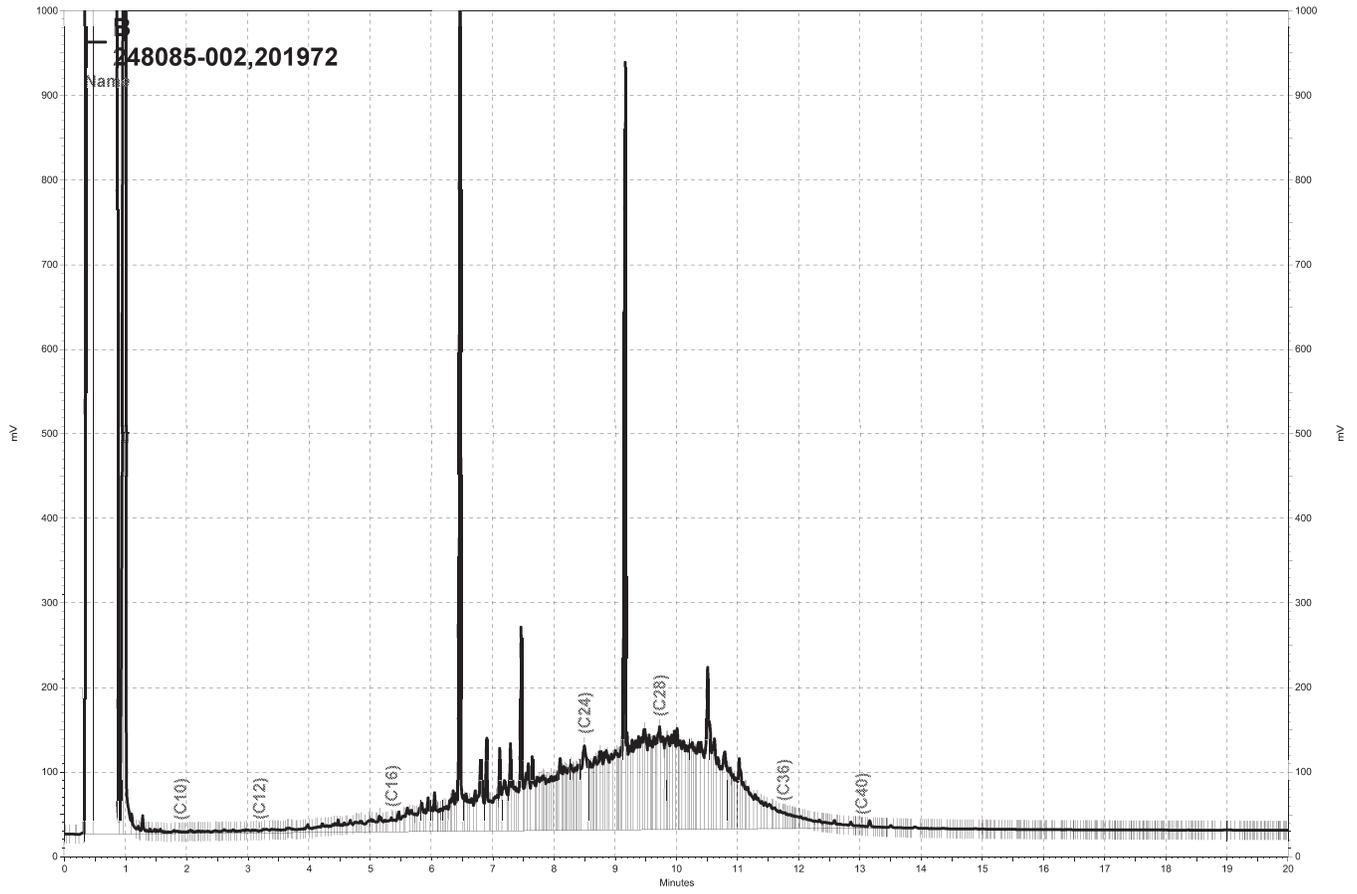
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.93	36.25	67	39-148	6	45

Surrogate	%REC	Limits
o-Terphenyl	93	62-136

RPD= Relative Percent Difference



— \\Lims\gdrive\ezchrom\Projects\GC14B\Data\234b032, B



\\Lims\gdrive\ezchrom\Projects\GC14B\Data\234b034, B