

22 June 2015

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101 Montgomery Street, Suite 900
San Francisco, California 94104

**Subject: Preliminary Study
Geotechnical and Environmental Issues
New Park Concept Plan
900 Innes
India Basin
San Francisco, California
Langan Project No.: 731651501**

Dear Ms. Strickland:

This letter presents the results of our preliminary study regarding geotechnical and environmental issues associated with the development of the 900 Innes Avenue Park in San Francisco, California as shown on Figure 1. The 900 Innes Avenue Park is part of the India Basin Waterfront Parks Vision Plan, which includes about 60 acres of public and privately owned vacant land to be developed into new publicly accessible parkland and open space. We performed a preliminary geotechnical investigation for the adjacent India Basin Development project that includes India Basin Open Space (southernmost section of the India Basin Waterfront Parks Vision Plan), and presented our findings and conclusions in a report dated 4 September 2014.

PROJECT DESCRIPTION

The project site is north of the India Basin Open Space park area, east of Innes Street, and south of the proposed India Basin Shoreline Park as shown on Figure 2. The 2.4-acre site includes 1.8 acres of land. The proposed 900 Inness Avenue Park includes extending a segment of the Bay Trail along the edge of the shoreline, a continuous bike/pedestrian lane, and recreational areas including beach areas and dog parks. In addition, a driveway is proposed for boat transfer / drop off, and for emergency vehicles. Additional improvements may include the construction of a one-story, light, boat building; alternatively, the existing historic shipwright's cottage, adjacent to Innes Avenue may be retrofitted. New utilities will be installed for lighting and irrigation. Site grading may require placing 3 to 5 feet of fill.

Wetlands may be created along the shoreline. Sedimentation and coastal process along the coastline are being evaluated by Moffat and Nichols.

SITE AND SUBSURFACE CONDITIONS

Site grades within the 900 Innes Avenue Park area vary from Elevation 10 feet near the edge of the shoreline to Elevation 30 feet adjacent to Innes Avenue. The site is partially paved, with two docks, two boat launches and an access road. The site includes an abandoned one-story family unit, two storage buildings, and a partially collapsed covered pier. The historic Shipwright's cottage is adjacent to Innes Avenue.

Published maps, aerial photos, and the results of available subsurface information indicate the majority of the site is east of the edge of the historic San Francisco Bay shoreline. The approximate location of the historic shoreline is shown in the attached Site Plan, Figure 2. The shoreline was filled between 1938 and 1968.

The portion of the site east of the old shoreline is likely underlain by 10 to 15 feet of sandy fill; 10 to 20 feet of soft, compressible clay referred to as Bay Mud and loose sand; medium dense sand; Old Bay Clay; and bedrock. The thicknesses of fill, Bay Mud, sand and Old Bay Clay, likely increase towards the Bay. The portion of the site west of the old shoreline is likely covered by 10 to 15 feet of fill, underlain by loose to dense sand to depths of at least 30 feet below existing site grades. Groundwater at the site is within the upper ten feet of the fill and can likely rise to the ground surface, near the shoreline.

The site, historically used as ship building and repair, and referred to as Donco Industries, was most recently investigated in 2013 for contamination, in coordination with EPA and the San Francisco Department of Health. The Phase I/II Investigation Targeted Brownfield Assessment Final Report by Weston Solutions, dated September 2013, indicates a release of petroleum hydrocarbons, PCBs, PAHs, and metals occurred at the site. Weston Solutions concludes the contamination is likely related to historical site activities (ship repair services), and current site activities (construction equipment and heavy machinery storage). They further indicate site development for recreational use may require the construction of a barrier, and/or excavation and disposal of contaminated soils, and and/or containment of contaminated soil. Each cleanup alternative will require subsequent confirmation and delineation sampling of the impacted areas.

REGIONAL SEISMICITY AND FAULTING

Regional faulting and seismic hazards at the project site are discussed in this section.

Regional Faulting

The major active faults in the area are the San Andreas, San Gregorio, Hayward, and Calaveras Faults. These and other faults of the region are shown on Figure 3. For each of the active faults within 50 kilometers of the site, the distance from the site and estimated mean

characteristic Moment magnitude¹ [2007 Working Group on California Earthquake Probabilities (WGCEP) (2007) and Cao et al. (2003)] are summarized in Table 1.

TABLE 1
Regional Faults and Seismicity

Fault Segment	Approx. Distance from fault (km)	Direction from Site	Mean Characteristic Moment Magnitude
N. San Andreas – Peninsula	11.3	West	7.23
N. San Andreas (1906 event)	11	West	8.05
Total Hayward	18	Northeast	7.00
Total Hayward-Rodgers Creek	18	Northeast	7.33
N. San Andreas – North Coast	18	West	7.51
San Gregorio Connected	19	West	7.50
Total Calaveras	34	East	7.03
Mount Diablo Thrust	34	East	6.70
Monet Vista – Shannon	35	Southeast	6.50
Green Valley Connected	39	East	6.80
Rodgers Creek	40	North	7.07
Point Reyes	47	West	6.90
West Napa	50	North	6.70

Figure 3 also shows the earthquake epicenters for events with magnitude greater than 5.0 from January 1800 through August 2014. Since 1800, four major earthquakes have been recorded on the San Andreas Fault. In 1836 an earthquake with an estimated maximum intensity of VII on the Modified Mercalli (MM) scale (Figure 4) occurred east of Monterey Bay on the San Andreas Fault (Toppozada and Borchardt 1998). The estimated Moment magnitude, M_w , for this earthquake is about 6.25. In 1838, an earthquake occurred with an estimated intensity of about VIII-IX (MM), corresponding to a M_w of about 7.5. The San Francisco Earthquake of 1906 caused the most significant damage in the history of the Bay Area in terms of loss of lives and property damage. This earthquake created a surface rupture along the San Andreas Fault

¹ Moment magnitude is an energy-based scale and provides a physically meaningful measure of the size of a faulting event. Moment magnitude is directly related to average slip and fault rupture area.

from Shelter Cove to San Juan Bautista approximately 470 kilometers in length. It had a maximum intensity of XI (MM), a M_w of about 7.9, and was felt 560 kilometers away in Oregon, Nevada, and Los Angeles. The Loma Prieta Earthquake occurred on 17 October 1989, in the Santa Cruz Mountains with a M_w of 6.9, approximately 89 km from the site. In 1868 an earthquake with an estimated maximum intensity of X on the MM scale occurred on the southern segment (between San Leandro and Fremont) of the Hayward Fault. The estimated M_w for the earthquake is 7.0. In 1861, an earthquake of unknown magnitude (probably a M_w of about 6.5) was reported on the Calaveras Fault. The most recent significant earthquake on this fault was the 1984 Morgan Hill earthquake ($M_w = 6.2$).

The most recent earthquake to affect the Bay Area occurred on 24 August 2014 and was located on the West Napa fault, approximately 50 kilometers northeast of the site, with a M_w of 6.0.

The 2007 WGCEP at the U.S. Geologic Survey (USGS) predicted a 63 percent chance of a magnitude 6.7 or greater earthquake occurring in the San Francisco Bay Area in 30 years. More specific estimates of the probabilities for different faults in the Bay Area are presented in Table 2.

TABLE 2
WGCEP (2007) Estimates of 30-Year Probability
of a Magnitude 6.7 or Greater Earthquake

Fault	Probability (percent)
Hayward-Rodgers Creek	31
N. San Andreas	21
Calaveras	7
San Gregorio	6
Concord-Green Valley	3
Greenville	3
Mount Diablo Thrust	1

Fault Rupture

Historically, ground surface displacements closely follow the traces of geologically young faults. The site is not within an Earthquake Fault Zone, as defined by the Alquist-Priolo Earthquake Fault Zoning Act, and no known active or potentially active faults exist on the site. In a

seismically active area, a remote possibility exists for future faulting in areas where no faults previously existed; however, we conclude the risk of surface faulting and consequent secondary ground failure is very low.

Seismic Hazards

During a major earthquake on a segment of one of the nearby faults, strong to very strong shaking is expected to occur at the project site. Strong shaking during an earthquake can result in ground failure such as that associated with soil liquefaction², lateral spreading³, and differential compaction⁴.

When a saturated soil with little to no cohesion liquefies during a major earthquake, it experiences a temporary loss of strength as a result of a transient rise in pore water pressure generated by strong ground motion. Flow failure, lateral spreading, differential settlement, loss of bearing, ground fissures, and sand boils are evidence of excess pore pressure generation and liquefaction. The site is within a designated liquefaction hazard zone as designated by the California Geological Survey (CGS) seismic hazard zone map for the area titled *State of California Seismic Hazard Zones, City and County of San Francisco, Official Map*, dated 17 November 2001 (Figure 5).

Loose to medium dense sandy fill and native sand below the high groundwater level may liquefy during a major earthquake on a nearby active fault. We anticipate several inches of vertical, earthquake-induced ground settlement could occur within the project site. The anticipated settlement is expected to be erratic and vary significantly across the site.

Densification of the fill above the design groundwater level may result in a few inches of ground settlement; however, several inches of densification settlement could occur locally in the fill.

Site grades along the Bay margin have been significantly modified to current elevations by man-made improvements, primarily by excavation and fill activities. Considering the surface of the fill and Bay Mud, are sloping, and likely presence of continuous, potentially liquefiable loose to medium dense sand below the groundwater level, we conclude lateral movement of the fill

² Liquefaction is a transformation of soil from a solid to a liquefied state during which saturated soil temporarily loses strength resulting from the buildup of excess pore water pressure, especially during earthquake-induced cyclic loading. Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits.

³ Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon reaching mobilization, the surficial blocks are transported downslope or in the direction of a free face by earthquake and gravitational forces.

⁴ Differential compaction is a phenomenon in which non-saturated, cohesionless soil is densified by earthquake vibrations, causing differential settlement.

towards the bay will likely occur during a major earthquake on a nearby active fault. During a major earthquake on a nearby active fault, we anticipate lateral ground displacement on the order of several inches might occur. We anticipate the direction of the lateral ground displacement will likely be towards the east/ northeast (towards the bay).

PRELIMINARY DISCUSSION AND CONCLUSIONS

On the basis of the available subsurface information and our understanding of the proposed development, we conclude the project is feasible from a geotechnical standpoint. The main geotechnical issues at the project site are:

- presence of uncontrolled fill across the site
- presence of hazardous substances within the fill
- anticipated ground displacements within the fill and native sand during a major earthquake on a nearby active fault
- presence of weak, compressible Bay Mud beneath the fill east of the old shoreline and Bay Mud consolidation under new building loads and new fill placement

During a major earthquake on a nearby active fault we anticipate ground displacements (vertical and lateral) within the fill may be on the order of several inches. Differential, earthquake-induced, vertical ground settlement might be on the order of four inches over a horizontal distance of 50 feet. Earthquake-induced ground settlement could affect the performance of the proposed Bay Trail, bike/pedestrian path, access road and utilities. Repairs will likely be required after a major earthquake on a nearby active fault.

We anticipate that in general, consolidation of the Bay Mud and Old Bay Clay under the weight of the existing fill is nearly complete. However, the onsite fill was placed without mechanical effort /compaction. Structures / proposed improvements over the existing fill will be subjected to excessive ground settlements induced by earthquake, new fill and building loads; in addition, differential settlement within the fill may be abrupt and erratic.

Placement of new fill will likely initiate consolidation of the Bay Mud. Bay Mud consolidation will result in large ground settlement that should be considered in the design of utilities, site grading, and other site improvements.

The anticipated earthquake-induced ground settlement and settlement from new fill should be accommodated in the design of the emergence access road and utilities, as need. The magnitude of the ground settlement should be evaluated during a design level geotechnical investigation.

Considering the presence of contaminants in the fill, site development for recreational use may require the construction of a barrier, and/or excavation and disposal of contaminated soils, and and/or containment of contaminated soil. Each cleanup alternative will require subsequent confirmation and delineation sampling of the impacted areas.

Lightweight, one-story structures may be supported on a stiffened mat foundation provided the mat is designed for the large anticipated differential ground settlement. Alternatively, lightweight structures may be supported on deep foundations.

The stability of the shoreline should be evaluated during the design level phase of the proposed improvements. If the anticipated ground movement is not acceptable, mitigation measures should be implemented, as needed.

PRELIMINARY RECOMMENDATIONS

Our preliminary recommendations for site preparation and grading, foundation design, floor slabs, and seismic design are presented in this section of the report.

Site Preparation and Grading

This section presents preliminary earthwork recommendations for site preparation and grading.

Site Clearing

Site demolition should include the removal of pavement, utility lines, and other below-grade elements that will interfere with the proposed construction. Excavations in fill for foundations and site utilities may encounter concrete elements and debris. Breaking up obstructions using jack hammers or hoe rams into small pieces may be required to facilitate offsite removal. Where utilities that are removed extend off site, they should be capped or plugged with grout.

Onsite fill will likely require special handling during site grading. Soil management measures to be implemented during construction should be addressed in the project Site Mitigation Plan.

Where concrete rubble is present, pieces larger than four inches in greatest dimension should be removed. Stripped pavement materials can be used as backfill provided they are crushed to less than four inches in greatest dimension and mixed with soil to prevent nesting. The weight of the asphalt and concrete fragments should not comprise more than 30 percent of the mixture. Existing concrete elements can be used as fill provided they are crushed to less than three inches in maximum dimension and properly mixed with onsite soil.

Subgrade Preparation

In areas to receive site improvements, including flatwork, the exposed soil subgrade should be scarified to a depth of at least eight inches, moisture-conditioned to above the optimum moisture content and compacted to at least 95 percent relative compaction⁵. The soil subgrade should be kept moist until it is covered by fill or other improvements.

Fill Placement and Compaction

Placement of more than three feet of new fill will result in large ground settlement that should be considered in the design of utilities, site grading, and other site improvements.

Fill should consist of onsite soil or imported soil that is non-corrosive, free of organic matter or other deleterious material, contains no rocks or lumps larger than four inches in greatest dimension, has a liquid limit of less than 40 and a plasticity index lower than 12, and is approved by the Geotechnical Engineer.

Fill should be placed in horizontal lifts not exceeding eight inches in loose thickness, moisture-conditioned to near the optimum moisture content, and compacted to at least 90 percent relative compaction. Fill thicker than five feet or clean sand or gravel (soil with less than 10 percent fines by weight) used as fill should be compacted to at least 95 percent relative compaction.

The Geotechnical Engineer should approve all sources of fill at least three days before use at the site. The grading contractor should provide analytical test results or other suitable environmental documentation indicating the imported fill is free of hazardous materials at least three days before use at the site. If this data is not available, up to two weeks should be allowed to perform analytical testing on the proposed import material. A bulk sample of approved fill should be provided to the geotechnical engineer at least three working days before use at the site so a compaction curve can be prepared.

Utilities and Utility Trenches

Excavations for utility trenches can be readily made with a backhoe; however, unexpected obstructions may make some of the trenching operations difficult. All trenches should conform to the current CAL-OSHA requirements.

Backfill for utility trenches and other excavations is also considered fill, and it should be compacted according to the recommendations presented in Section 8.1.3. If imported clean sand or gravel is used as backfill, however, it should be compacted to at least 95 percent

⁵ Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material, as determined by the latest ASTM D1557 laboratory compaction procedure.

relative compaction. Jetting of trench backfill should not be permitted. Special care should be taken when backfilling utility trenches in pavement areas. Poor compaction may cause excessive settlements, resulting in damage at the ground surface.

Utilities should be designed to accommodate 6 to 12 inches of vertical settlement where they enter the new buildings. If lateral soil movement is not mitigated, utility connections should also accommodate six inches of lateral soil movement.

Lightweight Structures on Stiffened Mat Foundations

Lightweight, one-story structures may be supported on a stiffened mat foundation provided the mat is designed for a differential settlement of four inches over a horizontal distance of 50 feet. Considering the variability of onsite fill and lack of documentation of fill compaction, we conclude during a major earthquake on a nearby active fault the actual ground differential settlement may be on the order of four inches over a horizontal distance of 50 feet. Alternatively, structures may be supported on deep foundations.

Ground Building Slabs

If there are any areas where floor moisture is undesirable, the floor should be moisture-proofed. To reduce water vapor transmission through the floor slabs, we recommend installing a capillary moisture break and a water vapor retarder over the soil subgrade and beneath new floor slabs. A capillary moisture break consists of at least four inches of clean, free-draining gravel or crushed rock. The vapor retarder should meet the requirements for Class C vapor retarders stated in ASTM E1745-97. The vapor retarder should be placed in accordance with the requirements of ASTM E1643-98. These requirements include overlapping seams by six inches, taping seams, and sealing penetrations in the vapor retarder. The vapor retarder should be covered with two inches of sand to aid in curing the concrete and to protect the vapor retarder during slab construction. The particle size of the gravel/crushed rock and sand should meet the gradation requirements presented in Table 3.

TABLE 3
Gradation Requirements for Capillary Moisture Break

Sieve Size	Percentage Passing Sieve
<i>Gravel or Crushed Rock</i>	
1 inch	90 – 100
3/4 inch	30 – 100
1/2 inch	5 – 25
3/8 inch	0 – 6
<i>Sand</i>	
No. 4	100
No. 200	0 – 5

The sand overlying the membrane should be dry at the time concrete is placed. Excess water trapped in the sand could eventually be transmitted as vapor through the slab. If the sand becomes wet, concrete should not be placed until the sand has been dried or replaced.

Concrete mixes with high water/cement (w/c) ratios result in excess water in the concrete, which increases the cure time and results in excessive vapor transmission through the slab. Therefore, concrete for the floor slab should have a low water/cement (w/c) ratio – less than 0.5. If approved by the project structural engineer, the sand can be eliminated and the concrete can be placed directly over the vapor retarder, provided the w/c ratio of the concrete does not exceed 0.45 and water is not added in the field. If necessary, workability should be increased by adding plasticizers. In addition, the slab should be properly cured.

Before the floor covering is placed, the contractor should check that the concrete surface and the moisture emission levels (if emission testing is required) meet the manufacturer's requirements.

Corrosion Protection

Concrete elements with a maximum water cement ratio of 0.55 (including grade beams and slabs), supported on onsite soil should be Type I or Type II concrete. Concrete elements in contact with Bay Mud should use Type V concrete. Additional corrosion testing should be performed during the design level investigation for each building.

Any utilities extending into Bay Mud should be corrosion protected. Below ground concrete structures and steel piles will require protection from corrosion. A site corrosivity evaluation should be performed by a corrosivity specialist to develop long-term corrosion control for the selected foundation system and proposed construction materials for the underground site utilities.

Seismic Design

Seismic parameters for design of buildings at the site will depend where on the site the buildings will be constructed. Our preliminary conclusion is the Site Class could range from S_D (less than 10 feet of Bay Mud) to S_E (more than 10 feet of Bay Mud).

Maximum Considered Earthquake (MCE) mapped short (S_s) and one second (S_1) spectral values for the project site are 1.50g and 0.616g, respectively. Limits of building areas with less than ten feet of Bay Mud (Site Class D) and more than 10 feet of Bay Mud (Site Class E) can be estimated using the Bay Mud thickness contours presented on Figure 9. Values of F_a , F_v , S_{MS} , S_{M1} , S_{DS} , and S_{D1} , for Site Class D, and E per 2013 CBC / ASCE 7-10 are presented in Table 4. The actual Site Class for each building should be confirmed during the design level investigation.

TABLE 4
Recommended Site Coefficients and
Mapped Response Acceleration Parameters

	Site Class D (West of Hudson Avenue)	Site Class E (East of Hudson Avenue)
F_a	1.00	0.90
F_v	1.50	2.40
S_{MS}	1.50	1.35
S_{M1}	0.92	1.48
S_{DS}	1.00	0.90
S_{D1}	0.62	0.99

If the design level investigation indicates a continuous liquefiable soil layer is present beneath new buildings, the Site Class is F, and a site specific response spectra will be required if the building period is greater than 0.5 second.

LIMITATIONS

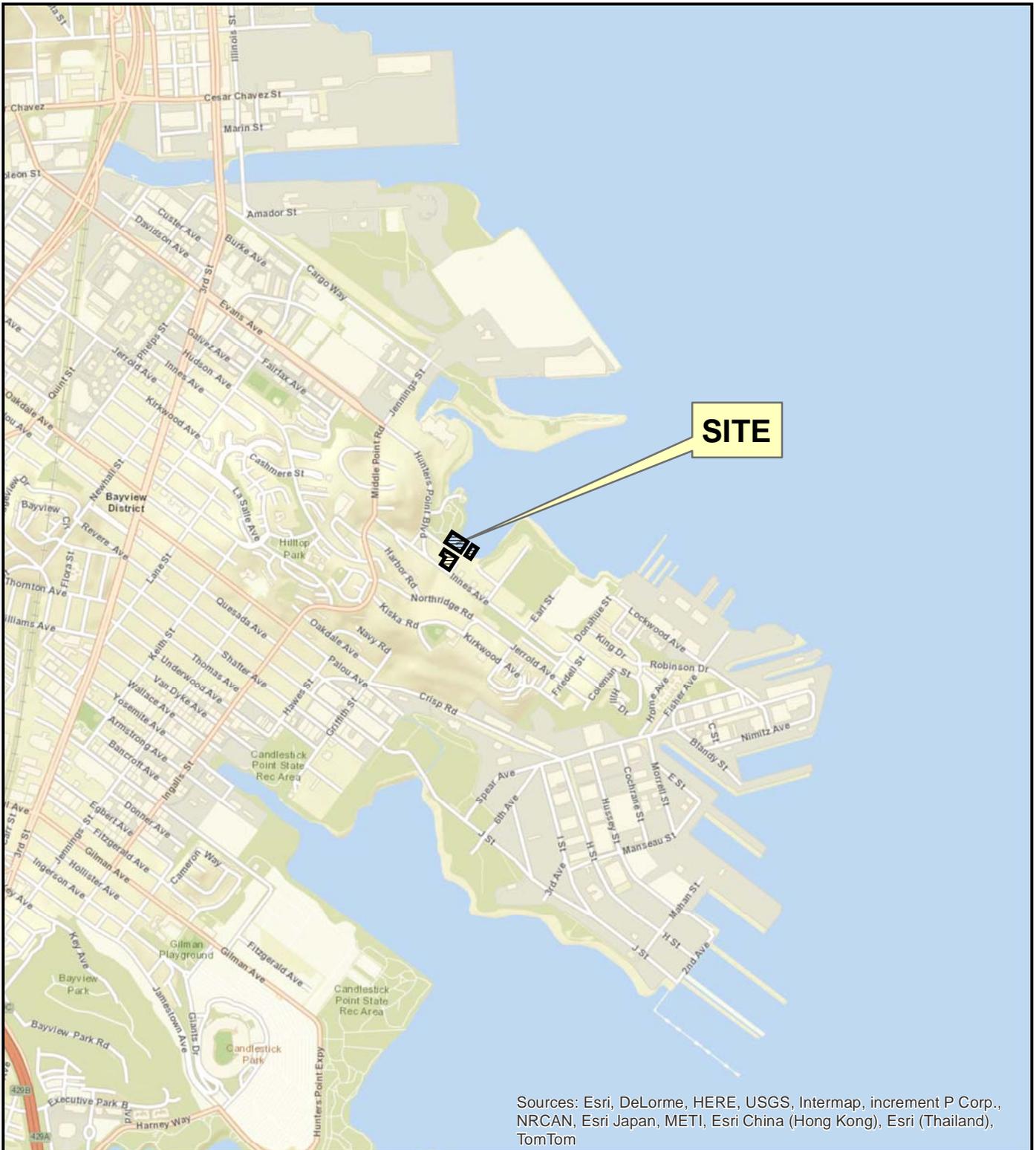
The conclusions and recommendations presented in this report are preliminary and may be used to estimate costs for preliminary schematic drawings; however during final design, detailed geotechnical investigation(s) should be performed for the proposed improvements. The design level geotechnical investigations should include field investigations and laboratory testing, as needed; engineering analyses should be performed for the final design and the results should be used to further evaluate subsurface conditions and to develop geotechnical design parameters for soil improvement, foundations, and other geotechnical aspects of the design specific to this site.

Sincerely,
Langan Treadwell Rollo

Maria Flessas, G.E. #2502
Principal

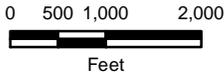
731651501.01_MGF_Feasibility Study 900 Innes Avenue

Attachments: Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 – Map of Major Faults and Earthquake Epicenters
in the San Francisco Bay Area
Figure 4 – Modified Mercalli Scale
Figure 5 – Liquefaction Hazard Zone Map



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.



**900 INNES
INDIA BASIN**
San Francisco, California

SITE LOCATION MAP

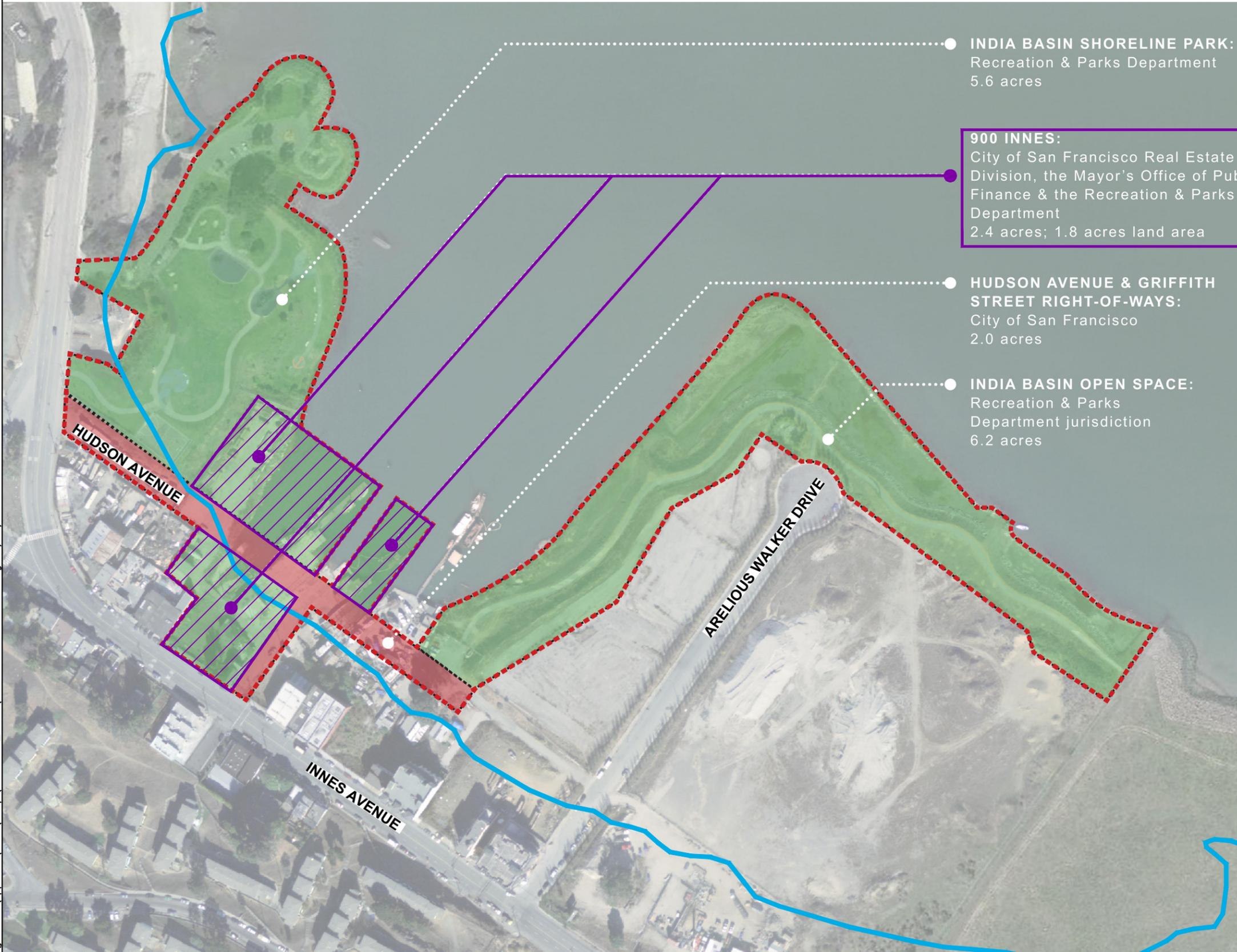
LANGAN TREADWELL ROLLO

Date 06/18/15

Project No. 731651501

Figure 1

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● **INDIA BASIN SHORELINE PARK:**
Recreation & Parks Department
5.6 acres

● **900 INNES:**
City of San Francisco Real Estate
Division, the Mayor's Office of Pub
Finance & the Recreation & Parks
Department
2.4 acres; 1.8 acres land area

● **HUDSON AVENUE & GRIFFITH
STREET RIGHT-OF-WAYS:**
City of San Francisco
2.0 acres

● **INDIA BASIN OPEN SPACE:**
Recreation & Parks
Department jurisdiction
6.2 acres

EXPLANATION

-  Approximate location of Historic Shoreline
-  Project Areas
-  Right-of-ways
-  900 Innes



0 200 Feet
Approximate scale

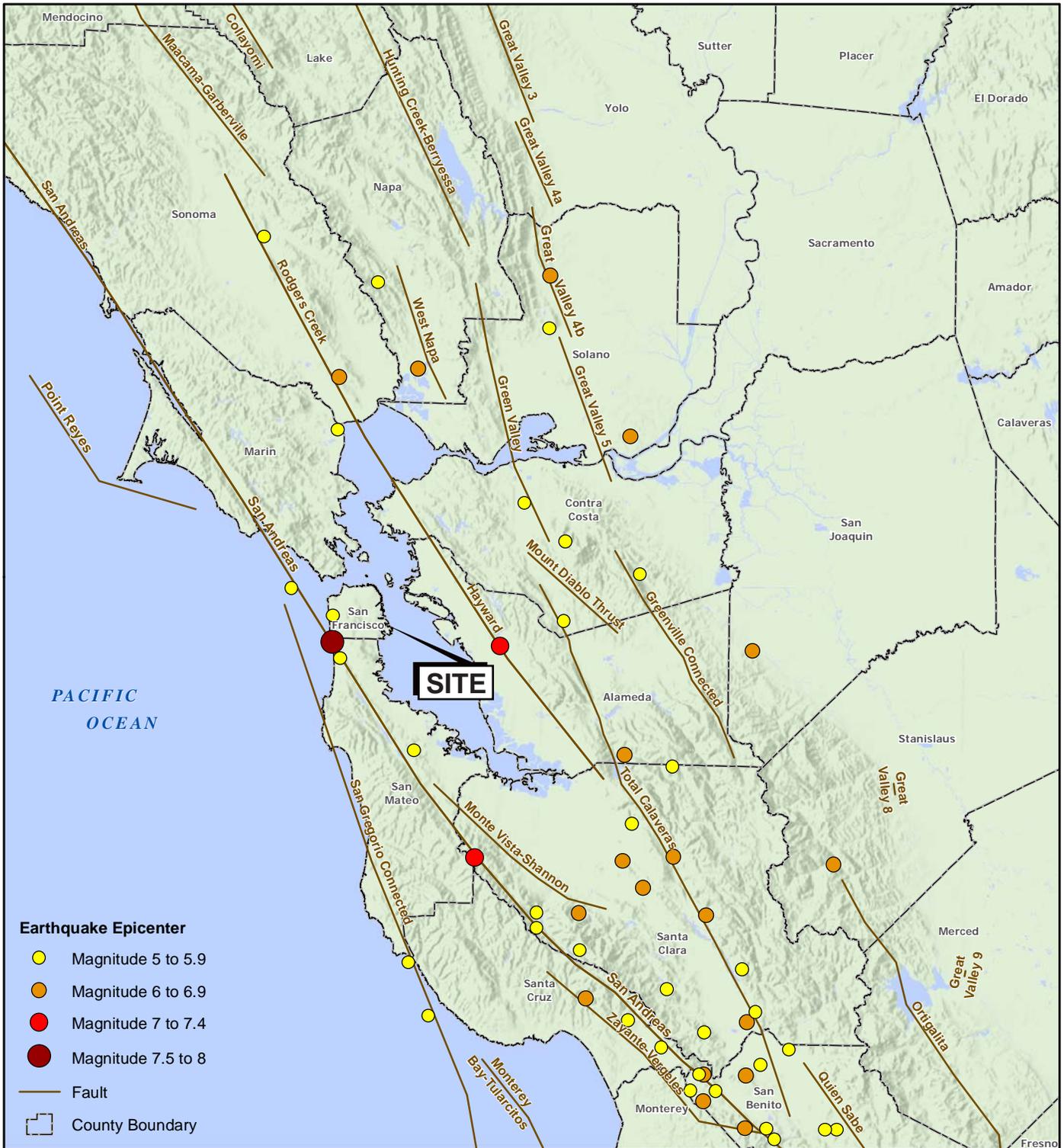
**900 INNES
INDIA BASIN**
San Francisco, California

SITE PLAN

Date 06/18/15 | Project No. 731651501 | Figure 2

LANGAN TREADWELL ROLLO

Reference: Base map from a drawing titled "2, Existing Conditions, Existing Site Aerial," by Bionic, undated.



Notes:

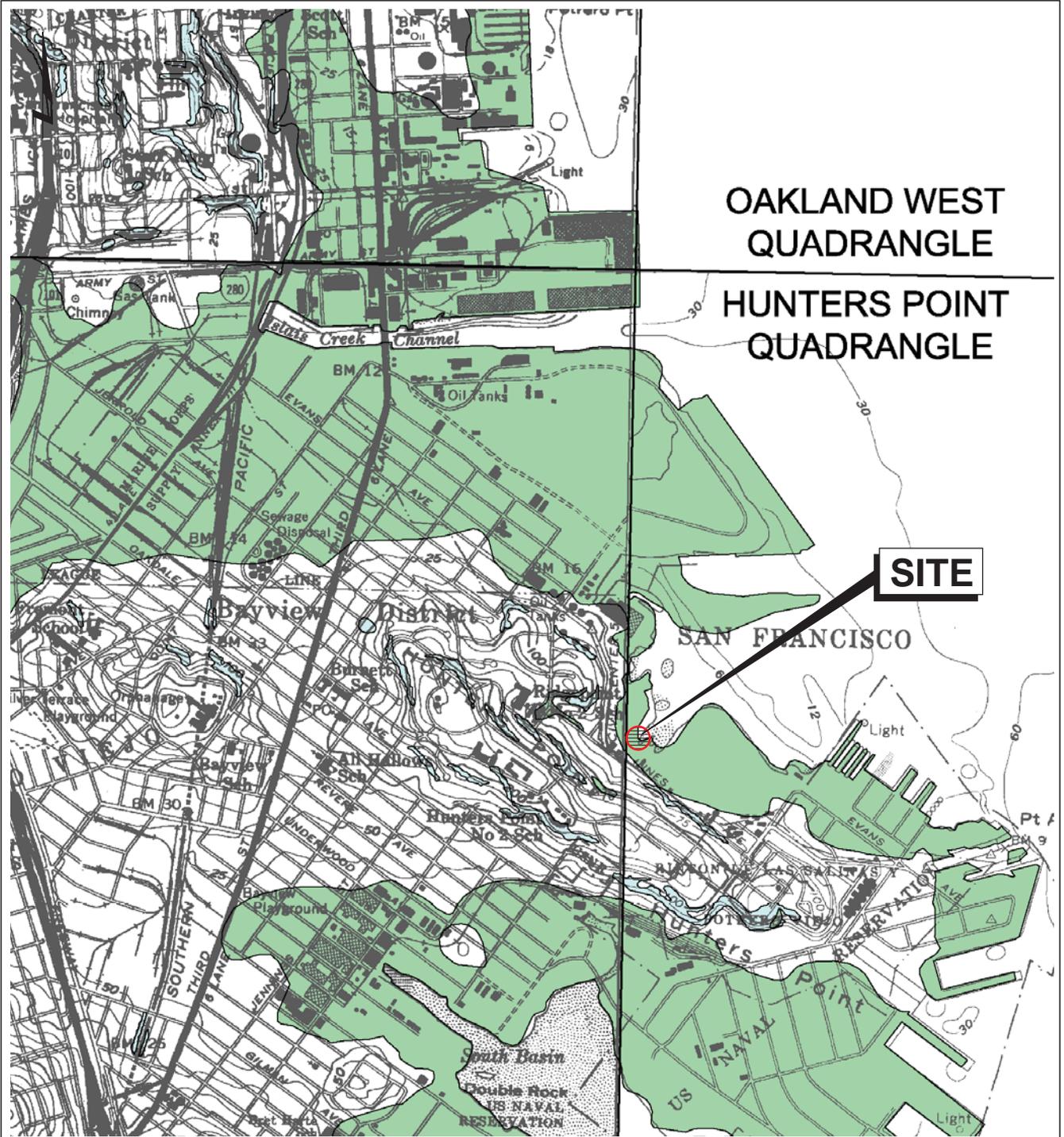
1. Quaternary fault data displayed are based on a generalized version of U.S. Geological Survey (USGS) Quaternary Fault and fold database, 2010. For cartographic purposes only.
2. The Earthquake Epicenter (Magnitude) data is provided by the USGS and is current through 08/24/2014.
3. Basemap hillshade and County boundaries provided by USGS and California Department of Transportation.
4. Map displayed in California State Coordinate System, California (Teale) Albers, North American Datum of 1983 (NAD83), Meters.



<p>900 INNES INDIA BASIN San Francisco, California</p>	<p>MAP OF MAJOR FAULTS AND EARTHQUAKE EPICENTERS IN THE SAN FRANCISCO BAY AREA</p>		
<p>LANGAN TREADWELL ROLLO</p>	<p>Date 06/18/15</p>	<p>Project No.731651501</p>	<p>Figure 3</p>

- I **Not felt by people, except under especially favorable circumstances. However, dizziness or nausea may be experienced.**
Sometimes birds and animals are uneasy or disturbed. Trees, structures, liquids, bodies of water may sway gently, and doors may swing very slowly.
- II **Felt indoors by a few people, especially on upper floors of multi-story buildings, and by sensitive or nervous persons.**
As in Grade I, birds and animals are disturbed, and trees, structures, liquids and bodies of water may sway. Hanging objects swing, especially if they are delicately suspended.
- III **Felt indoors by several people, usually as a rapid vibration that may not be recognized as an earthquake at first. Vibration is similar to that of a light, or lightly loaded trucks, or heavy trucks some distance away. Duration may be estimated in some cases.**
Movements may be appreciable on upper levels of tall structures. Standing motor cars may rock slightly.
- IV **Felt indoors by many, outdoors by a few. Awakens a few individuals, particularly light sleepers, but frightens no one except those apprehensive from previous experience. Vibration like that due to passing of heavy, or heavily loaded trucks. Sensation like a heavy body striking building, or the falling of heavy objects inside.**
Dishes, windows and doors rattle; glassware and crockery clink and clash. Walls and house frames creak, especially if intensity is in the upper range of this grade. Hanging objects often swing. Liquids in open vessels are disturbed slightly. Stationary automobiles rock noticeably.
- V **Felt indoors by practically everyone, outdoors by most people. Direction can often be estimated by those outdoors. Awakens many, or most sleepers. Frightens a few people, with slight excitement; some persons run outdoors.**
Buildings tremble throughout. Dishes and glassware break to some extent. Windows crack in some cases, but not generally. Vases and small or unstable objects overturn in many instances, and a few fall. Hanging objects and doors swing generally or considerably. Pictures knock against walls, or swing out of place. Doors and shutters open or close abruptly. Pendulum clocks stop, or run fast or slow. Small objects move, and furnishings may shift to a slight extent. Small amounts of liquids spill from well-filled open containers. Trees and bushes shake slightly.
- VI **Felt by everyone, indoors and outdoors. Awakens all sleepers. Frightens many people; general excitement, and some persons run outdoors.**
Persons move unsteadily. Trees and bushes shake slightly to moderately. Liquids are set in strong motion. Small bells in churches and schools ring. Poorly built buildings may be damaged. Plaster falls in small amounts. Other plaster cracks somewhat. Many dishes and glasses, and a few windows break. Knickknacks, books and pictures fall. Furniture overturns in many instances. Heavy furnishings move.
- VII **Frightens everyone. General alarm, and everyone runs outdoors.**
People find it difficult to stand. Persons driving cars notice shaking. Trees and bushes shake moderately to strongly. Waves form on ponds, lakes and streams. Water is muddied. Gravel or sand stream banks cave in. Large church bells ring. Suspended objects quiver. Damage is negligible in buildings of good design and construction; slight to moderate in well-built ordinary buildings; considerable in poorly built or badly designed buildings, adobe houses, old walls (especially where laid up without mortar), spires, etc. Plaster and some stucco fall. Many windows and some furniture break. Loosened brickwork and tiles shake down. Weak chimneys break at the roofline. Cornices fall from towers and high buildings. Bricks and stones are dislodged. Heavy furniture overturns. Concrete irrigation ditches are considerably damaged.
- VIII **General fright, and alarm approaches panic.**
Persons driving cars are disturbed. Trees shake strongly, and branches and trunks break off (especially palm trees). Sand and mud erupts in small amounts. Flow of springs and wells is temporarily and sometimes permanently changed. Dry wells renew flow. Temperatures of spring and well waters varies. Damage slight in brick structures built especially to withstand earthquakes; considerable in ordinary substantial buildings, with some partial collapse; heavy in some wooden houses, with some tumbling down. Panel walls break away in frame structures. Decayed pilings break off. Walls fall. Solid stone walls crack and break seriously. Wet grounds and steep slopes crack to some extent. Chimneys, columns, monuments and factory stacks and towers twist and fall. Very heavy furniture moves conspicuously or overturns.
- IX **Panic is general.**
Ground cracks conspicuously. Damage is considerable in masonry structures built especially to withstand earthquakes; great in other masonry buildings - some collapse in large part. Some wood frame houses built especially to withstand earthquakes are thrown out of plumb, others are shifted wholly off foundations. Reservoirs are seriously damaged and underground pipes sometimes break.
- X **Panic is general.**
Ground, especially when loose and wet, cracks up to widths of several inches; fissures up to a yard in width run parallel to canal and stream banks. Landsliding is considerable from river banks and steep coasts. Sand and mud shifts horizontally on beaches and flat land. Water level changes in wells. Water is thrown on banks of canals, lakes, rivers, etc. Dams, dikes, embankments are seriously damaged. Well-built wooden structures and bridges are severely damaged, and some collapse. Dangerous cracks develop in excellent brick walls. Most masonry and frame structures, and their foundations are destroyed. Railroad rails bend slightly. Pipe lines buried in earth tear apart or are crushed endwise. Open cracks and broad wavy folds open in cement pavements and asphalt road surfaces.
- XI **Panic is general.**
Disturbances in ground are many and widespread, varying with the ground material. Broad fissures, earth slumps, and land slips develop in soft, wet ground. Water charged with sand and mud is ejected in large amounts. Sea waves of significant magnitude may develop. Damage is severe to wood frame structures, especially near shock centers, great to dams, dikes and embankments, even at long distances. Few if any masonry structures remain standing. Supporting piers or pillars of large, well-built bridges are wrecked. Wooden bridges that "give" are less affected. Railroad rails bend greatly and some thrust endwise. Pipe lines buried in earth are put completely out of service.
- XII **Panic is general.**
Damage is total, and practically all works of construction are damaged greatly or destroyed. Disturbances in the ground are great and varied, and numerous shearing cracks develop. Landslides, rock falls, and slumps in river banks are numerous and extensive. Large rock masses are wrenched loose and torn off. Fault slips develop in firm rock, and horizontal and vertical offset displacements are notable. Water channels, both surface and underground, are disturbed and modified greatly. Lakes are dammed, new waterfalls are produced, rivers are deflected, etc. Surface waves are seen on ground surfaces. Lines of sight and level are distorted. Objects are thrown upward into the air.

900 INNES INDIA BASIN San Francisco, California	MODIFIED MERCALLI INTENSITY SCALE		
LANGAN TREADWELL ROLLO	Date 06/18/15	Project No. 731651501	Figure 4



OAKLAND WEST
QUADRANGLE

HUNTERS POINT
QUADRANGLE

SITE

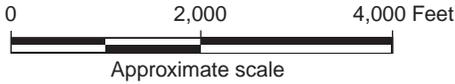
EXPLANATION



Liquefaction; Areas where historic occurrence of liquefaction, or local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacements.



Earthquake-Induced Landslides; Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacements.



Reference:
State of California "Seismic Hazard Zones"
City and County of San Francisco
Released on November 17, 2001

**900 INNES
INDIA BASIN**
San Francisco, California

LIQUEFACTION HAZARD ZONE MAP

LANGAN TREADWELL ROLLO

Date 06/18/15 Project No. 731651501 Figure 5

TECHNICAL MEMORANDUM

Foreshore Sediment Sampling

900 Innes Avenue

San Francisco, California

Prepared for:

Contract No. 4061-12/13

San Francisco Department of the Environment

1455 Market Street, Suite 1200

San Francisco, California 94103

Prepared by:

URS

Post Montgomery Center

One Montgomery Street, Suite 900

San Francisco, California 94104

October 2015

IDENTIFICATION FORM

Document Title: TECHNICAL MEMORANDUM
Foreshore Sediment Sampling
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San Francisco, California

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Plan Coverage: This Technical Memorandum constitutes the deliverable for technical support to complete the scope of work described in the Sampling and Analysis Plan Amendment – Foreshore Sediment Sampling, 900 Innes Avenue, Targeted Brownfields Assessment, San Francisco, CA for the San Francisco Department of the Environment.

APPROVAL FORM

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This document has been prepared for the San Francisco Department of the Environment under Contract No. 4061-12/13.

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- Appendix A WESTON Figures
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LIST OF ACRONYMS AND ABBREVIATIONS

ABCA	Analysis of Brownfields Cleanup Alternatives
bgs	below ground surface
bss	below sediment surface
CCR	California Code of Regulations
ESA	Environmental Site Assessment
ESLs	Environmental Screening Levels
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PVC	Polyvinyl Chloride
RCRA	Resource Conservation and Recovery Act
RSLs	Regional Screening Levels
RWQCB	Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
SFDOE	San Francisco Department of the Environment
STLC	Soluble Threshold Limit Concentration
SVOCs	semi-volatile organic compounds
TBA	Targeted Brownfields Assessment
TC	Toxicity Characteristic
TCLP	Toxicity Characteristic Leaching Procedure
TPH-d	total petroleum hydrocarbons as diesel
TPH-mo	total petroleum hydrocarbons as motor oil
TTLC	Total Threshold Limit Concentration
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USEPA	U.S. Environmental Protection Agency
URS	URS Corporation
WESTON	Weston Solutions, Inc.
WET	Waste Extraction Test

1.0 INTRODUCTION

URS Corporation (URS), under Contract No. 4061-12/13 with the San Francisco Department of the Environment (SFDOE), has prepared this Technical Memorandum to document the results of the additional sediment sampling conducted in the foreshore area of the 900 Innes Avenue property located in San Francisco, California (Site) (Figure 1). The scope of work was conducted in general accordance with the Sampling and Analysis Plan Amendment – Foreshore Sediment Sampling, 900 Innes Avenue, Targeted Brownfields Assessment, San Francisco, CA dated March 13, 2015.

The Sampling and Analysis Plan (SAP) Amendment for additional foreshore sediment sampling and analysis was prepared at the request of the San Francisco Department of the Environment. In 2014 the San Francisco Recreation and Parks Department completed their acquisition of the Site from the Tenderloin Housing Clinic. The SAP Amendment was prepared in order to generate additional sediment analytical data at the Site in order for the San Francisco Recreation and Parks Department to conduct further studies to assess the potential need for remediation of the sediments to allow for water access in the open space development proposed for the Site.

2.0 BACKGROUND

Weston Solutions, Inc. (WESTON), under contract with the United States Army Corps of Engineers (USACE) and in coordination with the United States Environmental Protection Agency (USEPA) Region 9, performed a Targeted Brownfields Assessment (TBA) at the Site. The TBA included both a Phase I Environmental Site Assessment (ESA), conducted in accordance with the scope and limitations of ASTM Practice E-1527-05, and a Phase II Site Investigation that included soil and sediment sampling and analysis.

Background information presented below was taken directly from the Phase I/II Investigation Targeted Brownfields Assessment, Final Report for 900 Innes Avenue, San Francisco, CA (WESTON 2013) and the 900 Innes Avenue Analysis of Brownfields Cleanup Alternatives (ABCA) (WESTON 2013a).

Information generated as part of the Phase I ESA indicated the Site is comprised of a cluster of eleven parcels centered at the 900 Innes Avenue property. The parcels are situated adjacent to India Basin in 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 (also known as “Paper Streets”) 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. These rights-of-way were not included in the scope of the WESTON TBA. The Site occupies approximately 105,550 square feet (2.4 acres) and is partially fenced. The map detailing the Site layout is presented on WESTON Figure 2-2 contained in *Appendix A*.

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 continued to function as a construction equipment storage facility and laydown yard.

WESTON reviewed available Site information to determine historic uses and identify hazardous substances that may be present at the Site and used this information to determine the most effective sampling design to meet project objectives. The following potential sources of contamination were identified at the Site:

- Construction equipment storage and laydown yard – Previously, the Site was 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, semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs), and constituents of gasoline, diesel and motor oil. After the Site was acquired by the San Francisco Recreation and Parks Department, they removed the remaining debris and other material left after the property was vacated by the tenant. Currently the site is vacant.

- 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, Total Petroleum Hydrocarbons (TPH) as diesel (TPH-d) and TPH as motor oil (TPH-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 a previous Phase I ESA 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.

Based on the historic use and planned development of the Site, as part of the proposed San Francisco Blue Greenway public open space, a sampling grid was determined to be the most appropriate sampling approach to assess potential contamination. A triangular grid with 50 foot

spacing between sample points was selected to provide spatial coverage of the Site. The sampling locations are shown on WESTON Figure 5-1 contained in *Appendix A*.

In August 2013, WESTON conducted a Phase II Site Investigation at the Site. A total of 27 shallow soil sample locations and 6 shallow sediment sample locations were sampled from an interval 0 to 6 inches below ground surface (bgs) at each location. Additionally, subsurface soil samples were collected at a depth of 3-4 feet bgs from 8 selected boring locations to allow for vertical characterization.

All of the sediment samples collected were analyzed for California Code of Regulations (CCR) Title 22 metals, PAHs, TPH-d, TPH as motor oil TPH-mo, Polychlorinated Biphenyls (PCBs), and organotins. All six of the sediment samples contained concentrations of two or more metals (arsenic, chromium, copper, lead, mercury, cobalt, and nickel) that exceeded established action levels. Additionally, PAHs were detected in five of the six samples above the action levels; PCBs were detected in three samples above the action levels; and Petroleum Hydrocarbons in four samples above the action level. Organotins were detected in all six samples but were below the action levels.

The analytical results of the soil and sediment samples results exceeding the action levels are shown graphically on WESTON Figures 6-1 through 6-4 contained in *Appendix A*.

In September 2013 WESTON prepared an ABCA in order to evaluate site conditions and possible remedial alternatives. Three potentially feasible cleanup alternatives were identified based on WESTON's experience with similar sites. These alternatives included the following:

1. No Action.
2. Construction of a Physical Barrier.
3. Excavation and Disposal.

However, the sediment data for this analysis was limited and the ABCA did not differentiate soil versus sediment remedial areas or alternatives and was more of a conceptualized approach document.

3.0 OBJECTIVE AND SCOPE OF FORESHORE SEDIMENT SAMPLING

Based on the limited number of data points (six) for sediment quality data, URS reviewed the sediment quality data presented in the WESTON TBA report summarized above to develop an approach to the supplemental sediment sampling. Additionally, aerial photos taken at both high and low tide were reviewed in order to assess where additional foreshore area sediment samples could be collected.

The objective of the additional foreshore sediment sampling and analysis is to augment the existing data set with additional sediment analytical data from around the foreshore area of the Site where potential future water access may take place. This will provide the San Francisco Recreation and Parks Department with additional data to conduct further studies associated with conceptual site redevelopment design and to assess the potential need for remediation of the sediments to allow for water access in the open space development proposed for the Site.

The additional foreshore sediment sampling scope of work included the following:

- Collection of additional sediment samples from 10 locations around the shoreline, building, and dock areas of the site where potential future water access may take place. The additional sediment sampling locations are shown on *Figure 2*.
- With the exception of areas where access was limited, sediment samples were collected in accordance with the March 2015 SAP Amendment prepared by URS which followed the same sampling procedures specified in the WESTON SAP (WESTON 2013b) prepared for the site. This included collection of a surface sediment sample from 0 to 0.5 feet below sediment surface (bss) at each of the proposed sampling locations. In addition to surface sediment samples, a deeper sample, collected from 1 to 1.5 feet bss, was also collected for analysis. Sediment grab samples were collected using a dedicated plastic trowel. In areas where access was limited, samples were collected from the edge of the docks or other structures using a 2-inch polyvinyl chloride (PVC) casing pushed to 1.5 feet bss. The casing was capped on the top and then extracted from the sediment. Sediment samples were extracted from the casing and transferred directly into a sample-dedicated polyethylene bag and homogenized, and then placed into a pre-labeled sample container for analyses. Sample containers were filled to the top, taking care to prevent sediment from remaining in the lid threads prior to being closed to prevent potential contaminant migration to or from the sample. This scope resulted in the collection and analysis of an additional 20 samples from the 10 supplemental sediment sampling locations.

- The sediment samples were analyzed for the same analytical suite as previously used by WESTON. This included the following analyses:
 1. TPH-d/TPH-mo.
 2. Title 22 Metals.
 3. Organotins.
 4. PAHs.
 5. PCBs.
- Conducted soluble analyses on approximately 50 percent of the samples with metals concentrations that exceed trigger levels 10 times the Soluble Threshold Limit Concentration (STLC) and/or 20 times the TCLP for the specified analyte to assess potential waste classification for material disposal purposes.
- Conducted data validation of the laboratory data in the same manner used by WESTON during the 2013 TBA.
- Prepared this Technical Memorandum for the San Francisco Department of the Environment for distribution to other Blue Greenway stakeholders, mainly the San Francisco Recreation and Parks Department, detailing the results of the additional sediment sampling and analyses.

With the exception of the use of dilute nitric acid and reagent grade hexane used in the equipment decontamination process and the use of PVC pipe for the collection of samples in limited access areas, the procedures for the collection and analysis of soil and groundwater samples followed the currently approved procedures presented in the 900 Innes Avenue, Targeted Brownfields Assessment, Phase I/II Investigation, Sampling and Analysis Plan dated August 2013 (WESTON 2013b).

4.0 SEDIMENT ANALYTICAL RESULTS

This section summarizes the analytical results from the additional foreshore sediment sampling and analysis conducted at the Site. All samples were analyzed by TestAmericam Laboratories, Inc. of Pleasanton, California. The metals analytical results are summarized in **Table 1** through **Table 6** and concentrations exceeding the United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) are shown graphically on **Figure 3** through **Figure 7**. The sediment analytical results for metals, PCBs, SVOCs, and organotins were compared with the USEPA January 2015 RSLs for both Resident and Industrial soil categories. It should be noted that if a particular analyte is indicated to exceed its Industrial RSL it also exceeds its Resident RSL as the Resident RSL is a more conservative number than the Industrial RSL.

Analytical results for TPH-d (Diesel Range Organics) and TPH-mo (Motor Oil Range Organics) were compared to the San Francisco Bay Regional Water Quality Control Board (RWQCB) December 2013 Residential (Table A-1) and Commercial/Industrial (Table A-2) Environmental Screening Levels (ESLs) where groundwater is a current or potential drinking water source. Similar to the RSLs, if a particular analyte is indicated to exceed its Commercial/Industrial ESL it also exceeds its Residential ESL as the Residential ESL is a more conservative number than the Industrial ESL.

4.1 Metals Analytical Results

The metals analytical results are summarized in **Table 1** and concentrations exceeding the USEPA RSLs are shown graphically on **Figure 3** and are discussed in more detail below.

Arsenic was detected in all of the samples analyzed above the laboratory reporting limit at concentrations ranging from 4.6 mg/kg up to 75 mg/kg. All of the arsenic concentrations in all 22 samples exceeded both the Resident and the Industrial RSL for arsenic. Both of the RSL values, Resident and Industrial, are considered conservative and are below typically accepted background concentrations for arsenic in the Bay Area. A recent 2011 study calculated the upper estimate for background arsenic (99th percentile) concentrations within undifferentiated flatland soils to be 11 mg/kg (Duverge 2011).

Cobalt was detected in all of the samples analyzed above the laboratory reporting limit. Concentrations ranged from 5.7 mg/kg to 26 mg/kg. One sample (SS-4-1') exceeded the Resident RSL for cobalt.

Copper was detected in all of the samples analyzed at concentrations above the laboratory reporting limit. Concentrations ranged from 75 mg/kg to 27,000 mg/kg. Only one sample (SS-9-0.5') exceeded the Resident RSL for copper.

Lead was detected in all of the samples analyzed above the laboratory reporting limit at concentrations ranging from 28 mg/kg up to 1,600 mg/kg. Concentrations of lead exceeded the Resident RSL in five samples (SS-2-1', SS-7-0.5', SS-8-1', SS-9-0.5', and SS-9-1.0') and the Industrial RSL in one sample (SS-4-1').

Mercury was detected in all of the samples analyzed above the laboratory reporting limit at concentrations ranging from 0.49 mg/kg up to 88 mg/kg. Concentrations of mercury exceeded the Resident RSL in three samples (SS-8-1', SS-9-0.5', and SS-9-1.0') and the Industrial RSL in one sample (SS-4-0.5').

With the exception of selenium and thallium, all of the other metal analytes were detected in one or more of the samples analyzed above the laboratory reporting limit. However, none of the concentrations detected exceeded their respective Resident or Industrial RSL value.

4.2 Petroleum Hydrocarbon Analytical Results

The petroleum hydrocarbon analytical results are summarized in *Table 2* and concentrations exceeding the RWQCB ESLs are shown graphically on *Figure 4*. With the exception of three samples (SS-5-0.5', SS-6-0.5', and SS-10-0.5'), diesel range organics were detected above the laboratory reporting limit in all of the samples at concentrations ranging from 39 mg/kg up to 5,500 mg/kg. With the exception of one concentration in the duplicate sample (FD-2) from SS-10-1', all of the concentrations detected exceeded the commercial/industrial ESL for diesel range organics. The concentration of diesel range organics detected in sample FD-2 was equal to the residential ESL of 100 mg/kg. Similarly, with the exception of two samples (SS-5-0.5' and SS-10-0.5'), motor oil range organics were detected above the laboratory reporting limit in all of the samples at concentrations ranging from 74 mg/kg up to 2,900 mg/kg. Concentrations in ten of the samples exceeded the residential ESL and ten samples had concentrations exceeding the commercial/industrial ESL.

4.3 Polychlorinated Biphenyl Analytical Results

The PCB analytical results are summarized in *Table 3* and concentrations exceeding the USEPA RSLs are shown graphically on *Figure 5*. The PCB analytical method detects and quantifies seven different Arachlor compounds. With the exception of one sample (SS-3-0.5), one of four different Arachlors (Arachlor-1242, Arachlor-1248, Arachlor-1254, and Arachlor-1260) was detected in all of the samples above the laboratory reporting limit. Of these, four samples (SS-7-0.5', SS-8-0.5', SS-10-0.5', and FD-2) had an Arachlor concentration that exceeded its Resident RSL and seven samples (SS-4-1', SS-7-1', FD-1, SS-8-1', SS-9-0.5', SS-9-1', and SS-10-1') had an Arachlor concentration that exceeded its Industrial RSL.

4.4 Polycyclic Aromatic Hydrocarbon Analytical Results

The PAH analytical results are summarized in *Table 4* and concentrations exceeding the USEPA RSLs are shown graphically on *Figure 6*. With the exception of three PAHs (acenaphthylene, benzo[a]anthracene, and dibenz[a,h]anthracene) one or more PAHs were detected above the laboratory reporting limit in all of the samples analyzed. Five PAHs (chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, and indeno[1,2,3-cd]pyrene) were detected above their respective Resident RSL and two PAHs (benzo[b]fluoranthene, and benzo[a]pyrene) were detected above their respective Industrial RSL. Phenanthrene and benzo[g,h,i]perylene were detected above the laboratory reporting limit in several samples however, they have no corresponding RSL values.

4.5 Organotin Analytical Results

The organotin analytical results are summarized in *Table 5* and concentrations exceeding the USEPA RSLs are shown graphically on *Figure 7*. The organotin analytical method detects and quantifies four different organotin compounds (dibutyltin, monobutyltin, tetra-n-butyltin, and tributyltin). All four of the organotin compounds were detected above the laboratory reporting limit in one or more of the samples analyzed. With the exception of two samples (SS-5-0.5' and SS-6-0.5'), dibutyltin was detected in all of the samples at concentrations that exceeded its respective RSLs. A total of 15 samples had concentrations greater than the Resident RSL and five samples had concentrations greater than the Industrial RSL. Tributyltin was detected in all but two samples (SS-2-0.5' and SS-5-0.5') at concentrations that exceed its Industrial RSL. Monobutyltin and tetra-n-butyltin were detected in a number of samples however they have no corresponding RSL values.

4.6 Disposal Implications

In order to assess potential implications associated with dredged/excavated sediment disposal, concentrations of detected metals were compared with their respective regulatory disposal criteria. The regulatory disposal criteria used for comparison with the metals concentrations are the Total Threshold Limit Concentration (TTLC) the STLC and the Toxicity Characteristic (TC) value also referred to as the TCLP. The TTLC and STLC are California State waste disposal criteria listed in the California Code of Regulations Title 22. If the TTLC (which represents the total concentration of an analyte in a sample) value is exceeded for any given analyte in waste material that is being profiled for disposal, the material is considered a California State Hazardous Waste and must be disposed of at a Class I landfill facility.

In addition to the total concentration values (TTLC) there are also corresponding soluble (STLC) values. The soluble fraction is typically evaluated when the total concentration of an analyte in a

sample is less than the TTLC but exceeds ten times (10x) the soluble criteria listed for the substance. The 10x “trigger” is used because there is a ten-fold dilution associated with the STLC extraction procedure. As such, if the total concentration measured in a sample is less than the TTLC but exceeds 10x the STLC value for the analyte, the Waste Extraction Test (WET) is conducted to determine the soluble component. If the results of the test indicate a value greater than the STLC for the given analyte, the material is considered a California State Hazardous Waste for disposal purposes.

In addition to the State standards, there are also Federal standards under the Resource Conservation and Recovery Act (RCRA) that apply to certain regulated compounds. This standard is known as the TC or TCLP value. The TC value addresses the soluble fraction of the contaminants. It is determined through the TCLP test. This test utilizes a twenty-fold dilution in the extraction process. As such, if the total concentration of a RCRA regulated compound exceeds 20x the TC value, a TCLP analysis is typically conducted. If the results of the TCLP analysis exceed the TC value, the material is considered a RCRA Hazardous Waste for disposal purposes and needs to be handled and disposed of appropriately. This typically involves treatment (usually stabilization or encapsulation to reduce the solubility of the contaminants) of the material prior to disposal at a Class I landfill.

The comparison of the metals results with the disposal criteria listed above are summarized in **Table 6**. As indicated in the table, four samples (SS-4-0.5', SS-4-1', SS-9-0.5', and SS-9-1.0') contained one of three metals (copper, lead, or mercury) above the respective TTLC value. Additionally, eight metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury) were detected above their respective trigger concentrations indicating the potential for these samples to exceed either their respective STLC or TC value. Based on this select samples were subjected to the WET and TCLP tests to assess the potential for the material to be classified as either California or RCRA hazardous waste. The results of the soluble metals analyses are summarized in **Table 7**. As shown in the table, one sample (SS-2-1') had soluble lead concentrations that exceeded both the STLC and TC values and two samples (SS-4-0.5 and SS-7-0.5') had a soluble lead concentration that exceeded the STLC value for lead. These results indicate that if sediment is dredged or excavated it has the potential to be classified as California or RCRA hazardous waste for disposal purposes.

5.0 DATA VALIDATION

The analytical data for this project were validated in accordance with the USEPA National Functional Guidelines for Organic and Inorganic Data Review. Based on the data validation, none of the data were rejected and the data were found to be usable, where qualified, for their intended purpose. Data qualifications included “J” flags, where concentrations were estimated based on the results of the data validation, and “UJ” flags where laboratory reporting limits were estimated based on the results of the data validation. The data qualification flags, where applicable, are listed in the analytical data summary tables. Copies of the data validation reports are contained in *Appendix B* along with the laboratory analytical reports.

6.0 REFERENCES

Duverge, Dylan Jacques, 2011. Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region, December.

Weston Solutions, Inc., 2013. Phase I/II Investigation, Targeted Brownfields Assessment, Final Report, 900 Innes Avenue Site, San Francisco, San Francisco County, California (November 2013).

Weston Solutions, Inc., 2013a. Final Document, 900 Innes Avenue Site, San Francisco, San Francisco County, California, Analysis of Brownfield Cleanup Alternatives (September 2013).

Weston Solutions, Inc., 2013b. 900 Innes Avenue, Targeted Brownfields Assessment, Phase I/II Investigation, San Francisco, California, Sampling and Analysis Plan (August 2013).

TABLES

Table 1
CAM 17 Metals Analytical Results
Foreshore Sediment Sampling
900 Innes Avenue, San Francisco , CA

CAM17 Metals																	
Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
SS-1-0.5'	<1.7	7.0	58	<0.33	<0.41	68	11	180	76	<1.7	90	<3.3	<0.83	<1.7	40	140	0.54
SS-1-1'	<1.4	8.6	69	<0.29	<0.36	64	12	370	120	2.2	88	<2.9	<0.72	<1.4	37	220	3.2
SS-2-0.5'	<1.6	5.0	77	<0.33	<0.41	37	8.3	120	140	1.9	59	<3.3	<0.82	<1.6	25	730	0.49
SS-2-1'	3.0	16	97	<0.37	2.3	130	18	650	410	17	230	<3.7	<0.92	<1.8	28	2400	1.8
SS-3-0.5'	<0.41	4.6	28	<0.083	<0.010	41	6.2	80	28	<0.41	41	<0.83	<0.21	<0.41	29	80	0.49
SS-3-1'	<1.9	16	130	<0.38	0.49	82	19	1100	150	20	81	<3.8	<0.94	<1.9	44	440	4.6
SS-4-0.5'	3.5	20	180	<0.34	0.47	94	10	700	350	2.0	74	<3.4	<0.86	<1.7	29	660	88
SS-4-1'	3.6	20	250	<0.34	33	100	26	850	1600	9.7	94	<3.4	<0.85	<1.7	31	1900	9.1
SS-5-0.5'	<0.37	4.8	27	0.16	<0.0093	39	5.7	75	46	0.39	38	<0.75	<0.19	<0.37	26	80	1.2
SS-5-1'	<0.42	7.2	49	0.18	0.10	48	7.4	200	54	3.8	56	<0.83	<0.21	<0.42	30	130	1.4
SS-6-0.5'	<0.44	6.0	35	0.17	<0.11	46	6.7	120	37	0.87	40	<0.88	<0.22	<0.44	29	94	0.99
SS-6-1'	<1.6	11	44	<0.33	<0.41	78	10	380	100	10	100	<3.3	<0.81	<1.6	39	180	1.9
SS-7-0.5'	3.0	11	170	<0.28	<0.35	76	9.6	390	580	13	66	<02.8	<0.69	<1.4	28	2000	2.3
SS-7-1'	4.2	11	90	<0.38	<0.48	120	10	650	300	7.9	77	<3.8	<0.95	<1.9	28	450	3.1
SS-8-0.5'	<1.5	9.5	120	<0.30	<0.37	82	11	620	190	2.7	67	<3.0	<0.75	<1.5	35	370	4.7
FD-1	<1.7	9.7	140	<0.34	<0.42	82	10	540	220	3.2	59	<3.4	<0.84	<1.7	34	350	5.1
SS-8-1'	<1.6	24	96	<0.32	0.43	85	10	1200	600	3.4	62	<3.2	<0.80	<1.6	30	440	10
SS-9-0.5'	<2.8	38	120	<0.22	1.4	110	14	27000	480	10	93	<2.2	0.94	<2.8	24	4000	10
SS-9-1'	<1.1	75	110	<0.23	0.86	140	21	2400	540	1.4	360	<2.3	<0.57	<1.1	26	540	23
SS-10-0.5'	<0.45	8.2	36	<0.090	0.20	56	6.4	310	41	0.78	42	<0.90	<0.23	<0.45	32	170	2.4
SS-10-1'	<1.3	12	35	<0.27	<0.33	62	6.7	840	63	1.6	53	<2.7	<0.67	<1.3	29	240	4.6
FD-2	<0.41	9.5	38	<0.082	0.28	63	7.2	670	60	1.6	49	<0.82	<0.20	<0.41	29	260	4.1
RSL-Resident mg/kg	31	0.67	15,000	160	70	120,000	23	3,100	400	390	1,500	390	390	0.78	390	23,000	9.4
RSL-Industrial mg/kg	470	3	220,000	2,300	980	1,800,000	350	47,000	800	5,800	22,000	5,800	5,800	12	5,800	350,000	40

Notes:

Units in mg/Kg unless otherwise stated

FD-1 is a field duplicate of SS-8-0.5'

FD-2 is a field duplicate of SS-10-1'

Blue shaded values exceed Resident RSLs

Green shaded values exceed Industrial RSLs

Table 2
 Diesel Range Organics and Motor Oil Range Organics Analytical Results
 Foreshore Sediment Sampling
 900 Innes Avenue, San Francisco, CA

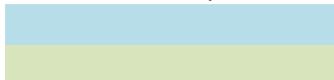
Diesel Range Organics		
Sample ID	Diesel Range Organics (C10-C28)	Motor Oil Range Organics (C24-C36)
SS-1-0.5'	180	420
SS-1-1'	260	610
SS-2-0.5'	320	640
SS-2-1'	360	800
SS-3-0.5'	110	140
SS-3-1'	340	570
SS-4-0.5'	370	620
SS-4-1'	5500	2900
SS-5-0.5'	39	74
SS-5-1'	120	210
SS-6-0.5'	59	100
SS-6-1'	150	160
SS-7-0.5'	240	560
SS-7-1'	220	460
SS-8-0.5'	260	480
FD-1	210	390
SS-8-1'	300	630
SS-9-0.5'	600	1100
SS-9-1'	780	1800
SS-10-0.5'	39	78
SS-10-1'	120	230
FD-2	100	190
ESL-Residential mg/kg	100	100
ESL-Industrial mg/kg	110	500

Notes:

Units in mg/Kg

FD-1 is a field duplicate of SS-8-0.5'

FD-2 is a field duplicate of SS-10-1'



Blue shaded values exceed Residential ESLs

Green shaded values exceed Commercial / Industrial ESLs

Table 3
 Polychlorinated Biphenyls Analytical Results
 Foreshore Sediment Sampling - 900 Innes Avenue, San Francisco, CA

Polychlorinated Biphenyls (PCBs)								
Sample ID	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	Total PCBs
SS-1-0.5'	<49	<49	<49	<49	<49	74	<49	74
SS-1-1'	<50	<50	<50	<50	<50	180	<50	180
SS-2-0.5'	<50	<50	<50	<50	<50	54	<50	54
SS-2-1'	<50	<50	<50	<50	<50	180	<50	180
SS-3-0.5'	<49	<49	<49	<49	<49	<49	<49	<49
SS-3-1'	<250	<250	<250	<250	<250	980	<250	980
SS-4-0.5'	<250	<250	<250	<250	<250	920	<250	920
SS-4-1'	<240	<240	<240	<240	<240	1100	<240	1100
SS-5-0.5'	<49	<49	<49	<49	<49	59	<49	59
SS-5-1'	<50	<50	<50	<50	<50	79	<50	79
SS-6-0.5'	<49	<49	<49	<49	50	<49	<49	50
SS-6-1'	<49	<49	<49	<49	<49	210	<49	210
SS-7-0.5'	<97	<97	<97	<97	410	<97	<97	410
SS-7-1'	<480	<480	<480	1900	<480	<480	<480	1900
SS-8-0.5'	<250	<250	<250	<250	<250	<250	710 J	710
FD-1	<2500	<2500	<2500	<2500	<2500	<2500	7800 J	7800
SS-8-1'	<500	<500	<500	<500	1600	<500	<52	1600
SS-9-0.5'	<490	<490	<490	<490	2500	<490	<490	2500
SS-9-1'	<2500	<2500	<2500	<2500	8900	<2500	<2500	8900
SS-10-0.5'	<99	<99	<99	<99	<99	<99	360 J	360
SS-10-1'	<490	<490	<490	<490	1500 J	<490	<490 UJ	1500
FD-2	<250	<250	<250	<250	<250 UJ	<250	870 J	870
RSL-Resident ug/kg	4000	1500	1500	2400	2400	2400	2400	NV
RSL-Industrial ug/kg	300000	6600	6600	10000	10000	10000	10000	NV

Notes:

Units are in ug/Kg

FD-1 is a field duplicate of SS-8-0.5'

FD-2 is a field duplicate of SS-10-1'

NA (1) PCBs not regulated under RCRA

NV No value for either individual or total PCBs

Blue shaded values exceed Resident RSLs

Green shaded values exceed Industrial RSLs

Table 4
Semivolatile Organic Compounds Analytical Results
Foreshore Sediment Sampling
900 Innes Avenue, San Francisco, CA

Semivolatile Organic Compounds																	
Sample ID	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo[a]anthracene	Chrysene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[a]pyrene	Indeno[1,2,3-cd]pyrene	Benzo[g,h,i]perylene	2-Methylnaphthalene	Dibenz(a,h)anthracene
SS-1-0.5'	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<3.3	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67
SS-1-1'	<1.3	<1.3	<1.3	<1.3	4.4	<1.3	<1.3	<1.3	<6.6	27	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
SS-2-0.5'	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<3.3	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67
SS-2-1'	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	0.73	<3.3	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67
SS-3-0.5'	<0.13	<0.13	0.17	0.20	1.0	0.62	2.0	2.0	<0.66	0.94	0.63	0.23	0.44	0.22	0.20	<0.13	<0.13
SS-3-1'	<0.27	<0.27	<0.27	<0.27	0.44	0.33	3.6	7.6	<1.3	0.93	1.8	0.73	1.1	0.62	0.62	<0.27	<0.27
SS-4-0.5'	<0.27	<0.27	<0.27	<0.27	1.5	0.58	2.6	3.1	<0.27	1.5	1.6	0.56	1.1	0.61	0.72	<0.27	<0.060
SS-4-1'	1.4	<1.3	1.8	2.3	7.6	2.3	2.6	3.7	<6.6	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	4.8	<1.3
SS-5-0.5'	<0.33	<0.33	<0.33	<0.33	<0.33	0.46	0.76	1.0	<1.6	1.1	1.3	0.53	0.87	0.48	0.45	<0.33	<0.33
SS-5-1'	<0.33	<0.33	<0.33	<0.33	0.45	0.34	0.67	1.7	<1.6	1.2	1.8	0.74	1.2	0.68	0.65	<0.33	<0.33
SS-6-0.5'	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	0.28	<1.3	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
SS-6-1'	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	0.32	0.99	<1.3	0.47	0.63	<0.27	0.40	<0.27	0.27	<0.27	<0.27
SS-7-0.5'	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
SS-7-1'	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66	0.86	1.5	<0.66	<0.66	1.0	<0.66	0.78	<0.66	<0.66	<0.66	<0.66
SS-8-0.5'	<0.048	<0.056	<0.038	<0.040	0.96	<0.043	1.4	1.9	<0.18	0.90	1.4	0.70	1.1	<0.13	<0.20	<0.062	<0.15
FD-1	<0.33	<0.33	<0.33	<0.33	0.58	<0.33	0.99	1.2	<1.6	0.80	1.1	0.47	0.83	0.49	0.49	<0.33	<0.33
SS-8-1'	<0.33	<0.33	<0.33	<0.33	1.1	0.70	1.4	3.5	<1.6	0.88	3.1	3.0	1.7	0.77	0.81	<0.33	<0.33
SS-9-0.5'	<0.67	<0.67	<0.67	<0.67	0.72	<0.67	1.4	1.3	<3.3	0.75	0.88	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67
SS-9-1'	<0.66	<0.66	<0.66	<0.66	1.1	<0.66	3.0	3.2	<3.3	1.1	1.1	<0.66	0.80	<0.66	<0.66	<0.66	<0.66
SS-10-0.5'	<0.066	<0.066	<0.066	<0.066	0.066	<0.066	0.10	0.16	<0.33	0.069	0.093	<0.066	0.072	<0.066	<0.066	<0.066	<0.066
SS-10-1'	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	0.20	0.43	<0.65	0.13	0.21	<0.13	0.16	<0.13	<0.13	<0.13	<0.13
FD-2	<0.13	<0.13	<0.13	<0.13	0.43	0.13	0.45	0.75	<0.65	0.24	0.31	<0.13	0.21	0.13	<0.13	<0.13	<0.13
RSL-Resident mg/kg	3.8	NV	3,500	4,700	NV	17,000	2,300	1,700	0.15	15	0.15	1.5	0.015	0.15	NV	230	0.015
RSL-Industrial mg/kg	17	NV	45,000	70,000	NV	230,000	30,000	23,000	2.9	290	2.9	29	0.29	2.9	NV	3,000	0.29

Notes:

Units in mg/Kg

FD-1 is a field duplicate of SS-8-0.5'

FD-2 is a field duplicate of SS-10-1'

Blue shaded values exceed Resident RSLs

Green shaded values exceed Industrial RSLs

Table 5
Organotins Analytical Results
Foreshore Sediment Sampling
900 Innes Avenue, San Francisco, CA

Organotins				
Sample ID	Dibutyltin	Monobutyltin	Tetra-n-butyltin	Tributyltin
SS-1-0.5'	81	24	<2.5 UJ	70
SS-1-1'	230	69	<2.5 UJ	150
SS-2-0.5'	62	<4.9	<13 UJ	<4.9
SS-2-1'	83	<0.95	<2.6 UJ	110
SS-3-0.5'	31	<0.92	<2.5 UJ	25
SS-3-1'	990	92	61 J	2200
SS-4-0.5'	130	57 J	26	160
SS-4-1'	76	<1.1 UJ	<2.9	150
SS-5-0.5'	<1.0	<1.0 UJ	<2.8	<1.0
SS-5-1'	38	<1.0 UJ	<2.8	74
SS-6-0.5'	12	<1.0 UJ	<2.8	32
SS-6-1'	26	<1.0 UJ	<2.8	62
SS-7-0.5'	120 J	76 J	<2.9 UJ	650 J
SS-7-1'	110	<1.0 UJ	42	180
SS-8-0.5'	79 J	<1.1 UJ	<3.0	130
FD-1	37 J	12 J	<2.8	89
SS-8-1'	66	<1.0 UJ	<2.7	130
SS-9-0.5'	16000	3900 J	150	13000
SS-9-1'	670	94 J	27	980
SS-10-0.5'	110	29 J	<2.9	130
SS-10-1'	260	50 J	40 J	780 J
FD-2	330	78 J	19 J	360 J
RSL-Resident mg/kg	18	NV	NV	18
RSL-Industrial mg/kg	250	NV	NV	250

Notes:

Units are in ug/Kg

FD-1 is a field duplicate of SS-8-0.5'

FD-2 is a field duplicate of SS-10-1'

Blue shaded values exceed Resident RSLs
 Green shaded values exceed Industrial RSLs

Table 6
Metals Analytical Results Compared to Disposal Criteria
Foreshore Sediment Sampling
900 Innes Avenue, San Francisco, CA

CAM17 Metals																	
Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
SS-1-0.5'	<1.7	7.0	58	<0.33	<0.41	68	11	180	76	<1.7	90	<3.3	<0.83	<1.7	40	140	0.54
SS-1-1'	<1.4	8.6	69	<0.29	<0.36	64	12	370	120	2.2	88	<2.9	<0.72	<1.4	37	220	3.2
SS-2-0.5'	<1.6	5.0	77	<0.33	<0.41	37	8.3	120	140	1.9	59	<3.3	<0.82	<1.6	25	730	0.49
SS-2-1'	3.0	16	97	<0.37	2.3	130	18	650	410	17	230	<3.7	<0.92	<1.8	28	2400	1.8
SS-3-0.5'	<0.41	4.6	28	<0.083	<0.010	41	6.2	80	28	<0.41	41	<0.83	<0.21	<0.41	29	80	0.49
SS-3-1'	<1.9	16	130	<0.38	0.49	82	19	1100	150	20	81	<3.8	<0.94	<1.9	44	440	4.6
SS-4-0.5'	3.5	20	180	<0.34	0.47	94	10	700	350	2.0	74	<3.4	<0.86	<1.7	29	660	88
SS-4-1'	3.6	20	250	<0.34	33	100	26	850	1600	9.7	94	<3.4	<0.85	<1.7	31	1900	9.1
SS-5-0.5'	<0.37	4.8	27	0.16	<0.0093	39	5.7	75	46	0.39	38	<0.75	<0.19	<0.37	26	80	1.2
SS-5-1'	<0.42	7.2	49	0.18	0.10	48	7.4	200	54	3.8	56	<0.83	<0.21	<0.42	30	130	1.4
SS-6-0.5'	<0.44	6.0	35	0.17	<0.11	46	6.7	120	37	0.87	40	<0.88	<0.22	<0.44	29	94	0.99
SS-6-1'	<1.6	11	44	<0.33	<0.41	78	10	380	100	10	100	<3.3	<0.81	<1.6	39	180	1.9
SS-7-0.5'	3.0	11	170	<0.28	<0.35	76	9.6	390	580	13	66	<02.8	<0.69	<1.4	28	2000	2.3
SS-7-1'	4.2	11	90	<0.38	<0.48	120	10	650	300	7.9	77	<3.8	<0.95	<1.9	28	450	3.1
SS-8-0.5'	<1.5	9.5	120	<0.30	<0.37	82	11	620	190	2.7	67	<3.0	<0.75	<1.5	35	370	4.7
FD-1	<1.7	9.7	140	<0.34	<0.42	82	10	540	220	3.2	59	<3.4	<0.84	<1.7	34	350	5.1
SS-8-1'	<1.6	24	96	<0.32	0.43	85	10	1200	600	3.4	62	<3.2	<0.80	<1.6	30	440	10
SS-9-0.5'	<2.8	38	120	<0.22	1.4	110	14	27000	480	10	93	<2.2	0.94	<2.8	24	4000	10
SS-9-1'	<1.1	75	110	<0.23	0.86	140	21	2400	540	1.4	360	<2.3	<0.57	<1.1	26	540	23
SS-10-0.5'	<0.45	8.2	36	<0.090	0.20	56	6.4	310	41	0.78	42	<0.90	<0.23	<0.45	32	170	2.4
SS-10-1'	<1.3	12	35	<0.27	<0.33	62	6.7	840	63	1.6	53	<2.7	<0.67	<1.3	29	240	4.6
FD-2	<0.41	9.5	38	<0.082	0.28	63	7.2	670	60	1.6	49	<0.82	<0.20	<0.41	29	260	4.1
TTLC	500	500	10,000	75	100	2,500	8,000	2,500	1,000	3,500	2,000	100	500	700	2,400	5,000	20
STLC (mg/L)	15	5	100	0.75	1	5	80	25	5	350	20	1	5	7	24	250	0.2
TCLP (mg/L)	NV	5	100	NV	1	5	NV	NV	5	NV	NV	1	5	NV	NV	NV	0.2

Notes:

Units in mg/Kg unless otherwise stated

FD-1 is a field duplicate of SS-8-0.5'

FD-2 is a field duplicate of SS-10-1'

Greater than 10X STLC

Greater than 10X STLC and 20X TCLP

Greater than TTLC

Table 7
 Soluable Metals Analytical Results
 Foreshore Sediment Sampling
 900 Innes Avenue, San Francisco, CA

Sample ID	Arsenic STLC	Cadmium STLC	Cadmium TCLP	Chromium STLC	Chromium TCLP	Copper STLC	Lead STLC	Lead TCLP	Nickel STLC	Mercury STLC	Mercury TCLP
SS-1-1'	NA	NA	NA	0.75	NA	<0.20	4.1	<0.050	NA	<0.0050 UJ	NA
SS-2-1'	NA	NA	NA	0.92	<0.10	<0.20	40	13	NA	NA	NA
SS-4-0.5'	NA	NA	NA	1.1	NA	<0.20	24	0.16	NA	NA	<0.0020 UJ
SS-4-1'	NA	<0.020	<0.10	1.6	<0.10	<0.20	NA	<0.050	NA	<0.0050 UJ	<0.0020
SS-7-0.5'	NA	NA	NA	0.4	NA	10	4.8	<0.050	NA	<0.0050 UJ	NA
SS-8-1'	NA	NA	NA	1.6	NA	<0.20	<0.050	<0.050	NA	<0.0050 UJ	<0.0020
SS-9-1'	0.31	NA	NA	2.5	<0.10	<0.20	<0.050	<0.050	6.9	NA	<0.0020 UJ
SS-10-1'	NA	NA	NA	NA	NA	<0.20	1.5	NA	NA	<0.0050 UJ	<0.0020 UJ
STLC (mg/L)	5	1	1	5	5	25	5	5	20	0.2	0.2
TCLP (mg/L)	5	1	1	5	5	NV	5	5	NV	0.2	0.2

Notes:

Units in mg/L unless otherwise stated

- Greater than STLC
- Greater than STLC and TCLP

FIGURES



Site Boundary

Site Location

SITE VICINITY MAP

Foreshore Sediment Sampling
900 Innes Avenue
San Francisco, California

October 2015

FIGURE 1

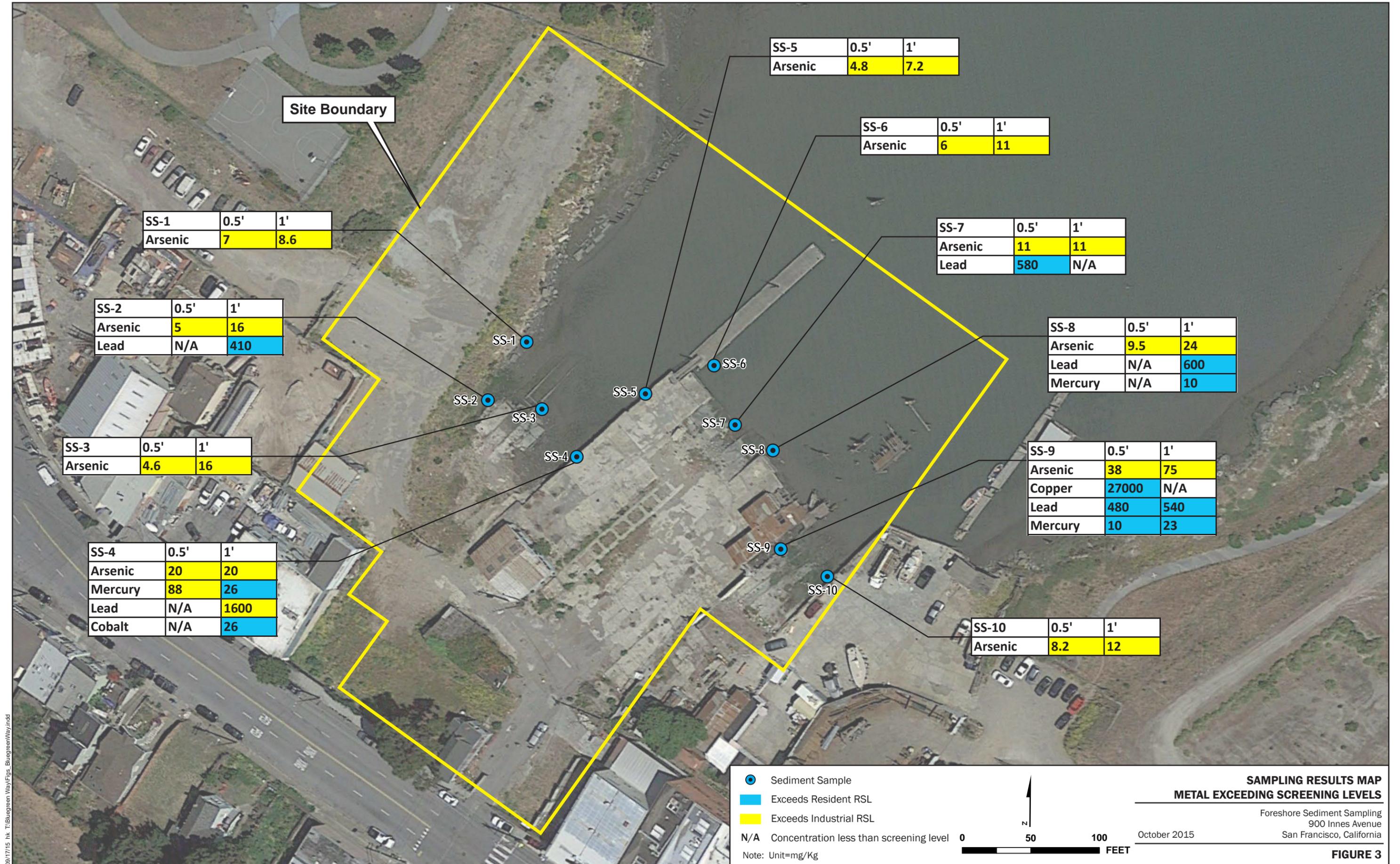


SEDIMENT SAMPLING LOCATIONS

Foreshore Sediment Sampling
900 Innes Avenue
October 2015
San Francisco, California

FIGURE 2

9/11/15 hk...T:\Bluegreen Way\Fig2_sediment_sample_loc.ai



Site Boundary

SS-1	0.5'	1'
Diesel Range Organics	180	260
Motor Oil Range Organics	420	610

SS-2	0.5'	1'
Diesel Range Organics	320	360
Motor Oil Range Organics	640	800

SS-3	0.5'	1'
Diesel Range Organics	110	340
Motor Oil Range Organics	140	570

SS-4	0.5'	1'
Diesel Range Organics	370	5500
Motor Oil Range Organics	620	2900

SS-5	1'
Diesel Range Organics	120
Motor Oil Range Organics	210

SS-6	0.5'	1'
Diesel Range Organics	N/A	150
Motor Oil Range Organics	100	160

SS-7	0.5'	1'
Diesel Range Organics	240	220
Motor Oil Range Organics	560	460

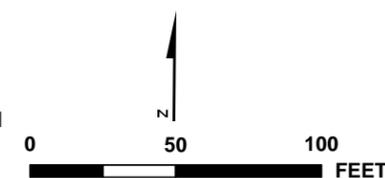
SS-8	0.5'	1'
Diesel Range Organics	260	300
Motor Oil Range Organics	480	630

SS-9	0.5'	1'
Diesel Range Organics	600	780
Motor Oil Range Organics	1100	1800

SS-10	1'
Diesel Range Organics	120
Motor Oil Range Organics	230

- Sediment Sample
- Exceeds Residential ESL
- Exceeds Commercial/Industrial ESL
- N/A Concentration less than screening level

Note: Unit=mg/Kg



**SAMPLING RESULTS MAP
DIESEL RANGE ORGANICS AND MOTOR OIL RANGE
ORGANICS EXCEEDING SCREENING LEVELS**

Foreshore Sediment Sampling
900 Innes Avenue
San Francisco, California

October 2015

FIGURE 4

Site Boundary

SS-7	0.5'	1'
PCB-1248	410	N/A
PCB-1242	N/A	1900

SS-8	0.5'	1'
PCB-1260	710	N/A
PCB-1248	N/A	1600

SS-9	0.5'	1'
PCB-1248	2500	8900

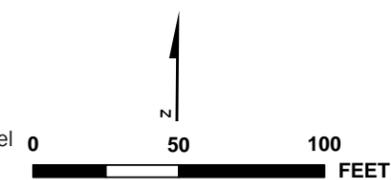
SS-4	1'
PCB-1254	1100

SS-10	0.5'	1'
PCB-1260	360	N/A
PCB-1248	N/A	1500

- Sediment Sample
- Exceeds Resident RSL
- Exceeds Industrial RSL

N/A Concentration less than screening level

Note: Unit= $\mu\text{g}/\text{Kg}$



**SAMPLING RESULTS MAP –
PCBs EXCEEDING SCREENING LEVELS**

Foreshore Sediment Sampling
900 Innes Avenue
San Francisco, California

October 2015

FIGURE 5

Site Boundary

SS-1	1'
Chrysene	27

SS-3	0.05'	1'
Benzo[b]fluoranthene	0.63	1.8
Benzo[a]pyrene	0.44	1.1
Indeno[1,2,3-cd]pyrene	0.22	0.62

SS-4	0.05'
Benzo[b]fluoranthene	1.6
Benzo[a]pyrene	1.1
Indeno[1,2,3-cd]pyrene	0.61

SS-5	0.05'	1'
Benzo[b]fluoranthene	1.3	1.8
Benzo[a]pyrene	0.87	1.2
Indeno[1,2,3-cd]pyrene	0.48	0.68

SS-6	1'
Benzo[b]fluoranthene	0.63
Benzo[a]pyrene	0.40

SS-7	1'
Benzo[b]fluoranthene	1.0
Benzo[a]pyrene	0.78

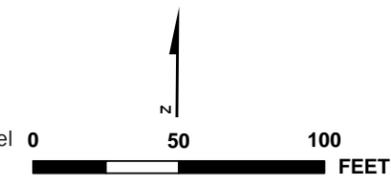
SS-8	0.05'	1'
Benzo[b]fluoranthene	1.4	3.1
Benzo[k]fluoranthene	N/A	3.0
Benzo[a]pyrene	1.1	1.7
Indeno[1,2,3-cd]pyrene	N/A	0.77

SS-9	0.05'	1'
Benzo[b]fluoranthene	0.88	1.1
Benzo[a]pyrene	N/A	0.8

SS-10	0.05'	1'
Benzo[b]fluoranthene	N/A	0.21
Benzo[a]pyrene	0.072	0.16

- Sediment Sample
- Exceeds Resident RSL
- Exceeds Industrial RSL
- N/A Concentration less than screening level

Note: Unit=mg/Kg



**SAMPLING RESULTS MAP – SVOCs
EXCEEDING SCREENING LEVELS**

Foreshore Sediment Sampling
900 Innes Avenue
San Francisco, California

October 2015

FIGURE 6

Site Boundary

SS-1	0.5'	1'
Dibutyltin	81	230
Tributyltin	70	150

SS-2	0.5'	1'
Dibutyltin	62	83
Tributyltin	NA	110

SS-3	0.5'	1'
Dibutyltin	31	990
Tributyltin	25	2200

SS-4	0.5'	1'
Dibutyltin	130	76
Tributyltin	160	150

SS-5	1'
Dibutyltin	38
Tributyltin	74

SS-6	0.5'	1'
Dibutyltin	NA	26
Tributyltin	32	62

SS-7	0.5'	1'
Dibutyltin	120	110
Tributyltin	650	180

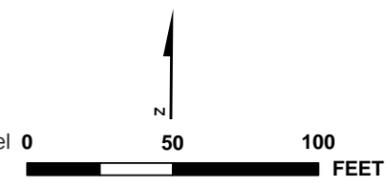
SS-8	0.5'	1'
Dibutyltin	79	66
Tributyltin	130	130

SS-9	0.5'	1'
Dibutyltin	16000	670
Tributyltin	13000	980

SS-10	0.5'	1'
Dibutyltin	110	260
Tributyltin	130	780

- Sediment Sample
- Exceeds Resident RSL
- Exceeds Industrial RSL
- N/A Concentration less than screening level

Note: Unit=mg/Kg



SAMPLING RESULTS MAP
ORGANOTINS EXCEEDING SCREENING LEVELS

Foreshore Sediment Sampling
900 Innes Avenue
San Francisco, California

October 2015

FIGURE 7

09/17/15 tk.TIBugreen Way\Figs_BugreenWay.mxd

APPENDIX A

WESTON FIGURES



SITE LAYOUT MAP

900 Innes Ave Site

Targeted Brownfields Assessment

San Francisco, California



FIGURE 2-2

India Basin
Shoreline Park

Hudson Ave

900 Innes Ave Site

APN
4629 A-010

APN
4630-002

Storage Shed

APN
4646-001

Boat Launch

Equipment / Machinery Storage
and Staging Area

Dilapidated
Pier Structure

Vacant
Storage Yard

APN
4646-019

APN
4646-002

APN
4646-003A

APN
4646-003

Vacant
Residential
Structure

Boat Launch

Innes Ave

Griffith St

Hudson Ave

Avenious
Walker Dr



0 50 100 200 300 400 Feet



SAMPLE LOCATION MAP

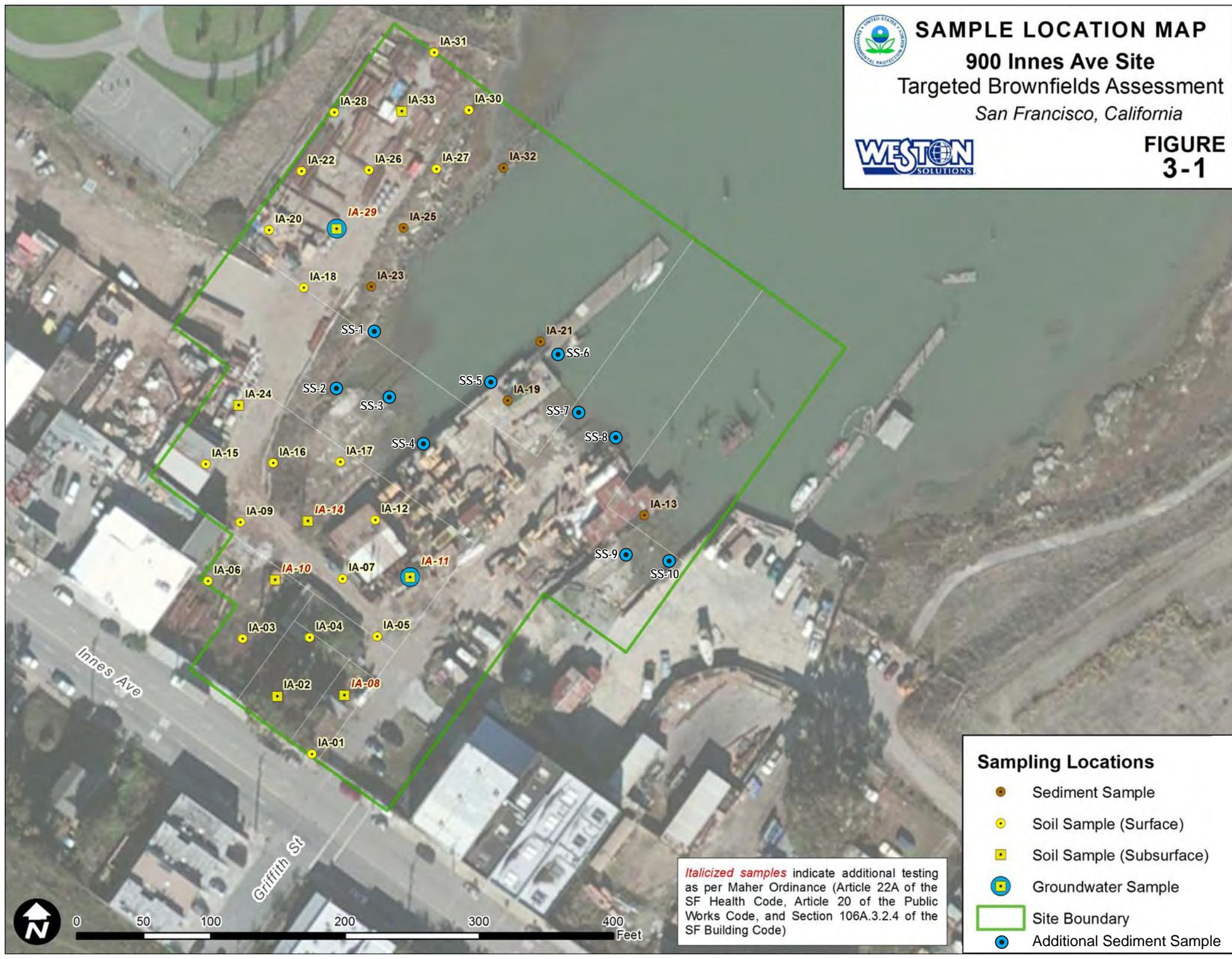
900 Innes Ave Site

Targeted Brownfields Assessment

San Francisco, California



FIGURE
3-1



Sampling Locations

- Sediment Sample
- Soil Sample (Surface)
- Soil Sample (Subsurface)
- Groundwater Sample
- Site Boundary
- Additional Sediment Sample

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

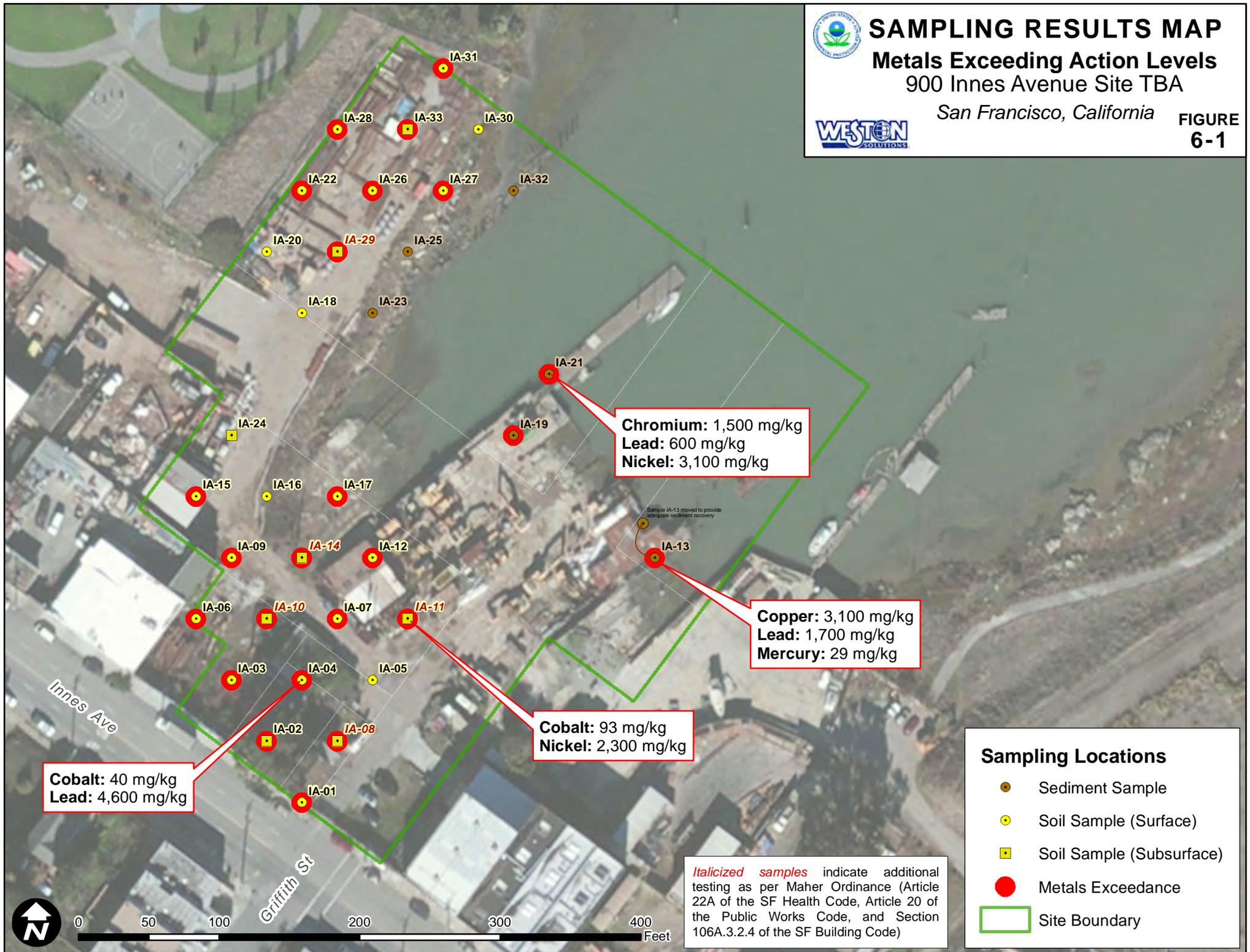
Metals Exceeding Action Levels

900 Innes Avenue Site TBA

San Francisco, California



FIGURE 6-1



Sampling Locations

- Sediment Sample
- Soil Sample (Surface)
- Soil Sample (Subsurface)
- Metals 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

PAHs Exceeding Action Levels 900 Innes Avenue Site TBA

San Francisco, California



FIGURE
6-2

IA-28

Benz(a)anthracene: 40,000 µg/kg
 Benzo(b)fluoranthene: 50,000 µg/kg
 Benzo(a)pyrenel: 37,000 µg/kg
 Dibenz(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-25

Benz(a)anthracene: 2,000 µg/kg
 Benzo(b)fluoranthene: 2,400 µg/kg
 Benzo(a)pyrenel: 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)pyrenel: 3,000 µg/kg
 Dibenz(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)pyrenel: 9,300 µg/kg
 Dibenz(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

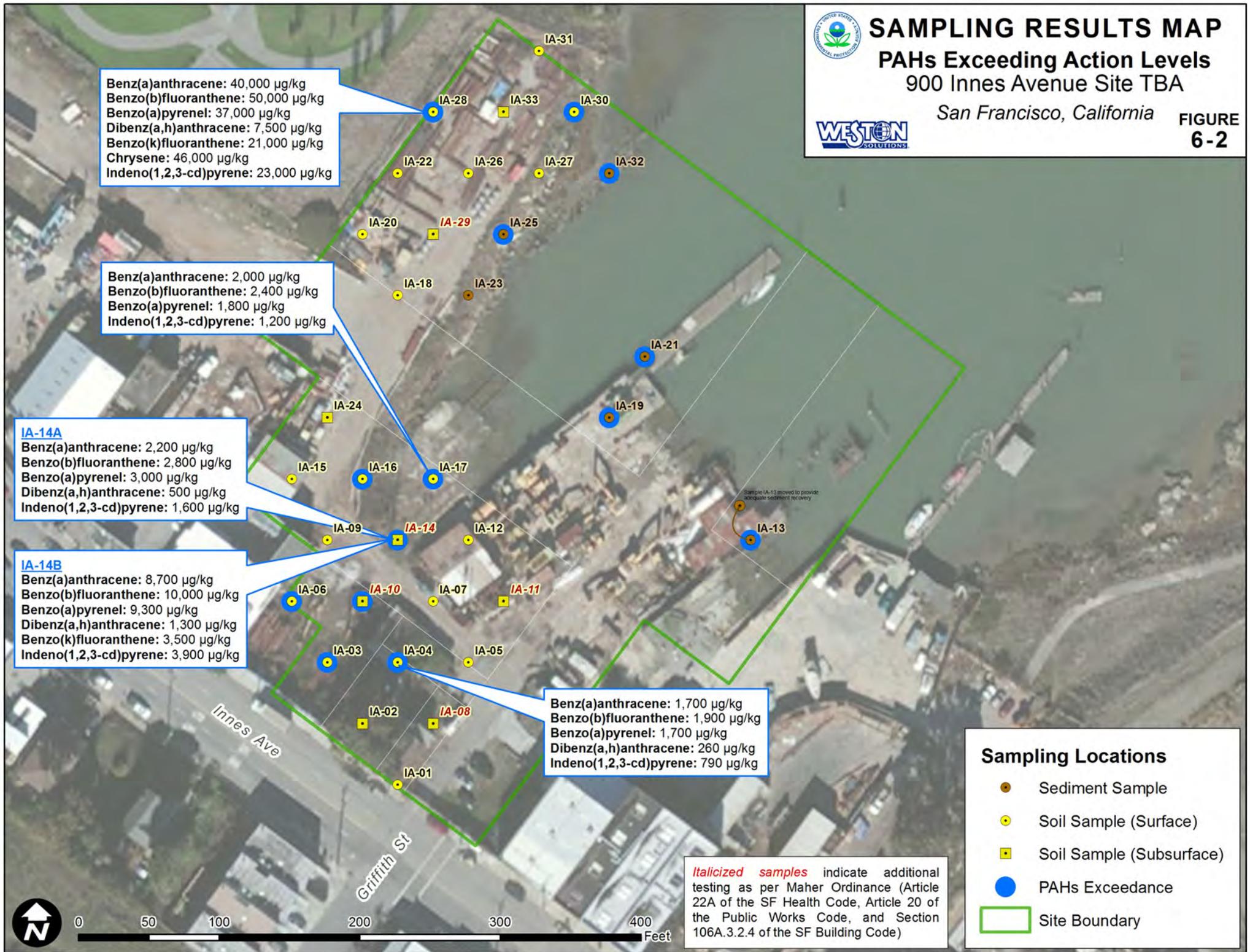
Benz(a)anthracene: 1,700 µg/kg
 Benzo(b)fluoranthene: 1,900 µg/kg
 Benzo(a)pyrenel: 1,700 µg/kg
 Dibenz(a,h)anthracene: 260 µg/kg
 Indeno(1,2,3-cd)pyrene: 790 µg/kg

Sample IA-13 moved to provide adequate sediment recovery

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)





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

Sample IA-13 moved to provide adequate sediment recovery

Sampling Locations

- Sediment Sample
- Soil Sample (Surface)
- Soil Sample (Subsurface)
- PCBs Exceedance
- Site Boundary

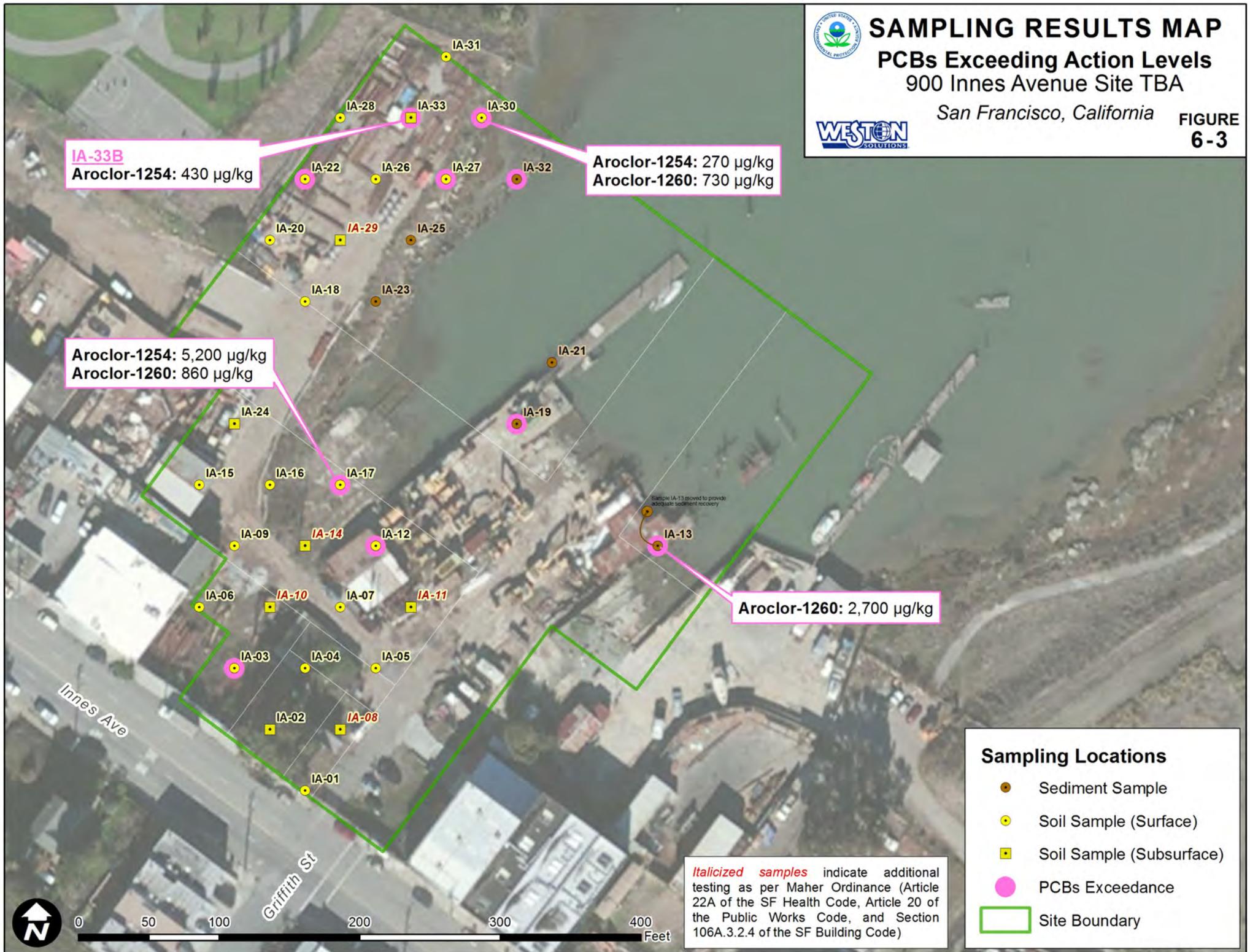
Italicized samples indicate additional testing as per Maher Ordinance (Article 22A of the SF Health Code, Article 20 of the Public Works Code, and Section 106A.3.2.4 of the SF Building Code)



0 50 100 200 300 400 Feet

Innes Ave

Griffith St





SAMPLING RESULTS MAP

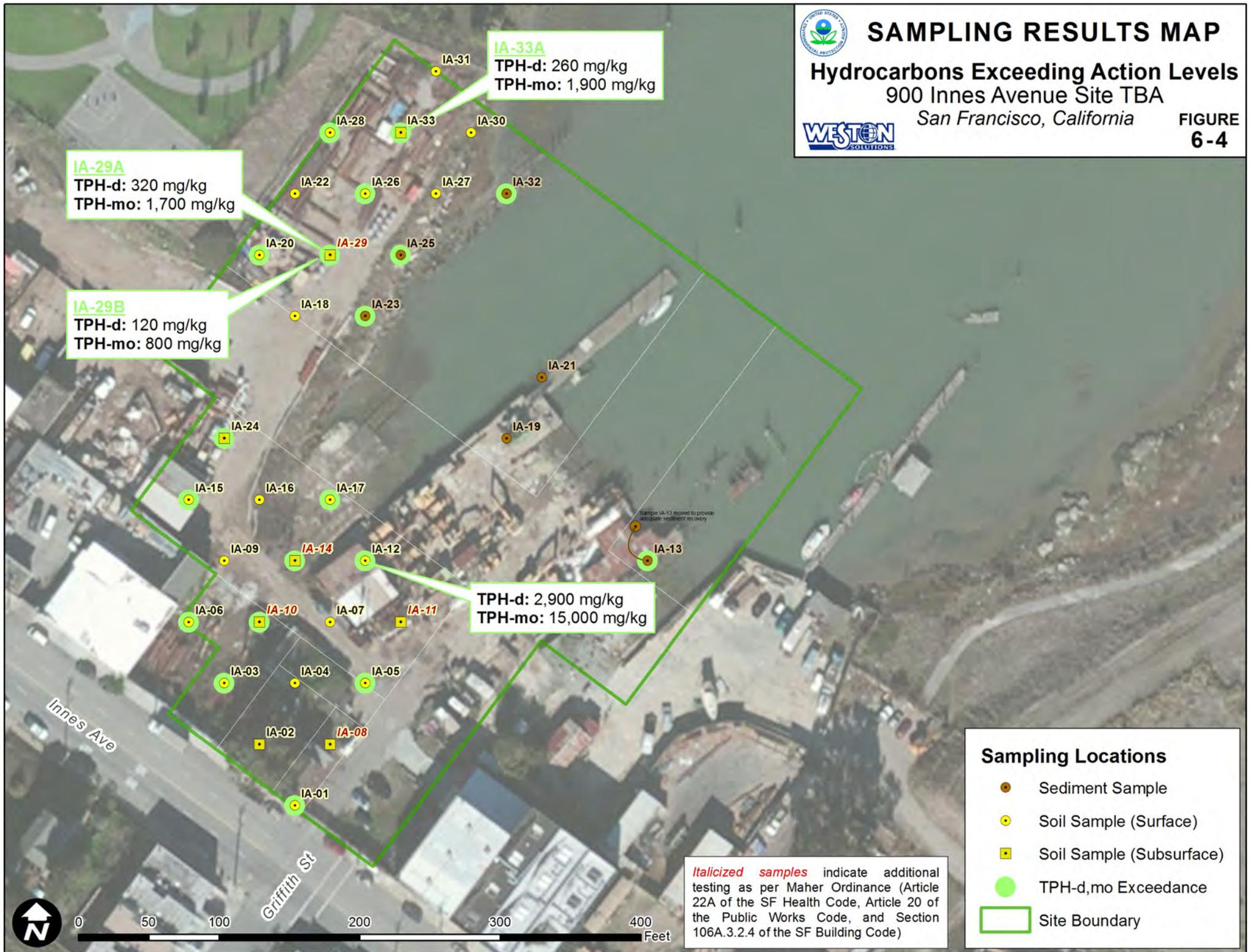
Hydrocarbons Exceeding Action Levels

900 Innes Avenue Site TBA

San Francisco, California



FIGURE 6-4



Sampling Locations

- Sediment Sample
- Soil Sample (Surface)
- Soil Sample (Subsurface)
- TPH-d,mo 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)

APPENDIX B

ANALYTICAL LABORATORY AND DATA VALIDATION REPORTS

LEVEL III Data Validation Report

PROJECT: Blue Greenway, 900 Innes

LABORATORY: Test America, Pleasanton, CA

LAB NUMBER: 720-64901

SAMPLES: SS-1-1', SS-2-0.5', SS-2-1', SS-3-0.5', SS-3-1', SS-4-0.5', SS-4-1', SS-5-0.5', SS-5-1', SS-6-0.5', SS-6-1', SS-7-0.5', SS-7-1', SS-8-0.5', SS-8-1', SS-9-0.5', SS-9-1', SS-10-0.5', SS-10-1', FD-1, FD-2

MATRIX: Sediment

Analysis	PAHs 8270C
Holding Time	✓
Surrogate Recovery	Note 1
MS/MSD	NA
LCS (Blank Spike)	✓
Method Blanks	✓
Field Duplicates (FD-1 and SS-8-0.5'; FD-2 and SS-10-1')	✓
Field/Equipment Blanks	NA
Reporting Limits	Note 2

✓ – QC criteria were met.

Notes: 1. The following surrogate recoveries were outside of their QC acceptance range:

Sample	Surrogate	Percent Recovery	Acceptance Range
SS-6-0.5'	Terphenyl-d ₁₄	118	32% to 117%
SS-10-0.5'	Terphenyl-d ₁₄	134	32% to 117%
SS-10-1'	Terphenyl-d ₁₄	121	32% to 117%

Since only one of the surrogates was out, data were not qualified.

2. Due to the presence of non-target compounds, the following dilutions were required:

Sample	Dilution Factor
SS-5-1' SS-6-1' SS-5-0.5' SS-2-1' SS-1-0.5' SS-2-0.5' SS-7-1' SS-8-0.5' SS-8-1' SS-9-0.5' FD-1 FD-2	5
SS-9-1' SS-4-1' SS-1-1' SS-7-0.5'	10
SS-6-0.5' SS-4-0.5' SS-3-0.5' SS-3-1' SS-10-1'	2

Reporting limits were increased by the same factors as the dilution.

Summary:

Based on this Level III validation, these data are usable for their intended purpose. None of these data were qualified or rejected.

LEVEL III Data Validation Report

PROJECT: Blue Greenway, 900 Innes

LABORATORY: Test America, Pleasanton, CA

LAB NUMBER: 720-64901

SAMPLES: SS-1-1', SS-2-0.5', SS-2-1', SS-3-0.5', SS-3-1', SS-4-0.5', SS-4-1',
SS-5-0.5', SS-5-1', SS-6-0.5', SS-6-1', SS-7-0.5', SS-7-1', SS-8-0.5',
SS-8-1', SS-9-0.5', SS-9-1', SS-10-0.5', SS-10-1', FD-1, FD-2

MATRIX: Sediment

Analysis	Diesel Range Organics, Motor Oil Range 8015B
Holding Time	✓
Surrogate Recovery	Note 1
MS/MSD	NA
LCS (Blank Spike)	✓
Method Blanks	✓
Field Duplicates (FD-1 and SS-8-0.5'; FD-2 and SS-10-1')	✓
Field/Equipment Blanks	NA
Reporting Limits	Note 2

✓ – QC criteria were met.

Notes: 1. For dilutions by factors of five or greater, the surrogate was diluted out. Results are not qualified when surrogates are diluted from the sample (0% recovery).

2. In order to quantitate diesel, the following dilutions were required:

Sample	Dilution Factor
SS-7-1' SS-8-1' SS-7-0.5' SS-4-0.5' SS-1-0.5' SS-3-1'	5
SS-2-1' SS-1-1' SS-2-0.5' SS-9-0.5'	10
SS-6-1' SS-5-1' SS-3-0.5' FD-2	2
SS-4-1'	50
FD-1 SS-8-0.5' SS-10-1'	3
SS-9-1'	20

Reporting limits were increased by the same factors as the dilution. Reported concentrations exceeded the elevated reporting limits.

Summary:

Based on this Level III validation, these data are usable for their intended purpose. None of these data were qualified or rejected.

LEVEL III Data Validation Report

PROJECT: Blue Greenway, 900 Innes

LABORATORY: Test America, Pleasanton, CA

LAB NUMBER: 720-64901

SAMPLES: SS-1-1', SS-2-0.5', SS-2-1', SS-3-0.5', SS-3-1', SS-4-0.5', SS-4-1', SS-5-0.5', SS-5-1', SS-6-0.5', SS-6-1', SS-7-0.5', SS-7-1', SS-8-0.5', SS-8-1', SS-9-0.5', SS-9-1', SS-10-0.5', SS-10-1', FD-1, FD-2

MATRIX: Sediment

Analysis	PCBs 8082
Holding Time	✓
Surrogate Recovery	Note 1
MS/MSD (SS-1-0.5')	✓
LCS (Blank Spike)	✓
Method Blanks	✓
Field Duplicates (FD-1 and SS-8-0.5'; FD-2 and SS-10-1')	Note 2
Field/Equipment Blanks	NA
Reporting Limits	Note 3

✓ – QC criteria were met.

- Notes:
1. Surrogates were diluted out of samples SS-7-1', SS-9-0.5', SS-9-1', SS-10-1', and FD-1. Results are not qualified when surrogates are diluted from samples.
 2. In both field duplicate pairs, significant discrepancies for reported concentrations were noted. In the case of FD-1 and SS-8-0.5', the reported concentrations of PCB-1260 were flagged "J," in each sample (710 µg/kg and 7800 µg/kg); (RPD=166.6%). In the duplicate pair FD-2 and SS-10-1', no RPD was calculated due to the non-detects. By inspection PCB-1248 in SS-10-1' and PCB-1260 in FD-2 were flagged "J," estimated. In the FD-1, SS-8-0.5' the mean should be used for the reported concentration PCB-1260.
 3. Reporting limits of the associated non-detects were flagged "UJ," estimated.

Summary:

Based on this Level III validation, these data are usable, as qualified, for their intended purpose. None of these data were rejected.

LEVEL III Data Validation Report

PROJECT: Blue Greenway, 900 Innes

LABORATORY: Test America, Pleasanton, CA

LAB NUMBER: 720-64901

SAMPLES: SS-1-1', SS-2-0.5', SS-2-1', SS-3-0.5', SS-3-1', SS-4-0.5', SS-4-1',
SS-5-0.5', SS-5-1', SS-6-0.5', SS-6-1', SS-7-0.5', SS-7-1', SS-8-0.5',
SS-8-1', SS-9-0.5', SS-9-1', SS-10-0.5', SS-10-1', FD-1, FD-2

MATRIX: Sediment

Analysis	Organotins* PSEP (GC/MS)
Holding Time	✓
Surrogate Recovery	✓
MS/MSD (SS-7-0.5')	Note 1
LCS (Blank Spike)	Note 2
Method Blanks	✓
Field Duplicates (FD-1 and SS-8-0.5'; FD-2 and SS-10-1')	Note 3
Field/Equipment Blanks	NA
Reporting Limits	Note 4

* Monobutyltin, tetra-n-butyltin, dibutyltin, tributyltin

✓ – QC criteria were met.

Notes: 1. The MS/MSD run on sample SS-7-0.5' had percent recoveries outside of QC acceptance range for all four compounds. In addition, the RPD was either not calculated or above the QC limit for all compounds. Since the concentration of tributyltin in sample SS-07-0.5' exceeded the spiking concentration by a factor greater than four, no qualifiers were required for this compound due to the MS/MSD. All reported concentrations in the spiked sample were flagged "J," estimated.

2. The following LCS recoveries had RPDs between the LCS and the LCSD that exceeded the QC limit.

Prep Batch	Compound	RPD	RPD Limit
190241	Tetra-n-butyltin	36	25
190247	Monobutyltin	65	36

Samples were flagged "J," and "UJ" for results of Tetra-butyltin in prep Batch 190241 and Monobutyltin in Prep Batch 190247.

3. The RPD between the reported Dibutyltin concentrations in the field duplicate pair FD-1 and SS-8-0.5' of 103% exceeded the QC limit of 50%. Both results were flagged "J."

For the duplicate pair, SS-10-1' and FD-2, the RPD between the reported concentration of Tetra-n-butyltin of 71% and between Tributyltin reported concentrations of 73% exceed the QC limit of 50%. All four reported concentrations were flagged "J," estimated. The mean of all ~~three~~ *duplicate pairs* compounds should be used as the estimated concentration *for each sampling point - sets of*

4. In order to quantitate target compounds, the following dilutions were required:

Sample	Compounds (-Butyltin)	Dilution Factor
SS-1-1'	Dibutyltin	5
SS-2-0.5'	All	5
SS-3-1'	Mono and Tetra-n	5
	Di and Tri	25
SS-9-0.5'	Mono	50
	Di and Tri	250
SS-10-1'	Di and Tri	10
SS-9-1'		
FD-2	Di and Tri	5

Reporting limits were increased by the same factors as the dilutions.

Summary:

Based on this Level III validation, these data are usable, as qualified, for their intended purpose. None of these data were rejected.

2. The following LCS recoveries had RPDs between the LCS and the LCSD that exceeded the QC limit.

Prep Batch	Compound	RPD	RPD Limit
190241	Tetra-n-butyltin	36	25
190247	Monobutyltin	65	36

Samples were flagged “J,” and “UJ” for results of Tetra-butyltin in prep Batch 190241 and Monobutyltin in Prep Batch 190247.

3. The RPD between the reported Dibutyltin concentrations in the field duplicate pair FD-1 and SS-8-0.5’ of 103% exceeded the QC limit of 50%. Both results were flagged “J.”

For the duplicate pair, SS-10-1’ and FD-2, the RPD between the reported concentration of Tetra-n-butyltin of 71% and between Tributyltin reported concentrations of 73% exceed the QC limit of 50%. All four reported concentrations were flagged “J,” estimated. The mean of all sets of flagged duplicate pairs should be used as the estimated concentration for each sampling point.

4. In order to quantitate target compounds, the following dilutions were required:

Sample	Compounds (-Butyltin)	Dilution Factor
SS-1-1’	Dibutyltin	5
SS-2-0.5’	All	5
SS-3-1’	Mono and Tetra-n	5
	Di and Tri	25
SS-9-0.5’	Mono	50
	Di and Tri	250
SS-10-1’	Di and Tri	10
SS-9-1’		
FD-2	Di and Tri	5

Reporting limits were increased by the same factors as the dilutions.

Summary:

Based on this Level III validation, these data are usable, as qualified, for their intended purpose. None of these data were rejected.

LEVEL III Data Validation Report

PROJECT: Blue Greenway, 900 Innes

LABORATORY: Test America, Pleasanton, CA

LAB NUMBER: 720-64901

SAMPLES: SS-1-1', SS-2-0.5', SS-2-1', SS-3-0.5', SS-3-1', SS-4-0.5', SS-4-1',
SS-5-0.5', SS-5-1', SS-6-0.5', SS-6-1', SS-7-0.5', SS-7-1', SS-8-0.5',
SS-8-1', SS-9-0.5', SS-9-1', SS-10-0.5', SS-10-1', FD-1, FD-2

MATRIX: Sediment

Analysis	CAM 17 Metals 6010B / Hg by 7471A
Holding Time	✓
Surrogate Recovery	NA
MS/MSD	✓
LCS (Blank Spike)	✓
Method Blanks	✓
Field Duplicates (FD-1 and SS-8-0.5')	✓
Field/Equipment Blanks	NA
Reporting Limits	Note 1

✓ – QC criteria were met.

Notes: 1. 6010B Metals were diluted by factors of four in all samples other than the specific metals listed below:

Sample	Un-diluted Metals
SS-3-0.5'	Sb, Be, Cd, Mo, Se, Ag, Tl
SS-5-0.5'	Sb, Be, Cd, Mo, Se, As, Tl
SS-5-1'	Sb, Be, Cd, Se, Ag, Tl
SS-6-0.5'	Sb, Be, Cd, Mo, Se, As, Tl
SS-10-0.5'	Sb, Be, Cd, Pb, Mo, Ni, Se, Ag, Tl
FD-2	Sb, Be, Cd, Pb, Ni, Se, Ag, Tl

Higher dilutions than four were needed in sample SS-9-0.5' as follows:

Sb (10)

Cu (50), [Pb, Mo, Ni, Tl (10)]

Reporting limits were increased by the same factors as the dilutions.

For Mercury, the following dilutions were required:

Sample	Hg Dilution Factor
SS-7-0.5' SS-2-1' SS-7-1' SS-1-1' SS-6-1'	5
SS-10-1' SS-10-0.5' SS-3-1' SS-8-0.5' FD-1 FD-2	10
SS-4-1' SS-4-0.5' SS-8-1' SS-9-0.5' SS-9-1'	100

Reporting limits were increased by the same factors as the dilutions. Reported concentrations of mercury exceeded the elevated reporting limits.

Summary:

Based on this Level III validation, these data are usable for their intended purpose. None of these data were qualified or rejected.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

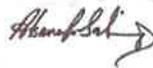
ANALYTICAL REPORT

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TestAmerica Job ID: 720-64901-1
Client Project/Site: Blue Greenway 900 Innes

For:
URS Corporation
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Attn: Mr. Erik Skov



Authorized for release by:
5/29/2015 4:09:06 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
E	Result exceeded calibration range.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

TestAmerica Pleasanton

Case Narrative

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Job ID: 720-64901-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative 720-64901-1

Comments

No additional comments.

Receipt

The samples were received on 5/19/2015 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

GC/MS Semi VOA

Method(s) 8270C: The following samples was diluted due to the abundance of non-target analytes: SS-9-1' (720-64901-18) and SS-10-1' (720-64901-20). Elevated reporting limits (RLs) are provided.

Method(s) 8270C: Surrogate recovery for the following samples was outside control limits: SS-10-0.5' (720-64901-19) and SS-10-1' (720-64901-20). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270C: Surrogate recovery for the following sample was outside the upper control limit: (MB 720-182427/1-A). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270C: The following samples was diluted due to the abundance of non-target analytes: SS-2-0.5' (720-64901-3), SS-2-1' (720-64901-4), SS-3-0.5' (720-64901-5), SS-3-1' (720-64901-6), FD-1 (720-64901-21) and FD-2 (720-64901-22). Elevated reporting limits (RLs) are provided.

Method(s) 8270C: The following samples was diluted due to the abundance of non-target analytes: SS-1-1' (720-64901-2), SS-4-0.5' (720-64901-7) and SS-4-1' (720-64901-8). Elevated reporting limits (RLs) are provided.

Method(s) Organotins: The continuing calibration verification (CCV) associated with batch 580-190365 recovered above the upper control limit for Monobutyl Tin. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SS-1-0.5' (720-64901-1), SS-1-1' (720-64901-2), SS-2-0.5' (720-64901-3), SS-2-1' (720-64901-4), SS-3-0.5' (720-64901-5), SS-3-1' (720-64901-6), (LCS 580-190241/2-A), (LCSD 580-190241/3-A), (MB 580-190241/1-A) and (580-47466-A-7-C MDLS).

Method(s) Organotins: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-190241, 580-190241 and 580-190241 recovered outside control limits for Tetrabutyltin. All targets had passing recovery in both the LCS and LCSD.

Method(s) Organotins: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-190247, 580-190247 and 580-190247 recovered outside control limits for MonobutylTin. All targets had passing recovery in the LCS and LCSD.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8015B: The following samples required a dilution due to the nature of the sample matrix: SS-1-1' (720-64901-2), SS-2-0.5' (720-64901-3) and SS-2-1' (720-64901-4). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SS-1-0.5' (720-64901-1), SS-1-1' (720-64901-2), SS-2-0.5' (720-64901-3), SS-2-1' (720-64901-4), SS-3-0.5' (720-64901-5), (LCS 720-182348/2-A), (MB 720-182348/1-A), (720-64901-A-1-B MS) and (720-64901-A-1-C MSD).

Method(s) 8082: The following sample(s) contained more than one Aroclor with insufficient separation to quantify individually. The PCBs present are quantified as the predominant Aroclor: SS-1-0.5' (720-64901-1), SS-1-1' (720-64901-2), SS-2-0.5' (720-64901-3) and SS-2-1' (720-64901-4).

Case Narrative

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Job ID: 720-64901-1 (Continued)

Laboratory: TestAmerica Pleasanton (Continued)

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SS-5-1' (720-64901-10), SS-6-0.5' (720-64901-11) and SS-6-1' (720-64901-12).

Method(s) 8082: The following sample(s) contained more than one Aroclor with insufficient separation to quantify individually. The PCBs present are quantified as the predominant Aroclor: SS-5-1' (720-64901-10), SS-6-0.5' (720-64901-11) and SS-6-1' (720-64901-12).

Method(s) 8015B: The following sample required a dilution due to the nature of the sample matrix: SS-4-1' (720-64901-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8015B: The following samples required a dilution due to the nature of the sample matrix: SS-3-1' (720-64901-6) and SS-4-0.5' (720-64901-7). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8015B: The following sample required a dilution due to the nature of the sample matrix: SS-1-0.5' (720-64901-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8082: The following samples required a dilution due to the nature of the sample matrix: SS-7-1' (720-64901-14), SS-9-0.5' (720-64901-17) and SS-9-1' (720-64901-18). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8082: The following sample(s) contained more than one Aroclor with insufficient separation to quantify individually. The PCBs present are quantified as the predominant Aroclor: SS-7-0.5' (720-64901-13), SS-7-1' (720-64901-14), SS-8-0.5' (720-64901-15), SS-8-1' (720-64901-16), SS-9-0.5' (720-64901-17), SS-9-1' (720-64901-18) and FD-2 (720-64901-22).

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SS-7-0.5' (720-64901-13), SS-7-1' (720-64901-14), SS-8-0.5' (720-64901-15), SS-8-1' (720-64901-16), SS-9-0.5' (720-64901-17), SS-9-1' (720-64901-18), FD-2 (720-64901-22), (LCS 720-182388/2-A), (MB 720-182388/1-A), (720-64909-A-1-G), (720-64909-A-1-E MS) and (720-64909-A-1-F MSD).

Method(s) 8082: The following samples required a dilution due to the nature of the sample matrix: SS-10-1' (720-64901-20) and FD-1 (720-64901-21). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8082: The following sample(s) contained more than one Aroclor with insufficient separation to quantify individually. The PCBs present are quantified as the predominant Aroclor: SS-3-1' (720-64901-6), SS-4-0.5' (720-64901-7), SS-4-1' (720-64901-8), SS-5-0.5' (720-64901-9), SS-10-0.5' (720-64901-19), SS-10-1' (720-64901-20) and FD-1 (720-64901-21).

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SS-3-1' (720-64901-6), SS-4-0.5' (720-64901-7), SS-4-1' (720-64901-8), SS-5-0.5' (720-64901-9), SS-10-0.5' (720-64901-19), SS-10-1' (720-64901-20) and FD-1 (720-64901-21).

Method(s) 8015B: The following samples required a dilution due to the nature of the sample matrix: SS-7-0.5' (720-64901-13) and SS-7-1' (720-64901-14). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8015B: The Diesel Range Organics (DRO) concentration reported for the following sample is due to the presence of discrete peaks: (720-64909-B-1-E).

Method(s) 8015B: The following samples required a dilution due to the nature of the sample matrix: SS-8-1' (720-64901-16), SS-9-0.5' (720-64901-17) and SS-9-1' (720-64901-18). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Case Narrative

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Job ID: 720-64901-1 (Continued)

Laboratory: TestAmerica Pleasanton (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6010B: The following samples was diluted due to the abundance of non-target analyte : SS-1-0.5' (720-64901-1), SS-1-1' (720-64901-2), SS-2-0.5' (720-64901-3), SS-2-1' (720-64901-4), SS-3-1' (720-64901-6), SS-4-0.5' (720-64901-7) and SS-4-1' (720-64901-8). Elevated reporting limits (RLs) are provided.

Method(s) 6010B: The following samples was diluted due to the abundance of non-target analyte: SS-6-1' (720-64901-12), SS-7-0.5' (720-64901-13), SS-7-1' (720-64901-14), SS-8-0.5' (720-64901-15), SS-8-1' (720-64901-16), SS-9-0.5' (720-64901-17), SS-9-1' (720-64901-18), SS-10-1' (720-64901-20) and FD-1 (720-64901-21). Elevated reporting limits (RLs) are provided.

Method(s) 6010B: The following sample was diluted to bring the concentration of target analytes within the calibration range: SS-9-0.5' (720-64901-17). Elevated reporting limits (RLs) are provided.

Method(s) 6010B: The following sample was diluted due to the abundance of non-target analyte : FD-1 (720-64901-21). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-1-0.5'

Lab Sample ID: 720-64901-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dibutyltin	81		0.93		ug/Kg		1	Organotins	Total/NA
Monobutyltin	24		0.93		ug/Kg		1	Organotins	Total/NA
Tributyltin	70		0.93		ug/Kg		1	Organotins	Total/NA
Diesel Range Organics [C10-C28]	180		5.0		mg/Kg		5	8015B	Total/NA
Motor Oil Range Organics [C24-C36]	420		250		mg/Kg		5	8015B	Total/NA
PCB-1254	74		49		ug/Kg		1	8082	Total/NA
Arsenic	7.0		3.3		mg/Kg		4	6010B	Total/NA
Barium	58		1.7		mg/Kg		4	6010B	Total/NA
Chromium	68		1.7		mg/Kg		4	6010B	Total/NA
Cobalt	11		0.66		mg/Kg		4	6010B	Total/NA
Copper	180		5.0		mg/Kg		4	6010B	Total/NA
Lead	76		1.7		mg/Kg		4	6010B	Total/NA
Nickel	90		1.7		mg/Kg		4	6010B	Total/NA
Vanadium	40		1.7		mg/Kg		4	6010B	Total/NA
Zinc	140		5.0		mg/Kg		4	6010B	Total/NA
Mercury	0.54		0.0095		mg/Kg		1	7471A	Total/NA

Client Sample ID: SS-1-1'

Lab Sample ID: 720-64901-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	4.4		1.3		mg/Kg		10	8270C	Total/NA
Chrysene	27		1.3		mg/Kg		10	8270C	Total/NA
Monobutyltin	69		0.94		ug/Kg		1	Organotins	Total/NA
Tributyltin	150		0.94		ug/Kg		1	Organotins	Total/NA
Dibutyltin - DL	230		4.7		ug/Kg		5	Organotins	Total/NA
Diesel Range Organics [C10-C28]	260		9.9		mg/Kg		10	8015B	Total/NA
Motor Oil Range Organics [C24-C36]	610		500		mg/Kg		10	8015B	Total/NA
PCB-1254	180		50		ug/Kg		1	8082	Total/NA
Arsenic	8.6		2.9		mg/Kg		4	6010B	Total/NA
Barium	69		1.4		mg/Kg		4	6010B	Total/NA
Chromium	64		1.4		mg/Kg		4	6010B	Total/NA
Cobalt	12		0.58		mg/Kg		4	6010B	Total/NA
Copper	370		4.3		mg/Kg		4	6010B	Total/NA
Lead	120		1.4		mg/Kg		4	6010B	Total/NA
Molybdenum	2.2		1.4		mg/Kg		4	6010B	Total/NA
Nickel	88		1.4		mg/Kg		4	6010B	Total/NA
Vanadium	37		1.4		mg/Kg		4	6010B	Total/NA
Zinc	220		4.3		mg/Kg		4	6010B	Total/NA
Mercury	3.2		0.047		mg/Kg		5	7471A	Total/NA

Client Sample ID: SS-2-0.5'

Lab Sample ID: 720-64901-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dibutyltin	62		4.9		ug/Kg		5	Organotins	Total/NA
Diesel Range Organics [C10-C28]	320		9.9		mg/Kg		10	8015B	Total/NA
Motor Oil Range Organics [C24-C36]	640		500		mg/Kg		10	8015B	Total/NA
PCB-1254	54		50		ug/Kg		1	8082	Total/NA
Arsenic	5.0		3.3		mg/Kg		4	6010B	Total/NA
Barium	77		1.6		mg/Kg		4	6010B	Total/NA
Chromium	37		1.6		mg/Kg		4	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-2-0.5' (Continued)

Lab Sample ID: 720-64901-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Cobalt	8.3		0.66		mg/Kg			4	6010B	Total/NA
Copper	120		4.9		mg/Kg			4	6010B	Total/NA
Lead	140		1.6		mg/Kg			4	6010B	Total/NA
Molybdenum	1.9		1.6		mg/Kg			4	6010B	Total/NA
Nickel	59		1.6		mg/Kg			4	6010B	Total/NA
Vanadium	25		1.6		mg/Kg			4	6010B	Total/NA
Zinc	730		4.9		mg/Kg			4	6010B	Total/NA
Mercury	0.49		0.0088		mg/Kg			1	7471A	Total/NA

Client Sample ID: SS-2-1'

Lab Sample ID: 720-64901-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Pyrene	0.73		0.67		mg/Kg			5	8270C	Total/NA
Dibutyltin	83		0.95		ug/Kg			1	Organotins	Total/NA
Tributyltin	110		0.95		ug/Kg			1	Organotins	Total/NA
Diesel Range Organics [C10-C28]	360		9.9		mg/Kg			10	8015B	Total/NA
Motor Oil Range Organics [C24-C36]	800		490		mg/Kg			10	8015B	Total/NA
PCB-1254	180		50		ug/Kg			1	8082	Total/NA
Antimony	3.0		1.8		mg/Kg			4	6010B	Total/NA
Arsenic	16		3.7		mg/Kg			4	6010B	Total/NA
Barium	97		1.8		mg/Kg			4	6010B	Total/NA
Cadmium	2.3		0.46		mg/Kg			4	6010B	Total/NA
Chromium	130		1.8		mg/Kg			4	6010B	Total/NA
Cobalt	18		0.73		mg/Kg			4	6010B	Total/NA
Copper	650		5.5		mg/Kg			4	6010B	Total/NA
Lead	410		1.8		mg/Kg			4	6010B	Total/NA
Molybdenum	17		1.8		mg/Kg			4	6010B	Total/NA
Nickel	230		1.8		mg/Kg			4	6010B	Total/NA
Vanadium	28		1.8		mg/Kg			4	6010B	Total/NA
Zinc	2400		5.5		mg/Kg			4	6010B	Total/NA
Mercury	1.8		0.045		mg/Kg			5	7471A	Total/NA

Client Sample ID: SS-3-0.5'

Lab Sample ID: 720-64901-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthene	0.17		0.13		mg/Kg			2	8270C	Total/NA
Fluorene	0.20		0.13		mg/Kg			2	8270C	Total/NA
Phenanthrene	1.0		0.13		mg/Kg			2	8270C	Total/NA
Anthracene	0.62		0.13		mg/Kg			2	8270C	Total/NA
Fluoranthene	2.0		0.13		mg/Kg			2	8270C	Total/NA
Pyrene	2.0		0.13		mg/Kg			2	8270C	Total/NA
Chrysene	0.94		0.13		mg/Kg			2	8270C	Total/NA
Benzo[b]fluoranthene	0.63		0.13		mg/Kg			2	8270C	Total/NA
Benzo[k]fluoranthene	0.23		0.13		mg/Kg			2	8270C	Total/NA
Benzo[a]pyrene	0.44		0.13		mg/Kg			2	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	0.22		0.13		mg/Kg			2	8270C	Total/NA
Benzo[g,h,i]perylene	0.20		0.13		mg/Kg			2	8270C	Total/NA
Dibutyltin	31		0.92		ug/Kg			1	Organotins	Total/NA
Tributyltin	25		0.92		ug/Kg			1	Organotins	Total/NA
Diesel Range Organics [C10-C28]	110		2.0		mg/Kg			2	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-3-0.5' (Continued)

Lab Sample ID: 720-64901-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Motor Oil Range Organics [C24-C36]	140		99		mg/Kg	2		8015B	Total/NA
Arsenic	4.6		3.3		mg/Kg	4		6010B	Total/NA
Barium	28		1.7		mg/Kg	4		6010B	Total/NA
Chromium	41		1.7		mg/Kg	4		6010B	Total/NA
Cobalt	6.2		0.66		mg/Kg	4		6010B	Total/NA
Copper	80		5.0		mg/Kg	4		6010B	Total/NA
Lead	28		1.7		mg/Kg	4		6010B	Total/NA
Nickel	41		1.7		mg/Kg	4		6010B	Total/NA
Vanadium	29		1.7		mg/Kg	4		6010B	Total/NA
Zinc	80		5.0		mg/Kg	4		6010B	Total/NA
Mercury	0.49		0.0090		mg/Kg	1		7471A	Total/NA

Client Sample ID: SS-3-1'

Lab Sample ID: 720-64901-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.44		0.27		mg/Kg	2		8270C	Total/NA
Anthracene	0.33		0.27		mg/Kg	2		8270C	Total/NA
Fluoranthene	3.6		0.27		mg/Kg	2		8270C	Total/NA
Pyrene	7.6		0.27		mg/Kg	2		8270C	Total/NA
Chrysene	0.93		0.27		mg/Kg	2		8270C	Total/NA
Benzo[b]fluoranthene	1.8		0.27		mg/Kg	2		8270C	Total/NA
Benzo[k]fluoranthene	0.73		0.27		mg/Kg	2		8270C	Total/NA
Benzo[a]pyrene	1.1		0.27		mg/Kg	2		8270C	Total/NA
Indeno[1,2,3-cd]pyrene	0.62		0.27		mg/Kg	2		8270C	Total/NA
Benzo[g,h,i]perylene	0.62		0.27		mg/Kg	2		8270C	Total/NA
Monobutyltin	92		4.7		ug/Kg	5		Organotins	Total/NA
Tetra-n-butyltin	61		13		ug/Kg	5		Organotins	Total/NA
Dibutyltin - DL	990		24		ug/Kg	25		Organotins	Total/NA
Tributyltin - DL	2200		24		ug/Kg	25		Organotins	Total/NA
Diesel Range Organics [C10-C28]	340		5.0		mg/Kg	5		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	570		250		mg/Kg	5		8015B	Total/NA
PCB-1254	980		250		ug/Kg	5		8082	Total/NA
Arsenic	16		3.8		mg/Kg	4		6010B	Total/NA
Barium	130		1.9		mg/Kg	4		6010B	Total/NA
Cadmium	0.49		0.47		mg/Kg	4		6010B	Total/NA
Chromium	82		1.9		mg/Kg	4		6010B	Total/NA
Cobalt	19		0.75		mg/Kg	4		6010B	Total/NA
Copper	1100		5.7		mg/Kg	4		6010B	Total/NA
Lead	150		1.9		mg/Kg	4		6010B	Total/NA
Molybdenum	20		1.9		mg/Kg	4		6010B	Total/NA
Nickel	81		1.9		mg/Kg	4		6010B	Total/NA
Vanadium	44		1.9		mg/Kg	4		6010B	Total/NA
Zinc	440		5.7		mg/Kg	4		6010B	Total/NA
Mercury	4.6		0.097		mg/Kg	10		7471A	Total/NA

Client Sample ID: SS-4-0.5'

Lab Sample ID: 720-64901-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	1.5		0.27		mg/Kg	2		8270C	Total/NA
Anthracene	0.58		0.27		mg/Kg	2		8270C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-4-0.5' (Continued)

Lab Sample ID: 720-64901-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	2.6		0.27		mg/Kg		2	8270C	Total/NA
Pyrene	3.1		0.27		mg/Kg		2	8270C	Total/NA
Chrysene	1.5		0.27		mg/Kg		2	8270C	Total/NA
Benzo[b]fluoranthene	1.6		0.27		mg/Kg		2	8270C	Total/NA
Benzo[k]fluoranthene	0.56		0.27		mg/Kg		2	8270C	Total/NA
Benzo[a]pyrene	1.1		0.27		mg/Kg		2	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	0.61		0.27		mg/Kg		2	8270C	Total/NA
Benzo[g,h,i]perylene	0.72		0.27		mg/Kg		2	8270C	Total/NA
Dibutyltin	130		1.1		ug/Kg		1	Organotins	Total/NA
Monobutyltin	57		1.1		ug/Kg		1	Organotins	Total/NA
Tetra-n-butyltin	26		2.9		ug/Kg		1	Organotins	Total/NA
Tributyltin	160		1.1		ug/Kg		1	Organotins	Total/NA
Diesel Range Organics [C10-C28]	370		5.0		mg/Kg		5	8015B	Total/NA
Motor Oil Range Organics [C24-C36]	620		250		mg/Kg		5	8015B	Total/NA
PCB-1254	920		250		ug/Kg		5	8082	Total/NA
Antimony	3.5		1.7		mg/Kg		4	6010B	Total/NA
Arsenic	20		3.4		mg/Kg		4	6010B	Total/NA
Barium	180		1.7		mg/Kg		4	6010B	Total/NA
Cadmium	0.47		0.43		mg/Kg		4	6010B	Total/NA
Chromium	94		1.7		mg/Kg		4	6010B	Total/NA
Cobalt	10		0.69		mg/Kg		4	6010B	Total/NA
Copper	700		5.2		mg/Kg		4	6010B	Total/NA
Lead	350		1.7		mg/Kg		4	6010B	Total/NA
Molybdenum	2.0		1.7		mg/Kg		4	6010B	Total/NA
Nickel	74		1.7		mg/Kg		4	6010B	Total/NA
Vanadium	29		1.7		mg/Kg		4	6010B	Total/NA
Zinc	660		5.2		mg/Kg		4	6010B	Total/NA
Mercury	88		0.91		mg/Kg		100	7471A	Total/NA

Client Sample ID: SS-4-1'

Lab Sample ID: 720-64901-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1.4		1.3		mg/Kg		10	8270C	Total/NA
Acenaphthene	1.8		1.3		mg/Kg		10	8270C	Total/NA
Fluorene	2.3		1.3		mg/Kg		10	8270C	Total/NA
Phenanthrene	7.6		1.3		mg/Kg		10	8270C	Total/NA
Anthracene	2.3		1.3		mg/Kg		10	8270C	Total/NA
Fluoranthene	2.6		1.3		mg/Kg		10	8270C	Total/NA
Pyrene	3.7		1.3		mg/Kg		10	8270C	Total/NA
2-Methylnaphthalene	4.8		1.3		mg/Kg		10	8270C	Total/NA
Dibutyltin	76		1.1		ug/Kg		1	Organotins	Total/NA
Tributyltin	150		1.1		ug/Kg		1	Organotins	Total/NA
Diesel Range Organics [C10-C28]	5500		50		mg/Kg		50	8015B	Total/NA
Motor Oil Range Organics [C24-C36]	2900		2500		mg/Kg		50	8015B	Total/NA
PCB-1254	1100		240		ug/Kg		5	8082	Total/NA
Antimony	3.6		1.7		mg/Kg		4	6010B	Total/NA
Arsenic	20		3.4		mg/Kg		4	6010B	Total/NA
Barium	250		1.7		mg/Kg		4	6010B	Total/NA
Cadmium	33		0.43		mg/Kg		4	6010B	Total/NA
Chromium	100		1.7		mg/Kg		4	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-4-1' (Continued)

Lab Sample ID: 720-64901-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	26		0.68		mg/Kg	4		6010B	Total/NA
Copper	850		5.1		mg/Kg	4		6010B	Total/NA
Lead	1600		1.7		mg/Kg	4		6010B	Total/NA
Molybdenum	9.7		1.7		mg/Kg	4		6010B	Total/NA
Nickel	94		1.7		mg/Kg	4		6010B	Total/NA
Vanadium	31		1.7		mg/Kg	4		6010B	Total/NA
Zinc	1900		5.1		mg/Kg	4		6010B	Total/NA
Mercury	9.1		0.94		mg/Kg	100		7471A	Total/NA

Client Sample ID: SS-5-0.5'

Lab Sample ID: 720-64901-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.46		0.33		mg/Kg	5		8270C	Total/NA
Fluoranthene	0.76		0.33		mg/Kg	5		8270C	Total/NA
Pyrene	1.0		0.33		mg/Kg	5		8270C	Total/NA
Chrysene	1.1		0.33		mg/Kg	5		8270C	Total/NA
Benzo[b]fluoranthene	1.3		0.33		mg/Kg	5		8270C	Total/NA
Benzo[k]fluoranthene	0.53		0.33		mg/Kg	5		8270C	Total/NA
Benzo[a]pyrene	0.87		0.33		mg/Kg	5		8270C	Total/NA
Indeno[1,2,3-cd]pyrene	0.48		0.33		mg/Kg	5		8270C	Total/NA
Benzo[g,h,i]perylene	0.45		0.33		mg/Kg	5		8270C	Total/NA
Diesel Range Organics [C10-C28]	39		1.0		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	74		50		mg/Kg	1		8015B	Total/NA
PCB-1254	59		49		ug/Kg	1		8082	Total/NA
Arsenic	4.8		3.0		mg/Kg	4		6010B	Total/NA
Barium	27		1.5		mg/Kg	4		6010B	Total/NA
Beryllium	0.16		0.075		mg/Kg	1		6010B	Total/NA
Chromium	39		1.5		mg/Kg	4		6010B	Total/NA
Cobalt	5.7		0.60		mg/Kg	4		6010B	Total/NA
Copper	75		4.5		mg/Kg	4		6010B	Total/NA
Lead	46		1.5		mg/Kg	4		6010B	Total/NA
Molybdenum	0.39		0.37		mg/Kg	1		6010B	Total/NA
Nickel	38		1.5		mg/Kg	4		6010B	Total/NA
Vanadium	26		1.5		mg/Kg	4		6010B	Total/NA
Zinc	80		4.5		mg/Kg	4		6010B	Total/NA
Mercury	1.2		0.0085		mg/Kg	1		7471A	Total/NA

Client Sample ID: SS-5-1'

Lab Sample ID: 720-64901-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.45		0.33		mg/Kg	5		8270C	Total/NA
Anthracene	0.34		0.33		mg/Kg	5		8270C	Total/NA
Fluoranthene	0.67		0.33		mg/Kg	5		8270C	Total/NA
Pyrene	1.7		0.33		mg/Kg	5		8270C	Total/NA
Chrysene	1.2		0.33		mg/Kg	5		8270C	Total/NA
Benzo[b]fluoranthene	1.8		0.33		mg/Kg	5		8270C	Total/NA
Benzo[k]fluoranthene	0.74		0.33		mg/Kg	5		8270C	Total/NA
Benzo[a]pyrene	1.2		0.33		mg/Kg	5		8270C	Total/NA
Indeno[1,2,3-cd]pyrene	0.68		0.33		mg/Kg	5		8270C	Total/NA
Benzo[g,h,i]perylene	0.65		0.33		mg/Kg	5		8270C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-5-1' (Continued)

Lab Sample ID: 720-64901-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dibutyltin	38		1.0		ug/Kg		1	Organotins	Total/NA
Tributyltin	74		1.0		ug/Kg		1	Organotins	Total/NA
Diesel Range Organics [C10-C28]	120		2.0		mg/Kg		2	8015B	Total/NA
Motor Oil Range Organics [C24-C36]	210		100		mg/Kg		2	8015B	Total/NA
PCB-1254	79		50		ug/Kg		1	8082	Total/NA
Arsenic	7.2		3.3		mg/Kg		4	6010B	Total/NA
Barium	49		1.7		mg/Kg		4	6010B	Total/NA
Beryllium	0.18		0.083		mg/Kg		1	6010B	Total/NA
Cadmium	0.10		0.10		mg/Kg		1	6010B	Total/NA
Chromium	48		1.7		mg/Kg		4	6010B	Total/NA
Cobalt	7.4		0.67		mg/Kg		4	6010B	Total/NA
Copper	200		5.0		mg/Kg		4	6010B	Total/NA
Lead	54		1.7		mg/Kg		4	6010B	Total/NA
Molybdenum	3.8		1.7		mg/Kg		4	6010B	Total/NA
Nickel	56		1.7		mg/Kg		4	6010B	Total/NA
Vanadium	30		1.7		mg/Kg		4	6010B	Total/NA
Zinc	130		5.0		mg/Kg		4	6010B	Total/NA
Mercury	1.4		0.0085		mg/Kg		1	7471A	Total/NA

Client Sample ID: SS-6-0.5'

Lab Sample ID: 720-64901-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	0.28		0.27		mg/Kg		2	8270C	Total/NA
Dibutyltin	12		1.0		ug/Kg		1	Organotins	Total/NA
Tributyltin	32		1.0		ug/Kg		1	Organotins	Total/NA
Diesel Range Organics [C10-C28]	59		1.0		mg/Kg		1	8015B	Total/NA
Motor Oil Range Organics [C24-C36]	100		50		mg/Kg		1	8015B	Total/NA
PCB-1248	50		49		ug/Kg		1	8082	Total/NA
Arsenic	6.0		3.5		mg/Kg		4	6010B	Total/NA
Barium	35		1.8		mg/Kg		4	6010B	Total/NA
Beryllium	0.17		0.088		mg/Kg		1	6010B	Total/NA
Chromium	46		1.8		mg/Kg		4	6010B	Total/NA
Cobalt	6.7		0.70		mg/Kg		4	6010B	Total/NA
Copper	120		5.3		mg/Kg		4	6010B	Total/NA
Lead	37		1.8		mg/Kg		4	6010B	Total/NA
Molybdenum	0.87		0.44		mg/Kg		1	6010B	Total/NA
Nickel	40		1.8		mg/Kg		4	6010B	Total/NA
Vanadium	29		1.8		mg/Kg		4	6010B	Total/NA
Zinc	94		5.3		mg/Kg		4	6010B	Total/NA
Mercury	0.99		0.0087		mg/Kg		1	7471A	Total/NA

Client Sample ID: SS-6-1'

Lab Sample ID: 720-64901-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.32		0.27		mg/Kg		2	8270C	Total/NA
Pyrene	0.99		0.27		mg/Kg		2	8270C	Total/NA
Chrysene	0.47		0.27		mg/Kg		2	8270C	Total/NA
Benzo[b]fluoranthene	0.63		0.27		mg/Kg		2	8270C	Total/NA
Benzo[a]pyrene	0.40		0.27		mg/Kg		2	8270C	Total/NA
Benzo[g,h,i]perylene	0.27		0.27		mg/Kg		2	8270C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-6-1' (Continued)

Lab Sample ID: 720-64901-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dibutyltin	26		1.0		ug/Kg	1		Organotins	Total/NA
Tributyltin	62		1.0		ug/Kg	1		Organotins	Total/NA
Diesel Range Organics [C10-C28]	150		2.0		mg/Kg	2		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	160		99		mg/Kg	2		8015B	Total/NA
PCB-1254	210		49		ug/Kg	1		8082	Total/NA
Arsenic	11		3.3		mg/Kg	4		6010B	Total/NA
Barium	44		1.6		mg/Kg	4		6010B	Total/NA
Chromium	78		1.6		mg/Kg	4		6010B	Total/NA
Cobalt	10		0.65		mg/Kg	4		6010B	Total/NA
Copper	380		4.9		mg/Kg	4		6010B	Total/NA
Lead	100		1.6		mg/Kg	4		6010B	Total/NA
Molybdenum	10		1.6		mg/Kg	4		6010B	Total/NA
Nickel	100		1.6		mg/Kg	4		6010B	Total/NA
Vanadium	39		1.6		mg/Kg	4		6010B	Total/NA
Zinc	180		4.9		mg/Kg	4		6010B	Total/NA
Mercury	1.9		0.050		mg/Kg	5		7471A	Total/NA

Client Sample ID: SS-7-0.5'

Lab Sample ID: 720-64901-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dibutyltin	120	F2 F1	1.1		ug/Kg	1		Organotins	Total/NA
Monobutyltin	76	F2 F1 *	1.1		ug/Kg	1		Organotins	Total/NA
Tributyltin	650	F2 E	1.1		ug/Kg	1		Organotins	Total/NA
Diesel Range Organics [C10-C28]	240		5.0		mg/Kg	5		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	560		250		mg/Kg	5		8015B	Total/NA
PCB-1248	410		97		ug/Kg	2		8082	Total/NA
Antimony	3.0		1.4		mg/Kg	4		6010B	Total/NA
Arsenic	11		2.8		mg/Kg	4		6010B	Total/NA
Barium	170		1.4		mg/Kg	4		6010B	Total/NA
Chromium	76		1.4		mg/Kg	4		6010B	Total/NA
Cobalt	9.6		0.56		mg/Kg	4		6010B	Total/NA
Copper	390		4.2		mg/Kg	4		6010B	Total/NA
Lead	580		1.4		mg/Kg	4		6010B	Total/NA
Molybdenum	13		1.4		mg/Kg	4		6010B	Total/NA
Nickel	66		1.4		mg/Kg	4		6010B	Total/NA
Vanadium	28		1.4		mg/Kg	4		6010B	Total/NA
Zinc	2000		4.2		mg/Kg	4		6010B	Total/NA
Mercury	2.3		0.045		mg/Kg	5		7471A	Total/NA

Client Sample ID: SS-7-1'

Lab Sample ID: 720-64901-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.86		0.66		mg/Kg	5		8270C	Total/NA
Pyrene	1.5		0.66		mg/Kg	5		8270C	Total/NA
Benzo[b]fluoranthene	1.0		0.66		mg/Kg	5		8270C	Total/NA
Benzo[a]pyrene	0.78		0.66		mg/Kg	5		8270C	Total/NA
Dibutyltin	110		1.0		ug/Kg	1		Organotins	Total/NA
Tetra-n-butyltin	42		2.8		ug/Kg	1		Organotins	Total/NA
Tributyltin	180		1.0		ug/Kg	1		Organotins	Total/NA
Diesel Range Organics [C10-C28]	220		5.0		mg/Kg	5		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-7-1' (Continued)

Lab Sample ID: 720-64901-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Motor Oil Range Organics [C24-C36]	460		250		mg/Kg	5		8015B	Total/NA
PCB-1242	1900		480		ug/Kg	10		8082	Total/NA
Antimony	4.2		1.9		mg/Kg	4		6010B	Total/NA
Arsenic	11		3.8		mg/Kg	4		6010B	Total/NA
Barium	90		1.9		mg/Kg	4		6010B	Total/NA
Chromium	120		1.9		mg/Kg	4		6010B	Total/NA
Cobalt	10		0.76		mg/Kg	4		6010B	Total/NA
Copper	650		5.7		mg/Kg	4		6010B	Total/NA
Lead	300		1.9		mg/Kg	4		6010B	Total/NA
Molybdenum	7.9		1.9		mg/Kg	4		6010B	Total/NA
Nickel	77		1.9		mg/Kg	4		6010B	Total/NA
Vanadium	28		1.9		mg/Kg	4		6010B	Total/NA
Zinc	450		5.7		mg/Kg	4		6010B	Total/NA
Mercury	3.1		0.049		mg/Kg	5		7471A	Total/NA

Client Sample ID: SS-8-0.5'

Lab Sample ID: 720-64901-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.96		0.67		mg/Kg	5		8270C	Total/NA
Fluoranthene	1.4		0.67		mg/Kg	5		8270C	Total/NA
Pyrene	1.9		0.67		mg/Kg	5		8270C	Total/NA
Chrysene	0.90		0.67		mg/Kg	5		8270C	Total/NA
Benzo[b]fluoranthene	1.4		0.67		mg/Kg	5		8270C	Total/NA
Benzo[k]fluoranthene	0.70		0.67		mg/Kg	5		8270C	Total/NA
Benzo[a]pyrene	1.1		0.67		mg/Kg	5		8270C	Total/NA
Dibutyltin	79		1.1		ug/Kg	1		Organotins	Total/NA
Tributyltin	130		1.1		ug/Kg	1		Organotins	Total/NA
Diesel Range Organics [C10-C28]	260		3.0		mg/Kg	3		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	480		150		mg/Kg	3		8015B	Total/NA
PCB-1260	710		250		ug/Kg	5		8082	Total/NA
Arsenic	9.5		3.0		mg/Kg	4		6010B	Total/NA
Barium	120		1.5		mg/Kg	4		6010B	Total/NA
Chromium	82		1.5		mg/Kg	4		6010B	Total/NA
Cobalt	11		0.60		mg/Kg	4		6010B	Total/NA
Copper	620		4.5		mg/Kg	4		6010B	Total/NA
Lead	190		1.5		mg/Kg	4		6010B	Total/NA
Molybdenum	2.7		1.5		mg/Kg	4		6010B	Total/NA
Nickel	67		1.5		mg/Kg	4		6010B	Total/NA
Vanadium	35		1.5		mg/Kg	4		6010B	Total/NA
Zinc	370		4.5		mg/Kg	4		6010B	Total/NA
Mercury	4.7		0.097		mg/Kg	10		7471A	Total/NA

Client Sample ID: SS-8-1'

Lab Sample ID: 720-64901-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	1.1		0.33		mg/Kg	5		8270C	Total/NA
Anthracene	0.70		0.33		mg/Kg	5		8270C	Total/NA
Fluoranthene	1.4		0.33		mg/Kg	5		8270C	Total/NA
Pyrene	3.5		0.33		mg/Kg	5		8270C	Total/NA
Chrysene	0.88		0.33		mg/Kg	5		8270C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-8-1' (Continued)

Lab Sample ID: 720-64901-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	3.1		0.33		mg/Kg	5		8270C	Total/NA
Benzo[k]fluoranthene	3.0		0.33		mg/Kg	5		8270C	Total/NA
Benzo[a]pyrene	1.7		0.33		mg/Kg	5		8270C	Total/NA
Indeno[1,2,3-cd]pyrene	0.77		0.33		mg/Kg	5		8270C	Total/NA
Benzo[g,h,i]perylene	0.81		0.33		mg/Kg	5		8270C	Total/NA
Dibutyltin	66		1.0		ug/Kg	1		Organotins	Total/NA
Tributyltin	130		1.0		ug/Kg	1		Organotins	Total/NA
Diesel Range Organics [C10-C28]	300		5.0		mg/Kg	5		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	630		250		mg/Kg	5		8015B	Total/NA
PCB-1248	1600		500		ug/Kg	10		8082	Total/NA
Arsenic	24		3.2		mg/Kg	4		6010B	Total/NA
Barium	96		1.6		mg/Kg	4		6010B	Total/NA
Cadmium	0.43		0.40		mg/Kg	4		6010B	Total/NA
Chromium	85		1.6		mg/Kg	4		6010B	Total/NA
Cobalt	10		0.64		mg/Kg	4		6010B	Total/NA
Copper	1200		4.8		mg/Kg	4		6010B	Total/NA
Lead	600		1.6		mg/Kg	4		6010B	Total/NA
Molybdenum	3.4		1.6		mg/Kg	4		6010B	Total/NA
Nickel	62		1.6		mg/Kg	4		6010B	Total/NA
Vanadium	30		1.6		mg/Kg	4		6010B	Total/NA
Zinc	440		4.8		mg/Kg	4		6010B	Total/NA
Mercury	10		0.85		mg/Kg	100		7471A	Total/NA

Client Sample ID: SS-9-0.5'

Lab Sample ID: 720-64901-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.72		0.67		mg/Kg	5		8270C	Total/NA
Fluoranthene	1.4		0.67		mg/Kg	5		8270C	Total/NA
Pyrene	1.3		0.67		mg/Kg	5		8270C	Total/NA
Chrysene	0.75		0.67		mg/Kg	5		8270C	Total/NA
Benzo[b]fluoranthene	0.88		0.67		mg/Kg	5		8270C	Total/NA
Tetra-n-butyltin	150		2.7		ug/Kg	1		Organotins	Total/NA
Monobutyltin - DL2	3900 *		50		ug/Kg	50		Organotins	Total/NA
Dibutyltin - DL3	16000		250		ug/Kg	250		Organotins	Total/NA
Tributyltin - DL3	13000		250		ug/Kg	250		Organotins	Total/NA
Diesel Range Organics [C10-C28]	600		9.9		mg/Kg	10		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	1100		500		mg/Kg	10		8015B	Total/NA
PCB-1248	2500		490		ug/Kg	10		8082	Total/NA
Arsenic	38		2.2		mg/Kg	4		6010B	Total/NA
Barium	120		1.1		mg/Kg	4		6010B	Total/NA
Cadmium	1.4		0.28		mg/Kg	4		6010B	Total/NA
Chromium	110		1.1		mg/Kg	4		6010B	Total/NA
Cobalt	14		0.45		mg/Kg	4		6010B	Total/NA
Copper	27000		42		mg/Kg	50		6010B	Total/NA
Lead	480		2.8		mg/Kg	10		6010B	Total/NA
Molybdenum	10		2.8		mg/Kg	10		6010B	Total/NA
Nickel	93		2.8		mg/Kg	10		6010B	Total/NA
Silver	0.94		0.56		mg/Kg	4		6010B	Total/NA
Vanadium	24		1.1		mg/Kg	4		6010B	Total/NA
Zinc	4000		42		mg/Kg	50		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-9-0.5' (Continued)

Lab Sample ID: 720-64901-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	10		0.91		mg/Kg	100		7471A	Total/NA

Client Sample ID: SS-9-1'

Lab Sample ID: 720-64901-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	1.1		0.66		mg/Kg	10		8270C	Total/NA
Fluoranthene	3.0		0.66		mg/Kg	10		8270C	Total/NA
Pyrene	3.2		0.66		mg/Kg	10		8270C	Total/NA
Chrysene	1.1		0.66		mg/Kg	10		8270C	Total/NA
Benzo[b]fluoranthene	1.1		0.66		mg/Kg	10		8270C	Total/NA
Benzo[a]pyrene	0.80		0.66		mg/Kg	10		8270C	Total/NA
Monobutyltin	94	*	1.0		ug/Kg	1		Organotins	Total/NA
Tetra-n-butyltin	27		2.7		ug/Kg	1		Organotins	Total/NA
Dibutyltin - DL	670		10		ug/Kg	10		Organotins	Total/NA
Tributyltin - DL	980		10		ug/Kg	10		Organotins	Total/NA
Diesel Range Organics [C10-C28]	780		20		mg/Kg	20		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	1800		990		mg/Kg	20		8015B	Total/NA
PCB-1248	8900		2500		ug/Kg	50		8082	Total/NA
Arsenic	75		2.3		mg/Kg	4		6010B	Total/NA
Barium	110		1.1		mg/Kg	4		6010B	Total/NA
Cadmium	0.86		0.29		mg/Kg	4		6010B	Total/NA
Chromium	140		1.1		mg/Kg	4		6010B	Total/NA
Cobalt	21		0.46		mg/Kg	4		6010B	Total/NA
Copper	2400		3.4		mg/Kg	4		6010B	Total/NA
Lead	540		1.1		mg/Kg	4		6010B	Total/NA
Molybdenum	1.4		1.1		mg/Kg	4		6010B	Total/NA
Nickel	360		1.1		mg/Kg	4		6010B	Total/NA
Vanadium	26		1.1		mg/Kg	4		6010B	Total/NA
Zinc	540		3.4		mg/Kg	4		6010B	Total/NA
Mercury	23		0.91		mg/Kg	100		7471A	Total/NA

Client Sample ID: SS-10-0.5'

Lab Sample ID: 720-64901-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.066		0.066		mg/Kg	1		8270C	Total/NA
Fluoranthene	0.10		0.066		mg/Kg	1		8270C	Total/NA
Pyrene	0.16		0.066		mg/Kg	1		8270C	Total/NA
Chrysene	0.069		0.066		mg/Kg	1		8270C	Total/NA
Benzo[b]fluoranthene	0.093		0.066		mg/Kg	1		8270C	Total/NA
Benzo[a]pyrene	0.072		0.066		mg/Kg	1		8270C	Total/NA
Dibutyltin	110		1.1		ug/Kg	1		Organotins	Total/NA
Monobutyltin	29	*	1.1		ug/Kg	1		Organotins	Total/NA
Tributyltin	130		1.1		ug/Kg	1		Organotins	Total/NA
Diesel Range Organics [C10-C28]	39		0.99		mg/Kg	1		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	78		49		mg/Kg	1		8015B	Total/NA
PCB-1260	360		99		ug/Kg	2		8082	Total/NA
Arsenic	8.2		3.6		mg/Kg	4		6010B	Total/NA
Barium	36		1.8		mg/Kg	4		6010B	Total/NA
Cadmium	0.20		0.11		mg/Kg	1		6010B	Total/NA
Chromium	56		1.8		mg/Kg	4		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-10-0.5' (Continued)

Lab Sample ID: 720-64901-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	6.4		0.72		mg/Kg	4		6010B	Total/NA
Copper	310		5.4		mg/Kg	4		6010B	Total/NA
Lead	41		0.45		mg/Kg	1		6010B	Total/NA
Molybdenum	0.78		0.45		mg/Kg	1		6010B	Total/NA
Nickel	42		0.45		mg/Kg	1		6010B	Total/NA
Vanadium	32		1.8		mg/Kg	4		6010B	Total/NA
Zinc	170		5.4		mg/Kg	4		6010B	Total/NA
Mercury	2.4		0.087		mg/Kg	10		7471A	Total/NA

Client Sample ID: SS-10-1'

Lab Sample ID: 720-64901-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.20		0.13		mg/Kg	2		8270C	Total/NA
Pyrene	0.43		0.13		mg/Kg	2		8270C	Total/NA
Chrysene	0.13		0.13		mg/Kg	2		8270C	Total/NA
Benzo[b]fluoranthene	0.21		0.13		mg/Kg	2		8270C	Total/NA
Benzo[a]pyrene	0.16		0.13		mg/Kg	2		8270C	Total/NA
Monobutyltin	50	*	1.0		ug/Kg	1		Organotins	Total/NA
Tetra-n-butyltin	40		2.7		ug/Kg	1		Organotins	Total/NA
Dibutyltin - DL	260		10		ug/Kg	10		Organotins	Total/NA
Tributyltin - DL	780		10		ug/Kg	10		Organotins	Total/NA
Diesel Range Organics [C10-C28]	120		3.0		mg/Kg	3		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	230		150		mg/Kg	3		8015B	Total/NA
PCB-1248	1500		490		ug/Kg	10		8082	Total/NA
Arsenic	12		2.7		mg/Kg	4		6010B	Total/NA
Barium	35		1.3		mg/Kg	4		6010B	Total/NA
Chromium	62		1.3		mg/Kg	4		6010B	Total/NA
Cobalt	6.7		0.53		mg/Kg	4		6010B	Total/NA
Copper	840		4.0		mg/Kg	4		6010B	Total/NA
Lead	63		1.3		mg/Kg	4		6010B	Total/NA
Molybdenum	1.6		1.3		mg/Kg	4		6010B	Total/NA
Nickel	53		1.3		mg/Kg	4		6010B	Total/NA
Vanadium	29		1.3		mg/Kg	4		6010B	Total/NA
Zinc	240		4.0		mg/Kg	4		6010B	Total/NA
Mercury	4.6		0.086		mg/Kg	10		7471A	Total/NA

Client Sample ID: FD-1

Lab Sample ID: 720-64901-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.58		0.33		mg/Kg	5		8270C	Total/NA
Fluoranthene	0.99		0.33		mg/Kg	5		8270C	Total/NA
Pyrene	1.2		0.33		mg/Kg	5		8270C	Total/NA
Chrysene	0.80		0.33		mg/Kg	5		8270C	Total/NA
Benzo[b]fluoranthene	1.1		0.33		mg/Kg	5		8270C	Total/NA
Benzo[k]fluoranthene	0.47		0.33		mg/Kg	5		8270C	Total/NA
Benzo[a]pyrene	0.83		0.33		mg/Kg	5		8270C	Total/NA
Indeno[1,2,3-cd]pyrene	0.49		0.33		mg/Kg	5		8270C	Total/NA
Benzo[g,h,i]perylene	0.49		0.33		mg/Kg	5		8270C	Total/NA
Dibutyltin	37		1.0		ug/Kg	1		Organotins	Total/NA
Monobutyltin	12	*	1.0		ug/Kg	1		Organotins	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: FD-1 (Continued)

Lab Sample ID: 720-64901-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tributyltin	89		1.0		ug/Kg	1		Organotins	Total/NA
Diesel Range Organics [C10-C28]	210		3.0		mg/Kg	3		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	390		150		mg/Kg	3		8015B	Total/NA
PCB-1260	7800		2500		ug/Kg	50		8082	Total/NA
Arsenic	9.7		3.4		mg/Kg	4		6010B	Total/NA
Barium	140		1.7		mg/Kg	4		6010B	Total/NA
Chromium	82		1.7		mg/Kg	4		6010B	Total/NA
Cobalt	10		0.67		mg/Kg	4		6010B	Total/NA
Copper	540		5.0		mg/Kg	4		6010B	Total/NA
Lead	220		1.7		mg/Kg	4		6010B	Total/NA
Molybdenum	3.2		1.7		mg/Kg	4		6010B	Total/NA
Nickel	59		1.7		mg/Kg	4		6010B	Total/NA
Vanadium	34		1.7		mg/Kg	4		6010B	Total/NA
Zinc	350		5.0		mg/Kg	4		6010B	Total/NA
Mercury	5.1		0.090		mg/Kg	10		7471A	Total/NA

Client Sample ID: FD-2

Lab Sample ID: 720-64901-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.43		0.13		mg/Kg	2		8270C	Total/NA
Anthracene	0.13		0.13		mg/Kg	2		8270C	Total/NA
Fluoranthene	0.45		0.13		mg/Kg	2		8270C	Total/NA
Pyrene	0.75		0.13		mg/Kg	2		8270C	Total/NA
Chrysene	0.24		0.13		mg/Kg	2		8270C	Total/NA
Benzo[b]fluoranthene	0.31		0.13		mg/Kg	2		8270C	Total/NA
Benzo[a]pyrene	0.21		0.13		mg/Kg	2		8270C	Total/NA
Indeno[1,2,3-cd]pyrene	0.13		0.13		mg/Kg	2		8270C	Total/NA
Monobutyltin	78	*	1.0		ug/Kg	1		Organotins	Total/NA
Tetra-n-butyltin	19		2.7		ug/Kg	1		Organotins	Total/NA
Dibutyltin - DL	330		5.0		ug/Kg	5		Organotins	Total/NA
Tributyltin - DL	360		5.0		ug/Kg	5		Organotins	Total/NA
Diesel Range Organics [C10-C28]	100		2.0		mg/Kg	2		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	190		99		mg/Kg	2		8015B	Total/NA
PCB-1260	870		250		ug/Kg	5		8082	Total/NA
Arsenic	9.5		3.3		mg/Kg	4		6010B	Total/NA
Barium	38		1.6		mg/Kg	4		6010B	Total/NA
Cadmium	0.28		0.10		mg/Kg	1		6010B	Total/NA
Chromium	63		1.6		mg/Kg	4		6010B	Total/NA
Cobalt	7.2		0.66		mg/Kg	4		6010B	Total/NA
Copper	670		4.9		mg/Kg	4		6010B	Total/NA
Lead	60		0.41		mg/Kg	1		6010B	Total/NA
Molybdenum	1.6		1.6		mg/Kg	4		6010B	Total/NA
Nickel	49		0.41		mg/Kg	1		6010B	Total/NA
Vanadium	29		1.6		mg/Kg	4		6010B	Total/NA
Zinc	260		4.9		mg/Kg	4		6010B	Total/NA
Mercury	4.1		0.092		mg/Kg	10		7471A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-1-0.5'

Lab Sample ID: 720-64901-1

Date Collected: 05/19/15 07:31

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Acenaphthylene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Acenaphthene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Fluorene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Phenanthrene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Anthracene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Fluoranthene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Benzo[a]anthracene	ND		3.3		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Chrysene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Benzo[b]fluoranthene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Benzo[k]fluoranthene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Benzo[a]pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Indeno[1,2,3-cd]pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Benzo[g,h,i]perylene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
2-Methylnaphthalene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Dibenz(a,h)anthracene	ND		0.67		mg/Kg		05/26/15 23:13	05/27/15 23:58	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		21 - 98				05/26/15 23:13	05/27/15 23:58	5
2-Fluorobiphenyl	71		30 - 112				05/26/15 23:13	05/27/15 23:58	5
Terphenyl-d14	70		32 - 117				05/26/15 23:13	05/27/15 23:58	5

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	81		0.93		ug/Kg		05/23/15 15:17	05/27/15 20:49	1
Monobutyltin	24		0.93		ug/Kg		05/23/15 15:17	05/27/15 20:49	1
Tetra-n-butyltin	ND	*	2.5	US	ug/Kg		05/23/15 15:17	05/27/15 20:49	1
Tributyltin	70		0.93		ug/Kg		05/23/15 15:17	05/27/15 20:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	56		20 - 151				05/23/15 15:17	05/27/15 20:49	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	180		5.0		mg/Kg		05/22/15 12:51	05/27/15 15:07	5
Motor Oil Range Organics [C24-C36]	420		250		mg/Kg		05/22/15 12:51	05/27/15 15:07	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X D	40 - 130				05/22/15 12:51	05/27/15 15:07	5

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1221	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1232	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1242	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1248	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1254	74		49		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1260	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:22	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-1-0.5'

Lab Sample ID: 720-64901-1

Date Collected: 05/19/15 07:31

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	70		45 - 132	05/26/15 13:18	05/26/15 22:22	1
DCB Decachlorobiphenyl	70		42 - 146	05/26/15 13:18	05/26/15 22:22	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Arsenic	7.0		3.3		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Barium	58		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Beryllium	ND		0.33		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Cadmium	ND		0.41		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Chromium	68		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Cobalt	11		0.66		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Copper	180		5.0		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Lead	76		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Molybdenum	ND		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Nickel	90		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Selenium	ND		3.3		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Silver	ND		0.83		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Thallium	ND		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Vanadium	40		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:32	4
Zinc	140		5.0		mg/Kg		05/26/15 17:30	05/27/15 12:32	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.54		0.0095		mg/Kg		05/26/15 16:15	05/27/15 19:09	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-1-1'

Lab Sample ID: 720-64901-2

Date Collected: 05/19/15 07:35

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Acenaphthylene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Acenaphthene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Fluorene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Phenanthrene	4.4		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Anthracene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Fluoranthene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Pyrene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Benzo[a]anthracene	ND		6.6		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Chrysene	27		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Benzo[b]fluoranthene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Benzo[k]fluoranthene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Benzo[a]pyrene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Indeno[1,2,3-cd]pyrene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Benzo[g,h,i]perylene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
2-Methylnaphthalene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10
Dibenz(a,h)anthracene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:01	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	59		21 - 98	05/26/15 23:13	05/28/15 18:01	10
2-Fluorobiphenyl	69		30 - 112	05/26/15 23:13	05/28/15 18:01	10
Terphenyl-d14	70		32 - 117	05/26/15 23:13	05/28/15 18:01	10

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Monobutyltin	69		0.94		ug/Kg		05/23/15 15:17	05/27/15 21:12	1
Tetra-n-butyltin	ND	*	2.5	UJ	ug/Kg		05/23/15 15:17	05/27/15 21:12	1
Tributyltin	150		0.94		ug/Kg		05/23/15 15:17	05/27/15 21:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Triphenyltin	74		20 - 151	05/23/15 15:17	05/27/15 21:12	1

Method: Organotins - Organotins, PSEP (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	230		4.7		ug/Kg		05/23/15 15:17	05/27/15 21:35	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Triphenyltin	124		20 - 151	05/23/15 15:17	05/27/15 21:35	5

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	260		9.9		mg/Kg		05/22/15 12:51	05/23/15 23:01	10
Motor Oil Range Organics [C24-C36]	610		500		mg/Kg		05/22/15 12:51	05/23/15 23:01	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X D	40 - 130	05/22/15 12:51	05/23/15 23:01	10

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:39	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-1-1'

Lab Sample ID: 720-64901-2

Date Collected: 05/19/15 07:35

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1232	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1242	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1248	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1254	180		50		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1260	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		45 - 132				05/26/15 13:18	05/26/15 22:39	1
DCB Decachlorobiphenyl	70		42 - 146				05/26/15 13:18	05/26/15 22:39	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Arsenic	8.6		2.9		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Barium	69		1.4		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Beryllium	ND		0.29		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Cadmium	ND		0.36		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Chromium	64		1.4		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Cobalt	12		0.58		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Copper	370		4.3		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Lead	120		1.4		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Molybdenum	2.2		1.4		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Nickel	88		1.4		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Selenium	ND		2.9		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Silver	ND		0.72		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Thallium	ND		1.4		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Vanadium	37		1.4		mg/Kg		05/26/15 17:30	05/27/15 12:37	4
Zinc	220		4.3		mg/Kg		05/26/15 17:30	05/27/15 12:37	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.2		0.047		mg/Kg		05/26/15 16:15	05/27/15 20:07	5

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-2-0.5'

Lab Sample ID: 720-64901-3

Date Collected: 05/19/15 07:43

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Acenaphthylene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Acenaphthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Fluorene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Phenanthrene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Anthracene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Fluoranthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Benzo[a]anthracene	ND		3.3		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Chrysene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Benzo[b]fluoranthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Benzo[k]fluoranthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Benzo[a]pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Indeno[1,2,3-cd]pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Benzo[g,h,i]perylene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
2-Methylnaphthalene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Dibenz(a,h)anthracene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:38	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	56		21 - 98				05/26/15 23:13	05/28/15 16:38	5
2-Fluorobiphenyl	52		30 - 112				05/26/15 23:13	05/28/15 16:38	5
Terphenyl-d14	76		32 - 117				05/26/15 23:13	05/28/15 16:38	5

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	62		4.9		ug/Kg		05/23/15 15:17	05/27/15 01:57	5
Monobutyltin	ND	^	4.9		ug/Kg		05/23/15 15:17	05/27/15 01:57	5
Tetra-n-butyltin	ND	*	13		ug/Kg		05/23/15 15:17	05/27/15 01:57	5
Tributyltin	ND		4.9		ug/Kg		05/23/15 15:17	05/27/15 01:57	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	79		20 - 151				05/23/15 15:17	05/27/15 01:57	5

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	320		9.9		mg/Kg		05/22/15 12:51	05/24/15 00:58	10
Motor Oil Range Organics [C24-C36]	640		500		mg/Kg		05/22/15 12:51	05/24/15 00:58	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X D	40 - 130				05/22/15 12:51	05/24/15 00:58	10

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1221	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1232	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1242	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1248	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1254	54		50		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1260	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:55	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-2-0.5'

Lab Sample ID: 720-64901-3

Date Collected: 05/19/15 07:43

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		45 - 132	05/26/15 13:18	05/26/15 22:55	1
DCB Decachlorobiphenyl	69		42 - 146	05/26/15 13:18	05/26/15 22:55	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.6		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Arsenic	5.0		3.3		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Barium	77		1.6		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Beryllium	ND		0.33		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Cadmium	ND		0.41		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Chromium	37		1.6		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Cobalt	8.3		0.66		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Copper	120		4.9		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Lead	140		1.6		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Molybdenum	1.9		1.6		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Nickel	59		1.6		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Selenium	ND		3.3		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Silver	ND		0.82		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Thallium	ND		1.6		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Vanadium	25		1.6		mg/Kg		05/26/15 17:30	05/27/15 12:42	4
Zinc	730		4.9		mg/Kg		05/26/15 17:30	05/27/15 12:42	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.49		0.0088		mg/Kg		05/26/15 16:15	05/27/15 19:14	1

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-2-1'

Lab Sample ID: 720-64901-4

Date Collected: 05/19/15 07:47

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Acenaphthylene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Acenaphthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Fluorene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Phenanthrene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Anthracene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Fluoranthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Pyrene	0.73		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Benzo[a]anthracene	ND		3.3		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Chrysene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Benzo[b]fluoranthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Benzo[k]fluoranthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Benzo[a]pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Indeno[1,2,3-cd]pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Benzo[g,h,i]perylene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
2-Methylnaphthalene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Dibenz(a,h)anthracene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 16:59	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		21 - 98				05/26/15 23:13	05/28/15 16:59	5
2-Fluorobiphenyl	56		30 - 112				05/26/15 23:13	05/28/15 16:59	5
Terphenyl-d14	84		32 - 117				05/26/15 23:13	05/28/15 16:59	5

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	83		0.95		ug/Kg		05/23/15 15:17	05/27/15 02:20	1
Monobutyltin	ND	^	0.95		ug/Kg		05/23/15 15:17	05/27/15 02:20	1
Tetra-n-butyltin	ND	*	2.6	UJ	ug/Kg		05/23/15 15:17	05/27/15 02:20	1
Tributyltin	110		0.95		ug/Kg		05/23/15 15:17	05/27/15 02:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	68		20 - 151				05/23/15 15:17	05/27/15 02:20	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	360		9.9		mg/Kg		05/22/15 12:51	05/24/15 01:27	10
Motor Oil Range Organics [C24-C36]	800		490		mg/Kg		05/22/15 12:51	05/24/15 01:27	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X D	40 - 130				05/22/15 12:51	05/24/15 01:27	10

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		50		ug/Kg		05/26/15 13:18	05/26/15 23:12	1
PCB-1221	ND		50		ug/Kg		05/26/15 13:18	05/26/15 23:12	1
PCB-1232	ND		50		ug/Kg		05/26/15 13:18	05/26/15 23:12	1
PCB-1242	ND		50		ug/Kg		05/26/15 13:18	05/26/15 23:12	1
PCB-1248	ND		50		ug/Kg		05/26/15 13:18	05/26/15 23:12	1
PCB-1254	180		50		ug/Kg		05/26/15 13:18	05/26/15 23:12	1
PCB-1260	ND		50		ug/Kg		05/26/15 13:18	05/26/15 23:12	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-2-1'

Lab Sample ID: 720-64901-4

Date Collected: 05/19/15 07:47

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		45 - 132	05/26/15 13:18	05/26/15 23:12	1
DCB Decachlorobiphenyl	74		42 - 146	05/26/15 13:18	05/26/15 23:12	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.0		1.8		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Arsenic	16		3.7		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Barium	97		1.8		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Beryllium	ND		0.37		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Cadmium	2.3		0.46		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Chromium	130		1.8		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Cobalt	18		0.73		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Copper	650		5.5		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Lead	410		1.8		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Molybdenum	17		1.8		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Nickel	230		1.8		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Selenium	ND		3.7		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Silver	ND		0.92		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Thallium	ND		1.8		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Vanadium	28		1.8		mg/Kg		05/26/15 17:30	05/27/15 12:47	4
Zinc	2400		5.5		mg/Kg		05/26/15 17:30	05/27/15 12:47	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.8		0.045		mg/Kg		05/26/15 16:15	05/27/15 20:10	5

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-3-0.5'

Lab Sample ID: 720-64901-5

Date Collected: 05/19/15 07:55

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Acenaphthylene	ND		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Acenaphthene	0.17		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Fluorene	0.20		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Phenanthrene	1.0		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Anthracene	0.62		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Fluoranthene	2.0		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Pyrene	2.0		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Benzo[a]anthracene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Chrysene	0.94		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Benzo[b]fluoranthene	0.63		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Benzo[k]fluoranthene	0.23		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Benzo[a]pyrene	0.44		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Indeno[1,2,3-cd]pyrene	0.22		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Benzo[g,h,i]perylene	0.20		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
2-Methylnaphthalene	ND		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Dibenz(a,h)anthracene	ND		0.13		mg/Kg		05/26/15 23:13	05/28/15 17:21	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	59		21 - 98				05/26/15 23:13	05/28/15 17:21	2
2-Fluorobiphenyl	61		30 - 112				05/26/15 23:13	05/28/15 17:21	2
Terphenyl-d14	100		32 - 117				05/26/15 23:13	05/28/15 17:21	2

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	31		0.92		ug/Kg		05/23/15 15:17	05/27/15 02:43	1
Monobutyltin	ND	^	0.92		ug/Kg		05/23/15 15:17	05/27/15 02:43	1
Tetra-n-butyltin	ND	*	2.5	0.5	ug/Kg		05/23/15 15:17	05/27/15 02:43	1
Tributyltin	25		0.92		ug/Kg		05/23/15 15:17	05/27/15 02:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tripentyltin	60		20 - 151				05/23/15 15:17	05/27/15 02:43	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	110		2.0		mg/Kg		05/22/15 12:51	05/24/15 01:56	2
Motor Oil Range Organics [C24-C36]	140		99		mg/Kg		05/22/15 12:51	05/24/15 01:56	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	57		40 - 130				05/22/15 12:51	05/24/15 01:56	2

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		49		ug/Kg		05/26/15 13:18	05/26/15 23:29	1
PCB-1221	ND		49		ug/Kg		05/26/15 13:18	05/26/15 23:29	1
PCB-1232	ND		49		ug/Kg		05/26/15 13:18	05/26/15 23:29	1
PCB-1242	ND		49		ug/Kg		05/26/15 13:18	05/26/15 23:29	1
PCB-1248	ND		49		ug/Kg		05/26/15 13:18	05/26/15 23:29	1
PCB-1254	ND		49		ug/Kg		05/26/15 13:18	05/26/15 23:29	1
PCB-1260	ND		49		ug/Kg		05/26/15 13:18	05/26/15 23:29	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-3-0.5'

Lab Sample ID: 720-64901-5

Date Collected: 05/19/15 07:55

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		45 - 132	05/26/15 13:18	05/26/15 23:29	1
DCB Decachlorobiphenyl	71		42 - 146	05/26/15 13:18	05/26/15 23:29	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.41		mg/Kg		05/26/15 17:30	05/27/15 22:41	1
Arsenic	4.6		3.3		mg/Kg		05/26/15 17:30	05/27/15 12:52	4
Barium	28		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:52	4
Beryllium	ND		0.083		mg/Kg		05/26/15 17:30	05/28/15 18:15	1
Cadmium	ND		0.10		mg/Kg		05/26/15 17:30	05/27/15 22:41	1
Chromium	41		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:52	4
Cobalt	6.2		0.66		mg/Kg		05/26/15 17:30	05/27/15 12:52	4
Copper	80		5.0		mg/Kg		05/26/15 17:30	05/27/15 12:52	4
Lead	28		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:52	4
Molybdenum	ND		0.41		mg/Kg		05/26/15 17:30	05/28/15 18:15	1
Nickel	41		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:52	4
Selenium	ND		0.83		mg/Kg		05/26/15 17:30	05/27/15 22:41	1
Silver	ND		0.21		mg/Kg		05/26/15 17:30	05/27/15 22:41	1
Thallium	ND		0.41		mg/Kg		05/26/15 17:30	05/28/15 18:15	1
Vanadium	29		1.7		mg/Kg		05/26/15 17:30	05/27/15 12:52	4
Zinc	80		5.0		mg/Kg		05/26/15 17:30	05/27/15 12:52	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.49		0.0090		mg/Kg		05/26/15 16:15	05/27/15 19:19	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-3-1'

Lab Sample ID: 720-64901-6

Date Collected: 05/19/15 07:59

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Acenaphthylene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Acenaphthene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Fluorene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Phenanthrene	0.44		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Anthracene	0.33		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Fluoranthene	3.6		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Pyrene	7.6		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Benzo[a]anthracene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Chrysene	0.93		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Benzo[b]fluoranthene	1.8		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Benzo[k]fluoranthene	0.73		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Benzo[a]pyrene	1.1		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Indeno[1,2,3-cd]pyrene	0.62		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Benzo[g,h,i]perylene	0.62		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
2-Methylnaphthalene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Dibenz(a,h)anthracene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 17:42	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	65		21 - 98				05/26/15 23:13	05/28/15 17:42	2
2-Fluorobiphenyl	62		30 - 112				05/26/15 23:13	05/28/15 17:42	2
Terphenyl-d14	99		32 - 117				05/26/15 23:13	05/28/15 17:42	2

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Monobutyltin	92		4.7		ug/Kg		05/23/15 15:17	05/27/15 21:58	5
Tetra-n-butyltin	61	* J	13		ug/Kg		05/23/15 15:17	05/27/15 21:58	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	70		20 - 151				05/23/15 15:17	05/27/15 21:58	5

Method: Organotins - Organotins, PSEP (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	990		24		ug/Kg		05/23/15 15:17	05/28/15 12:01	25
Tributyltin	2200		24		ug/Kg		05/23/15 15:17	05/28/15 12:01	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	74		20 - 151				05/23/15 15:17	05/28/15 12:01	25

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	340		5.0		mg/Kg		05/22/15 12:51	05/27/15 02:18	5
Motor Oil Range Organics [C24-C36]	570		250		mg/Kg		05/22/15 12:51	05/27/15 02:18	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X	40 - 130				05/22/15 12:51	05/27/15 02:18	5

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:49	5

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-3-1'

Lab Sample ID: 720-64901-6

Date Collected: 05/19/15 07:59

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:49	5
PCB-1232	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:49	5
PCB-1242	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:49	5
PCB-1248	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:49	5
PCB-1254	980		250		ug/Kg		05/26/15 13:18	05/27/15 10:49	5
PCB-1260	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:49	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		45 - 132	05/26/15 13:18	05/27/15 10:49	5
DCB Decachlorobiphenyl	93		42 - 146	05/26/15 13:18	05/27/15 10:49	5

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Arsenic	16		3.8		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Barium	130		1.9		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Beryllium	ND		0.38		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Cadmium	0.49		0.47		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Chromium	82		1.9		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Cobalt	19		0.75		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Copper	1100		5.7		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Lead	150		1.9		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Molybdenum	20		1.9		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Nickel	81		1.9		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Selenium	ND		3.8		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Silver	ND		0.94		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Thallium	ND		1.9		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Vanadium	44		1.9		mg/Kg		05/26/15 17:30	05/27/15 13:07	4
Zinc	440		5.7		mg/Kg		05/26/15 17:30	05/27/15 13:07	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.6		0.097		mg/Kg		05/26/15 16:15	05/27/15 20:12	10

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-4-0.5'

Lab Sample ID: 720-64901-7

Date Collected: 05/19/15 08:19

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Acenaphthylene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Acenaphthene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Fluorene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Phenanthrene	1.5		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Anthracene	0.58		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Fluoranthene	2.6		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Pyrene	3.1		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Benzo[a]anthracene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Chrysene	1.5		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Benzo[b]fluoranthene	1.6		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Benzo[k]fluoranthene	0.56		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Benzo[a]pyrene	1.1		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Indeno[1,2,3-cd]pyrene	0.61		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Benzo[g,h,i]perylene	0.72		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
2-Methylnaphthalene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Dibenz(a,h)anthracene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 18:27	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	67		21 - 98				05/26/15 23:13	05/28/15 18:27	2
2-Fluorobiphenyl	73		30 - 112				05/26/15 23:13	05/28/15 18:27	2
Terphenyl-d14	108		32 - 117				05/26/15 23:13	05/28/15 18:27	2

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	130		1.1		ug/Kg		05/24/15 18:29	05/28/15 00:15	1
Monobutyltin	57	* J	1.1		ug/Kg		05/24/15 18:29	05/28/15 00:15	1
Tetra-n-butyltin	26		2.9		ug/Kg		05/24/15 18:29	05/28/15 00:15	1
Tributyltin	160		1.1		ug/Kg		05/24/15 18:29	05/28/15 00:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	48		20 - 151				05/24/15 18:29	05/28/15 00:15	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	370		5.0		mg/Kg		05/22/15 12:51	05/27/15 02:42	5
Motor Oil Range Organics [C24-C36]	620		250		mg/Kg		05/22/15 12:51	05/27/15 02:42	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X	40 - 130				05/22/15 12:51	05/27/15 02:42	5

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		250		ug/Kg		05/26/15 13:18	05/27/15 09:59	5
PCB-1221	ND		250		ug/Kg		05/26/15 13:18	05/27/15 09:59	5
PCB-1232	ND		250		ug/Kg		05/26/15 13:18	05/27/15 09:59	5
PCB-1242	ND		250		ug/Kg		05/26/15 13:18	05/27/15 09:59	5
PCB-1248	ND		250		ug/Kg		05/26/15 13:18	05/27/15 09:59	5
PCB-1254	920		250		ug/Kg		05/26/15 13:18	05/27/15 09:59	5
PCB-1260	ND		250		ug/Kg		05/26/15 13:18	05/27/15 09:59	5

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-4-0.5'

Lab Sample ID: 720-64901-7

Date Collected: 05/19/15 08:19

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	70		45 - 132	05/26/15 13:18	05/27/15 09:59	5
DCB Decachlorobiphenyl	77		42 - 146	05/26/15 13:18	05/27/15 09:59	5

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.5		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Arsenic	20		3.4		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Barium	180		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Beryllium	ND		0.34		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Cadmium	0.47		0.43		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Chromium	94		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Cobalt	10		0.69		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Copper	700		5.2		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Lead	350		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Molybdenum	2.0		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Nickel	74		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Selenium	ND		3.4		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Silver	ND		0.86		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Thallium	ND		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Vanadium	29		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:12	4
Zinc	660		5.2		mg/Kg		05/26/15 17:30	05/27/15 13:12	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	88		0.91		mg/Kg		05/26/15 16:15	05/27/15 20:14	100

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-4-1'

Lab Sample ID: 720-64901-8

Date Collected: 05/19/15 08:28

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	1.4		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Acenaphthylene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Acenaphthene	1.8		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Fluorene	2.3		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Phenanthrene	7.6		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Anthracene	2.3		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Fluoranthene	2.6		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Pyrene	3.7		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Benzo[a]anthracene	ND		6.6		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Chrysene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Benzo[b]fluoranthene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Benzo[k]fluoranthene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Benzo[a]pyrene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Indeno[1,2,3-cd]pyrene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Benzo[g,h,i]perylene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
2-Methylnaphthalene	4.8		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Dibenz(a,h)anthracene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 18:52	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	64		21 - 98				05/26/15 23:13	05/28/15 18:52	10
2-Fluorobiphenyl	64		30 - 112				05/26/15 23:13	05/28/15 18:52	10
Terphenyl-d14	77		32 - 117				05/26/15 23:13	05/28/15 18:52	10

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	76		1.1		ug/Kg		05/24/15 18:29	05/28/15 00:38	1
Monobutyltin	ND	*	1.1	UJ	ug/Kg		05/24/15 18:29	05/28/15 00:38	1
Tetra-n-butyltin	ND		2.9		ug/Kg		05/24/15 18:29	05/28/15 00:38	1
Tributyltin	150		1.1		ug/Kg		05/24/15 18:29	05/28/15 00:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	100		20 - 151				05/24/15 18:29	05/28/15 00:38	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	5500		50		mg/Kg		05/22/15 12:51	05/27/15 13:12	50
Motor Oil Range Organics [C24-C36]	2900		2500		mg/Kg		05/22/15 12:51	05/27/15 13:12	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X D	40 - 130				05/22/15 12:51	05/27/15 13:12	50

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		240		ug/Kg		05/26/15 13:18	05/27/15 10:16	5
PCB-1221	ND		240		ug/Kg		05/26/15 13:18	05/27/15 10:16	5
PCB-1232	ND		240		ug/Kg		05/26/15 13:18	05/27/15 10:16	5
PCB-1242	ND		240		ug/Kg		05/26/15 13:18	05/27/15 10:16	5
PCB-1248	ND		240		ug/Kg		05/26/15 13:18	05/27/15 10:16	5
PCB-1254	1100		240		ug/Kg		05/26/15 13:18	05/27/15 10:16	5
PCB-1260	ND		240		ug/Kg		05/26/15 13:18	05/27/15 10:16	5

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-4-1'

Lab Sample ID: 720-64901-8

Date Collected: 05/19/15 08:28

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	58		45 - 132	05/26/15 13:18	05/27/15 10:16	5
DCB Decachlorobiphenyl	90		42 - 146	05/26/15 13:18	05/27/15 10:16	5

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.6		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Arsenic	20		3.4		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Barium	250		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Beryllium	ND		0.34		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Cadmium	33		0.43		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Chromium	100		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Cobalt	26		0.68		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Copper	850		5.1		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Lead	1600		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Molybdenum	9.7		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Nickel	94		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Selenium	ND		3.4		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Silver	ND		0.85		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Thallium	ND		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Vanadium	31		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:17	4
Zinc	1900		5.1		mg/Kg		05/26/15 17:30	05/27/15 13:17	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	9.1		0.94		mg/Kg		05/26/15 16:15	05/27/15 20:22	100

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-5-0.5'

Lab Sample ID: 720-64901-9

Date Collected: 05/19/15 08:40

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Acenaphthylene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Acenaphthene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Fluorene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Phenanthrene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Anthracene	0.46		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Fluoranthene	0.76		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Pyrene	1.0		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Benzo[a]anthracene	ND		1.6		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Chrysene	1.1		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Benzo[b]fluoranthene	1.3		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Benzo[k]fluoranthene	0.53		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Benzo[a]pyrene	0.87		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Indeno[1,2,3-cd]pyrene	0.48		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Benzo[g,h,i]perylene	0.45		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
2-Methylnaphthalene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Dibenz(a,h)anthracene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:32	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	60		21 - 98				05/26/15 23:13	05/28/15 04:32	5
2-Fluorobiphenyl	52		30 - 112				05/26/15 23:13	05/28/15 04:32	5
Terphenyl-d14	90		32 - 117				05/26/15 23:13	05/28/15 04:32	5

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	ND		1.0		ug/Kg		05/24/15 18:29	05/28/15 01:01	1
Monobutyltin	ND	*	1.0	UJ	ug/Kg		05/24/15 18:29	05/28/15 01:01	1
Tetra-n-butyltin	ND		2.8		ug/Kg		05/24/15 18:29	05/28/15 01:01	1
Tributyltin	ND		1.0		ug/Kg		05/24/15 18:29	05/28/15 01:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	37		20 - 151				05/24/15 18:29	05/28/15 01:01	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	39		1.0		mg/Kg		05/22/15 12:51	05/27/15 01:53	1
Motor Oil Range Organics [C24-C36]	74		50		mg/Kg		05/22/15 12:51	05/27/15 01:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	111		40 - 130				05/22/15 12:51	05/27/15 01:53	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		49		ug/Kg		05/26/15 13:18	05/27/15 10:32	1
PCB-1221	ND		49		ug/Kg		05/26/15 13:18	05/27/15 10:32	1
PCB-1232	ND		49		ug/Kg		05/26/15 13:18	05/27/15 10:32	1
PCB-1242	ND		49		ug/Kg		05/26/15 13:18	05/27/15 10:32	1
PCB-1248	ND		49		ug/Kg		05/26/15 13:18	05/27/15 10:32	1
PCB-1254	59		49		ug/Kg		05/26/15 13:18	05/27/15 10:32	1
PCB-1260	ND		49		ug/Kg		05/26/15 13:18	05/27/15 10:32	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-5-0.5'

Lab Sample ID: 720-64901-9

Date Collected: 05/19/15 08:40

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		45 - 132	05/26/15 13:18	05/27/15 10:32	1
DCB Decachlorobiphenyl	75		42 - 146	05/26/15 13:18	05/27/15 10:32	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.37		mg/Kg		05/26/15 17:30	05/27/15 22:46	1
Arsenic	4.8		3.0		mg/Kg		05/26/15 17:30	05/27/15 13:22	4
Barium	27		1.5		mg/Kg		05/26/15 17:30	05/27/15 13:22	4
Beryllium	0.16		0.075		mg/Kg		05/26/15 17:30	05/27/15 22:46	1
Cadmium	ND		0.093		mg/Kg		05/26/15 17:30	05/27/15 22:46	1
Chromium	39		1.5		mg/Kg		05/26/15 17:30	05/27/15 13:22	4
Cobalt	5.7		0.60		mg/Kg		05/26/15 17:30	05/27/15 13:22	4
Copper	75		4.5		mg/Kg		05/26/15 17:30	05/27/15 13:22	4
Lead	46		1.5		mg/Kg		05/26/15 17:30	05/27/15 13:22	4
Molybdenum	0.39		0.37		mg/Kg		05/26/15 17:30	05/28/15 18:20	1
Nickel	38		1.5		mg/Kg		05/26/15 17:30	05/27/15 13:22	4
Selenium	ND		0.75		mg/Kg		05/26/15 17:30	05/27/15 22:46	1
Silver	ND		0.19		mg/Kg		05/26/15 17:30	05/27/15 22:46	1
Thallium	ND		0.37		mg/Kg		05/26/15 17:30	05/28/15 18:20	1
Vanadium	26		1.5		mg/Kg		05/26/15 17:30	05/27/15 13:22	4
Zinc	80		4.5		mg/Kg		05/26/15 17:30	05/27/15 13:22	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.2		0.0085		mg/Kg		05/26/15 16:15	05/27/15 19:55	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-5-1'

Lab Sample ID: 720-64901-10

Date Collected: 05/19/15 08:47

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Acenaphthylene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Acenaphthene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Fluorene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Phenanthrene	0.45		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Anthracene	0.34		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Fluoranthene	0.67		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Pyrene	1.7		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Benzo[a]anthracene	ND		1.6		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Chrysene	1.2		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Benzo[b]fluoranthene	1.8		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Benzo[k]fluoranthene	0.74		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Benzo[a]pyrene	1.2		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Indeno[1,2,3-cd]pyrene	0.68		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Benzo[g,h,i]perylene	0.65		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
2-Methylnaphthalene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Dibenz(a,h)anthracene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 04:53	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	69		21 - 98				05/26/15 23:13	05/28/15 04:53	5
2-Fluorobiphenyl	58		30 - 112				05/26/15 23:13	05/28/15 04:53	5
Terphenyl-d14	82		32 - 117				05/26/15 23:13	05/28/15 04:53	5

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	38		1.0		ug/Kg		05/24/15 18:29	05/28/15 01:23	1
Monobutyltin	ND	*	1.0	UJ	ug/Kg		05/24/15 18:29	05/28/15 01:23	1
Tetra-n-butyltin	ND		2.8		ug/Kg		05/24/15 18:29	05/28/15 01:23	1
Tributyltin	74		1.0		ug/Kg		05/24/15 18:29	05/28/15 01:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tripentyltin	52		20 - 151				05/24/15 18:29	05/28/15 01:23	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	120		2.0		mg/Kg		05/26/15 18:29	05/27/15 21:53	2
Motor Oil Range Organics [C24-C36]	210		100		mg/Kg		05/26/15 18:29	05/27/15 21:53	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	55		40 - 130				05/26/15 18:29	05/27/15 21:53	2

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1221	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1232	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1242	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1248	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1254	79		50		ug/Kg		05/26/15 13:18	05/26/15 22:22	1
PCB-1260	ND		50		ug/Kg		05/26/15 13:18	05/26/15 22:22	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-5-1'

Lab Sample ID: 720-64901-10

Date Collected: 05/19/15 08:47

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	70		45 - 132	05/26/15 13:18	05/26/15 22:22	1
DCB Decachlorobiphenyl	75		42 - 146	05/26/15 13:18	05/26/15 22:22	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.42		mg/Kg		05/26/15 17:30	05/27/15 22:51	1
Arsenic	7.2		3.3		mg/Kg		05/26/15 17:30	05/27/15 13:27	4
Barium	49		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:27	4
Beryllium	0.18		0.083		mg/Kg		05/26/15 17:30	05/27/15 22:51	1
Cadmium	0.10		0.10		mg/Kg		05/26/15 17:30	05/27/15 22:51	1
Chromium	48		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:27	4
Cobalt	7.4		0.67		mg/Kg		05/26/15 17:30	05/27/15 13:27	4
Copper	200		5.0		mg/Kg		05/26/15 17:30	05/27/15 13:27	4
Lead	54		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:27	4
Molybdenum	3.8		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:27	4
Nickel	56		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:27	4
Selenium	ND		0.83		mg/Kg		05/26/15 17:30	05/27/15 22:51	1
Silver	ND		0.21		mg/Kg		05/26/15 17:30	05/27/15 22:51	1
Thallium	ND		0.42		mg/Kg		05/26/15 17:30	05/28/15 20:10	1
Vanadium	30		1.7		mg/Kg		05/26/15 17:30	05/27/15 13:27	4
Zinc	130		5.0		mg/Kg		05/26/15 17:30	05/27/15 13:27	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.4		0.0085		mg/Kg		05/26/15 16:15	05/27/15 19:57	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-6-0.5'

Lab Sample ID: 720-64901-11

Date Collected: 05/19/15 09:01

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Acenaphthylene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Acenaphthene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Fluorene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Phenanthrene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Anthracene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Fluoranthene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Pyrene	0.28		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Benzo[a]anthracene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Chrysene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Benzo[b]fluoranthene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Benzo[k]fluoranthene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Benzo[a]pyrene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Indeno[1,2,3-cd]pyrene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Benzo[g,h,i]perylene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
2-Methylnaphthalene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Dibenz(a,h)anthracene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:15	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	66		21 - 98				05/26/15 23:13	05/28/15 05:15	2
2-Fluorobiphenyl	57		30 - 112				05/26/15 23:13	05/28/15 05:15	2
Terphenyl-d14	118	X	32 - 117				05/26/15 23:13	05/28/15 05:15	2

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	12		1.0		ug/Kg		05/24/15 18:29	05/28/15 01:46	1
Monobutyltin	ND	*	1.0	0.5	ug/Kg		05/24/15 18:29	05/28/15 01:46	1
Tetra-n-butyltin	ND		2.8		ug/Kg		05/24/15 18:29	05/28/15 01:46	1
Tributyltin	32		1.0		ug/Kg		05/24/15 18:29	05/28/15 01:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	61		20 - 151				05/24/15 18:29	05/28/15 01:46	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	59		1.0		mg/Kg		05/22/15 12:51	05/24/15 02:55	1
Motor Oil Range Organics [C24-C36]	100		50		mg/Kg		05/22/15 12:51	05/24/15 02:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	57		40 - 130				05/22/15 12:51	05/24/15 02:55	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1221	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1232	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1242	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1248	50		49		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1254	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:39	1
PCB-1260	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:39	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-6-0.5'

Lab Sample ID: 720-64901-11

Date Collected: 05/19/15 09:01

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	64		45 - 132	05/26/15 13:18	05/26/15 22:39	1
DCB Decachlorobiphenyl	71		42 - 146	05/26/15 13:18	05/26/15 22:39	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.44		mg/Kg		05/26/15 17:30	05/27/15 22:55	1
Arsenic	6.0		3.5		mg/Kg		05/26/15 17:30	05/27/15 13:32	4
Barium	35		1.8		mg/Kg		05/26/15 17:30	05/27/15 13:32	4
Beryllium	0.17		0.088		mg/Kg		05/26/15 17:30	05/27/15 22:55	1
Cadmium	ND		0.11		mg/Kg		05/26/15 17:30	05/27/15 22:55	1
Chromium	46		1.8		mg/Kg		05/26/15 17:30	05/27/15 13:32	4
Cobalt	6.7		0.70		mg/Kg		05/26/15 17:30	05/27/15 13:32	4
Copper	120		5.3		mg/Kg		05/26/15 17:30	05/27/15 13:32	4
Lead	37		1.8		mg/Kg		05/26/15 17:30	05/27/15 13:32	4
Molybdenum	0.87		0.44		mg/Kg		05/26/15 17:30	05/28/15 18:29	1
Nickel	40		1.8		mg/Kg		05/26/15 17:30	05/27/15 13:32	4
Selenium	ND		0.88		mg/Kg		05/26/15 17:30	05/27/15 22:55	1
Silver	ND		0.22		mg/Kg		05/26/15 17:30	05/27/15 22:55	1
Thallium	ND		0.44		mg/Kg		05/26/15 17:30	05/28/15 18:29	1
Vanadium	29		1.8		mg/Kg		05/26/15 17:30	05/27/15 13:32	4
Zinc	94		5.3		mg/Kg		05/26/15 17:30	05/27/15 13:32	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.99		0.0087		mg/Kg		05/26/15 20:56	05/27/15 16:44	1

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-6-1'

Lab Sample ID: 720-64901-12

Date Collected: 05/19/15 09:10

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Acenaphthylene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Acenaphthene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Fluorene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Phenanthrene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Anthracene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Fluoranthene	0.32		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Pyrene	0.99		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Benzo[a]anthracene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Chrysene	0.47		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Benzo[b]fluoranthene	0.63		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Benzo[k]fluoranthene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Benzo[a]pyrene	0.40		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Indeno[1,2,3-cd]pyrene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Benzo[g,h,i]perylene	0.27		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
2-Methylnaphthalene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Dibenz(a,h)anthracene	ND		0.27		mg/Kg		05/26/15 23:13	05/28/15 05:36	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	68		21 - 98				05/26/15 23:13	05/28/15 05:36	2
2-Fluorobiphenyl	59		30 - 112				05/26/15 23:13	05/28/15 05:36	2
Terphenyl-d14	113		32 - 117				05/26/15 23:13	05/28/15 05:36	2

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	26		1.0		ug/Kg		05/24/15 18:29	05/28/15 02:09	1
Monobutyltin	ND	*	1.0	VJ	ug/Kg		05/24/15 18:29	05/28/15 02:09	1
Tetra-n-butyltin	ND		2.8		ug/Kg		05/24/15 18:29	05/28/15 02:09	1
Tributyltin	62		1.0		ug/Kg		05/24/15 18:29	05/28/15 02:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	45		20 - 151				05/24/15 18:29	05/28/15 02:09	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	150		2.0		mg/Kg		05/26/15 16:23	05/27/15 18:28	2
Motor Oil Range Organics [C24-C36]	160		99		mg/Kg		05/26/15 16:23	05/27/15 18:28	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	88		40 - 130				05/26/15 16:23	05/27/15 18:28	2

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1221	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1232	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1242	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1248	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1254	210		49		ug/Kg		05/26/15 13:18	05/26/15 22:55	1
PCB-1260	ND		49		ug/Kg		05/26/15 13:18	05/26/15 22:55	1

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-6-1'

Lab Sample ID: 720-64901-12

Date Collected: 05/19/15 09:10

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		45 - 132	05/26/15 13:18	05/26/15 22:55	1
DCB Decachlorobiphenyl	79		42 - 146	05/26/15 13:18	05/26/15 22:55	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.6		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Arsenic	11		3.3		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Barium	44		1.6		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Beryllium	ND		0.33		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Cadmium	ND		0.41		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Chromium	78		1.6		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Cobalt	10		0.65		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Copper	380		4.9		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Lead	100		1.6		mg/Kg		05/26/15 20:54	05/28/15 17:10	4
Molybdenum	10		1.6		mg/Kg		05/26/15 20:54	05/28/15 17:10	4
Nickel	100		1.6		mg/Kg		05/26/15 20:54	05/28/15 17:10	4
Selenium	ND		3.3		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Silver	ND		0.81		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Thallium	ND		1.6		mg/Kg		05/26/15 20:54	05/28/15 17:10	4
Vanadium	39		1.6		mg/Kg		05/26/15 20:54	05/28/15 02:18	4
Zinc	180		4.9		mg/Kg		05/26/15 20:54	05/28/15 02:18	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.9		0.050		mg/Kg		05/26/15 20:56	05/27/15 17:36	5

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-7-0.5'

Lab Sample ID: 720-64901-13

Date Collected: 05/19/15 09:18

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Acenaphthylene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Acenaphthene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Fluorene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Phenanthrene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Anthracene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Fluoranthene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Pyrene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Benzo[a]anthracene	ND		6.6		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Chrysene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Benzo[b]fluoranthene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Benzo[k]fluoranthene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Benzo[a]pyrene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Indeno[1,2,3-cd]pyrene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Benzo[g,h,i]perylene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
2-Methylnaphthalene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10
Dibenz(a,h)anthracene	ND		1.3		mg/Kg		05/26/15 23:13	05/28/15 05:58	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	76		21 - 98	05/26/15 23:13	05/28/15 05:58	10
2-Fluorobiphenyl	66		30 - 112	05/26/15 23:13	05/28/15 05:58	10
Terphenyl-d14	106		32 - 117	05/26/15 23:13	05/28/15 05:58	10

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	120	F2 F1	1.1		ug/Kg		05/24/15 18:29	05/28/15 02:32	1
Monobutyltin	76	F2 F1 *	1.1		ug/Kg		05/24/15 18:29	05/28/15 02:32	1
Tetra-n-butyltin	ND	F1	2.9		ug/Kg		05/24/15 18:29	05/28/15 02:32	1
Tributyltin	650	F2 E	1.1		ug/Kg		05/24/15 18:29	05/28/15 02:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Triphenyltin	50		20 - 151	05/24/15 18:29	05/28/15 02:32	1

Method: Organotins - Organotins, PSEP (GC/MS) - DL

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Triphenyltin	70		20 - 151	05/24/15 18:29	05/28/15 12:24	10

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	240		5.0		mg/Kg		05/26/15 16:23	05/27/15 18:57	5
Motor Oil Range Organics [C24-C36]	560		250		mg/Kg		05/26/15 16:23	05/27/15 18:57	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X D	40 - 130	05/26/15 16:23	05/27/15 18:57	5

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		97		ug/Kg		05/26/15 13:18	05/27/15 09:59	2
PCB-1221	ND		97		ug/Kg		05/26/15 13:18	05/27/15 09:59	2
PCB-1232	ND		97		ug/Kg		05/26/15 13:18	05/27/15 09:59	2

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-7-0.5'

Lab Sample ID: 720-64901-13

Date Collected: 05/19/15 09:18

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	ND		97		ug/Kg		05/26/15 13:18	05/27/15 09:59	2
PCB-1248	410		97		ug/Kg		05/26/15 13:18	05/27/15 09:59	2
PCB-1254	ND		97		ug/Kg		05/26/15 13:18	05/27/15 09:59	2
PCB-1260	ND		97		ug/Kg		05/26/15 13:18	05/27/15 09:59	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		45 - 132				05/26/15 13:18	05/27/15 09:59	2
DCB Decachlorobiphenyl	77		42 - 146				05/26/15 13:18	05/27/15 09:59	2

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.0		1.4		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Arsenic	11		2.8		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Barium	170		1.4		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Beryllium	ND		0.28		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Cadmium	ND		0.35		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Chromium	76		1.4		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Cobalt	9.6		0.56		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Copper	390		4.2		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Lead	580		1.4		mg/Kg		05/26/15 20:54	05/28/15 17:14	4
Molybdenum	13		1.4		mg/Kg		05/26/15 20:54	05/28/15 17:14	4
Nickel	66		1.4		mg/Kg		05/26/15 20:54	05/28/15 17:14	4
Selenium	ND		2.8		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Silver	ND		0.69		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Thallium	ND		1.4		mg/Kg		05/26/15 20:54	05/28/15 17:14	4
Vanadium	28		1.4		mg/Kg		05/26/15 20:54	05/28/15 02:22	4
Zinc	2000		4.2		mg/Kg		05/26/15 20:54	05/28/15 02:22	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.3		0.045		mg/Kg		05/26/15 20:56	05/27/15 17:38	5

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-7-1'

Lab Sample ID: 720-64901-14

Date Collected: 05/19/15 09:31

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Acenaphthylene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Acenaphthene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Fluorene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Phenanthrene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Anthracene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Fluoranthene	0.86		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Pyrene	1.5		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Benzo[a]anthracene	ND		3.3		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Chrysene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Benzo[b]fluoranthene	1.0		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Benzo[k]fluoranthene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Benzo[a]pyrene	0.78		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Indeno[1,2,3-cd]pyrene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Benzo[g,h,i]perylene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
2-Methylnaphthalene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Dibenz(a,h)anthracene	ND		0.66		mg/Kg		05/26/15 23:13	05/28/15 06:19	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	82		21 - 98				05/26/15 23:13	05/28/15 06:19	5
2-Fluorobiphenyl	72		30 - 112				05/26/15 23:13	05/28/15 06:19	5
Terphenyl-d14	111		32 - 117				05/26/15 23:13	05/28/15 06:19	5

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	110		1.0		ug/Kg		05/24/15 18:29	05/28/15 03:41	1
Monobutyltin	ND	*	1.0		ug/Kg		05/24/15 18:29	05/28/15 03:41	1
Tetra-n-butyltin	42		2.8		ug/Kg		05/24/15 18:29	05/28/15 03:41	1
Tributyltin	180		1.0		ug/Kg		05/24/15 18:29	05/28/15 03:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tripentyltin	33		20 - 151				05/24/15 18:29	05/28/15 03:41	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	220		5.0		mg/Kg		05/26/15 16:23	05/27/15 19:26	5
Motor Oil Range Organics [C24-C36]	460		250		mg/Kg		05/26/15 16:23	05/27/15 19:26	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X D	40 - 130				05/26/15 16:23	05/27/15 19:26	5

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		480		ug/Kg		05/26/15 13:18	05/27/15 10:16	10
PCB-1221	ND		480		ug/Kg		05/26/15 13:18	05/27/15 10:16	10
PCB-1232	ND		480		ug/Kg		05/26/15 13:18	05/27/15 10:16	10
PCB-1242	1900		480		ug/Kg		05/26/15 13:18	05/27/15 10:16	10
PCB-1248	ND		480		ug/Kg		05/26/15 13:18	05/27/15 10:16	10
PCB-1254	ND		480		ug/Kg		05/26/15 13:18	05/27/15 10:16	10
PCB-1260	ND		480		ug/Kg		05/26/15 13:18	05/27/15 10:16	10

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-7-1'

Lab Sample ID: 720-64901-14

Date Collected: 05/19/15 09:31

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	X D	45 - 132	05/26/15 13:18	05/27/15 10:16	10
DCB Decachlorobiphenyl	0	X D	42 - 146	05/26/15 13:18	05/27/15 10:16	10

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	4.2		1.9		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Arsenic	11		3.8		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Barium	90		1.9		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Beryllium	ND		0.38		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Cadmium	ND		0.48		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Chromium	120		1.9		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Cobalt	10		0.76		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Copper	650		5.7		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Lead	300		1.9		mg/Kg		05/26/15 20:54	05/28/15 17:19	4
Molybdenum	7.9		1.9		mg/Kg		05/26/15 20:54	05/28/15 17:19	4
Nickel	77		1.9		mg/Kg		05/26/15 20:54	05/28/15 17:19	4
Selenium	ND		3.8		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Silver	ND		0.95		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Thallium	ND		1.9		mg/Kg		05/26/15 20:54	05/28/15 17:19	4
Vanadium	28		1.9		mg/Kg		05/26/15 20:54	05/28/15 02:27	4
Zinc	450		5.7		mg/Kg		05/26/15 20:54	05/28/15 02:27	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.1		0.049		mg/Kg		05/26/15 20:56	05/27/15 17:40	5

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-8-0.5'

Lab Sample ID: 720-64901-15

Date Collected: 05/19/15 09:36

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Acenaphthylene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Acenaphthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Fluorene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Phenanthrene	0.96		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Anthracene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Fluoranthene	1.4		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Pyrene	1.9		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Benzo[a]anthracene	ND		3.3		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Chrysene	0.90		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Benzo[b]fluoranthene	1.4		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Benzo[k]fluoranthene	0.70		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Benzo[a]pyrene	1.1		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Indeno[1,2,3-cd]pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Benzo[g,h,i]perylene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
2-Methylnaphthalene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Dibenz(a,h)anthracene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 06:41	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	72		21 - 98				05/26/15 23:13	05/28/15 06:41	5
2-Fluorobiphenyl	63		30 - 112				05/26/15 23:13	05/28/15 06:41	5
Terphenyl-d14	100		32 - 117				05/26/15 23:13	05/28/15 06:41	5

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	79	J	1.1		ug/Kg		05/24/15 18:29	05/28/15 04:03	1
Monobutyltin	ND		1.1	WJ	ug/Kg		05/24/15 18:29	05/28/15 04:03	1
Tetra-n-butyltin	ND		3.0		ug/Kg		05/24/15 18:29	05/28/15 04:03	1
Tributyltin	130		1.1		ug/Kg		05/24/15 18:29	05/28/15 04:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tripentyltin	41		20 - 151				05/24/15 18:29	05/28/15 04:03	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	260		3.0		mg/Kg		05/26/15 16:23	05/27/15 19:56	3
Motor Oil Range Organics [C24-C36]	480		150		mg/Kg		05/26/15 16:23	05/27/15 19:56	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	45		40 - 130				05/26/15 16:23	05/27/15 19:56	3

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:32	5
PCB-1221	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:32	5
PCB-1232	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:32	5
PCB-1242	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:32	5
PCB-1248	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:32	5
PCB-1254	ND		250		ug/Kg		05/26/15 13:18	05/27/15 10:32	5
PCB-1260	710	J	250		ug/Kg		05/26/15 13:18	05/27/15 10:32	5

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-8-0.5'

Lab Sample ID: 720-64901-15

Date Collected: 05/19/15 09:36

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		45 - 132	05/26/15 13:18	05/27/15 10:32	5
DCB Decachlorobiphenyl	91		42 - 146	05/26/15 13:18	05/27/15 10:32	5

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Arsenic	9.5		3.0		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Barium	120		1.5		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Beryllium	ND		0.30		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Cadmium	ND		0.37		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Chromium	82		1.5		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Cobalt	11		0.60		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Copper	620		4.5		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Lead	190		1.5		mg/Kg		05/26/15 20:54	05/28/15 17:24	4
Molybdenum	2.7		1.5		mg/Kg		05/26/15 20:54	05/28/15 17:24	4
Nickel	67		1.5		mg/Kg		05/26/15 20:54	05/28/15 17:24	4
Selenium	ND		3.0		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Silver	ND		0.75		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Thallium	ND		1.5		mg/Kg		05/26/15 20:54	05/28/15 17:24	4
Vanadium	35		1.5		mg/Kg		05/26/15 20:54	05/28/15 02:32	4
Zinc	370		4.5		mg/Kg		05/26/15 20:54	05/28/15 02:32	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.7		0.097		mg/Kg		05/26/15 20:56	05/27/15 17:42	10

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-8-1'
Date Collected: 05/19/15 09:51
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-16
Matrix: Solid

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Acenaphthylene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Acenaphthene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Fluorene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Phenanthrene	1.1		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Anthracene	0.70		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Fluoranthene	1.4		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Pyrene	3.5		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Benzo[a]anthracene	ND		1.6		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Chrysene	0.88		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Benzo[b]fluoranthene	3.1		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Benzo[k]fluoranthene	3.0		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Benzo[a]pyrene	1.7		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Indeno[1,2,3-cd]pyrene	0.77		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Benzo[g,h,i]perylene	0.81		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
2-Methylnaphthalene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Dibenz(a,h)anthracene	ND		0.33		mg/Kg		05/26/15 23:13	05/28/15 07:02	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	81		21 - 98				05/26/15 23:13	05/28/15 07:02	5
2-Fluorobiphenyl	71		30 - 112				05/26/15 23:13	05/28/15 07:02	5
Terphenyl-d14	89		32 - 117				05/26/15 23:13	05/28/15 07:02	5

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	66		1.0		ug/Kg		05/24/15 18:29	05/28/15 04:26	1
Monobutyltin	ND	*	1.0	UJ	ug/Kg		05/24/15 18:29	05/28/15 04:26	1
Tetra-n-butyltin	ND		2.7		ug/Kg		05/24/15 18:29	05/28/15 04:26	1
Tributyltin	130		1.0		ug/Kg		05/24/15 18:29	05/28/15 04:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tripentyltin	67		20 - 151				05/24/15 18:29	05/28/15 04:26	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	300		5.0		mg/Kg		05/26/15 16:23	05/28/15 11:23	5
Motor Oil Range Organics [C24-C36]	630		250		mg/Kg		05/26/15 16:23	05/28/15 11:23	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X D	40 - 130				05/26/15 16:23	05/28/15 11:23	5

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		500		ug/Kg		05/27/15 13:18	05/27/15 10:49	10
PCB-1221	ND		500		ug/Kg		05/26/15 13:18	05/27/15 10:49	10
PCB-1232	ND		500		ug/Kg		05/26/15 13:18	05/27/15 10:49	10
PCB-1242	ND		500		ug/Kg		05/26/15 13:18	05/27/15 10:49	10
PCB-1248	1600		500		ug/Kg		05/26/15 13:18	05/27/15 10:49	10
PCB-1254	ND		500		ug/Kg		05/26/15 13:18	05/27/15 10:49	10
PCB-1260	ND		500		ug/Kg		05/26/15 13:18	05/27/15 10:49	10

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-8-1'

Lab Sample ID: 720-64901-16

Date Collected: 05/19/15 09:51

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	89		45 - 132	05/26/15 13:18	05/27/15 10:49	10
DCB Decachlorobiphenyl	123		42 - 146	05/26/15 13:18	05/27/15 10:49	10

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.6		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Arsenic	24		3.2		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Barium	96		1.6		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Beryllium	ND		0.32		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Cadmium	0.43		0.40		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Chromium	85		1.6		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Cobalt	10		0.64		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Copper	1200		4.8		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Lead	600		1.6		mg/Kg		05/26/15 20:54	05/28/15 17:28	4
Molybdenum	3.4		1.6		mg/Kg		05/26/15 20:54	05/28/15 17:28	4
Nickel	62		1.6		mg/Kg		05/26/15 20:54	05/28/15 17:28	4
Selenium	ND		3.2		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Silver	ND		0.80		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Thallium	ND		1.6		mg/Kg		05/26/15 20:54	05/28/15 17:28	4
Vanadium	30		1.6		mg/Kg		05/26/15 20:54	05/28/15 02:36	4
Zinc	440		4.8		mg/Kg		05/26/15 20:54	05/28/15 02:36	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	10		0.85		mg/Kg		05/26/15 20:56	05/27/15 17:45	100

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-9-0.5'

Lab Sample ID: 720-64901-17

Date Collected: 05/19/15 10:26

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Acenaphthylene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Acenaphthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Fluorene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Phenanthrene	0.72		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Anthracene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Fluoranthene	1.4		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Pyrene	1.3		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Benzo[a]anthracene	ND		3.3		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Chrysene	0.75		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Benzo[b]fluoranthene	0.88		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Benzo[k]fluoranthene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Benzo[a]pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Indeno[1,2,3-cd]pyrene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Benzo[g,h,i]perylene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
2-Methylnaphthalene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Dibenz(a,h)anthracene	ND		0.67		mg/Kg		05/26/15 23:13	05/28/15 07:24	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	71		21 - 98				05/26/15 23:13	05/28/15 07:24	5
2-Fluorobiphenyl	59		30 - 112				05/26/15 23:13	05/28/15 07:24	5
Terphenyl-d14	78		32 - 117				05/26/15 23:13	05/28/15 07:24	5

Method: Organotins - Organotins, PSEP (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetra-n-butyltin	150		2.7		ug/Kg		05/24/15 18:29	05/28/15 04:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	60		20 - 151				05/24/15 18:29	05/28/15 04:49	1

Method: Organotins - Organotins, PSEP (GC/MS) - DL									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	45		20 - 151				05/24/15 18:29	05/28/15 12:47	5

Method: Organotins - Organotins, PSEP (GC/MS) - DL2									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Monobutyltin	3900		50		ug/Kg		05/24/15 18:29	05/28/15 13:10	50

Method: Organotins - Organotins, PSEP (GC/MS) - DL3									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	16000		250		ug/Kg		05/24/15 18:29	05/28/15 15:05	250
Tributyltin	13000		250		ug/Kg		05/24/15 18:29	05/28/15 15:05	250

Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	600		9.9		mg/Kg		05/26/15 16:23	05/28/15 11:47	10
Motor Oil Range Organics [C24-C36]	1100		500		mg/Kg		05/26/15 16:23	05/28/15 11:47	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X D	40 - 130				05/26/15 16:23	05/28/15 11:47	10

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:06	10
PCB-1221	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:06	10
PCB-1232	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:06	10
PCB-1242	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:06	10
PCB-1248	2500		490		ug/Kg		05/26/15 13:18	05/27/15 11:06	10
PCB-1254	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:06	10
PCB-1260	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:06	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	X D	45 - 132				05/26/15 13:18	05/27/15 11:06	10
DCB Decachlorobiphenyl	0	X D	42 - 146				05/26/15 13:18	05/27/15 11:06	10

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.8		mg/Kg		05/26/15 20:54	05/28/15 17:47	10
Arsenic	38		2.2		mg/Kg		05/26/15 20:54	05/28/15 02:41	4
Barium	120		1.1		mg/Kg		05/26/15 20:54	05/28/15 02:41	4
Beryllium	ND		0.22		mg/Kg		05/26/15 20:54	05/28/15 02:41	4
Cadmium	1.4		0.28		mg/Kg		05/26/15 20:54	05/28/15 02:41	4
Chromium	110		1.1		mg/Kg		05/26/15 20:54	05/28/15 02:41	4
Cobalt	14		0.45		mg/Kg		05/26/15 20:54	05/28/15 02:41	4
Copper	27000		42		mg/Kg		05/26/15 20:54	05/28/15 17:52	50
Lead	480		2.8		mg/Kg		05/26/15 20:54	05/28/15 17:47	10
Molybdenum	10		2.8		mg/Kg		05/26/15 20:54	05/28/15 17:47	10
Nickel	93		2.8		mg/Kg		05/26/15 20:54	05/28/15 17:47	10
Selenium	ND		2.2		mg/Kg		05/26/15 20:54	05/28/15 02:41	4
Silver	0.94		0.56		mg/Kg		05/26/15 20:54	05/28/15 02:41	4
Thallium	ND		2.8		mg/Kg		05/26/15 20:54	05/28/15 17:47	10
Vanadium	24		1.1		mg/Kg		05/26/15 20:54	05/28/15 02:41	4
Zinc	4000		42		mg/Kg		05/26/15 20:54	05/28/15 17:52	50

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	10		0.91		mg/Kg		05/26/15 20:56	05/27/15 17:48	100

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-9-1'
Date Collected: 05/19/15 10:20
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-18
Matrix: Solid

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Acenaphthylene	ND		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Acenaphthene	ND		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Fluorene	ND		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Phenanthrene	1.1		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Anthracene	ND		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Fluoranthene	3.0		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Pyrene	3.2		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Benzo[a]anthracene	ND		3.3		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Chrysene	1.1		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Benzo[b]fluoranthene	1.1		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Benzo[k]fluoranthene	ND		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Benzo[a]pyrene	0.80		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Indeno[1,2,3-cd]pyrene	ND		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Benzo[g,h,i]perylene	ND		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
2-Methylnaphthalene	ND		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10
Dibenz(a,h)anthracene	ND		0.66		mg/Kg		05/27/15 09:39	05/28/15 14:50	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	48		21 - 98	05/27/15 09:39	05/28/15 14:50	10
2-Fluorobiphenyl	51		30 - 112	05/27/15 09:39	05/28/15 14:50	10
Terphenyl-d14	71		32 - 117	05/27/15 09:39	05/28/15 14:50	10

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Monobutyltin	94	*	1.0		ug/Kg		05/24/15 18:29	05/28/15 05:11	1
Tetra-n-butyltin	27		2.7		ug/Kg		05/24/15 18:29	05/28/15 05:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Triphenyltin	62		20 - 151	05/24/15 18:29	05/28/15 05:11	1

Method: Organotins - Organotins, PSEP (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	670		10		ug/Kg		05/24/15 18:29	05/28/15 13:33	10
Tributyltin	980		10		ug/Kg		05/24/15 18:29	05/28/15 13:33	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Triphenyltin	69		20 - 151	05/24/15 18:29	05/28/15 13:33	10

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	780		20		mg/Kg		05/26/15 16:23	05/28/15 12:11	20
Motor Oil Range Organics [C24-C36]	1800		990		mg/Kg		05/26/15 16:23	05/28/15 12:11	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl	0	X D	40 - 130	05/26/15 16:23	05/28/15 12:11	20

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2500		ug/Kg		05/26/15 13:18	05/27/15 11:22	50

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-9-1'

Lab Sample ID: 720-64901-18

Date Collected: 05/19/15 10:20

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		2500		ug/Kg		05/26/15 13:18	05/27/15 11:22	50
PCB-1232	ND		2500		ug/Kg		05/26/15 13:18	05/27/15 11:22	50
PCB-1242	ND		2500		ug/Kg		05/26/15 13:18	05/27/15 11:22	50
PCB-1248	8900		2500		ug/Kg		05/26/15 13:18	05/27/15 11:22	50
PCB-1254	ND		2500		ug/Kg		05/26/15 13:18	05/27/15 11:22	50
PCB-1260	ND		2500		ug/Kg		05/26/15 13:18	05/27/15 11:22	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	X D	45 - 132				05/26/15 13:18	05/27/15 11:22	50
DCB Decachlorobiphenyl	0	X D	42 - 146				05/26/15 13:18	05/27/15 11:22	50

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Arsenic	75		2.3		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Barium	110		1.1		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Beryllium	ND		0.23		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Cadmium	0.86		0.29		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Chromium	140		1.1		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Cobalt	21		0.46		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Copper	2400		3.4		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Lead	540		1.1		mg/Kg		05/26/15 20:54	05/28/15 17:33	4
Molybdenum	1.4		1.1		mg/Kg		05/26/15 20:54	05/28/15 17:33	4
Nickel	360		1.1		mg/Kg		05/26/15 20:54	05/28/15 17:33	4
Selenium	ND		2.3		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Silver	ND		0.57		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Thallium	ND		1.1		mg/Kg		05/26/15 20:54	05/28/15 17:33	4
Vanadium	26		1.1		mg/Kg		05/26/15 20:54	05/28/15 02:46	4
Zinc	540		3.4		mg/Kg		05/26/15 20:54	05/28/15 02:46	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	23		0.91		mg/Kg		05/26/15 20:56	05/27/15 17:50	100

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-10-0.5'

Lab Sample ID: 720-64901-19

Date Collected: 05/19/15 10:10

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Acenaphthylene	ND		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Acenaphthene	ND		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Fluorene	ND		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Phenanthrene	0.066		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Anthracene	ND		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Fluoranthene	0.10		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Pyrene	0.16		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Benzo[a]anthracene	ND		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Chrysene	0.069		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Benzo[b]fluoranthene	0.093		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Benzo[k]fluoranthene	ND		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Benzo[a]pyrene	0.072		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Indeno[1,2,3-cd]pyrene	ND		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Benzo[g,h,i]perylene	ND		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
2-Methylnaphthalene	ND		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Dibenz(a,h)anthracene	ND		0.066		mg/Kg		05/27/15 09:39	05/28/15 15:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	57		21 - 98				05/27/15 09:39	05/28/15 15:11	1
2-Fluorobiphenyl	66		30 - 112				05/27/15 09:39	05/28/15 15:11	1
Terphenyl-d14	134	X	32 - 117				05/27/15 09:39	05/28/15 15:11	1

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	110		1.1		ug/Kg		05/24/15 18:29	05/28/15 05:34	1
Monobutyltin	29	*J	1.1		ug/Kg		05/24/15 18:29	05/28/15 05:34	1
Tetra-n-butyltin	ND		2.9		ug/Kg		05/24/15 18:29	05/28/15 05:34	1
Tributyltin	130		1.1		ug/Kg		05/24/15 18:29	05/28/15 05:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	63		20 - 151				05/24/15 18:29	05/28/15 05:34	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	39		0.99		mg/Kg		05/26/15 16:23	05/28/15 10:59	1
Motor Oil Range Organics [C24-C36]	78		49		mg/Kg		05/26/15 16:23	05/28/15 10:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	79		40 - 130				05/26/15 16:23	05/28/15 10:59	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		99		ug/Kg		05/26/15 13:18	05/27/15 11:06	2
PCB-1221	ND		99		ug/Kg		05/26/15 13:18	05/27/15 11:06	2
PCB-1232	ND		99		ug/Kg		05/26/15 13:18	05/27/15 11:06	2
PCB-1242	ND		99		ug/Kg		05/26/15 13:18	05/27/15 11:06	2
PCB-1248	ND		99		ug/Kg		05/26/15 13:18	05/27/15 11:06	2
PCB-1254	ND		99		ug/Kg		05/26/15 13:18	05/27/15 11:06	2
PCB-1260	360	J	99		ug/Kg		05/26/15 13:18	05/27/15 11:06	2

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-10-0.5'

Lab Sample ID: 720-64901-19

Date Collected: 05/19/15 10:10

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		45 - 132	05/26/15 13:18	05/27/15 11:06	2
DCB Decachlorobiphenyl	83		42 - 146	05/26/15 13:18	05/27/15 11:06	2

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.45		mg/Kg		05/26/15 20:54	05/28/15 17:57	1
Arsenic	8.2		3.6		mg/Kg		05/26/15 20:54	05/28/15 02:50	4
Barium	36		1.8		mg/Kg		05/26/15 20:54	05/28/15 02:50	4
Beryllium	ND		0.090		mg/Kg		05/26/15 20:54	05/28/15 17:57	1
Cadmium	0.20		0.11		mg/Kg		05/26/15 20:54	05/28/15 17:57	1
Chromium	56		1.8		mg/Kg		05/26/15 20:54	05/28/15 02:50	4
Cobalt	6.4		0.72		mg/Kg		05/26/15 20:54	05/28/15 02:50	4
Copper	310		5.4		mg/Kg		05/26/15 20:54	05/28/15 02:50	4
Lead	41		0.45		mg/Kg		05/26/15 20:54	05/28/15 17:57	1
Molybdenum	0.78		0.45		mg/Kg		05/26/15 20:54	05/28/15 17:57	1
Nickel	42		0.45		mg/Kg		05/26/15 20:54	05/28/15 17:57	1
Selenium	ND		0.90		mg/Kg		05/26/15 20:54	05/28/15 17:57	1
Silver	ND		0.23		mg/Kg		05/26/15 20:54	05/28/15 17:57	1
Thallium	ND		0.45		mg/Kg		05/26/15 20:54	05/28/15 17:57	1
Vanadium	32		1.8		mg/Kg		05/26/15 20:54	05/28/15 02:50	4
Zinc	170		5.4		mg/Kg		05/26/15 20:54	05/28/15 02:50	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.4		0.087		mg/Kg		05/26/15 20:56	05/27/15 17:52	10

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-10-1'

Lab Sample ID: 720-64901-20

Date Collected: 05/19/15 10:14

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Acenaphthylene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Acenaphthene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Fluorene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Phenanthrene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Anthracene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Fluoranthene	0.20		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Pyrene	0.43		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Benzo[a]anthracene	ND		0.65		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Chrysene	0.13		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Benzo[b]fluoranthene	0.21		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Benzo[k]fluoranthene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Benzo[a]pyrene	0.16		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Indeno[1,2,3-cd]pyrene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Benzo[g,h,i]perylene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
2-Methylnaphthalene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Dibenz(a,h)anthracene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 15:33	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	66		21 - 98				05/27/15 09:39	05/28/15 15:33	2
2-Fluorobiphenyl	68		30 - 112				05/27/15 09:39	05/28/15 15:33	2
Terphenyl-d14	121	X	32 - 117				05/27/15 09:39	05/28/15 15:33	2

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Monobutyltin	50	J	1.0		ug/Kg		05/24/15 18:29	05/28/15 05:57	1
Tetra-n-butyltin	40	J	2.7		ug/Kg		05/24/15 18:29	05/28/15 05:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	42		20 - 151				05/24/15 18:29	05/28/15 05:57	1

Method: Organotins - Organotins, PSEP (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	260		10		ug/Kg		05/24/15 18:29	05/28/15 13:56	10
Tributyltin	780	J	10		ug/Kg		05/24/15 18:29	05/28/15 13:56	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	33		20 - 151				05/24/15 18:29	05/28/15 13:56	10

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	120		3.0		mg/Kg		05/26/15 16:23	05/27/15 22:22	3
Motor Oil Range Organics [C24-C36]	230		150		mg/Kg		05/26/15 16:23	05/27/15 22:22	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	67		40 - 130				05/26/15 16:23	05/27/15 22:22	3

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:22	10

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-10-1'

Lab Sample ID: 720-64901-20

Date Collected: 05/19/15 10:14

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:22	10
PCB-1232	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:22	10
PCB-1242	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:22	10
PCB-1248	1500	J	490		ug/Kg		05/26/15 13:18	05/27/15 11:22	10
PCB-1254	ND		490		ug/Kg		05/26/15 13:18	05/27/15 11:22	10
PCB-1260	ND		490	US	ug/Kg		05/26/15 13:18	05/27/15 11:22	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	X D	45 - 132	05/26/15 13:18	05/27/15 11:22	10
DCB Decachlorobiphenyl	0	X D	42 - 146	05/26/15 13:18	05/27/15 11:22	10

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Arsenic	12		2.7		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Barium	35		1.3		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Beryllium	ND		0.27		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Cadmium	ND		0.33		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Chromium	62		1.3		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Cobalt	6.7		0.53		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Copper	840		4.0		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Lead	63		1.3		mg/Kg		05/26/15 20:54	05/28/15 18:02	4
Molybdenum	1.6		1.3		mg/Kg		05/26/15 20:54	05/28/15 18:02	4
Nickel	53		1.3		mg/Kg		05/26/15 20:54	05/28/15 18:02	4
Selenium	ND		2.7		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Silver	ND		0.67		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Thallium	ND		1.3		mg/Kg		05/26/15 20:54	05/28/15 18:02	4
Vanadium	29		1.3		mg/Kg		05/26/15 20:54	05/28/15 02:55	4
Zinc	240		4.0		mg/Kg		05/26/15 20:54	05/28/15 02:55	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.6		0.086		mg/Kg		05/26/15 20:56	05/27/15 17:55	10

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: FD-1

Lab Sample ID: 720-64901-21

Date Collected: 05/19/15 00:00

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Acenaphthylene	ND		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Acenaphthene	ND		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Fluorene	ND		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Phenanthrene	0.58		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Anthracene	ND		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Fluoranthene	0.99		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Pyrene	1.2		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Benzo[a]anthracene	ND		1.6		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Chrysene	0.80		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Benzo[b]fluoranthene	1.1		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Benzo[k]fluoranthene	0.47		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Benzo[a]pyrene	0.83		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Indeno[1,2,3-cd]pyrene	0.49		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Benzo[g,h,i]perylene	0.49		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
2-Methylnaphthalene	ND		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Dibenz(a,h)anthracene	ND		0.33		mg/Kg		05/27/15 09:39	05/28/15 15:54	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	65		21 - 98				05/27/15 09:39	05/28/15 15:54	5
2-Fluorobiphenyl	64		30 - 112				05/27/15 09:39	05/28/15 15:54	5
Terphenyl-d14	90		32 - 117				05/27/15 09:39	05/28/15 15:54	5

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	37	J	1.0		ug/Kg		05/24/15 18:29	05/28/15 10:53	1
Monobutyltin	12	J	1.0		ug/Kg		05/24/15 18:29	05/28/15 10:53	1
Tetra-n-butyltin	ND		2.8		ug/Kg		05/24/15 18:29	05/28/15 10:53	1
Tributyltin	89		1.0		ug/Kg		05/24/15 18:29	05/28/15 10:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	29		20 - 151				05/24/15 18:29	05/28/15 10:53	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	210		3.0		mg/Kg		05/26/15 16:23	05/27/15 19:26	3
Motor Oil Range Organics [C24-C36]	390		150		mg/Kg		05/26/15 16:23	05/27/15 19:26	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	50		40 - 130				05/26/15 16:23	05/27/15 19:26	3

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2500		ug/Kg		05/26/15 19:49	05/27/15 15:46	50
PCB-1221	ND		2500		ug/Kg		05/26/15 19:49	05/27/15 15:46	50
PCB-1232	ND		2500		ug/Kg		05/26/15 19:49	05/27/15 15:46	50
PCB-1242	ND		2500		ug/Kg		05/26/15 19:49	05/27/15 15:46	50
PCB-1248	ND		2500		ug/Kg		05/26/15 19:49	05/27/15 15:46	50
PCB-1254	ND		2500		ug/Kg		05/26/15 19:49	05/27/15 15:46	50
PCB-1260	7800	J	2500		ug/Kg		05/26/15 19:49	05/27/15 15:46	50

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: FD-1

Lab Sample ID: 720-64901-21

Date Collected: 05/19/15 00:00

Matrix: Solid

Date Received: 05/19/15 15:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	X D	45 - 132	05/26/15 19:49	05/27/15 15:46	50
DCB Decachlorobiphenyl	0	X D	42 - 146	05/26/15 19:49	05/27/15 15:46	50

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.7		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Arsenic	9.7		3.4		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Barium	140		1.7		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Beryllium	ND		0.34		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Cadmium	ND		0.42		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Chromium	82		1.7		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Cobalt	10		0.67		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Copper	540		5.0		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Lead	220		1.7		mg/Kg		05/26/15 20:54	05/28/15 20:05	4
Molybdenum	3.2		1.7		mg/Kg		05/26/15 20:54	05/28/15 20:05	4
Nickel	59		1.7		mg/Kg		05/26/15 20:54	05/28/15 20:05	4
Selenium	ND		3.4		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Silver	ND		0.84		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Thallium	ND		1.7		mg/Kg		05/26/15 20:54	05/28/15 20:05	4
Vanadium	34		1.7		mg/Kg		05/26/15 20:54	05/28/15 03:00	4
Zinc	350		5.0		mg/Kg		05/26/15 20:54	05/28/15 03:00	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	5.1		0.090		mg/Kg		05/26/15 20:56	05/27/15 17:57	10

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: FD-2

Lab Sample ID: 720-64901-22

Date Collected: 05/19/15 00:00

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Acenaphthylene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Acenaphthene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Fluorene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Phenanthrene	0.43		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Anthracene	0.13		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Fluoranthene	0.45		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Pyrene	0.75		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Benzo[a]anthracene	ND		0.65		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Chrysene	0.24		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Benzo[b]fluoranthene	0.31		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Benzo[k]fluoranthene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Benzo[a]pyrene	0.21		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Indeno[1,2,3-cd]pyrene	0.13		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Benzo[g,h,i]perylene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
2-Methylnaphthalene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Dibenz(a,h)anthracene	ND		0.13		mg/Kg		05/27/15 09:39	05/28/15 16:16	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	68		21 - 98				05/27/15 09:39	05/28/15 16:16	2
2-Fluorobiphenyl	69		30 - 112				05/27/15 09:39	05/28/15 16:16	2
Terphenyl-d14	113		32 - 117				05/27/15 09:39	05/28/15 16:16	2

Method: Organotins - Organotins, PSEP (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Monobutyltin	78	J	1.0		ug/Kg		05/24/15 18:29	05/28/15 11:15	1
Tetra-n-butyltin	19	J	2.7		ug/Kg		05/24/15 18:29	05/28/15 11:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	61		20 - 151				05/24/15 18:29	05/28/15 11:15	1

Method: Organotins - Organotins, PSEP (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	330		5.0		ug/Kg		05/24/15 18:29	05/28/15 11:38	5
Tributyltin	360	J	5.0		ug/Kg		05/24/15 18:29	05/28/15 11:38	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	51		20 - 151				05/24/15 18:29	05/28/15 11:38	5

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	100		2.0		mg/Kg		05/26/15 16:23	05/27/15 19:56	2
Motor Oil Range Organics [C24-C36]	190		99		mg/Kg		05/26/15 16:23	05/27/15 19:56	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	51		40 - 130				05/26/15 16:23	05/27/15 19:56	2

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		250		ug/Kg		05/26/15 19:49	05/27/15 16:20	5

TestAmerica Pleasanton

Client Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: FD-2

Lab Sample ID: 720-64901-22

Date Collected: 05/19/15 00:00

Matrix: Solid

Date Received: 05/19/15 15:00

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		250		ug/Kg		05/26/15 19:49	05/27/15 16:20	5
PCB-1232	ND		250		ug/Kg		05/26/15 19:49	05/27/15 16:20	5
PCB-1242	ND		250		ug/Kg		05/26/15 19:49	05/27/15 16:20	5
PCB-1248	ND		250	UJ	ug/Kg		05/26/15 19:49	05/27/15 16:20	5
PCB-1254	ND		250		ug/Kg		05/26/15 19:49	05/27/15 16:20	5
PCB-1260	870	J	250		ug/Kg		05/26/15 19:49	05/27/15 16:20	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	98		45 - 132	05/26/15 19:49	05/27/15 16:20	5
DCB Decachlorobiphenyl	120		42 - 146	05/26/15 19:49	05/27/15 16:20	5

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.41		mg/Kg		05/26/15 20:54	05/28/15 18:11	1
Arsenic	9.5		3.3		mg/Kg		05/26/15 20:54	05/28/15 03:14	4
Barium	38		1.6		mg/Kg		05/26/15 20:54	05/28/15 03:14	4
Beryllium	ND		0.082		mg/Kg		05/26/15 20:54	05/28/15 18:11	1
Cadmium	0.28		0.10		mg/Kg		05/26/15 20:54	05/28/15 18:11	1
Chromium	63		1.6		mg/Kg		05/26/15 20:54	05/28/15 03:14	4
Cobalt	7.2		0.66		mg/Kg		05/26/15 20:54	05/28/15 03:14	4
Copper	670		4.9		mg/Kg		05/26/15 20:54	05/28/15 03:14	4
Lead	60		0.41		mg/Kg		05/26/15 20:54	05/28/15 18:11	1
Molybdenum	1.6		1.6		mg/Kg		05/26/15 20:54	05/28/15 03:14	4
Nickel	49		0.41		mg/Kg		05/26/15 20:54	05/28/15 18:11	1
Selenium	ND		0.82		mg/Kg		05/26/15 20:54	05/28/15 18:11	1
Silver	ND		0.20		mg/Kg		05/26/15 20:54	05/28/15 18:11	1
Thallium	ND		0.41		mg/Kg		05/26/15 20:54	05/28/15 18:11	1
Vanadium	29		1.6		mg/Kg		05/26/15 20:54	05/28/15 03:14	4
Zinc	260		4.9		mg/Kg		05/26/15 20:54	05/28/15 03:14	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.1		0.092		mg/Kg		05/26/15 20:56	05/27/15 18:04	10

TestAmerica Pleasanton

Surrogate Summary

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		NBZ (21-98)	FBP (30-112)	TPH (32-117)
720-64901-1	SS-1-0.5'	64	71	70
720-64901-2	SS-1-1'	59	69	70
720-64901-3	SS-2-0.5'	56	52	76
720-64901-4	SS-2-1'	64	56	84
720-64901-5	SS-3-0.5'	59	61	100
720-64901-6	SS-3-1'	65	62	99
720-64901-7	SS-4-0.5'	67	73	108
720-64901-8	SS-4-1'	64	64	77
720-64901-9	SS-5-0.5'	60	52	90
720-64901-10	SS-5-1'	69	58	82
720-64901-11	SS-6-0.5'	66	57	118 X
720-64901-12	SS-6-1'	68	59	113
720-64901-13	SS-7-0.5'	76	66	106
720-64901-14	SS-7-1'	82	72	111
720-64901-15	SS-8-0.5'	72	63	100
720-64901-16	SS-8-1'	81	71	89
720-64901-17	SS-9-0.5'	71	59	78
720-64901-18	SS-9-1'	48	51	71
720-64901-19	SS-10-0.5'	57	66	134 X
720-64901-20	SS-10-1'	66	68	121 X
720-64901-21	FD-1	65	64	90
720-64901-22	FD-2	68	69	113
LCS 720-182401/2-A	Lab Control Sample	77	85	129 X
LCS 720-182427/2-A	Lab Control Sample	75	74	88
MB 720-182401/1-A	Method Blank	64	71	76
MB 720-182427/1-A	Method Blank	96	89	135 X

Surrogate Legend

NBZ = Nitrobenzene-d5
 FBP = 2-Fluorobiphenyl
 TPH = Terphenyl-d14

Method: Organotins - Organotins, PSEP (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TPT (20-151)
720-64901-1	SS-1-0.5'	56
720-64901-2	SS-1-1'	74
720-64901-2 - DL	SS-1-1'	124
720-64901-3	SS-2-0.5'	79
720-64901-4	SS-2-1'	68
720-64901-5	SS-3-0.5'	60
720-64901-6	SS-3-1'	70
720-64901-6 - DL	SS-3-1'	74
720-64901-7	SS-4-0.5'	48
720-64901-8	SS-4-1'	100
720-64901-9	SS-5-0.5'	37

TestAmerica Pleasanton

Surrogate Summary

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: Organotins - Organotins, PSEP (GC/MS) (Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	TPT (20-151)			
720-64901-10	SS-5-1'	52			
720-64901-11	SS-6-0.5'	61			
720-64901-12	SS-6-1'	45			
720-64901-13	SS-7-0.5'	50			
720-64901-13 - DL	SS-7-0.5'	70			
720-64901-13 MS	SS-7-0.5'	65			
720-64901-13 MSD	SS-7-0.5'	58			
720-64901-14	SS-7-1'	33			
720-64901-15	SS-8-0.5'	41			
720-64901-16	SS-8-1'	67			
720-64901-17	SS-9-0.5'	60			
720-64901-17 - DL	SS-9-0.5'	45			
720-64901-18	SS-9-1'	62			
720-64901-18 - DL	SS-9-1'	69			
720-64901-19	SS-10-0.5'	63			
720-64901-20	SS-10-1'	42			
720-64901-20 - DL	SS-10-1'	33			
720-64901-21	FD-1	29			
720-64901-22	FD-2	61			
720-64901-22 - DL	FD-2	51			
LCS 580-190241/2-A	Lab Control Sample	70			
LCS 580-190247/2-A	Lab Control Sample	71			
LCSD 580-190241/3-A	Lab Control Sample Dup	88			
LCSD 580-190247/3-A	Lab Control Sample Dup	83			
MB 580-190241/1-A	Method Blank	71			
MB 580-190247/1-A	Method Blank	73			

Surrogate Legend

TPT = Triphenyltin

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	PTP1 (40-130)			
720-64901-1	SS-1-0.5'	0 X D			
720-64901-2	SS-1-1'	0 X D			
720-64901-3	SS-2-0.5'	0 X D			
720-64901-4	SS-2-1'	0 X D			
720-64901-5	SS-3-0.5'	57			
720-64901-6	SS-3-1'	0 X			
720-64901-7	SS-4-0.5'	0 X			
720-64901-8	SS-4-1'	0 X D			
720-64901-9	SS-5-0.5'	111			
720-64901-10	SS-5-1'	55			
720-64901-11	SS-6-0.5'	57			
720-64901-12	SS-6-1'	88			
720-64901-13	SS-7-0.5'	0 X D			

TestAmerica Pleasanton

Surrogate Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	PTP1 (40-130)					
720-64901-14	SS-7-1'	0 X D					
720-64901-15	SS-8-0.5'	45					
720-64901-16	SS-8-1'	0 X D					
720-64901-17	SS-9-0.5'	0 X D					
720-64901-18	SS-9-1'	0 X D					
720-64901-19	SS-10-0.5'	79					
720-64901-20	SS-10-1'	67					
720-64901-21	FD-1	50					
720-64901-22	FD-2	51					
LCS 720-182263/2-A	Lab Control Sample	93					
LCS 720-182368/2-A	Lab Control Sample	111					
MB 720-182263/1-A	Method Blank	103					
MB 720-182368/1-A	Method Blank	103					

Surrogate Legend

PTP = p-Terphenyl

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	TCX1 (45-132)	DCB1 (42-146)		
720-64901-1	SS-1-0.5'	70	70		
720-64901-1 MS	SS-1-0.5'	73	70		
720-64901-1 MSD	SS-1-0.5'	72	69		
720-64901-2	SS-1-1'	69	70		
720-64901-3	SS-2-0.5'	73	69		
720-64901-4	SS-2-1'	71	74		
720-64901-5	SS-3-0.5'	67	71		
720-64901-6	SS-3-1'	72	93		
720-64901-7	SS-4-0.5'	70	77		
720-64901-8	SS-4-1'	58	90		
720-64901-9	SS-5-0.5'	69	75		
720-64901-10	SS-5-1'	70	75		
720-64901-11	SS-6-0.5'	64	71		
720-64901-12	SS-6-1'	71	79		
720-64901-13	SS-7-0.5'	71	77		
720-64901-14	SS-7-1'	0 X D	0 X D		
720-64901-15	SS-8-0.5'	78	91		
720-64901-16	SS-8-1'	89	123		
720-64901-17	SS-9-0.5'	0 X D	0 X D		
720-64901-18	SS-9-1'	0 X D	0 X D		
720-64901-19	SS-10-0.5'	69	83		
720-64901-20	SS-10-1'	0 X D	0 X D		
720-64901-21	FD-1	0 X D	0 X D		
720-64901-22	FD-2	98	120		
LCS 720-182348/2-A	Lab Control Sample	79	88		
LCS 720-182388/2-A	Lab Control Sample	95	106		

TestAmerica Pleasanton

Surrogate Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (45-132)	DCB1 (42-146)
MB 720-182348/1-A	Method Blank	79	86
MB 720-182388/1-A	Method Blank	87	102

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

TestAmerica Pleasanton



QC Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-182401/1-A
Matrix: Solid
Analysis Batch: 182430

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182401

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Naphthalene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Acenaphthylene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Acenaphthene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Fluorene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Phenanthrene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Anthracene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Fluoranthene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Pyrene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Benzo[a]anthracene	ND		0.33		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Chrysene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Benzo[b]fluoranthene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Benzo[k]fluoranthene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Benzo[a]pyrene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Indeno[1,2,3-cd]pyrene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Benzo[g,h,i]perylene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
2-Methylnaphthalene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1
Dibenz(a,h)anthracene	ND		0.067		mg/Kg		05/26/15 23:13	05/27/15 18:47		1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil	Fac
	%Recovery	Qualifier					
Nitrobenzene-d5	64		21 - 98	05/26/15 23:13	05/27/15 18:47		1
2-Fluorobiphenyl	71		30 - 112	05/26/15 23:13	05/27/15 18:47		1
Terphenyl-d14	76		32 - 117	05/26/15 23:13	05/27/15 18:47		1

Lab Sample ID: LCS 720-182401/2-A
Matrix: Solid
Analysis Batch: 182550

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182401

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Naphthalene	1.33	1.10		mg/Kg		83	44 - 115
Acenaphthylene	1.33	1.09		mg/Kg		82	61 - 129
Acenaphthene	1.33	1.07		mg/Kg		80	50 - 115
Fluorene	1.33	1.19		mg/Kg		90	54 - 115
Phenanthrene	1.33	1.25		mg/Kg		94	54 - 115
Anthracene	1.33	1.28		mg/Kg		96	55 - 115
Fluoranthene	1.33	1.23		mg/Kg		92	52 - 130
Pyrene	1.33	1.48		mg/Kg		111	48 - 115
Benzo[a]anthracene	1.33	1.16		mg/Kg		87	55 - 115
Chrysene	1.33	1.09		mg/Kg		82	58 - 115
Benzo[b]fluoranthene	1.33	1.24		mg/Kg		93	50 - 119
Benzo[k]fluoranthene	1.33	1.24		mg/Kg		93	55 - 120
Benzo[a]pyrene	1.33	1.29		mg/Kg		97	57 - 122
Indeno[1,2,3-cd]pyrene	1.33	1.32		mg/Kg		99	56 - 115
Benzo[g,h,i]perylene	1.33	1.24		mg/Kg		93	56 - 115
2-Methylnaphthalene	1.33	1.11		mg/Kg		83	49 - 115
Dibenz(a,h)anthracene	1.33	1.33		mg/Kg		100	57 - 121

TestAmerica Pleasanton

QC Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-182401/2-A
Matrix: Solid
Analysis Batch: 182550

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182401

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5	77		21 - 98
2-Fluorobiphenyl	85		30 - 112
Terphenyl-d14	129	X	32 - 117

Lab Sample ID: MB 720-182427/1-A
Matrix: Solid
Analysis Batch: 182478

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182427

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Acenaphthylene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Acenaphthene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Fluorene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Phenanthrene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Anthracene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Fluoranthene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Pyrene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Benzo[a]anthracene	ND		0.33		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Chrysene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Benzo[b]fluoranthene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Benzo[k]fluoranthene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Benzo[a]pyrene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Indeno[1,2,3-cd]pyrene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Benzo[g,h,i]perylene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
2-Methylnaphthalene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1
Dibenz(a,h)anthracene	ND		0.067		mg/Kg		05/27/15 09:39	05/27/15 23:51	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5	96		21 - 98	05/27/15 09:39	05/27/15 23:51	1
2-Fluorobiphenyl	89		30 - 112	05/27/15 09:39	05/27/15 23:51	1
Terphenyl-d14	135	X	32 - 117	05/27/15 09:39	05/27/15 23:51	1

Lab Sample ID: LCS 720-182427/2-A
Matrix: Solid
Analysis Batch: 182536

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182427

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Naphthalene	1.33	1.17		mg/Kg		88	44 - 115
Acenaphthylene	1.33	1.17		mg/Kg		88	61 - 129
Acenaphthene	1.33	1.12		mg/Kg		85	50 - 115
Fluorene	1.33	1.19		mg/Kg		89	54 - 115
Phenanthrene	1.33	1.30		mg/Kg		98	54 - 115
Anthracene	1.33	1.35		mg/Kg		101	55 - 115
Fluoranthene	1.33	1.28		mg/Kg		97	52 - 130
Pyrene	1.33	1.31		mg/Kg		99	48 - 115
Benzo[a]anthracene	1.33	1.25		mg/Kg		94	55 - 115
Chrysene	1.33	1.19		mg/Kg		90	58 - 115
Benzo[b]fluoranthene	1.33	1.24		mg/Kg		93	50 - 119

TestAmerica Pleasanton

QC Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-182427/2-A

Matrix: Solid

Analysis Batch: 182536

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 182427

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Benzo[k]fluoranthene	1.33	1.24		mg/Kg		94	55 - 120
Benzo[a]pyrene	1.33	1.30		mg/Kg		98	57 - 122
Indeno[1,2,3-cd]pyrene	1.33	1.37		mg/Kg		103	56 - 115
Benzo[g,h,i]perylene	1.33	1.45		mg/Kg		109	56 - 115
2-Methylnaphthalene	1.33	1.21		mg/Kg		92	49 - 115
Dibenz(a,h)anthracene	1.33	1.35		mg/Kg		102	57 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	75		21 - 98
2-Fluorobiphenyl	74		30 - 112
Terphenyl-d14	88		32 - 117

Method: Organotins - Organotins, PSEP (GC/MS)

Lab Sample ID: MB 580-190241/1-A

Matrix: Solid

Analysis Batch: 190365

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 190241

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	ND		1.0		ug/Kg		05/23/15 14:45	05/26/15 18:43	1
Monobutyltin	ND	^	1.0		ug/Kg		05/23/15 14:45	05/26/15 18:43	1
Tetra-n-butyltin	ND		2.7		ug/Kg		05/23/15 14:45	05/26/15 18:43	1
Tributyltin	ND		1.0		ug/Kg		05/23/15 14:45	05/26/15 18:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Triphenyltin	71		20 - 151	05/23/15 14:45	05/26/15 18:43	1

Lab Sample ID: LCS 580-190241/2-A

Matrix: Solid

Analysis Batch: 190365

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 190241

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Dibutyltin	30.7	15.2		ug/Kg		49	25 - 142
Monobutyltin	24.9	15.4	^	ug/Kg		62	24 - 125
Tetra-n-butyltin	40.0	30.0		ug/Kg		75	26 - 149
Tributyltin	35.6	24.5		ug/Kg		69	20 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Triphenyltin	70		20 - 151

Lab Sample ID: LCSD 580-190241/3-A

Matrix: Solid

Analysis Batch: 190365

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 190241

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Dibutyltin	30.7	16.9		ug/Kg		55	25 - 142	11	30
Monobutyltin	24.9	17.0	^	ug/Kg		68	24 - 125	10	36

TestAmerica Pleasanton

QC Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1



Method: Organotins - Organotins, PSEP (GC/MS) (Continued)

Lab Sample ID: LCSD 580-190241/3-A
Matrix: Solid
Analysis Batch: 190365

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 190241

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Tetra-n-butyltin	40.0	20.8	*	ug/Kg		52	26 - 149	36	25
Tributyltin	35.6	28.5		ug/Kg		80	20 - 146	15	28

Surrogate	%Recovery	Qualifier	Limits
Tripentyltin	88		20 - 151

Lab Sample ID: MB 580-190247/1-A
Matrix: Solid
Analysis Batch: 190417

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 190247

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibutyltin	ND		1.0		ug/Kg		05/24/15 18:29	05/27/15 22:21	1
Monobutyltin	ND		1.0		ug/Kg		05/24/15 18:29	05/27/15 22:21	1
Tetra-n-butyltin	ND		2.7		ug/Kg		05/24/15 18:29	05/27/15 22:21	1
Tributyltin	ND		1.0		ug/Kg		05/24/15 18:29	05/27/15 22:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tripentyltin	73		20 - 151	05/24/15 18:29	05/27/15 22:21	1

Lab Sample ID: LCS 580-190247/2-A
Matrix: Solid
Analysis Batch: 190417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 190247

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Dibutyltin	30.7	20.9		ug/Kg		68	25 - 142
Monobutyltin	24.9	14.2		ug/Kg		57	24 - 125
Tetra-n-butyltin	40.0	20.9		ug/Kg		52	26 - 149
Tributyltin	35.6	25.7		ug/Kg		72	20 - 146

Surrogate	%Recovery	Qualifier	Limits
Tripentyltin	71		20 - 151

Lab Sample ID: LCSD 580-190247/3-A
Matrix: Solid
Analysis Batch: 190417

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 190247

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Dibutyltin	30.7	21.5		ug/Kg		70	25 - 142	3	30
Monobutyltin	24.9	7.20	*	ug/Kg		29	24 - 125	65	36
Tetra-n-butyltin	40.0	23.3		ug/Kg		58	26 - 149	11	25
Tributyltin	35.6	25.5		ug/Kg		71	20 - 146	1	28

Surrogate	%Recovery	Qualifier	Limits
Tripentyltin	83		20 - 151

TestAmerica Pleasanton

QC Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: Organotins - Organotins, PSEP (GC/MS) (Continued)

Lab Sample ID: 720-64901-13 MS
Matrix: Solid
Analysis Batch: 190417

Client Sample ID: SS-7-0.5'
Prep Type: Total/NA
Prep Batch: 190247

Analyte	Sample	Sample	Spike	MS MS		Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Dibutyltin	120	F2 F1	30.7	94.2	F1	ug/Kg		-85	25 - 142
Monobutyltin	76	F2 F1 *	24.9	55.0	F1	ug/Kg		-82	24 - 125
Tetra-n-butyltin	ND	F1	40.0	ND	F1	ug/Kg		0	26 - 149
Tributyltin	650	F2 E	35.6	75.7	4	ug/Kg		-1623	20 - 146
		MS MS							
Surrogate	%Recovery		Qualifier	Limits					
Tripentyltin	65			20 - 151					

Lab Sample ID: 720-64901-13 MSD
Matrix: Solid
Analysis Batch: 190417

Client Sample ID: SS-7-0.5'
Prep Type: Total/NA
Prep Batch: 190247

Analyte	Sample	Sample	Spike	MSD MSD		Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Dibutyltin	120	F2 F1	30.7	166	F1 F2	ug/Kg		149	25 - 142	55	30
Monobutyltin	76	F2 F1 *	24.9	92.7	F2	ug/Kg		69	24 - 125	51	36
Tetra-n-butyltin	ND	F1	40.0	47.7		ug/Kg		119	26 - 149	NC	25
Tributyltin	650	F2 E	35.6	102	4 F2	ug/Kg		-1550	20 - 146	29	28
		MSD MSD									
Surrogate	%Recovery		Qualifier	Limits							
Tripentyltin	58			20 - 151							

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-182263/1-A
Matrix: Solid
Analysis Batch: 182306

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182263

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		05/22/15 12:51	05/23/15 16:40	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		05/22/15 12:51	05/23/15 16:40	1
		MB MB							
Surrogate	%Recovery		Qualifier	Limits		Prepared	Analyzed		Dil Fac
p-Terphenyl	103			40 - 130		05/22/15 12:51	05/23/15 16:40		1

Lab Sample ID: LCS 720-182263/2-A
Matrix: Solid
Analysis Batch: 182306

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182263

Analyte	Spike	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Diesel Range Organics [C10-C28]	83.0	74.2		mg/Kg		89	50 - 150
		LCS LCS					
Surrogate	%Recovery		Qualifier	Limits			
p-Terphenyl	93			40 - 130			

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QC Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 720-182368/1-A
Matrix: Solid
Analysis Batch: 182423

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182368

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/26/15 16:23	05/27/15 23:21	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/26/15 16:23	05/27/15 23:21	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
p-Terphenyl	103		40 - 130	05/26/15 16:23	05/27/15 23:21	1

Lab Sample ID: LCS 720-182368/2-A
Matrix: Solid
Analysis Batch: 182423

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182368

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Diesel Range Organics [C10-C28]	82.1	87.4		mg/Kg		106	50 - 150

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
p-Terphenyl	111		40 - 130

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 720-182348/1-A
Matrix: Solid
Analysis Batch: 182321

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182348

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016	ND		50		ug/Kg		05/26/15 13:18	05/27/15 02:15	1
PCB-1221	ND		50		ug/Kg		05/26/15 13:18	05/27/15 02:15	1
PCB-1232	ND		50		ug/Kg		05/26/15 13:18	05/27/15 02:15	1
PCB-1242	ND		50		ug/Kg		05/26/15 13:18	05/27/15 02:15	1
PCB-1248	ND		50		ug/Kg		05/26/15 13:18	05/27/15 02:15	1
PCB-1254	ND		50		ug/Kg		05/26/15 13:18	05/27/15 02:15	1
PCB-1260	ND		50		ug/Kg		05/26/15 13:18	05/27/15 02:15	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	79		45 - 132	05/26/15 13:18	05/27/15 02:15	1
DCB Decachlorobiphenyl	86		42 - 146	05/26/15 13:18	05/27/15 02:15	1

Lab Sample ID: LCS 720-182348/2-A
Matrix: Solid
Analysis Batch: 182321

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182348

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
PCB-1016	131	105		ug/Kg		81	65 - 121
PCB-1260	131	99.8		ug/Kg		76	68 - 127

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	79		45 - 132
DCB Decachlorobiphenyl	88		42 - 146

TestAmerica Pleasanton

QC Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1



Lab Sample ID: 720-64901-1 MS

Matrix: Solid
Analysis Batch: 182321

Client Sample ID: SS-1-0.5'

Prep Type: Total/NA
Prep Batch: 182348

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
PCB-1016	ND		131	109		ug/Kg		83	69 - 120
PCB-1260	ND		131	118		ug/Kg		90	73 - 114

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	73		45 - 132
DCB Decachlorobiphenyl	70		42 - 146

Lab Sample ID: 720-64901-1 MSD

Matrix: Solid
Analysis Batch: 182321

Client Sample ID: SS-1-0.5'

Prep Type: Total/NA
Prep Batch: 182348

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
PCB-1016	ND		131	110		ug/Kg		84	69 - 120	1	20
PCB-1260	ND		131	118		ug/Kg		90	73 - 114	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	72		45 - 132
DCB Decachlorobiphenyl	69		42 - 146

Lab Sample ID: MB 720-182388/1-A

Matrix: Solid
Analysis Batch: 182412

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 182388

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		50		ug/Kg		05/26/15 19:45	05/27/15 15:13	1
PCB-1221	ND		50		ug/Kg		05/26/15 19:45	05/27/15 15:13	1
PCB-1232	ND		50		ug/Kg		05/26/15 19:45	05/27/15 15:13	1
PCB-1242	ND		50		ug/Kg		05/26/15 19:45	05/27/15 15:13	1
PCB-1248	ND		50		ug/Kg		05/26/15 19:45	05/27/15 15:13	1
PCB-1254	ND		50		ug/Kg		05/26/15 19:45	05/27/15 15:13	1
PCB-1260	ND		50		ug/Kg		05/26/15 19:45	05/27/15 15:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	87		45 - 132	05/26/15 19:45	05/27/15 15:13	1
DCB Decachlorobiphenyl	102		42 - 146	05/26/15 19:45	05/27/15 15:13	1

Lab Sample ID: LCS 720-182388/2-A

Matrix: Solid
Analysis Batch: 182412

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 182388

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	131	127		ug/Kg		97	65 - 121
PCB-1260	131	121		ug/Kg		92	68 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	95		45 - 132
DCB Decachlorobiphenyl	106		42 - 146

TestAmerica Pleasanton

QC Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-182381/1-A
Matrix: Solid
Analysis Batch: 182451

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182381

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.50		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Arsenic	ND		1.0		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Barium	ND		0.50		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Beryllium	ND		0.10		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Cadmium	ND		0.13		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Chromium	ND		0.50		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Cobalt	ND		0.20		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Copper	ND		1.5		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Lead	ND		0.50		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Molybdenum	ND		0.50		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Nickel	ND		0.50		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Selenium	ND		1.0		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Silver	ND		0.25		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Thallium	ND		0.50		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Vanadium	ND		0.50		mg/Kg		05/26/15 17:30	05/27/15 11:08	1
Zinc	ND		1.5		mg/Kg		05/26/15 17:30	05/27/15 11:08	1

Lab Sample ID: LCS 720-182381/2-A
Matrix: Solid
Analysis Batch: 182451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182381

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	50.0	48.1		mg/Kg		96	80 - 120
Arsenic	50.0	47.5		mg/Kg		95	80 - 120
Barium	50.0	50.0		mg/Kg		100	80 - 120
Beryllium	50.0	48.3		mg/Kg		97	80 - 120
Cadmium	50.0	50.3		mg/Kg		101	80 - 120
Chromium	50.0	49.1		mg/Kg		98	80 - 120
Cobalt	50.0	51.9		mg/Kg		104	80 - 120
Copper	50.0	48.3		mg/Kg		97	80 - 120
Lead	50.0	50.0		mg/Kg		100	80 - 120
Molybdenum	50.0	50.4		mg/Kg		101	80 - 120
Nickel	50.0	50.2		mg/Kg		100	80 - 120
Selenium	50.0	46.8		mg/Kg		94	80 - 120
Silver	25.0	24.2		mg/Kg		97	80 - 120
Thallium	50.0	49.2		mg/Kg		98	80 - 120
Vanadium	50.0	46.7		mg/Kg		93	80 - 120
Zinc	50.0	51.4		mg/Kg		103	80 - 120

Lab Sample ID: LCSD 720-182381/3-A
Matrix: Solid
Analysis Batch: 182451

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 182381

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	50.0	50.4		mg/Kg		101	80 - 120	5	20
Arsenic	50.0	49.1		mg/Kg		98	80 - 120	3	20
Barium	50.0	52.1		mg/Kg		104	80 - 120	4	20
Beryllium	50.0	49.8		mg/Kg		100	80 - 120	3	20

TestAmerica Pleasanton

QC Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1



Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 720-182381/3-A

Matrix: Solid

Analysis Batch: 182451

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 182381

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
Cadmium	50.0	52.3		mg/Kg		105	80 - 120	4	20	
Chromium	50.0	51.1		mg/Kg		102	80 - 120	4	20	
Cobalt	50.0	54.2		mg/Kg		108	80 - 120	4	20	
Copper	50.0	49.8		mg/Kg		100	80 - 120	3	20	
Lead	50.0	51.7		mg/Kg		103	80 - 120	3	20	
Molybdenum	50.0	52.2		mg/Kg		104	80 - 120	3	20	
Nickel	50.0	52.1		mg/Kg		104	80 - 120	4	20	
Selenium	50.0	48.8		mg/Kg		98	80 - 120	4	20	
Silver	25.0	25.3		mg/Kg		101	80 - 120	4	20	
Thallium	50.0	50.8		mg/Kg		102	80 - 120	3	20	
Vanadium	50.0	48.1		mg/Kg		96	80 - 120	3	20	
Zinc	50.0	53.8		mg/Kg		108	80 - 120	4	20	

Lab Sample ID: LCSSRM 720-182381/25-A

Matrix: Solid

Analysis Batch: 182451

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 182381

Analyte	Spike Added	LCSSRM		Unit	D	%Rec	%Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
Antimony	74.6	44.9		mg/Kg		60	11 - 101			
Arsenic	45.5	43.1		mg/Kg		95	69 - 119			
Barium	579	550		mg/Kg		95	61 - 117			
Beryllium	155	140		mg/Kg		90	56 - 102			
Cadmium	201	193		mg/Kg		96	67 - 118			
Chromium	106	101		mg/Kg		95	67 - 121			
Cobalt	247	245		mg/Kg		99	64 - 133			
Copper	130	119		mg/Kg		92	68 - 126			
Lead	302	276		mg/Kg		91	62 - 113			
Molybdenum	165	152		mg/Kg		92	62 - 128			
Nickel	305	289		mg/Kg		95	65 - 117			
Selenium	133	128		mg/Kg		96	63 - 126			
Silver	33.5	32.0		mg/Kg		95	51 - 130			
Thallium	191	173		mg/Kg		90	64 - 124			
Vanadium	214	193		mg/Kg		90	67 - 123			
Zinc	388	382		mg/Kg		98	62 - 110			

Lab Sample ID: MB 720-182392/1-A

Matrix: Solid

Analysis Batch: 182468

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 182392

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		0.50		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Arsenic	ND		1.0		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Barium	ND		0.50		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Beryllium	ND		0.10		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Cadmium	ND		0.13		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Chromium	ND		0.50		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Cobalt	ND		0.20		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Copper	ND		1.5		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Lead	ND		0.50		mg/Kg		05/26/15 20:54	05/27/15 13:49	1

TestAmerica Pleasanton

QC Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 720-182392/1-A

Matrix: Solid

Analysis Batch: 182468

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 182392

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Molybdenum	ND		0.50		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Nickel	ND		0.50		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Selenium	ND		1.0		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Silver	ND		0.25		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Thallium	ND		0.50		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Vanadium	ND		0.50		mg/Kg		05/26/15 20:54	05/27/15 13:49	1
Zinc	ND		1.5		mg/Kg		05/26/15 20:54	05/27/15 13:49	1

Lab Sample ID: LCS 720-182392/2-A

Matrix: Solid

Analysis Batch: 182468

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 182392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
Arsenic	50.0	47.8		mg/Kg		96	80 - 120	
Barium	50.0	52.2		mg/Kg		104	80 - 120	
Beryllium	50.0	48.4		mg/Kg		97	80 - 120	
Cadmium	50.0	51.7		mg/Kg		103	80 - 120	
Chromium	50.0	49.4		mg/Kg		99	80 - 120	
Cobalt	50.0	54.0		mg/Kg		108	80 - 120	
Copper	50.0	48.1		mg/Kg		96	80 - 120	
Lead	50.0	50.3		mg/Kg		101	80 - 120	
Molybdenum	50.0	50.5		mg/Kg		101	80 - 120	
Nickel	50.0	51.3		mg/Kg		103	80 - 120	
Selenium	50.0	47.6		mg/Kg		95	80 - 120	
Silver	25.0	25.2		mg/Kg		101	80 - 120	
Thallium	50.0	49.9		mg/Kg		100	80 - 120	
Vanadium	50.0	46.2		mg/Kg		92	80 - 120	
Zinc	50.0	53.5		mg/Kg		107	80 - 120	

Lab Sample ID: LCSD 720-182392/3-A

Matrix: Solid

Analysis Batch: 182468

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 182392

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	50.0	50.1		mg/Kg		100	80 - 120	5	20
Barium	50.0	54.1		mg/Kg		108	80 - 120	4	20
Beryllium	50.0	50.5		mg/Kg		101	80 - 120	4	20
Cadmium	50.0	53.9		mg/Kg		108	80 - 120	4	20
Chromium	50.0	51.8		mg/Kg		104	80 - 120	5	20
Cobalt	50.0	56.4		mg/Kg		113	80 - 120	4	20
Copper	50.0	50.4		mg/Kg		101	80 - 120	5	20
Lead	50.0	52.4		mg/Kg		105	80 - 120	4	20
Molybdenum	50.0	53.0		mg/Kg		106	80 - 120	5	20
Nickel	50.0	53.6		mg/Kg		107	80 - 120	4	20
Selenium	50.0	49.9		mg/Kg		100	80 - 120	5	20
Silver	25.0	26.2		mg/Kg		105	80 - 120	4	20
Thallium	50.0	52.1		mg/Kg		104	80 - 120	4	20

TestAmerica Pleasanton

QC Sample Results

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 720-182392/3-A
Matrix: Solid
Analysis Batch: 182468

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 182392

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Vanadium	50.0	48.4		mg/Kg		97	80 - 120	5	20
Zinc	50.0	55.9		mg/Kg		112	80 - 120	4	20

Lab Sample ID: LCSSRM 720-182392/25-A
Matrix: Solid
Analysis Batch: 182468

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182392

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Antimony	74.6	49.0		mg/Kg		66	11 - 101
Arsenic	45.5	43.2		mg/Kg		95	69 - 119
Barium	579	575		mg/Kg		99	61 - 117
Beryllium	155	142		mg/Kg		92	56 - 102
Cadmium	201	196		mg/Kg		97	67 - 118
Chromium	106	99.9		mg/Kg		94	67 - 121
Cobalt	247	251		mg/Kg		102	64 - 133
Copper	130	122		mg/Kg		94	68 - 126
Lead	302	279		mg/Kg		92	62 - 113
Molybdenum	165	157		mg/Kg		95	62 - 128
Nickel	305	294		mg/Kg		96	65 - 117
Selenium	133	127		mg/Kg		96	63 - 126
Silver	33.5	32.5		mg/Kg		97	51 - 130
Thallium	191	176		mg/Kg		92	64 - 124
Vanadium	214	194		mg/Kg		91	67 - 123
Zinc	388	389		mg/Kg		100	62 - 110

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 720-182367/1-A
Matrix: Solid
Analysis Batch: 182500

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182367

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.010		mg/Kg		05/26/15 16:15	05/27/15 18:29	1

Lab Sample ID: LCS 720-182367/2-A
Matrix: Solid
Analysis Batch: 182500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182367

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.833	0.900		mg/Kg		108	80 - 120

Lab Sample ID: LCSD 720-182367/3-A
Matrix: Solid
Analysis Batch: 182500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 182367

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.833	0.917		mg/Kg		110	80 - 120	2	20

TestAmerica Pleasanton

QC Sample Results

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: MB 720-182393/1-A
Matrix: Solid
Analysis Batch: 182486

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.010		mg/Kg		05/26/15 20:56	05/27/15 16:01	1

Lab Sample ID: LCS 720-182393/2-A
Matrix: Solid
Analysis Batch: 182486

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.833	0.950		mg/Kg		114	80 - 120

Lab Sample ID: LCSD 720-182393/3-A
Matrix: Solid
Analysis Batch: 182486

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 182393

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.833	0.992		mg/Kg		119	80 - 120	4	20

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QC Association Summary

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

GC/MS Semi VOA

Prep Batch: 182401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	3546	
720-64901-2	SS-1-1'	Total/NA	Solid	3546	
720-64901-3	SS-2-0.5'	Total/NA	Solid	3546	
720-64901-4	SS-2-1'	Total/NA	Solid	3546	
720-64901-5	SS-3-0.5'	Total/NA	Solid	3546	
720-64901-6	SS-3-1'	Total/NA	Solid	3546	
720-64901-7	SS-4-0.5'	Total/NA	Solid	3546	
720-64901-8	SS-4-1'	Total/NA	Solid	3546	
720-64901-9	SS-5-0.5'	Total/NA	Solid	3546	
720-64901-10	SS-5-1'	Total/NA	Solid	3546	
720-64901-11	SS-6-0.5'	Total/NA	Solid	3546	
720-64901-12	SS-6-1'	Total/NA	Solid	3546	
720-64901-13	SS-7-0.5'	Total/NA	Solid	3546	
720-64901-14	SS-7-1'	Total/NA	Solid	3546	
720-64901-15	SS-8-0.5'	Total/NA	Solid	3546	
720-64901-16	SS-8-1'	Total/NA	Solid	3546	
720-64901-17	SS-9-0.5'	Total/NA	Solid	3546	
LCS 720-182401/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 720-182401/1-A	Method Blank	Total/NA	Solid	3546	

Prep Batch: 182427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-18	SS-9-1'	Total/NA	Solid	3546	
720-64901-19	SS-10-0.5'	Total/NA	Solid	3546	
720-64901-20	SS-10-1'	Total/NA	Solid	3546	
720-64901-21	FD-1	Total/NA	Solid	3546	
720-64901-22	FD-2	Total/NA	Solid	3546	
LCS 720-182427/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 720-182427/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 182430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	8270C	182401
MB 720-182401/1-A	Method Blank	Total/NA	Solid	8270C	182401

Analysis Batch: 182478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-9	SS-5-0.5'	Total/NA	Solid	8270C	182401
720-64901-10	SS-5-1'	Total/NA	Solid	8270C	182401
720-64901-11	SS-6-0.5'	Total/NA	Solid	8270C	182401
720-64901-12	SS-6-1'	Total/NA	Solid	8270C	182401
720-64901-13	SS-7-0.5'	Total/NA	Solid	8270C	182401
720-64901-14	SS-7-1'	Total/NA	Solid	8270C	182401
720-64901-15	SS-8-0.5'	Total/NA	Solid	8270C	182401
720-64901-16	SS-8-1'	Total/NA	Solid	8270C	182401
720-64901-17	SS-9-0.5'	Total/NA	Solid	8270C	182401
MB 720-182427/1-A	Method Blank	Total/NA	Solid	8270C	182427

Analysis Batch: 182536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-2	SS-1-1'	Total/NA	Solid	8270C	182401

TestAmerica Pleasanton

QC Association Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1



GC/MS Semi VOA (Continued)

Analysis Batch: 182536 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-7	SS-4-0.5'	Total/NA	Solid	8270C	182401
720-64901-8	SS-4-1'	Total/NA	Solid	8270C	182401
LCS 720-182427/2-A	Lab Control Sample	Total/NA	Solid	8270C	182427

Analysis Batch: 182550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-3	SS-2-0.5'	Total/NA	Solid	8270C	182401
720-64901-4	SS-2-1'	Total/NA	Solid	8270C	182401
720-64901-5	SS-3-0.5'	Total/NA	Solid	8270C	182401
720-64901-6	SS-3-1'	Total/NA	Solid	8270C	182401
720-64901-18	SS-9-1'	Total/NA	Solid	8270C	182427
720-64901-19	SS-10-0.5'	Total/NA	Solid	8270C	182427
720-64901-20	SS-10-1'	Total/NA	Solid	8270C	182427
720-64901-21	FD-1	Total/NA	Solid	8270C	182427
720-64901-22	FD-2	Total/NA	Solid	8270C	182427
LCS 720-182401/2-A	Lab Control Sample	Total/NA	Solid	8270C	182401

Prep Batch: 190241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-2	SS-1-1'	Total/NA	Solid	Organotin Prep	
720-64901-2 - DL	SS-1-1'	Total/NA	Solid	Organotin Prep	
720-64901-3	SS-2-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-4	SS-2-1'	Total/NA	Solid	Organotin Prep	
720-64901-5	SS-3-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-6 - DL	SS-3-1'	Total/NA	Solid	Organotin Prep	
720-64901-6	SS-3-1'	Total/NA	Solid	Organotin Prep	
LCS 580-190241/2-A	Lab Control Sample	Total/NA	Solid	Organotin Prep	
LCSD 580-190241/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotin Prep	
MB 580-190241/1-A	Method Blank	Total/NA	Solid	Organotin Prep	

Prep Batch: 190247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-7	SS-4-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-8	SS-4-1'	Total/NA	Solid	Organotin Prep	
720-64901-9	SS-5-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-10	SS-5-1'	Total/NA	Solid	Organotin Prep	
720-64901-11	SS-6-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-12	SS-6-1'	Total/NA	Solid	Organotin Prep	
720-64901-13 - DL	SS-7-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-13	SS-7-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-13 MS	SS-7-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-13 MSD	SS-7-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-14	SS-7-1'	Total/NA	Solid	Organotin Prep	
720-64901-15	SS-8-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-16	SS-8-1'	Total/NA	Solid	Organotin Prep	
720-64901-17 - DL	SS-9-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-17	SS-9-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-17 - DL2	SS-9-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-17 - DL3	SS-9-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-18	SS-9-1'	Total/NA	Solid	Organotin Prep	

TestAmerica Pleasanton

QC Association Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

GC/MS Semi VOA (Continued)

Prep Batch: 190247 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-18 - DL	SS-9-1'	Total/NA	Solid	Organotin Prep	
720-64901-19	SS-10-0.5'	Total/NA	Solid	Organotin Prep	
720-64901-20 - DL	SS-10-1'	Total/NA	Solid	Organotin Prep	
720-64901-20	SS-10-1'	Total/NA	Solid	Organotin Prep	
720-64901-21	FD-1	Total/NA	Solid	Organotin Prep	
720-64901-22 - DL	FD-2	Total/NA	Solid	Organotin Prep	
720-64901-22	FD-2	Total/NA	Solid	Organotin Prep	
LCS 580-190247/2-A	Lab Control Sample	Total/NA	Solid	Organotin Prep	
LCSD 580-190247/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotin Prep	
MB 580-190247/1-A	Method Blank	Total/NA	Solid	Organotin Prep	

Analysis Batch: 190365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-3	SS-2-0.5'	Total/NA	Solid	Organotins	190241
720-64901-4	SS-2-1'	Total/NA	Solid	Organotins	190241
720-64901-5	SS-3-0.5'	Total/NA	Solid	Organotins	190241
LCS 580-190241/2-A	Lab Control Sample	Total/NA	Solid	Organotins	190241
LCSD 580-190241/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotins	190241
MB 580-190241/1-A	Method Blank	Total/NA	Solid	Organotins	190241

Analysis Batch: 190417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	Organotins	190241
720-64901-2	SS-1-1'	Total/NA	Solid	Organotins	190241
720-64901-2 - DL	SS-1-1'	Total/NA	Solid	Organotins	190241
720-64901-6	SS-3-1'	Total/NA	Solid	Organotins	190241
720-64901-7	SS-4-0.5'	Total/NA	Solid	Organotins	190247
720-64901-8	SS-4-1'	Total/NA	Solid	Organotins	190247
720-64901-9	SS-5-0.5'	Total/NA	Solid	Organotins	190247
720-64901-10	SS-5-1'	Total/NA	Solid	Organotins	190247
720-64901-11	SS-6-0.5'	Total/NA	Solid	Organotins	190247
720-64901-12	SS-6-1'	Total/NA	Solid	Organotins	190247
720-64901-13	SS-7-0.5'	Total/NA	Solid	Organotins	190247
720-64901-13 MS	SS-7-0.5'	Total/NA	Solid	Organotins	190247
720-64901-13 MSD	SS-7-0.5'	Total/NA	Solid	Organotins	190247
720-64901-14	SS-7-1'	Total/NA	Solid	Organotins	190247
720-64901-15	SS-8-0.5'	Total/NA	Solid	Organotins	190247
720-64901-16	SS-8-1'	Total/NA	Solid	Organotins	190247
720-64901-17	SS-9-0.5'	Total/NA	Solid	Organotins	190247
720-64901-18	SS-9-1'	Total/NA	Solid	Organotins	190247
720-64901-19	SS-10-0.5'	Total/NA	Solid	Organotins	190247
720-64901-20	SS-10-1'	Total/NA	Solid	Organotins	190247
LCS 580-190247/2-A	Lab Control Sample	Total/NA	Solid	Organotins	190247
LCSD 580-190247/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotins	190247
MB 580-190247/1-A	Method Blank	Total/NA	Solid	Organotins	190247

Analysis Batch: 190539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-6 - DL	SS-3-1'	Total/NA	Solid	Organotins	190241
720-64901-13 - DL	SS-7-0.5'	Total/NA	Solid	Organotins	190247
720-64901-17 - DL	SS-9-0.5'	Total/NA	Solid	Organotins	190247

TestAmerica Pleasanton

QC Association Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

GC/MS Semi VOA (Continued)

Analysis Batch: 190539 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-17 - DL2	SS-9-0.5'	Total/NA	Solid	Organotins	190247
720-64901-17 - DL3	SS-9-0.5'	Total/NA	Solid	Organotins	190247
720-64901-18 - DL	SS-9-1'	Total/NA	Solid	Organotins	190247
720-64901-20 - DL	SS-10-1'	Total/NA	Solid	Organotins	190247
720-64901-21	FD-1	Total/NA	Solid	Organotins	190247
720-64901-22	FD-2	Total/NA	Solid	Organotins	190247
720-64901-22 - DL	FD-2	Total/NA	Solid	Organotins	190247

GC Semi VOA

Prep Batch: 182263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	3546	
720-64901-2	SS-1-1'	Total/NA	Solid	3546	
720-64901-3	SS-2-0.5'	Total/NA	Solid	3546	
720-64901-4	SS-2-1'	Total/NA	Solid	3546	
720-64901-5	SS-3-0.5'	Total/NA	Solid	3546	
720-64901-6	SS-3-1'	Total/NA	Solid	3546	
720-64901-7	SS-4-0.5'	Total/NA	Solid	3546	
720-64901-8	SS-4-1'	Total/NA	Solid	3546	
720-64901-9	SS-5-0.5'	Total/NA	Solid	3546	
720-64901-11	SS-6-0.5'	Total/NA	Solid	3546	
LCS 720-182263/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 720-182263/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 182305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-2	SS-1-1'	Total/NA	Solid	8015B	182263
720-64901-3	SS-2-0.5'	Total/NA	Solid	8015B	182263
720-64901-4	SS-2-1'	Total/NA	Solid	8015B	182263
720-64901-5	SS-3-0.5'	Total/NA	Solid	8015B	182263

Analysis Batch: 182306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-11	SS-6-0.5'	Total/NA	Solid	8015B	182263
LCS 720-182263/2-A	Lab Control Sample	Total/NA	Solid	8015B	182263
MB 720-182263/1-A	Method Blank	Total/NA	Solid	8015B	182263

Analysis Batch: 182320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-10	SS-5-1'	Total/NA	Solid	8082	182348
720-64901-11	SS-6-0.5'	Total/NA	Solid	8082	182348
720-64901-12	SS-6-1'	Total/NA	Solid	8082	182348

Analysis Batch: 182321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	8082	182348
720-64901-1 MS	SS-1-0.5'	Total/NA	Solid	8082	182348
720-64901-1 MSD	SS-1-0.5'	Total/NA	Solid	8082	182348
720-64901-2	SS-1-1'	Total/NA	Solid	8082	182348

TestAmerica Pleasanton

QC Association Summary

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

GC Semi VOA (Continued)

Analysis Batch: 182321 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-3	SS-2-0.5'	Total/NA	Solid	8082	182348
720-64901-4	SS-2-1'	Total/NA	Solid	8082	182348
720-64901-5	SS-3-0.5'	Total/NA	Solid	8082	182348
LCS 720-182348/2-A	Lab Control Sample	Total/NA	Solid	8082	182348
MB 720-182348/1-A	Method Blank	Total/NA	Solid	8082	182348

Analysis Batch: 182323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-6	SS-3-1'	Total/NA	Solid	8015B	182263
720-64901-7	SS-4-0.5'	Total/NA	Solid	8015B	182263
720-64901-9	SS-5-0.5'	Total/NA	Solid	8015B	182263

Prep Batch: 182348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	3546	
720-64901-1 MS	SS-1-0.5'	Total/NA	Solid	3546	
720-64901-1 MSD	SS-1-0.5'	Total/NA	Solid	3546	
720-64901-2	SS-1-1'	Total/NA	Solid	3546	
720-64901-3	SS-2-0.5'	Total/NA	Solid	3546	
720-64901-4	SS-2-1'	Total/NA	Solid	3546	
720-64901-5	SS-3-0.5'	Total/NA	Solid	3546	
720-64901-6	SS-3-1'	Total/NA	Solid	3546	
720-64901-7	SS-4-0.5'	Total/NA	Solid	3546	
720-64901-8	SS-4-1'	Total/NA	Solid	3546	
720-64901-9	SS-5-0.5'	Total/NA	Solid	3546	
720-64901-10	SS-5-1'	Total/NA	Solid	3546	
720-64901-11	SS-6-0.5'	Total/NA	Solid	3546	
720-64901-12	SS-6-1'	Total/NA	Solid	3546	
720-64901-13	SS-7-0.5'	Total/NA	Solid	3546	
720-64901-14	SS-7-1'	Total/NA	Solid	3546	
720-64901-15	SS-8-0.5'	Total/NA	Solid	3546	
720-64901-16	SS-8-1'	Total/NA	Solid	3546	
720-64901-17	SS-9-0.5'	Total/NA	Solid	3546	
720-64901-18	SS-9-1'	Total/NA	Solid	3546	
720-64901-19	SS-10-0.5'	Total/NA	Solid	3546	
720-64901-20	SS-10-1'	Total/NA	Solid	3546	
LCS 720-182348/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 720-182348/1-A	Method Blank	Total/NA	Solid	3546	

Prep Batch: 182368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-10	SS-5-1'	Total/NA	Solid	3546	
720-64901-12	SS-6-1'	Total/NA	Solid	3546	
720-64901-13	SS-7-0.5'	Total/NA	Solid	3546	
720-64901-14	SS-7-1'	Total/NA	Solid	3546	
720-64901-15	SS-8-0.5'	Total/NA	Solid	3546	
720-64901-16	SS-8-1'	Total/NA	Solid	3546	
720-64901-17	SS-9-0.5'	Total/NA	Solid	3546	
720-64901-18	SS-9-1'	Total/NA	Solid	3546	
720-64901-19	SS-10-0.5'	Total/NA	Solid	3546	
720-64901-20	SS-10-1'	Total/NA	Solid	3546	

TestAmerica Pleasanton



QC Association Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

GC Semi VOA (Continued)

Prep Batch: 182368 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-21	FD-1	Total/NA	Solid	3546	
720-64901-22	FD-2	Total/NA	Solid	3546	
LCS 720-182368/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 720-182368/1-A	Method Blank	Total/NA	Solid	3546	

Prep Batch: 182388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-21	FD-1	Total/NA	Solid	3546	
720-64901-22	FD-2	Total/NA	Solid	3546	
LCS 720-182388/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 720-182388/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 182412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-13	SS-7-0.5'	Total/NA	Solid	8082	182348
720-64901-14	SS-7-1'	Total/NA	Solid	8082	182348
720-64901-15	SS-8-0.5'	Total/NA	Solid	8082	182348
720-64901-16	SS-8-1'	Total/NA	Solid	8082	182348
720-64901-17	SS-9-0.5'	Total/NA	Solid	8082	182348
720-64901-18	SS-9-1'	Total/NA	Solid	8082	182348
720-64901-22	FD-2	Total/NA	Solid	8082	182388
LCS 720-182388/2-A	Lab Control Sample	Total/NA	Solid	8082	182388
MB 720-182388/1-A	Method Blank	Total/NA	Solid	8082	182388

Analysis Batch: 182413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-6	SS-3-1'	Total/NA	Solid	8082	182348
720-64901-7	SS-4-0.5'	Total/NA	Solid	8082	182348
720-64901-8	SS-4-1'	Total/NA	Solid	8082	182348
720-64901-9	SS-5-0.5'	Total/NA	Solid	8082	182348
720-64901-19	SS-10-0.5'	Total/NA	Solid	8082	182348
720-64901-20	SS-10-1'	Total/NA	Solid	8082	182348
720-64901-21	FD-1	Total/NA	Solid	8082	182388

Analysis Batch: 182422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-8	SS-4-1'	Total/NA	Solid	8015B	182263
720-64901-12	SS-6-1'	Total/NA	Solid	8015B	182368
720-64901-13	SS-7-0.5'	Total/NA	Solid	8015B	182368
720-64901-14	SS-7-1'	Total/NA	Solid	8015B	182368
720-64901-15	SS-8-0.5'	Total/NA	Solid	8015B	182368
720-64901-20	SS-10-1'	Total/NA	Solid	8015B	182368

Analysis Batch: 182423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	8015B	182263
720-64901-10	SS-5-1'	Total/NA	Solid	8015B	182368
720-64901-21	FD-1	Total/NA	Solid	8015B	182368
720-64901-22	FD-2	Total/NA	Solid	8015B	182368
LCS 720-182368/2-A	Lab Control Sample	Total/NA	Solid	8015B	182368
MB 720-182368/1-A	Method Blank	Total/NA	Solid	8015B	182368

TestAmerica Pleasanton



QC Association Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Analysis Batch: 182528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-16	SS-8-1'	Total/NA	Solid	8015B	182368
720-64901-17	SS-9-0.5'	Total/NA	Solid	8015B	182368
720-64901-18	SS-9-1'	Total/NA	Solid	8015B	182368
720-64901-19	SS-10-0.5'	Total/NA	Solid	8015B	182368

Metals

Prep Batch: 182367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	7471A	
720-64901-2	SS-1-1'	Total/NA	Solid	7471A	
720-64901-3	SS-2-0.5'	Total/NA	Solid	7471A	
720-64901-4	SS-2-1'	Total/NA	Solid	7471A	
720-64901-5	SS-3-0.5'	Total/NA	Solid	7471A	
720-64901-6	SS-3-1'	Total/NA	Solid	7471A	
720-64901-7	SS-4-0.5'	Total/NA	Solid	7471A	
720-64901-8	SS-4-1'	Total/NA	Solid	7471A	
720-64901-9	SS-5-0.5'	Total/NA	Solid	7471A	
720-64901-10	SS-5-1'	Total/NA	Solid	7471A	
LCS 720-182367/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 720-182367/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
MB 720-182367/1-A	Method Blank	Total/NA	Solid	7471A	

Prep Batch: 182381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	3050B	
720-64901-2	SS-1-1'	Total/NA	Solid	3050B	
720-64901-3	SS-2-0.5'	Total/NA	Solid	3050B	
720-64901-4	SS-2-1'	Total/NA	Solid	3050B	
720-64901-5	SS-3-0.5'	Total/NA	Solid	3050B	
720-64901-6	SS-3-1'	Total/NA	Solid	3050B	
720-64901-7	SS-4-0.5'	Total/NA	Solid	3050B	
720-64901-8	SS-4-1'	Total/NA	Solid	3050B	
720-64901-9	SS-5-0.5'	Total/NA	Solid	3050B	
720-64901-10	SS-5-1'	Total/NA	Solid	3050B	
720-64901-11	SS-6-0.5'	Total/NA	Solid	3050B	
LCS 720-182381/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-182381/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-182381/25-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-182381/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 182392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-12	SS-6-1'	Total/NA	Solid	3050B	
720-64901-13	SS-7-0.5'	Total/NA	Solid	3050B	
720-64901-14	SS-7-1'	Total/NA	Solid	3050B	
720-64901-15	SS-8-0.5'	Total/NA	Solid	3050B	
720-64901-16	SS-8-1'	Total/NA	Solid	3050B	
720-64901-17	SS-9-0.5'	Total/NA	Solid	3050B	
720-64901-18	SS-9-1'	Total/NA	Solid	3050B	
720-64901-19	SS-10-0.5'	Total/NA	Solid	3050B	
720-64901-20	SS-10-1'	Total/NA	Solid	3050B	
720-64901-21	FD-1	Total/NA	Solid	3050B	

TestAmerica Pleasanton

QC Association Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1



Metals (Continued)

Prep Batch: 182392 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-22	FD-2	Total/NA	Solid	3050B	
LCS 720-182392/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-182392/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-182392/25-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-182392/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 182393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-11	SS-6-0.5'	Total/NA	Solid	7471A	
720-64901-12	SS-6-1'	Total/NA	Solid	7471A	
720-64901-13	SS-7-0.5'	Total/NA	Solid	7471A	
720-64901-14	SS-7-1'	Total/NA	Solid	7471A	
720-64901-15	SS-8-0.5'	Total/NA	Solid	7471A	
720-64901-16	SS-8-1'	Total/NA	Solid	7471A	
720-64901-17	SS-9-0.5'	Total/NA	Solid	7471A	
720-64901-18	SS-9-1'	Total/NA	Solid	7471A	
720-64901-19	SS-10-0.5'	Total/NA	Solid	7471A	
720-64901-20	SS-10-1'	Total/NA	Solid	7471A	
720-64901-21	FD-1	Total/NA	Solid	7471A	
720-64901-22	FD-2	Total/NA	Solid	7471A	
LCS 720-182393/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 720-182393/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
MB 720-182393/1-A	Method Blank	Total/NA	Solid	7471A	

Analysis Batch: 182451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	6010B	182381
720-64901-2	SS-1-1'	Total/NA	Solid	6010B	182381
720-64901-3	SS-2-0.5'	Total/NA	Solid	6010B	182381
720-64901-4	SS-2-1'	Total/NA	Solid	6010B	182381
720-64901-5	SS-3-0.5'	Total/NA	Solid	6010B	182381
720-64901-6	SS-3-1'	Total/NA	Solid	6010B	182381
720-64901-7	SS-4-0.5'	Total/NA	Solid	6010B	182381
720-64901-8	SS-4-1'	Total/NA	Solid	6010B	182381
720-64901-9	SS-5-0.5'	Total/NA	Solid	6010B	182381
720-64901-10	SS-5-1'	Total/NA	Solid	6010B	182381
720-64901-11	SS-6-0.5'	Total/NA	Solid	6010B	182381
LCS 720-182381/2-A	Lab Control Sample	Total/NA	Solid	6010B	182381
LCSD 720-182381/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	182381
LCSSRM 720-182381/25-A	Lab Control Sample	Total/NA	Solid	6010B	182381
MB 720-182381/1-A	Method Blank	Total/NA	Solid	6010B	182381

Analysis Batch: 182468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-182392/2-A	Lab Control Sample	Total/NA	Solid	6010B	182392
LCSD 720-182392/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	182392
LCSSRM 720-182392/25-A	Lab Control Sample	Total/NA	Solid	6010B	182392
MB 720-182392/1-A	Method Blank	Total/NA	Solid	6010B	182392

TestAmerica Pleasanton

QC Association Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Metals (Continued)

Analysis Batch: 182486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-11	SS-6-0.5'	Total/NA	Solid	7471A	182393
720-64901-12	SS-6-1'	Total/NA	Solid	7471A	182393
720-64901-13	SS-7-0.5'	Total/NA	Solid	7471A	182393
720-64901-14	SS-7-1'	Total/NA	Solid	7471A	182393
720-64901-15	SS-8-0.5'	Total/NA	Solid	7471A	182393
720-64901-16	SS-8-1'	Total/NA	Solid	7471A	182393
720-64901-17	SS-9-0.5'	Total/NA	Solid	7471A	182393
720-64901-18	SS-9-1'	Total/NA	Solid	7471A	182393
720-64901-19	SS-10-0.5'	Total/NA	Solid	7471A	182393
720-64901-20	SS-10-1'	Total/NA	Solid	7471A	182393
720-64901-21	FD-1	Total/NA	Solid	7471A	182393
720-64901-22	FD-2	Total/NA	Solid	7471A	182393
LCS 720-182393/2-A	Lab Control Sample	Total/NA	Solid	7471A	182393
LCSD 720-182393/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	182393
MB 720-182393/1-A	Method Blank	Total/NA	Solid	7471A	182393

Analysis Batch: 182500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-1	SS-1-0.5'	Total/NA	Solid	7471A	182367
720-64901-2	SS-1-1'	Total/NA	Solid	7471A	182367
720-64901-3	SS-2-0.5'	Total/NA	Solid	7471A	182367
720-64901-4	SS-2-1'	Total/NA	Solid	7471A	182367
720-64901-5	SS-3-0.5'	Total/NA	Solid	7471A	182367
720-64901-6	SS-3-1'	Total/NA	Solid	7471A	182367
720-64901-7	SS-4-0.5'	Total/NA	Solid	7471A	182367
720-64901-8	SS-4-1'	Total/NA	Solid	7471A	182367
720-64901-9	SS-5-0.5'	Total/NA	Solid	7471A	182367
720-64901-10	SS-5-1'	Total/NA	Solid	7471A	182367
LCS 720-182367/2-A	Lab Control Sample	Total/NA	Solid	7471A	182367
LCSD 720-182367/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	182367
MB 720-182367/1-A	Method Blank	Total/NA	Solid	7471A	182367

Analysis Batch: 182523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-5	SS-3-0.5'	Total/NA	Solid	6010B	182381
720-64901-9	SS-5-0.5'	Total/NA	Solid	6010B	182381
720-64901-10	SS-5-1'	Total/NA	Solid	6010B	182381
720-64901-11	SS-6-0.5'	Total/NA	Solid	6010B	182381

Analysis Batch: 182527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-12	SS-6-1'	Total/NA	Solid	6010B	182392
720-64901-13	SS-7-0.5'	Total/NA	Solid	6010B	182392
720-64901-14	SS-7-1'	Total/NA	Solid	6010B	182392
720-64901-15	SS-8-0.5'	Total/NA	Solid	6010B	182392
720-64901-16	SS-8-1'	Total/NA	Solid	6010B	182392
720-64901-17	SS-9-0.5'	Total/NA	Solid	6010B	182392
720-64901-18	SS-9-1'	Total/NA	Solid	6010B	182392
720-64901-19	SS-10-0.5'	Total/NA	Solid	6010B	182392
720-64901-20	SS-10-1'	Total/NA	Solid	6010B	182392
720-64901-21	FD-1	Total/NA	Solid	6010B	182392

TestAmerica Pleasanton



QC Association Summary

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Metals (Continued)

Analysis Batch: 182527 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-22	FD-2	Total/NA	Solid	6010B	182392

Analysis Batch: 182594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-12	SS-6-1'	Total/NA	Solid	6010B	182392
720-64901-13	SS-7-0.5'	Total/NA	Solid	6010B	182392
720-64901-14	SS-7-1'	Total/NA	Solid	6010B	182392
720-64901-15	SS-8-0.5'	Total/NA	Solid	6010B	182392
720-64901-16	SS-8-1'	Total/NA	Solid	6010B	182392
720-64901-17	SS-9-0.5'	Total/NA	Solid	6010B	182392
720-64901-17	SS-9-0.5'	Total/NA	Solid	6010B	182392
720-64901-18	SS-9-1'	Total/NA	Solid	6010B	182392
720-64901-19	SS-10-0.5'	Total/NA	Solid	6010B	182392
720-64901-20	SS-10-1'	Total/NA	Solid	6010B	182392
720-64901-22	FD-2	Total/NA	Solid	6010B	182392

Analysis Batch: 182595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-5	SS-3-0.5'	Total/NA	Solid	6010B	182381
720-64901-9	SS-5-0.5'	Total/NA	Solid	6010B	182381
720-64901-11	SS-6-0.5'	Total/NA	Solid	6010B	182381

Analysis Batch: 182602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-21	FD-1	Total/NA	Solid	6010B	182392

Analysis Batch: 182603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-64901-10	SS-5-1'	Total/NA	Solid	6010B	182381

TestAmerica Pleasanton

Lab Chronicle

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-1-0.5'

Lab Sample ID: 720-64901-1

Date Collected: 05/19/15 07:31

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		5	182430	05/27/15 23:58	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190241	05/23/15 15:17	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/27/15 20:49	ERB	TAL SEA
Total/NA	Prep	3546			182263	05/22/15 12:51	DFR	TAL PLS
Total/NA	Analysis	8015B		5	182423	05/27/15 15:07	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		1	182321	05/26/15 22:22	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 12:32	EFH	TAL PLS
Total/NA	Prep	7471A			182367	05/26/15 16:15	ECT	TAL PLS
Total/NA	Analysis	7471A		1	182500	05/27/15 19:09	SLK	TAL PLS

Client Sample ID: SS-1-1'

Lab Sample ID: 720-64901-2

Date Collected: 05/19/15 07:35

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		10	182536	05/28/15 18:01	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190241	05/23/15 15:17	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/27/15 21:12	ERB	TAL SEA
Total/NA	Prep	Organotin Prep	DL		190241	05/23/15 15:17	ERZ	TAL SEA
Total/NA	Analysis	Organotins	DL	5	190417	05/27/15 21:35	ERB	TAL SEA
Total/NA	Prep	3546			182263	05/22/15 12:51	DFR	TAL PLS
Total/NA	Analysis	8015B		10	182305	05/23/15 23:01	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		1	182321	05/26/15 22:39	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 12:37	EFH	TAL PLS
Total/NA	Prep	7471A			182367	05/26/15 16:15	ECT	TAL PLS
Total/NA	Analysis	7471A		5	182500	05/27/15 20:07	SLK	TAL PLS

Client Sample ID: SS-2-0.5'

Lab Sample ID: 720-64901-3

Date Collected: 05/19/15 07:43

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		5	182550	05/28/15 16:38	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190241	05/23/15 15:17	ERZ	TAL SEA
Total/NA	Analysis	Organotins		5	190365	05/27/15 01:57	ERB	TAL SEA
Total/NA	Prep	3546			182263	05/22/15 12:51	DFR	TAL PLS

TestAmerica Pleasanton

Lab Chronicle

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-2-0.5'

Lab Sample ID: 720-64901-3

Date Collected: 05/19/15 07:43

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015B		10	182305	05/24/15 00:58	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		1	182321	05/26/15 22:55	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 12:42	EFH	TAL PLS
Total/NA	Prep	7471A			182367	05/26/15 16:15	ECT	TAL PLS
Total/NA	Analysis	7471A		1	182500	05/27/15 19:14	SLK	TAL PLS

Client Sample ID: SS-2-1'

Lab Sample ID: 720-64901-4

Date Collected: 05/19/15 07:47

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		5	182550	05/28/15 16:59	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190241	05/23/15 15:17	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190365	05/27/15 02:20	ERB	TAL SEA
Total/NA	Prep	3546			182263	05/22/15 12:51	DFR	TAL PLS
Total/NA	Analysis	8015B		10	182305	05/24/15 01:27	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		1	182321	05/26/15 23:12	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 12:47	EFH	TAL PLS
Total/NA	Prep	7471A			182367	05/26/15 16:15	ECT	TAL PLS
Total/NA	Analysis	7471A		5	182500	05/27/15 20:10	SLK	TAL PLS

Client Sample ID: SS-3-0.5'

Lab Sample ID: 720-64901-5

Date Collected: 05/19/15 07:55

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		2	182550	05/28/15 17:21	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190241	05/23/15 15:17	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190365	05/27/15 02:43	ERB	TAL SEA
Total/NA	Prep	3546			182263	05/22/15 12:51	DFR	TAL PLS
Total/NA	Analysis	8015B		2	182305	05/24/15 01:56	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		1	182321	05/26/15 23:29	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		1	182523	05/27/15 22:41	SLK	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		1	182595	05/28/15 18:15	CAM	TAL PLS

TestAmerica Pleasanton

Lab Chronicle

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-3-0.5'
Date Collected: 05/19/15 07:55
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 12:52	EFH	TAL PLS
Total/NA	Prep	7471A			182367	05/26/15 16:15	ECT	TAL PLS
Total/NA	Analysis	7471A		1	182500	05/27/15 19:19	SLK	TAL PLS

Client Sample ID: SS-3-1'
Date Collected: 05/19/15 07:59
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		2	182550	05/28/15 17:42	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190241	05/23/15 15:17	ERZ	TAL SEA
Total/NA	Analysis	Organotins		5	190417	05/27/15 21:58	ERB	TAL SEA
Total/NA	Prep	Organotin Prep	DL		190241	05/23/15 15:17	ERZ	TAL SEA
Total/NA	Analysis	Organotins	DL	25	190539	05/28/15 12:01	ERB	TAL SEA
Total/NA	Prep	3546			182263	05/22/15 12:51	DFR	TAL PLS
Total/NA	Analysis	8015B		5	182323	05/27/15 02:18	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		5	182413	05/27/15 10:49	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 13:07	EFH	TAL PLS
Total/NA	Prep	7471A			182367	05/26/15 16:15	ECT	TAL PLS
Total/NA	Analysis	7471A		10	182500	05/27/15 20:12	SLK	TAL PLS

Client Sample ID: SS-4-0.5'
Date Collected: 05/19/15 08:19
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		2	182536	05/28/15 18:27	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 00:15	ERB	TAL SEA
Total/NA	Prep	3546			182263	05/22/15 12:51	DFR	TAL PLS
Total/NA	Analysis	8015B		5	182323	05/27/15 02:42	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		5	182413	05/27/15 09:59	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 13:12	EFH	TAL PLS
Total/NA	Prep	7471A			182367	05/26/15 16:15	ECT	TAL PLS
Total/NA	Analysis	7471A		100	182500	05/27/15 20:14	SLK	TAL PLS

TestAmerica Pleasanton

Lab Chronicle

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-4-1'

Lab Sample ID: 720-64901-8

Date Collected: 05/19/15 08:28

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		10	182536	05/28/15 18:52	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 00:38	ERB	TAL SEA
Total/NA	Prep	3546			182263	05/22/15 12:51	DFR	TAL PLS
Total/NA	Analysis	8015B		50	182422	05/27/15 13:12	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		5	182413	05/27/15 10:16	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 13:17	EFH	TAL PLS
Total/NA	Prep	7471A			182367	05/26/15 16:15	ECT	TAL PLS
Total/NA	Analysis	7471A		100	182500	05/27/15 20:22	SLK	TAL PLS

Client Sample ID: SS-5-0.5'

Lab Sample ID: 720-64901-9

Date Collected: 05/19/15 08:40

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		5	182478	05/28/15 04:32	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 01:01	ERB	TAL SEA
Total/NA	Prep	3546			182263	05/22/15 12:51	DFR	TAL PLS
Total/NA	Analysis	8015B		1	182323	05/27/15 01:53	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		1	182413	05/27/15 10:32	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		1	182523	05/27/15 22:46	SLK	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		1	182595	05/28/15 18:20	CAM	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 13:22	EFH	TAL PLS
Total/NA	Prep	7471A			182367	05/26/15 16:15	ECT	TAL PLS
Total/NA	Analysis	7471A		1	182500	05/27/15 19:55	SLK	TAL PLS

Client Sample ID: SS-5-1'

Lab Sample ID: 720-64901-10

Date Collected: 05/19/15 08:47

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		5	182478	05/28/15 04:53	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA

TestAmerica Pleasanton

Lab Chronicle

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-5-1'

Lab Sample ID: 720-64901-10

Date Collected: 05/19/15 08:47

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Organotins		1	190417	05/28/15 01:23	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 18:29	JRD	TAL PLS
Total/NA	Analysis	8015B		2	182423	05/27/15 21:53	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		1	182320	05/26/15 22:22	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		1	182523	05/27/15 22:51	SLK	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 13:27	EFH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		1	182603	05/28/15 20:10	CAM	TAL PLS
Total/NA	Prep	7471A			182367	05/26/15 16:15	ECT	TAL PLS
Total/NA	Analysis	7471A		1	182500	05/27/15 19:57	SLK	TAL PLS

Client Sample ID: SS-6-0.5'

Lab Sample ID: 720-64901-11

Date Collected: 05/19/15 09:01

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		2	182478	05/28/15 05:15	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 01:46	ERB	TAL SEA
Total/NA	Prep	3546			182263	05/22/15 12:51	DFR	TAL PLS
Total/NA	Analysis	8015B		1	182306	05/24/15 02:55	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		1	182320	05/26/15 22:39	DCH	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		1	182523	05/27/15 22:55	SLK	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		1	182595	05/28/15 18:29	CAM	TAL PLS
Total/NA	Prep	3050B			182381	05/26/15 17:30	ASB	TAL PLS
Total/NA	Analysis	6010B		4	182451	05/27/15 13:32	EFH	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		1	182486	05/27/15 16:44	SLK	TAL PLS

Client Sample ID: SS-6-1'

Lab Sample ID: 720-64901-12

Date Collected: 05/19/15 09:10

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		2	182478	05/28/15 05:36	MQL	TAL PLS

TestAmerica Pleasanton

Lab Chronicle

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-6-1'
Date Collected: 05/19/15 09:10
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 02:09	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		2	182422	05/27/15 18:28	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		1	182320	05/26/15 22:55	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 02:18	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182594	05/28/15 17:10	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		5	182486	05/27/15 17:36	SLK	TAL PLS

Client Sample ID: SS-7-0.5'
Date Collected: 05/19/15 09:18
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		10	182478	05/28/15 05:58	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 02:32	ERB	TAL SEA
Total/NA	Prep	Organotin Prep	DL		190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins	DL	10	190539	05/28/15 12:24	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		5	182422	05/27/15 18:57	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		2	182412	05/27/15 09:59	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 02:22	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182594	05/28/15 17:14	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		5	182486	05/27/15 17:38	SLK	TAL PLS

Client Sample ID: SS-7-1'
Date Collected: 05/19/15 09:31
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		5	182478	05/28/15 06:19	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA

TestAmerica Pleasanton

Lab Chronicle

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-7-1'

Date Collected: 05/19/15 09:31

Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Organotins		1	190417	05/28/15 03:41	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		5	182422	05/27/15 19:26	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		10	182412	05/27/15 10:16	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 02:27	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182594	05/28/15 17:19	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		5	182486	05/27/15 17:40	SLK	TAL PLS

Client Sample ID: SS-8-0.5'

Date Collected: 05/19/15 09:36

Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		5	182478	05/28/15 06:41	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 04:03	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		3	182422	05/27/15 19:56	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		5	182412	05/27/15 10:32	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 02:32	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182594	05/28/15 17:24	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		10	182486	05/27/15 17:42	SLK	TAL PLS

Client Sample ID: SS-8-1'

Date Collected: 05/19/15 09:51

Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		5	182478	05/28/15 07:02	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 04:26	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		5	182528	05/28/15 11:23	JXL	TAL PLS

TestAmerica Pleasanton

Lab Chronicle

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-8-1'
Date Collected: 05/19/15 09:51
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		10	182412	05/27/15 10:49	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 02:36	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182594	05/28/15 17:28	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		100	182486	05/27/15 17:45	SLK	TAL PLS

Client Sample ID: SS-9-0.5'
Date Collected: 05/19/15 10:26
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182401	05/26/15 23:13	DFR	TAL PLS
Total/NA	Analysis	8270C		5	182478	05/28/15 07:24	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 04:49	ERB	TAL SEA
Total/NA	Prep	Organotin Prep	DL		190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins	DL	5	190539	05/28/15 12:47	ERB	TAL SEA
Total/NA	Prep	Organotin Prep	DL2		190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins	DL2	50	190539	05/28/15 13:10	ERB	TAL SEA
Total/NA	Prep	Organotin Prep	DL3		190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins	DL3	250	190539	05/28/15 15:05	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		10	182528	05/28/15 11:47	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		10	182412	05/27/15 11:06	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 02:41	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		10	182594	05/28/15 17:47	CAM	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		50	182594	05/28/15 17:52	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		100	182486	05/27/15 17:48	SLK	TAL PLS

Client Sample ID: SS-9-1'
Date Collected: 05/19/15 10:20
Date Received: 05/19/15 15:00

Lab Sample ID: 720-64901-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182427	05/27/15 09:39	NVP	TAL PLS

TestAmerica Pleasanton



Lab Chronicle

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-9-1'

Lab Sample ID: 720-64901-18

Date Collected: 05/19/15 10:20

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270C		10	182550	05/28/15 14:50	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 05:11	ERB	TAL SEA
Total/NA	Prep	Organotin Prep	DL		190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins	DL	10	190539	05/28/15 13:33	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		20	182528	05/28/15 12:11	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		50	182412	05/27/15 11:22	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 02:46	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182594	05/28/15 17:33	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		100	182486	05/27/15 17:50	SLK	TAL PLS

Client Sample ID: SS-10-0.5'

Lab Sample ID: 720-64901-19

Date Collected: 05/19/15 10:10

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182427	05/27/15 09:39	NVP	TAL PLS
Total/NA	Analysis	8270C		1	182550	05/28/15 15:11	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 05:34	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		1	182528	05/28/15 10:59	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		2	182413	05/27/15 11:06	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 02:50	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		1	182594	05/28/15 17:57	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		10	182486	05/27/15 17:52	SLK	TAL PLS

Client Sample ID: SS-10-1'

Lab Sample ID: 720-64901-20

Date Collected: 05/19/15 10:14

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182427	05/27/15 09:39	NVP	TAL PLS
Total/NA	Analysis	8270C		2	182550	05/28/15 15:33	MQL	TAL PLS

TestAmerica Pleasanton

Lab Chronicle

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: SS-10-1'

Lab Sample ID: 720-64901-20

Date Collected: 05/19/15 10:14

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190417	05/28/15 05:57	ERB	TAL SEA
Total/NA	Prep	Organotin Prep	DL		190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins	DL	10	190539	05/28/15 13:56	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		3	182422	05/27/15 22:22	JXL	TAL PLS
Total/NA	Prep	3546			182348	05/26/15 13:18	JRD	TAL PLS
Total/NA	Analysis	8082		10	182413	05/27/15 11:22	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 02:55	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182594	05/28/15 18:02	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		10	182486	05/27/15 17:55	SLK	TAL PLS

Client Sample ID: FD-1

Lab Sample ID: 720-64901-21

Date Collected: 05/19/15 00:00

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182427	05/27/15 09:39	NVP	TAL PLS
Total/NA	Analysis	8270C		5	182550	05/28/15 15:54	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins		1	190539	05/28/15 10:53	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		3	182423	05/27/15 19:26	JXL	TAL PLS
Total/NA	Prep	3546			182388	05/26/15 19:49	JRD	TAL PLS
Total/NA	Analysis	8082		50	182413	05/27/15 15:46	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 03:00	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182602	05/28/15 20:05	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		10	182486	05/27/15 17:57	SLK	TAL PLS

Client Sample ID: FD-2

Lab Sample ID: 720-64901-22

Date Collected: 05/19/15 00:00

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			182427	05/27/15 09:39	NVP	TAL PLS
Total/NA	Analysis	8270C		2	182550	05/28/15 16:16	MQL	TAL PLS
Total/NA	Prep	Organotin Prep			190247	05/24/15 18:29	ERZ	TAL SEA

TestAmerica Pleasanton

Lab Chronicle

Client: URS Corporation
 Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Client Sample ID: FD-2

Lab Sample ID: 720-64901-22

Date Collected: 05/19/15 00:00

Matrix: Solid

Date Received: 05/19/15 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Organotins		1	190539	05/28/15 11:15	ERB	TAL SEA
Total/NA	Prep	Organotin Prep	DL		190247	05/24/15 18:29	ERZ	TAL SEA
Total/NA	Analysis	Organotins	DL	5	190539	05/28/15 11:38	ERB	TAL SEA
Total/NA	Prep	3546			182368	05/26/15 16:23	JRD	TAL PLS
Total/NA	Analysis	8015B		2	182423	05/27/15 19:56	JXL	TAL PLS
Total/NA	Prep	3546			182388	05/26/15 19:49	JRD	TAL PLS
Total/NA	Analysis	8082		5	182412	05/27/15 16:20	DCH	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		4	182527	05/28/15 03:14	SLK	TAL PLS
Total/NA	Prep	3050B			182392	05/26/15 20:54	ECT	TAL PLS
Total/NA	Analysis	6010B		1	182594	05/28/15 18:11	CAM	TAL PLS
Total/NA	Prep	7471A			182393	05/26/15 20:56	ECT	TAL PLS
Total/NA	Analysis	7471A		10	182486	05/27/15 18:04	SLK	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Method Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PLS
Organotins	Organotins, PSEP (GC/MS)	NONE	TAL SEA
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PLS
6010B	Metals (ICP)	SW846	TAL PLS
7471A	Mercury (CVAA)	SW846	TAL PLS

Protocol References:

NONE = NONE

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Pleasanton



Sample Summary

Client: URS Corporation
Project/Site: Blue Greenway 900 Innes

TestAmerica Job ID: 720-64901-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-64901-1	SS-1-0.5'	Solid	05/19/15 07:31	05/19/15 15:00
720-64901-2	SS-1-1'	Solid	05/19/15 07:35	05/19/15 15:00
720-64901-3	SS-2-0.5'	Solid	05/19/15 07:43	05/19/15 15:00
720-64901-4	SS-2-1'	Solid	05/19/15 07:47	05/19/15 15:00
720-64901-5	SS-3-0.5'	Solid	05/19/15 07:55	05/19/15 15:00
720-64901-6	SS-3-1'	Solid	05/19/15 07:59	05/19/15 15:00
720-64901-7	SS-4-0.5'	Solid	05/19/15 08:19	05/19/15 15:00
720-64901-8	SS-4-1'	Solid	05/19/15 08:28	05/19/15 15:00
720-64901-9	SS-5-0.5'	Solid	05/19/15 08:40	05/19/15 15:00
720-64901-10	SS-5-1'	Solid	05/19/15 08:47	05/19/15 15:00
720-64901-11	SS-6-0.5'	Solid	05/19/15 09:01	05/19/15 15:00
720-64901-12	SS-6-1'	Solid	05/19/15 09:10	05/19/15 15:00
720-64901-13	SS-7-0.5'	Solid	05/19/15 09:18	05/19/15 15:00
720-64901-14	SS-7-1'	Solid	05/19/15 09:31	05/19/15 15:00
720-64901-15	SS-8-0.5'	Solid	05/19/15 09:36	05/19/15 15:00
720-64901-16	SS-8-1'	Solid	05/19/15 09:51	05/19/15 15:00
720-64901-17	SS-9-0.5'	Solid	05/19/15 10:26	05/19/15 15:00
720-64901-18	SS-9-1'	Solid	05/19/15 10:20	05/19/15 15:00
720-64901-19	SS-10-0.5'	Solid	05/19/15 10:10	05/19/15 15:00
720-64901-20	SS-10-1'	Solid	05/19/15 10:14	05/19/15 15:00
720-64901-21	FD-1	Solid	05/19/15 00:00	05/19/15 15:00
720-64901-22	FD-2	Solid	05/19/15 00:00	05/19/15 15:00

TestAmerica Pleasanton

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA Pleasanton Chain of Custody
 1220 Quarry Lane • Pleasanton CA 94566-4756
 Phone: (925) 200-8007
 Fax: (925) 200-8007

Reference #: 161249
 Date: 5/19/15 Page 1 of 3

5/29/2015

Report To

Anal: Eric Seay
 Company: KECOM

Address: One Montecito, SE CA, 94104
 Email: ERIC_SEAY@KECOM.COM

Bill To: Col. Kutzman
 Phone: 415-243-3845

Sample ID: 55-1-05 Date: 5/19/15 Time: 731 Mat: 5 Present: None

Sample ID	Date	Time	Mat	Present
55-1-05	5/19/15	731	5	None
55-1-1		735		
55-2-05		743		
55-2-1		747		
55-3-05		755		
55-3-1		759		
55-4-05		819		
55-4-1		828		
55-5-05		840		
55-5-1		847		

Project Info: Project Name: Blue Greenway # of Containers: 1

Sample Receipt: Head Space: 3.3°C

Analysis Request:

- Volatile Organics GC/MS (VOCs) EPA 8260B
- HVOCs by EPA 8260B
- EPA 8260B: Gas BTEX 5 Oxygenates DCA, EDB Ethanol
- TEPH EPA 8015B Silica Gel Diesel Motor Oil Other
- SemiVolatile Organics GC/MS EPA 8270C
- PNA/PAH's by EPA 8270C 8270C SIM
- Oil and Grease Petroleum (EPA 1664/9071) Total
- Pesticides EPA 8081 EPA 8082
- CAM17 Metals (EPA 6010/7470/7471)
- Metals: 6010B 200.7 Lead LUFT RCRA Other:
- Metals: 6020 200.8 (ICP-MS):
- W.E.T (STLC) W.E.T (DI) TCLP
- Hex. Chrom by EPA 7196 or EPA 7199
- pH 6040 SM4500
- Spec. Cond. Alkalinity TSS SS TDS
- Anions: Cl SO₄ NO₃ F Br NO₂ PO₄
- Perchlorate by EPA 314.0
- COD EPA 410.4 SM5220D Turbidity
- Organotins

720-64901 Chain of Custody

1) Relinquished by: Signature: [Signature] Time: 1215 Date: 5/19/15
 Printed Name: EVAN BRUNGER
 Company: KECOM

2) Relinquished by: Signature: [Signature] Time: 1200 Date: 5/19/15
 Printed Name: [Name]
 Company: [Company]

3) Relinquished by: Signature: [Signature] Time: 1500 Date: 5/19/15
 Printed Name: [Name]
 Company: [Company]

Received by: Signature: [Signature] Time: 1215 Date: 5/19/15
 Printed Name: [Name]
 Company: [Company]

Received by: Signature: [Signature] Time: 1500 Date: 5/19/15
 Printed Name: [Name]
 Company: [Company]

Received by: Signature: [Signature] Time: 5/19/15 Date: 5/19/15
 Printed Name: [Name]
 Company: [Company]

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA Pleasanton Chain of Custody
 1220 Quarry Lane • Pleasanton CA 94566-4756
 Phone: (925) 484-1919 • Fax (925) 500-3002

Reference #: 161249
 Date 5/19/15 Page 2 of 3

Report To

Ant: Eye Skov

Company: AXCOM

Address: One Montgomery St, CA, 94104

Email: ERK.SKOV@AXCOM.COM

Bill To: Kat Johnson

Sampled By: ES/ES

Phone: 415-243-2845

Attn: Kat Johnson

Analysis Request

Volatile Organics GC/MS (VOCs)
 EPA 8260B
 HVOCs by EPA 8260B
 EPA 8260B: Gas BTEX
 5 Oxygenates DCA, ED8 Ethanol
 TEPH EPA 8015B Silica Gel
 Diesel Motor Oil Other
 SemiVolatile Organics GC/MS
 EPA 8270C
 PNA/PAH's by 8270C
 8270C SIM
 Oil and Grease Petroleum
 (EPA 1864/9071) Total
 Pesticides EPA 8081
 PCB EPA 8082
 CAM17 Metals
 (EPA 6010/7470/7471)
 Metals: 6010B 200.7
 Lead LUFT RCRA Other:
 Metals: 6020 200.8
 (ICP-MS):
 W.E.T (STLC)
 W.E.T (DI) TCLP
 Hex. Chrom by EPA 7196
 or EPA 7199
 pH 9040
 SM4500
 Spec. Cond. Alkalinity
 TSS SS TDS
 Anions: Cl SO₄ NO₃ F
 Br NO₂ PO₄
 Perchlorate by EPA 314.0
 COD EPA 410.4 SM5220D
 Turbidity
 X Organometals

Sample ID	Date	Time	Mat	Preserv	Analysis Request
SS-6-0.5'	5/9/15	901	S	None	
SS-6-1'		910			
SS-7-0.5'		918			
SS-7-1'		931			
SS-8-0.5'		936			
SS-8-1'		951			
SS-9-0.5'		1026			
SS-9-1'		1020			
SS-10-0.5'		1010			
SS-10-1'		1014			

Project Info

Project Name #: Blue Greenway

Head Space: 900 tubes

Temp: 3.3c

PO#: 20063558

Y/N: N

Sample Receipt

of Containers: 1

Signature: [Signature]

Printed Name: Zen Bruger

Company: AXCOM

If yes, please call with payment information ASAP

Day	Day	Day	Day	Other
10	9	4	3	1
A	Day	Day	Day	Day

Report: Routine Level 3 Level 4 EDD EDF
 Special Instructions / Comments: Global ID

See Terms and conditions on reverse

1) Relinquished by: [Signature] Time: 1215
 Signature: [Signature]
 Printed Name: Zen Bruger
 Company: AXCOM
 Date: 5/19/15

2) Relinquished by: [Signature] Time: 1800
 Signature: [Signature]
 Printed Name: Sam Bampney
 Company: TS
 Date: 5/19/15

3) Relinquished by: [Signature] Time: 1500
 Signature: [Signature]
 Printed Name: Julien
 Company: TS
 Date: 5-19-15

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA Pleasanton Chain of Custody
 1220 Quarry Lane • Pleasanton CA 94566-4756
 Phone: (925) 709-6498 Fax: (925) 709-6498

Reference #: 161219
 Date: 5/19/15 Page 3 of 3

5/29/2015

Report To

Attn: ERIC SKOV
 Company: KECDM

Address: ERIC.SKOV@KECDM.COM
 Email: eric.skov@one.northavenue.com
 Bill To: Kali Katsami
 Sampled By: PK/LS

Phone: 415-243-3845
 Attn: Eric Skov

Sample ID: FD-1 Date: 5/19/15 Time: 5:00 Mat: None Presrv: None

Volatile Organics GC/MS (VOCs)		<input type="checkbox"/> EPA 8260B
HVOCs by		<input type="checkbox"/> EPA 8260B
EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX		
<input type="checkbox"/> 5 Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol		
TEPH EPA 8016B <input type="checkbox"/> Silica Gel		<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other		
SemiVolatile Organics GC/MS		<input type="checkbox"/> EPA 8270C
PNA/PAH's by		<input checked="" type="checkbox"/> 8270C <input type="checkbox"/> 8270C SIM
Oil and Grease (EPA 1664/9071)		<input type="checkbox"/> Petroleum <input type="checkbox"/> Total
Pesticides <input type="checkbox"/> EPA 8081		<input checked="" type="checkbox"/> EPA 8082
PCBs		
CAM17 Metals (EPA 6010/7470/7471)		
Metals: <input type="checkbox"/> 8010B <input type="checkbox"/> 200.7		
<input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other:		
Metals: <input type="checkbox"/> 8020 <input type="checkbox"/> 200.8 (ICP-MS):		
<input type="checkbox"/> W.E.T (STLC) <input type="checkbox"/> W.E.T (DI) <input type="checkbox"/> TCLP		
Hex. Chrom by <input type="checkbox"/> EPA 7196 <input type="checkbox"/> or EPA 7199		
pH		<input type="checkbox"/> 9040 <input type="checkbox"/> SM4500
<input type="checkbox"/> Spec. Cond. <input type="checkbox"/> Alkalinity <input type="checkbox"/> TSS <input type="checkbox"/> SS <input type="checkbox"/> TDS		
Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO ₄ <input type="checkbox"/> NO ₃ <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO ₂ <input type="checkbox"/> PO ₄		
<input type="checkbox"/> Perchlorate by EPA 314.0		
COD <input type="checkbox"/> EPA 410.4 <input type="checkbox"/> SM5220D <input type="checkbox"/> Turbidity		
<u>XX</u> Organotins		

Project Info. Sample Receipt

Project Name/ #: Blue Greenway # of Containers: 900 Invas

Head Space: 3.3"

PO#: 28068358 Temp: 3.3°C

Credit Card Y/N: N If yes, please call with payment information ASAP

T	10	9	4	3	2	1	Other:
A	Day	Day	Day	Day	Day	Day	

Report: Routine Level 3 Level 4 EDD EDF
 Special Instructions / Comments: Global ID

See Terms and Conditions on reverse

1) Relinquished by:

Signature: [Signature] Time: 12:15
 Printed Name: Kevin Swings Date: 5/19/15
 Company: KECDM

2) Relinquished by:

Signature: [Signature] Time: 1:00
 Printed Name: Kevin Swings Date: 5/19/15
 Company: TR

3) Relinquished by:

Signature: _____ Time: _____
 Printed Name: _____ Date: _____
 Company: _____

Received by: [Signature] Time: 12:15
 Printed Name: Kevin Swings Date: 5/19/15
 Company: KECDM

Received by: [Signature] Time: 1:00
 Printed Name: Kevin Swings Date: 5/19/15
 Company: TR

Received by: _____ Time: _____
 Printed Name: _____ Date: _____
 Company: _____

Login Sample Receipt Checklist

Client: URS Corporation

Job Number: 720-64901-1

Login Number: 64901

List Number: 1

Creator: Mullen, Joan

List Source: TestAmerica Pleasanton

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: URS Corporation

Job Number: 720-64901-1

Login Number: 64901
List Number: 2
Creator: Rivers, Zachary V

List Source: TestAmerica Seattle
List Creation: 05/21/15 11:52 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ ($1/4''$).	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

14

ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES

**Shipwrights Cottage
900 Innes Avenue Site
Hunters Point, San Francisco, California**

Prepared for:

**Contract No. 4061-12/13
San Francisco Department of the Environment
1455 Market Street, Suite 1200
San Francisco, California 94103**

Prepared by:

**Post Montgomery Center
One Montgomery Street, Suite 900**

URS

San Francisco, California 94104

December 2015

IDENTIFICATION FORM

Document Title: **Analysis of Brownfield Cleanup Alternatives
Shipwrights Cottage
900 Innes Avenue Site
City and County of San Francisco, California**

Organization Title: URS Corporation
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 One Montgomery Street, Suite 900
 San Francisco, California 94104

Project Manager: Kali Futnani
Telephone: (415) 243-3878

Project Geologist: Erik Skov, PG, CHG
Telephone: (415) 243-3845

Plan Coverage: This Assessment of Brownfield Cleanup Alternatives constitutes the deliverable for technical support to the San Francisco Department of the Environment to develop cleanup alternatives for the Shipwrights Cottage located at 900 Innes Avenue in San Francisco, CA under Contract No. 4061-12/13.

APPROVAL FORM

Prepared for: San Francisco Department of the Environment
1455 Market Street, Suite 1200
San Francisco, California 94103

Prepared by: URS Corporation
Post Montgomery Center
One Montgomery Street, Suite 900
San Francisco, California 94104

Signature:  Date: 12/2/2015
Name: **For** Kali Futnani
Title: Project Manager
URS Corporation

Signature:  Date: 12/2/2015
Name: Erik Skov, PG, CHG
Title: Senior Geologist
Professional Geologist No. 7470
URS Corporation

This document has been prepared for the San Francisco Department of the Environment under Contract No. 4061-12/13.

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1. INTRODUCTION AND BACKGROUND

URS Corporation (URS), under Contract No. 4061-12/13 with the San Francisco Department of the Environment (SFDOE), has prepared this Assessment of Brownfield Cleanup Alternatives (ABCA) for the Shipwright's Cottage located at the 900 Innes Avenue property in Hunters Point, City and County of San Francisco, California (Site) (Figure 1).

In 2014 the City and County of San Francisco, Recreation and Parks Department (RPD) completed their acquisition of the Site from the Tenderloin Housing Clinic. This ABCA was prepared to support the RPD in their application to the United States Environmental Protection Agency (USEPA) for a Brownfields Cleanup Grant.

1.1. Site Location

The Site is located on a portion of the property known as 900 Innes Avenue located in Hunters Point, San Francisco, California (Figure 1). The Shipwright's Cottage is located at the north corner of the intersection of Innes Avenue and Griffith Street. The 900 Innes Avenue property is comprised of seven different City and County of San Francisco Assessor Parcel Numbers (APN). The Site is assigned APN 4646003.

1.2. Ownership and Previous Use

The house was constructed as an early component of an isolated working-class settlement of shipbuilders. The first property owner was John Johnson Dircks, a shipwright who was among the first immigrants to arrive at India Basin. Dircks resided in the house, from 1875 until 1893, after which point the residence was deeded to Carl J. Jorgenson, a ship carpenter. Members of the Jorgenson family, as well as the Siemers family, resided in the cottage at various times during the following few decades (Page & Turnbull, 2015).

In 1923, the Shipwright's Cottage was incorporated into the adjacent Anderson & Cristofani Boatyard. No residents were recorded at this address in the 1930 and 1940 United States census rolls; however, Carl Jorgenson was listed at 900 Innes until around 1960. In 1961, the property was sold to Walter and Alice Anderson; Walter was partner in the adjacent Anderson & Cristofani Boatyard. The building served as an office for the yard (Page & Turnbull, 2015).

The property changed hands several times during the 1960s, 1970s, and 1980s. The house was ultimately donated to the Tenderloin Housing Clinic in 2007. The Shipwright's Cottage was designated a San Francisco Article 10 landmark in 2008, and the Tenderloin Housing Clinic sold the building (along with the remainder of the 900 Innes Avenue property) to the City and County of San Francisco in 2014. The property was previously owned by the Tenderloin Housing Clinic prior to its acquisition by the City and County of San Francisco RPD (Page & Turnbull, 2015).

1.3. Site Assessment Findings

In 2013 Weston Solutions conducted a Phase I Environmental Site Assessment (ESA) as part of a Targeted Brownfields Assessment (TBA) being conducted at the property (Weston, 2013). Based on the information presented in this report and the historical information presented in the Page & Turnbull Feasibility Study for the Shipwright's Cottage conducted in 2015 (Page & Turnbull, 2015), the building likely contains asbestos containing building materials and lead-based paint given the age of construction of the building and subsequent modifications/additions made to the structure. Additionally, the Page & Turnbull report indicated the presence of mold on building materials inside the structure. A hazardous materials building survey or building drip line investigation has not yet been conducted but is proposed to be undertaken prior to any building redevelopment/renovation activities.

1.4. Project Goal

The goal of the project is to abate hazardous building materials and lead-based paint from the structure as well as lead-impacted soil from the dripline of the building in order to prepare the building for its eventual restoration and reuse. This project is part of a larger vision for the Blue Greenway, an open space system covering 13 miles of trails, and the segment of the regional San Francisco Bay Trail in the city. The expected reuse of the 900 Innes property as a park would allow for this strategy. Reuse in this case would prioritize maintaining the overall character of the Shipwright's Cottage, sensitively refitting for modern use within their historic layouts, and repairing failed details and features.

2. APPLICABLE REGULATIONS AND CLEANUP STANDARDS

The section identifies the cleanup oversight responsibility and cleanup standards for contaminants at the Site.

2.1. Cleanup Oversight Responsibility

Asbestos cleanup oversight will be overseen by the Bay Area Air Quality Management District (BAAQMD) who will issue a permit (Job Number or J#) for the abatement of asbestos associated with building renovation.

The California Environmental Protection Agency (Cal EPA) Department of Toxic Substances Control (DTSC) will be the regulatory oversight agency for the excavation and disposal of lead-contaminated soil from the drip line of the structure. It is assumed that the removal of lead-impacted soil from the drip line of the Shipwright's Cottage will be conducted in conjunction with other soil remedial activities at the 900 Innes Avenue property for which the DTSC will be the lead oversight agency.

2.2. Cleanup Standards for Major Contaminants

In addition to visual clearance by a qualified California Certified Asbestos Consultant (CAC), clearance air monitoring will be conducted to ensure levels are safe for building reentry to conduct other hazardous material abatement activities including lead-based paint removal and mold removal and eventually, building renovation. In accordance with the Asbestos Hazard Emergency Response Act (AHERA) (40 Code of Federal Regulations [CFR] §763.90[i]), removal of asbestos containing building materials are considered complete when representative air samples from the affected space, analyzed by transmission electron microscopy (TEM) method, are not statistically significantly different than outside concentrations or do not exceed the filter background level of 70 asbestos fiber structures per square millimeter.

The cleanup standard for lead-impacted soil in the drip line of the building will be established as part of the Feasibility Study/Remedial Action Plan preparation process for contaminated soil remediation on other portions of the 900 Innes Avenue property.

2.3. Laws and Regulations Applicable to the Cleanup

Asbestos abatement activities will be conducted in accordance with the following appropriate and applicable regulations:

- The asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations specify work practices for asbestos to be followed during demolitions and renovations of all structures, installations, and buildings (40 CFR Part 61, Subpart M).

- Asbestos Hazard Emergency Response Act (40 CFR Part 763) as it relates to final air monitoring clearance standards.
- OSHA oversees the working conditions for workers by implementing and managing occupational safety and health standards. The following regulations pertain to handling asbestos in the workplace:
 1. Asbestos General Standard—Specification of permissible exposure limits, engineering controls, worker training, labeling, respiratory protection, and disposal of asbestos waste (29 CFR §1910.1001) as well as the California Code of Regulations (CCR) Title 8.
 2. Asbestos Construction Standard—Covers construction work involving asbestos, including work practices during demolition and renovation, worker training, disposal of asbestos waste, and specification of permissible exposure limits (29 CFR §1926.1101)

Additionally, California Occupational Health and Safety Administration's (Cal-OSHA's) lead in construction standard (8 CCR I532.1) requires a contractor whose work involves disturbing lead-containing materials to develop and implement a lead compliance plan, conduct employee exposure assessment to determine appropriate protective measures, including medical surveillance and personal hygiene facilities, and to provide employee training on the hazards of lead-related work.

The DTSC has adopted regulations (SB 20 Electronic Waste Recycling Act) for the handling of universal waste or E-Waste. This category is a subset under all hazardous wastes (CCR Title 26). Universal wastes encompass a variety of electronic devices (including fluorescent lamps, light ballasts, mercury thermostats, cathode ray tubes, batteries, etc.) that usually contain mercury, lead, cadmium, chromium and copper. These materials are considered toxic and are banned from landfill disposal. These materials must be collected and recycled prior to building renovation.

Bay Area Air Quality Management District (BAAQMD) Regulation 11 (Hazardous Pollutants), Rule 2 (Asbestos Demolition, Renovation and Manufacturing) was promulgated to control emissions of asbestos to the atmosphere during demolition and/or renovation. The rule requires that for every demolition or renovation involving the removal of 100 square feet/lineal feet or greater of Regulated Asbestos Containing Material (RACM), a notification must be made to the BAAQMD at least 10 working days prior to commencement of demolition/renovation. The District provides a form to use for notification of the two types of jobs. Information obtained from the notification form is stored and a job number (J#) is assigned to each demolition or renovation job that is notified. The J# is proof that the notification requirements of District Regulation 11-2 have been met. This information then allows BAAQMD staff to conduct an inspection to determine compliance with all other requirements of Regulation 11-2.

Lead-impacted soil from the drip line of the Shipwright's Cottage will be conducted by contractors operating in accordance to the U.S. Department of Labor OSHA Hazardous Waste Operations and Emergency Response Standard (HAZWOPER), 29 CFR §1910.120. The requirements of 29 CFR §1910.120 apply to clean-up operations at sites recognized by federal, state, local, or other governmental body as uncontrolled hazardous waste sites.

The National Historic Preservation Act, Code of Federal Regulations 36 (36 CFR) pertains to cultural resources and historic sites. A cultural resources study and archeological report have not been prepared for the Site. The proposed abatement and cleanup activities will comply with the National Historic Preservation Act and will be undertaken in a manner such that any cultural resources or historic structures will not be degraded.

Other laws and regulations applicable to this cleanup may include the Federal Small Business Liability Relief and Brownfields Revitalization Act, the Federal Davis-Bacon Act, and local city and county laws regarding procurement of contractors to conduct the abatement and cleanup activities. In addition, excavation and grading permits, if required, and underground service alert notifications will be obtained prior to the work commencing.

3. EVALUATION OF BROWNFIELD CLEANUP ALTERNATIVES

The following section discusses the proposed cleanup alternatives and provides an evaluation to determine the preferred alternative.

3.1. Cleanup Action Objectives

The objective of the Shipwright's Cottage Brownfields Cleanup Project is to eliminate the potential exposure to asbestos, lead, mold, and other miscellaneous hazardous substances (universal wastes) for individuals entering and working around the building, and to facilitate the renovation of the building, as it is planned to be an integral part of the larger site redevelopment of the 900 Innes Avenue property. The following sections describe the three alternatives considered in terms of their effectiveness, feasibility of implementation, and costs with regard to achieving the project objectives.

3.2. Identification and Evaluation of Cleanup Alternatives

Three potentially feasible cleanup alternatives were identified based on URS' previous experience with similar sites. These alternatives include:

1. No Action.
2. Removal of High Risk Asbestos/Lead-Based Paint/Mold/Universal Waste/Operation and Maintenance of Remaining Materials/Excavation and Disposal of Lead-Impacted Soil From the Drip Line of the Shipwright's Cottage.
3. Removal of all Asbestos/Lead-Based Paint/Universal Waste and Excavation and Disposal of Lead-Impacted Soil from the Drip Line of the Shipwright's Cottage.

Alternative 1: No-Action

A no-action alternative would leave the Shipwright's Cottage building in its present condition, making it unusable for use. The only advantages to no action are those related to immediate avoidance of expenses that would be incurred by taking action. However, in the long term, expenses associated with no action may exceed those related to taking action at the present time due to the continued deterioration of the condition of the building, maintaining security (fencing, boarding of windows and doors, and signage) of the building to avoid trespassing, and potential exposures to and liability associated with unauthorized entrants.

Alternative 2: Removal of High Risk Asbestos/Lead-Based Paint/Universal Waste/Mold/ Operation and Maintenance of Remaining Materials/Excavation and Disposal of Lead-Impacted Soil From the Drip Line of the Shipwright's Cottage

This alternative would address deteriorated and friable asbestos-containing materials and deteriorated lead-based paint in the interior and exterior of the building including asbestos ceiling tiles, asbestos floor tiles and mastic, lead-based paint chips, and peeling lead-based paint. This alternative will also remove readily visible mold from interior building surfaces and miscellaneous universal waste contained in the building as well as excavation and disposal of lead-impacted soil from the drip line of the Shipwright's Cottage.

Alternative 3: Removal of all Asbestos/Lead-Based Paint/Universal Waste and Excavation and Disposal of Lead-Impacted Soil From the Drip Line of the Shipwright's Cottage.

This alternative would address all asbestos-containing materials and lead-based paint in the interior and exterior of the building including asbestos ceiling tiles, asbestos floor tiles and mastic, lead-based paint chips, peeling lead-based paint, and other identified lead-based paint on interior and exterior surfaces of the building. This alternative will also remove mold from all interior surfaces of the structure and miscellaneous universal waste contained in the building as well as excavation and disposal of lead-impacted soil from the drip line of the Shipwright's Cottage.

3.2.1. Alternative 1 Analysis – No Action

Effectiveness: The effectiveness of the No-Action alternative in achieving project goals would be negligible. The continued presence of asbestos containing building materials, lead-based paint, and universal waste(s) in the structure, as would be the case under the no-action alternative, would pose a potential long-term health risk to anyone entering the building. Additionally, lead-impacted soil that may be present in the drip line of the structure would also remain, posing potential health risks. The no-action alternative would be highly non-effective in achieving the goals of reduction of health risks for facilitating the renovation of the structure as part of the overall 900 Innes site redevelopment.

Implementation: Implementation of the No-Action alternative would be fairly straightforward. The building would be left in the current unused state in which it currently exists. The identified ACM, lead-based paint, and universal waste(s) would still pose a hazard to anyone entering the building. The building would not be demolished and the excavation and disposal of lead-impacted material from the drip line of the building would not occur. Controls would be necessary to manage exposure to those entering the building.

Under the No-action Alternative, the building will remain unused for an extended period of time and will likely continue to deteriorate increasing the risk to those entering the building. The

building, if it were to remain in this state, would detract from the redevelopment of the remainder of the 900 Innes Avenue site.

Cost: Direct costs associated with the No-Action Alternative would consist of providing building security and upkeep of measures to mitigate trespassers. Indirect costs could include potential liability associated with unauthorized entrants into the buildings. No Action alternative costs are estimated at \$5,000 annually.

3.2.2. Alternative 2 Analysis – Abatement of High Risk Asbestos/Lead-Based Paint/ Universal Waste/Mold/Operation and Maintenance of Remaining Materials/ Excavation and Disposal of Lead-Impacted Soil from the Drip Line of the Shipwright’s Cottage

Effectiveness: Alternative 2 would be effective at removing high risk asbestos containing building materials, lead-based paint, universal waste(s), and mold thus reducing potential hazards to individuals entering or working inside the building. However, Alternative 2 would be limited in that all asbestos containing building materials, lead-based paint, universal waste(s), and mold would not be removed from the building, and some degree of operations and maintenance would be required in order to ensure remaining materials do not become high risk from further degradation of the building or from any work being conducted inside the building that may disturb these materials. Lead-impacted soil would be removed from the drip line of the building to mitigate potential risks associated with exposure to lead in soil around the outside of the building.

Implementation: Implementation of Alternative 2 would be performed by certified asbestos, lead, and mold abatement contractors. All friable asbestos, asbestos tile debris, floor tile and mastic, and ceiling tile would be removed. In addition, interior and exterior lead-based paint chips and loose lead-based paint would be removed. An Operations and Maintenance (O&M) Plan would be prepared for the remaining asbestos containing material and lead-based paint left in place on/in the structure. Miscellaneous universal waste(s), mainly materials that are considered universal waste that would not be reused in the building renovation, would also be removed by the abatement contractor performing asbestos and lead-based paint removal. Removal of readily visible and accessible mold on the outside of walls and other interior surfaces would also be conducted by certified abatement contractors. In addition to the abatement of hazardous building materials and mold, lead-impacted soil from the drip line of the building would also be excavated and disposed of offsite. Implementation of these activities is considered routine for properly trained and licensed contractors.

Cost: Costs associated with Alternative 2 would consist of costs to abate high-risk asbestos containing building materials, lead-based paint and mold, and removal and disposal of miscellaneous universal waste(s). Alternative 2 would also involve the development of an O&M Plan for asbestos, lead-based paint, and any universal waste(s) left in place in the structure. Additionally, the cost for Alternative 2 would include the excavation and disposal of lead-

impacted soil from the drip line of the Shipwright's Cottage. The estimated cost for Alternative 2 is \$85,000 plus \$1,500 annually for O&M inspections and reporting.

3.2.3. Alternative 3 Analysis – Abatement of All Asbestos/Lead-Based Paint/Universal Waste/Mold and Excavation and Disposal of Lead-Impacted Soil from the Drip Line of the Shipwright's Cottage

Effectiveness: Alternative 3 would be highly effective in achieving the cleanup action objective of eliminating the potential for exposure to asbestos, lead, mold, and other miscellaneous hazardous substances for individuals entering the building, and to facilitate the renovation of the building.

Implementation: Implementation of Alternative 3 would be performed by certified asbestos, lead, and mold abatement contractors. In addition to the asbestos-containing materials and lead-based paint to be removed in Alternative 2, removal of all identified asbestos containing material, including any non-friable material (e.g., transite pipes or sheeting, roofing penetration tar, caulking, etc.), and removal of all lead-based paint including paint in good condition would be conducted. Under Alternative 3 all identified mold, including mold that may not be readily accessible behind walls or other enclosed areas, will be abated. Additionally, all identified universal wastes will be removed and disposed, and lead-impacted soil in the drip line of the structure will be excavated and disposed of offsite. Implementation of these activities is considered routine for properly trained and licensed contractors.

Cost: Costs associated with Alternative 3 would consist of abatement costs for asbestos containing building materials, lead-based paint and mold, and removal and disposal of universal waste(s). Additionally, the cost for Alternative 3 would include the excavation and disposal of lead-impacted soil from the drip line of the Shipwright's Cottage. The estimated cost for Alternative 3 is **\$114,320**.

3.3. Comparison of Alternatives

Alternative 1 – No Action: This alternative would leave the hazardous building materials in place and manage access to the sight by potential trespassers. This alternative does not meet the project goal of the planned renovation and reuse of the Shipwright's Cottage as part of the overall redevelopment of the 900 Innes Avenue site as a part of the Blue Greenway project. This alternative is not given any additional consideration under this analysis as it will not allow the overall project to be completed.

Alternative 2 – Abatement of High Risk Asbestos/Lead-Based Paint/Universal Waste/Mold/ Operation and Maintenance of Remaining Materials/Excavation and Disposal of Lead-Impacted Soil from the Drip Line of the Shipwright's Cottage: This alternative would meet the project objectives. However, it would only remove the high-risk hazardous building materials and would leave some asbestos and lead-based paint in place to be managed under an asbestos and

lead-based paint O&M plan. Additionally, this alternative would remove the visible mold from the structure and the lead-impacted soil from the drip line of the Shipwright's Cottage. This alternative was not selected because it leaves some asbestos and lead-based paint within the structure, which would inhibit the proposed renovation and would require annual inspections of the components containing asbestos and lead-based paint until such time as these are removed or abated from the structure.

Alternative 3 – Abatement of All Asbestos/Lead-Based-Paint/Universal Waste/Mold and Excavation and Disposal of Lead-Impacted Soil from the Drip Line of the Shipwright's Cottage: This alternative would meet the project objective and would not have any ongoing O&M requirements associated with management of asbestos and lead-based paint left in the structure as it would remove all of the asbestos and lead-based paint from the Shipwright's Cottage. Additionally, this alternative would remove the mold from the structure and the lead-impacted soil from the drip line of the building. This alternative would allow for the uninhibited renovation of the structure as all of the hazardous building materials would be abated. No annual inspections of components containing asbestos and lead-based paint would be required as these will have been abated from the structure.

Table 1 – Cost Comparison for Cleanup Alternatives

	Cleanup Alternative 1	Cleanup Alternative 2	Cleanup Alternative 3
Description	No Action	Abatement of High Risk Asbestos/Lead-Based Paint/Universal Waste/Mold/Operation and Maintenance of Remaining Materials/Excavation and Disposal of Lead-Impacted Soil from the Drip Line of the Shipwright's Cottage	Abatement of All Asbestos/Lead-Based Paint/Universal Waste/Mold/Operation and Maintenance of Remaining Materials/Excavation and Disposal of Lead-Impacted Soil from the Drip Line of the Shipwright's Cottage
Cost	\$5,000 Annually	\$85,000 plus \$1,500 annually for O&M Inspection and Reporting.	\$114,320

Selected Alternative

Alternative 3 – Abatement of All Asbestos/Lead-Based Paint/Universal Waste/Mold/Operation and Maintenance of Remaining Materials/Excavation and Disposal of Lead-Impacted Soil from the Drip Line of the Shipwright's Cottage: This alternative was selected because it allows the

planned renovation and redevelopment of the Shipwright's Cottage to take place uninhibited by the presence of remaining asbestos and lead-based paint and without continuing O&M obligations.

3.4. Consideration of Climate Impacts

Data demonstrates that the climate is changing at an increasingly rapid rate. The U.S. EPA must adapt to climate change if it is to continue fulfilling its statutory, regulatory, and programmatic requirements. The U.S. EPA is therefore planning for future changes in the climate to ensure it continues to fulfill its mission of protecting the human health and the environment. As part of the EPA's Climate Change Adaptation Plan in Region 9's Implementation Plan (EPA, 2013), the ABCA must take into consideration the effects of potential climate impacts upon the effectiveness of the proposed cleanup alternatives.

Potential climate impacts for the San Francisco Bay Area will likely include lack of rainfall, future droughts, and temperature increase. Along with temperature increases comes the likelihood of sea level rise which is anticipated to have the most impact along the bay margin of the San Francisco Bay. The effects of these changes are not likely to have any impact on the evaluated alternatives as the elevation of the Shipwright's Cottage is not likely to be directly affected by sea-level rise effects in the San Francisco Bay.

4. LIMITATIONS AND ADDITIONAL ASSESSMENT NEEDS

URS' services were performed in a manner consistent with that level of care and skill ordinarily exercised by members of the same profession currently practicing in the same locality under similar conditions. No expressed or implied representation or warranty is included or intended in our reports, except that our services were performed, within the limits prescribed by our client, with the customary thoroughness and competence of our profession.

Recommendations provided are not necessarily inclusive of all possible conditions. No other warranty, expressed or implied, is made regarding the professional opinions presented in this report. This document is intended to be used in its entirety. No portion of this document, by itself, is designed to completely represent any aspect of the project described herein. URS should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This document shall not be relied upon by or transferred to any additional parties, or used for any other purpose, without the express written authorization of URS. The conditions of the site can change with time as a result of natural processes or the activities of man at or within the vicinity of the site. Additionally, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this document may, therefore, be invalidated over time, in part or in whole, by changes over which URS has any control.

A hazardous building materials survey and lead in building drip line soil investigation will be required in order to prepare a Hazardous Building Materials Abatement and Clearance Monitoring Plan and a contaminated soil Removal Action Work Plan.

5. REFERENCES

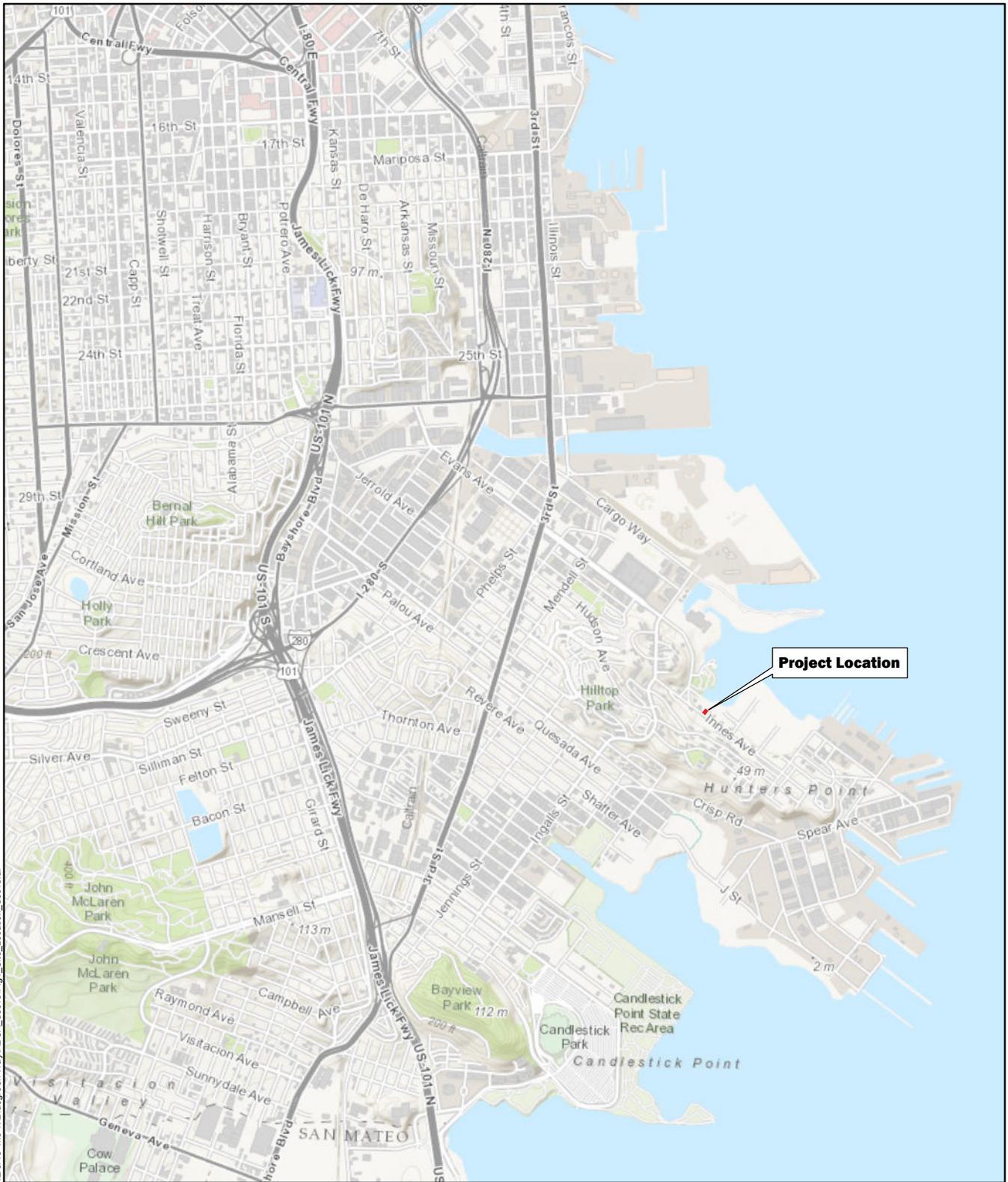
Environmental Protection Agency (EPA). (2013, November 19). Climate Change.

<http://www.epa.gov/climatechange/impacts-adaptation/fed-programs/EPA-impl-plans.html>.

Page & Turnbull, 2015, Feasibility Study, Shipwright's Cottage, 900 Innes Avenue, San Francisco, California (September, 2015).

Weston Solutions, Inc., 2013. Phase I/II Investigation, Targeted Brownfields Assessment, Final Report, 900 Innes Avenue Site, San Francisco, San Francisco County, California (November 2013).

FIGURES



12/3/15 rks T:\Bluegreen Way\ABCA_dec15\Fig1_Site_Location_dec15.ai

Source: Contours (5-foot intervals) by HJW for the City and County of San Francisco, 2001.

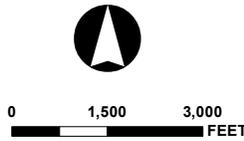
**900 INNES AVENUE
SITE LOCATION**

Assessment of Brownfield Cleanup Alternatives
Shipwrights Cottage
900 Innes Avenue
San Francisco, California

December 2015
60407957



FIGURE 1





12/3/15 rfs T:\Bluegreen\Way\ABCA_dec15\Fig2_site_plan.indd

Source: Google Earth Pro., 2015.

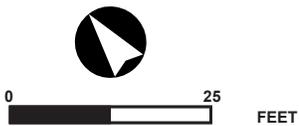
SITE PLAN

Assessment of Brownfield Cleanup Alternatives
Shipwrights Cottage
900 Innes Avenue
San Francisco, California

December 2015
60407957



FIGURE 2



28 October 2014

Mr. Patrick Banks
Build Inc.
315 Linden St.
San Francisco, CA 94102

**Subject: Updated Phase I Environmental Site Assessment
India Basin
San Francisco, California
Langan Project No.: 731626702**

Dear Mr. Banks:

This letter report presents the results of Langan Treadwell Rollo's (Langan) Updated Phase I Environmental Site Assessment (ESA) for the India Basin property located in San Francisco, California (Site) (Figure 1). AEI Consultants (AEI) previously completed a Phase I ESA for the Site dated 14 January 2013. We understand Build Inc. requires this Updated Phase I ESA for its environmental due diligence activities related to the Site.

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 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 feet¹; 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.

As shown on Figure 2, the Site encompasses approximately 14 acres and has been vacant land since the 1950s and 1960s. Previously, the Site was submerged in the San Francisco Bay. The surrounding areas are currently used by various residential and commercial businesses. Land use in the immediate vicinity of the Site is primarily, residential, commercial and light industrial.

The purpose of this Updated Phase I ESA is to identify substantial changes in environmental conditions at the Site since AEI's Phase I ESA was prepared in January 2013. Substantial changes are defined as conditions that indicate 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 on the Site or into the ground, groundwater, or surface water of the Site.

¹ Elevations are referenced to San Francisco City datum.

The Updated Phase I ESA was performed to identify changes in Site environmental conditions that may have occurred since January 2013. This project included the tasks listed below:

- reviewing regulatory agency databases and readily available files for the Site and surrounding area sites that could identify a change in the environmental conditions since January 2013; and
- conducting a reconnaissance of the Site and neighboring sites to assess any changes in the environmental conditions since January 2013.

SPECIALIZED KNOWLEDGE

Langan reviewed the following environmental documents for the Site:

- AEI Consultants, (AEI), *Phase I Environmental Site Assessment, 110 Undeveloped Parcels Bound by India Street, Innes Avenue, Earl Street, and Griffith Street, San Francisco, San Francisco County, California 94124* dated 14 January 2013.

Information from these documents has been included in the preparation of this report, as appropriate.

CLIENT-PROVIDED INFORMATION

Environmental Liens or Activity and Use Limitation

The Client indicated that they were not aware of environmental liens, environmental activity or use limitations pertaining to the Site.

Valuation Reduction for Environmental Issues

The Client indicated that no valuation reductions for environmental issues are known or believed to be present at the Site.

Owner Information

The Client representative has indicated that the Site is owned by India Basin Investments, LLC.

GEOLOGIC AND HYDROGEOLOGIC SETTING

The physical setting of the Site was determined using information provided in the EDR *Radius Map with GeoCheck*[®], topographic maps, and information obtained from our files. The Site is at an elevation of approximately 16 feet MSL and with a flat topography. 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. 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, extending to elevations ranging from 15 to -26 feet; 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. The Bay Mud layer is soft to stiff, and extends to depths ranging from 36 feet to 83 feet.

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 and extends to depths ranging from 16 feet to 98 feet. The sand near the bay includes 4- to 6- foot thick layers of very stiff to hard clay. 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 feet 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 consisting of very stiff to hard clay and very dense sand and gravel. The residual soil is 3 feet 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 Iness Avenue, and slopes down to a depth of 149 feet near the eastern side of the Site.

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.

No former coal gasification sites exist within a half mile radius of the Site. There are no oil & gas pipelines, active landfill sites, Department of Defense sites, or Indian Reservations within one mile of the Site.

SITE DESCRIPTION AND HISTORY

This summary of land-use history of the Site was evaluated by reviewing previous environmental records prepared for the Site and searching aerial photos, historical topographic maps, City Directories, and Sanborn Fire Insurance Maps provided by EDR. Historical topographic maps were reviewed for the years 1899, 1915, 1947, 1950, 1956, 1968, 1980, and 1993. Sanborn maps of the Site were reviewed for the years 1966, 1975, 1987, 1989, 1991, and 1999. Historical aerial photographs of the Site were reviewed for the years 1938, 1943, 1946, 1956, 1968, 1974, 1982, 1993, 1998, 2005, 2009, 2010, and 2012. Historical research documentation is provided in Appendix A. Based on the available sources, it appears that the

Site was part of the San Francisco Bay until the property was filled in in the 1950s and 1960s. The Site has remained vacant and undeveloped since that time.

PREVIOUS SITE INVESTIGATIONS AND REPORT

AEI Phase I ESA

Based on the historical use of the property and the surrounding land, AEI's January 2013 Phase I ESA revealed evidence of the following recognized environmental condition (REC) in connection with the Site:

- 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 REC.

REVIEW OF PUBLIC RECORDS

A review of environmental regulatory agency lists and records was performed for the Site and vicinity to identify potential sources of or activities involving hazardous substances or petroleum products that might affect the soil and groundwater quality at the Site. The lists identify sites where underground storage tank (UST) leaks, chemical spills, or contamination of soil and/or groundwater have been reported and confirmed. The regulatory lists also include sites where above-ground or underground storage tanks are present, hazardous materials are generated and/or stored, and whether or not there has been an unauthorized release.

A search of environmental regulatory agency databases for the Site and vicinity was prepared for Langan by Environmental Data Resources Inc. (EDR), and is included in Appendix B of this report. The list of the government agency databases reviewed by EDR is summarized in their report. Our Update Phase I ESA also included searching online databases maintained by the California Regional Water Quality Control Board (RWQCB) and California Department of Toxic Substances Control (DTSC) regarding any additional files and evaluating any fuel and hazardous materials leaks reported at the Site and neighboring sites since January 2013.

Based on our review of the EDR report, the Site was listed as 894 Innes Avenue and identified on several databases. This property is actually located approximately 0.06 miles southwest of the Site and environmental conditions remain as described in AEI's January 2013 Phase I ESA. No new information was obtained for the Site or nearby properties and detailed conditions remain as described in AEI's January 2013 Phase I ESA.

SITE AND VICINITY RECONNAISSANCE

Mr. Robert N. Milano of Langan performed a Site and vicinity reconnaissance on 5 August 2014. The objective of the reconnaissance was to check for visual evidence of past or present use or storage of hazardous materials that could potentially affect the soil and groundwater quality at the Site. Photographs taken at the time of our reconnaissance are presented in Appendix C.

The Site is currently vacant land with shrubbery. Arelious Walker Drive runs north to south in the western portion of the Site. A large gravel mound was observed near the center of the Site. During the reconnaissance, minor trash debris was observed on the Site.

At the time of our inspection, there was no observed evidence of any significant staining, spillage, and/or ponded liquids or unconfined solids.

Nearby Area

A reconnaissance of the adjoining properties was conducted from the public right-of-ways. Surrounding properties were dominated by vacant lots, public open space, the San Francisco Bay, commercial and industrial buildings, residences, and roadways. No apparent signs of chemical releases or leaks were noted at any nearby facilities.

SUMMARY AND CONCLUSIONS

Based on our review of available files, it appears that the property was part of the India Basin Inlet on the San Francisco Bay, and was filled in the 1950s and 1960s. Since that time, the Site has remained undeveloped land.

Based on the historical use of the property and the surrounding land, it is unlikely that the subsurface conditions have been adversely affected by a release of hazardous materials or petroleum hydrocarbons to the soil or groundwater. There are no past, current or future threats of the release of hazardous materials or petroleum hydrocarbons to the environment, which could adversely affect the subsurface conditions at the Site.

There are several facilities within the study area that appear on the regulatory agency lists (Appendix B). The potential for the documented off-site sources of chemical constituents affecting the environmental conditions at the Site is judged to be minimal. The chief transport mechanism for the migration of off-site chemical impacts to the on-site environment would likely be via groundwater flow. It does not appear that any documented off-site facility(s) have affected the groundwater migrating onto the Site and affecting the environmental conditions of the Site.

Based on our review of regulatory files, the Site history, and Site reconnaissance, this assessment revealed no substantial changes at the Site since AEI's January 2013 report. AEI's January 2013 report revealed evidence of one recognized environmental condition (REC) at the Site which is in relation to the fill material placed at the Site to bring to existing grade. AEI stated that the fill material at the Site contains heavy metals and petroleum products.

LIMITATIONS

Activities undertaken as part of this assessment were conducted on behalf of Build Inc., or designee to provide preliminary information and data as input to possible decisions about the Site. The conclusions presented in this report are professional opinions based on the specific activities conducted. Information obtained from government agencies and the current property owner is dependent upon the quality of the information obtained.

Langan makes no guarantees or warranties with respect to the accuracy or completeness of this information. Opinions and recommendations presented herein apply to Site conditions existing at the time of our assessment, and cannot necessarily be taken to apply to Site changes or conditions of which we are not aware and have not had the opportunity to evaluate.

The assessment did not include testing for the presence of lead paint, asbestos, PCBs in transformers or other electrical equipment, or naturally occurring environmental hazards (e.g., radon). The assessment did not address non-chemical hazards, such as the potential for seismic hazards at the Site, nor did the scope of this work include any soil, air, or groundwater testing.

Thank you for the opportunity to provide this Updated Phase I ESA. If you have any questions or need any information clarified, please call Mr. Peter J. Cusack at (415) 955-5200.

Sincerely yours,

Langan Treadwell Rollo



Robert N. Milano
Senior Staff Scientist

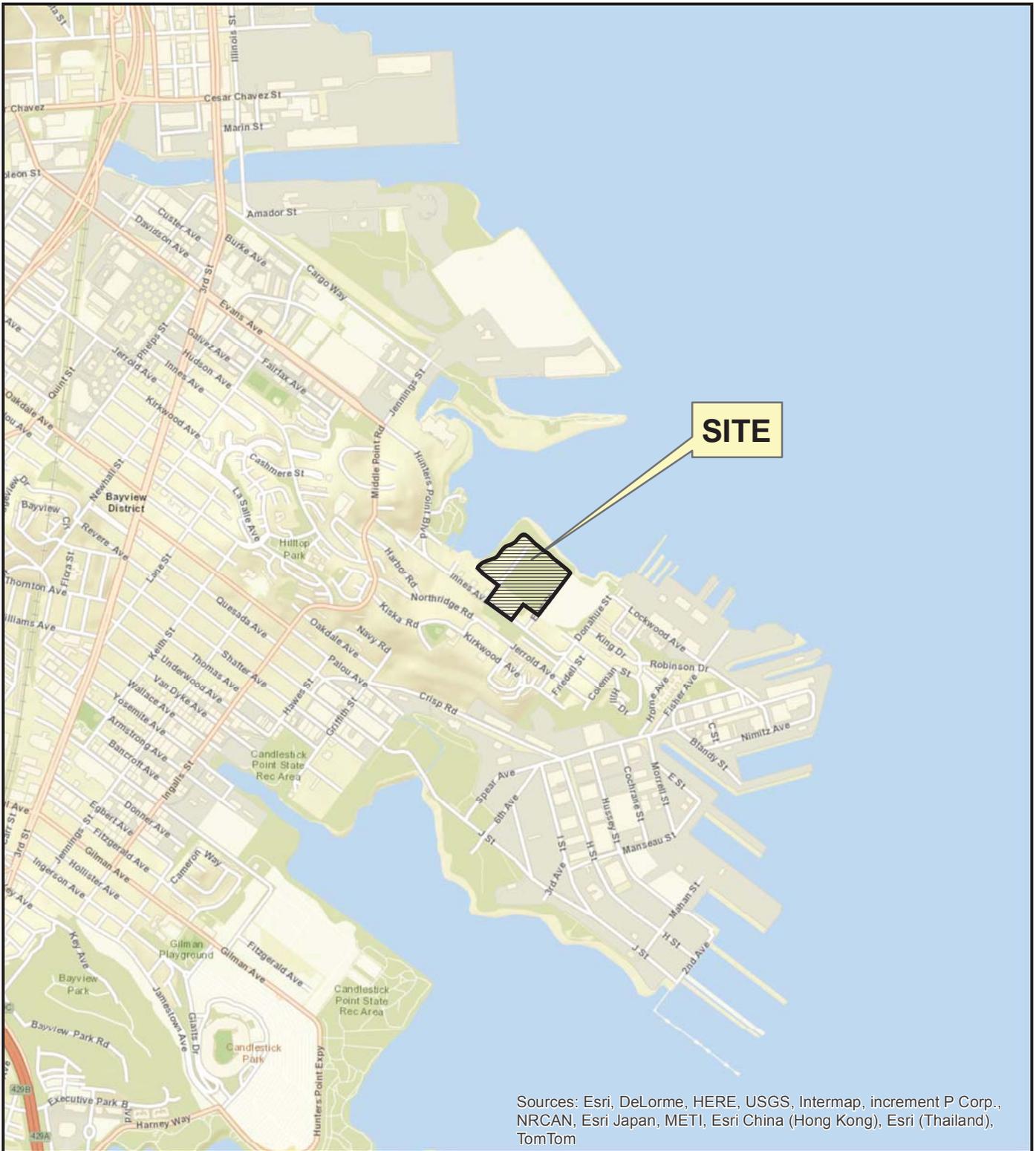


Peter J. Cusack
Senior Associate

Attachments: Figure 1 – Site Location Map
Figure 2 – Site Plan
Appendix A – Historical Research Documentation
Appendix B – Environmental Regulatory Records
Appendix C – Photographs

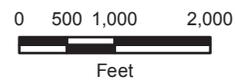
731626702.02 PJC

FIGURES



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

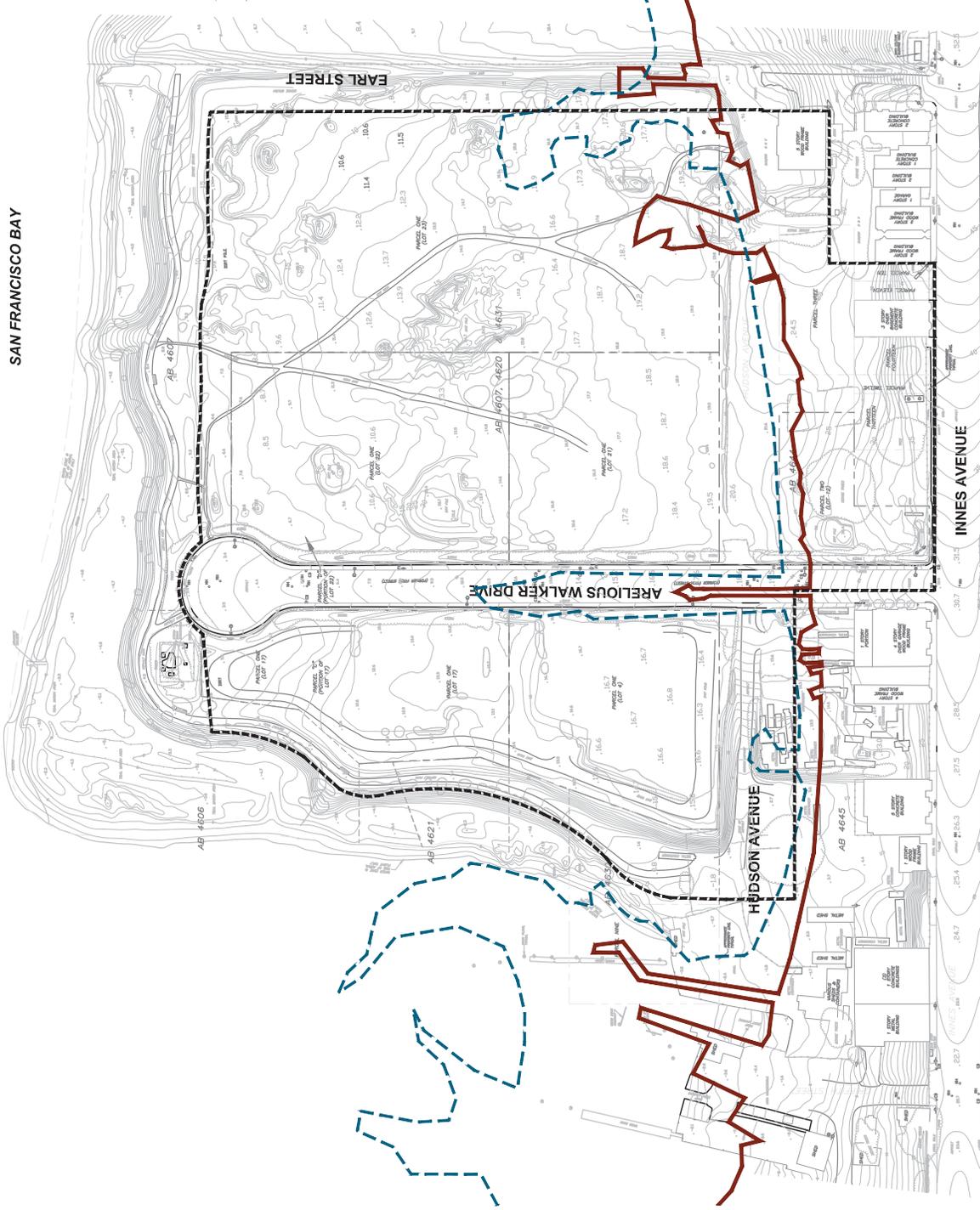
LANGAN TREADWELL ROLLO

Date 06/03/14

Project No. 731626701

Figure 1

SAN FRANCISCO BAY



EXPLANATION

- Approximate location of 1938 Shoreline
- - - Approximate location of 1946 Shoreline
- Approximate site limits



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 09/04/14 Project No. 731626702 Figure 2
LANGAN TREADWELL ROLLO

APPENDIX A
HISTORICAL RESEARCH DOCUMENTATION



India Basin

Earl Street/Innes Avenue
San Francisco, CA 94124

Inquiry Number: 4048497.3
August 27, 2014

Certified Sanborn® Map Report



6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

8/27/14

Site Name:

India Basin
Earl Street/Innes Avenue
San Francisco, CA 94124

Client Name:

Langan Engineering
32 Executive Park Suite 130
Irvine, CA 92614-0000



EDR Inquiry # 4048497.3

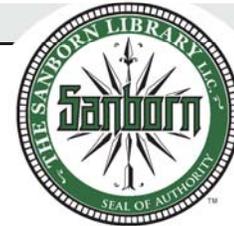
Contact: Peter J. Cusack

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Langan Engineering were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Site Name: India Basin
Address: Earl Street/Innes Avenue
City, State, Zip: San Francisco, CA 94124
Cross Street:
P.O. # NA
Project: 731626702
Certification # AE49-4842-94CD



Sanborn® Library search results
Certification # AE49-4842-94CD

Maps Provided:

1999
1991
1989
1987
1975
1966

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others 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™

Limited Permission To Make Copies

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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

1991 Source Sheets



Volume 8, Sheet xxxx

1989 Source Sheets



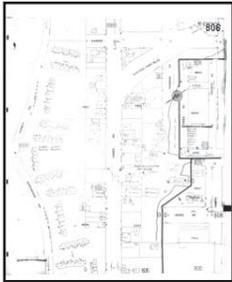
Volume 8, Sheet 806

1987 Source Sheets



Volume 8, Sheet 806

1975 Source Sheets



Volume 8, Sheet 806

1966 Source Sheets



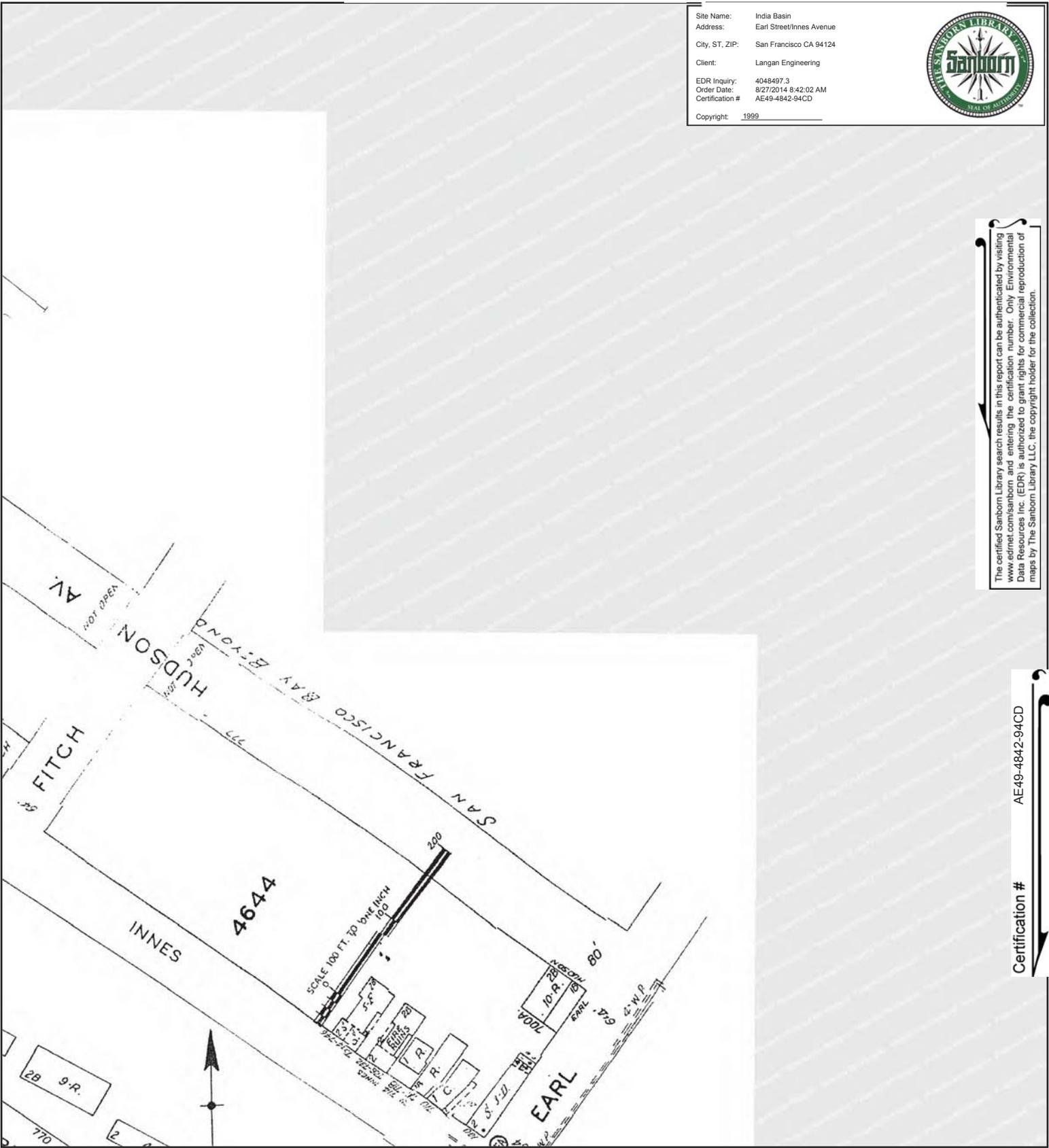
Volume 8, Sheet 806

1999 Certified Sanborn Map

Site Name: India Basin
 Address: Earl Street/Innes Avenue
 City, ST, ZIP: San Francisco CA 94124
 Client: Langan Engineering
 EDR Inquiry: 4048497.3
 Order Date: 8/27/2014 8:42:02 AM
 Certification #: AE49-4842-94CD
 Copyright: 1999

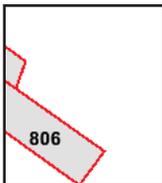


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Volume 8, Sheet 806



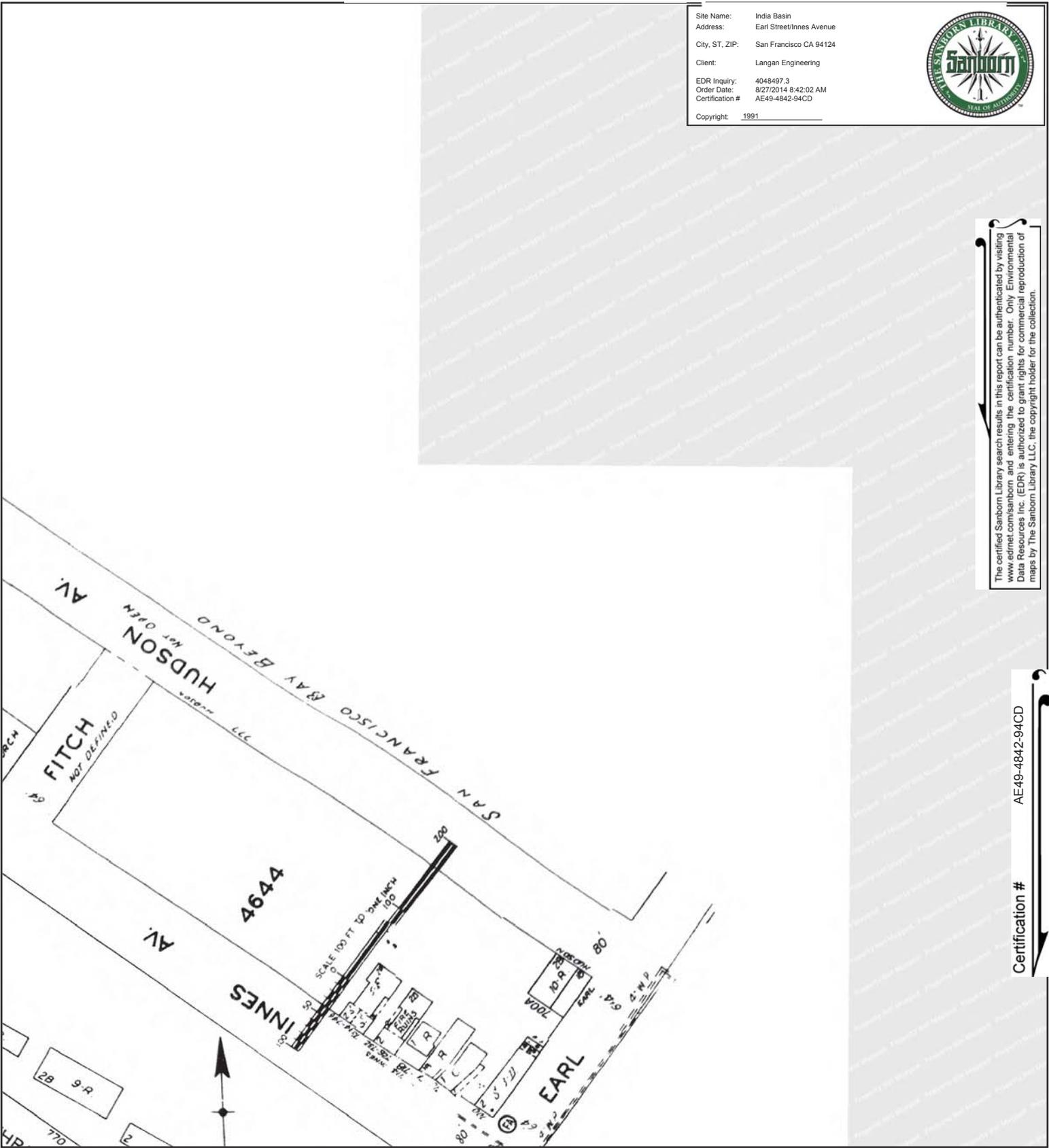
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 City, ST, ZIP: San Francisco CA 94124
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 Order Date: 8/27/2014 8:42:02 AM
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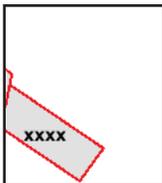
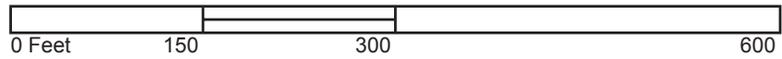


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Volume 8, Sheet xxxx

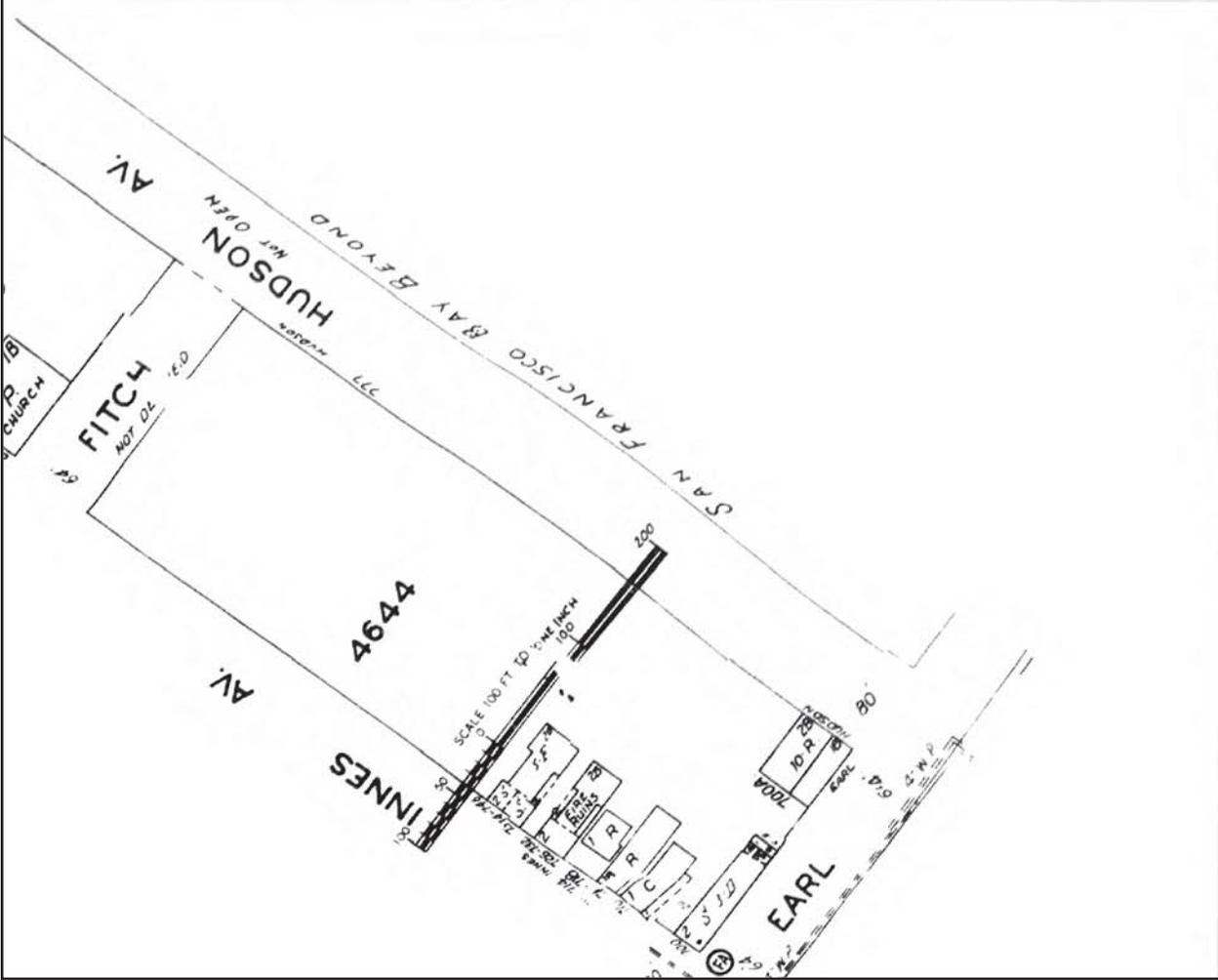


1989 Certified Sanborn Map

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Address: Earl Street/Innes Avenue
City, ST, ZIP: San Francisco CA 94124
Client: Langan Engineering
EDR Inquiry: 4048497.3
Order Date: 8/27/2014 8:42:02 AM
Certification #: AE49-4842-94CD
Copyright: 1989

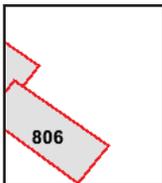
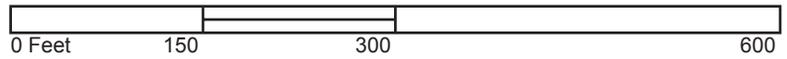


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Volume 8, Sheet 806

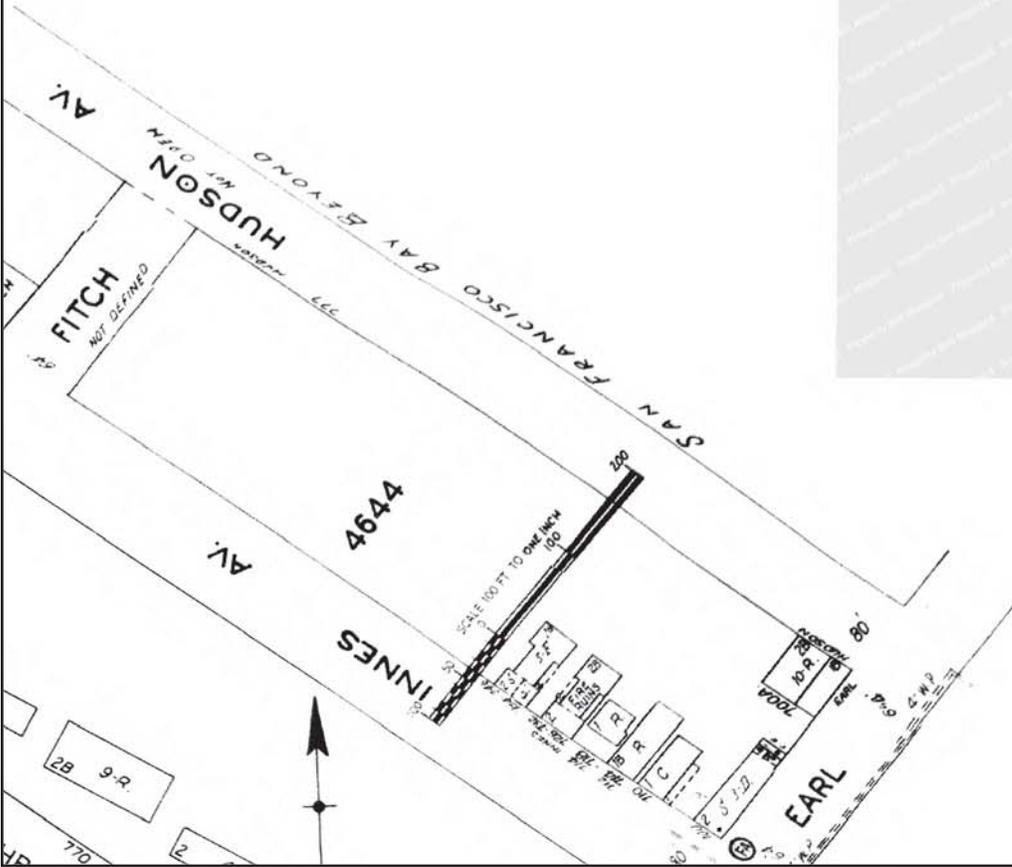


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 City, ST, ZIP: San Francisco CA 94124
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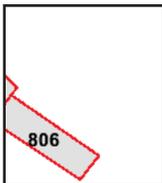
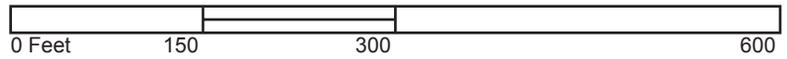


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Volume 8, Sheet 806

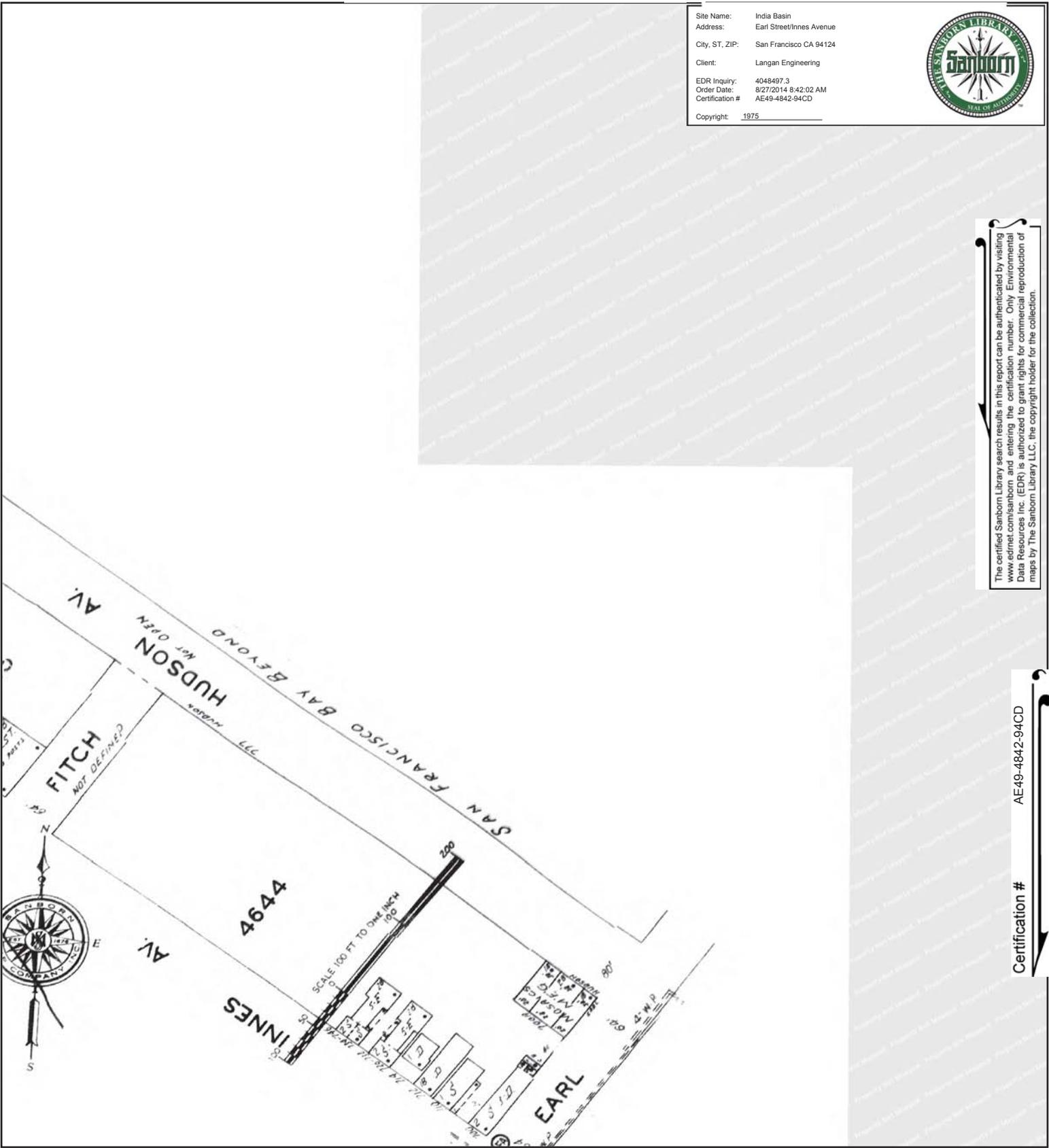


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 Copyright: 1975

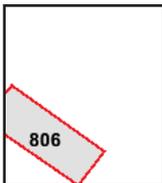
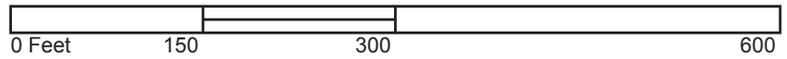


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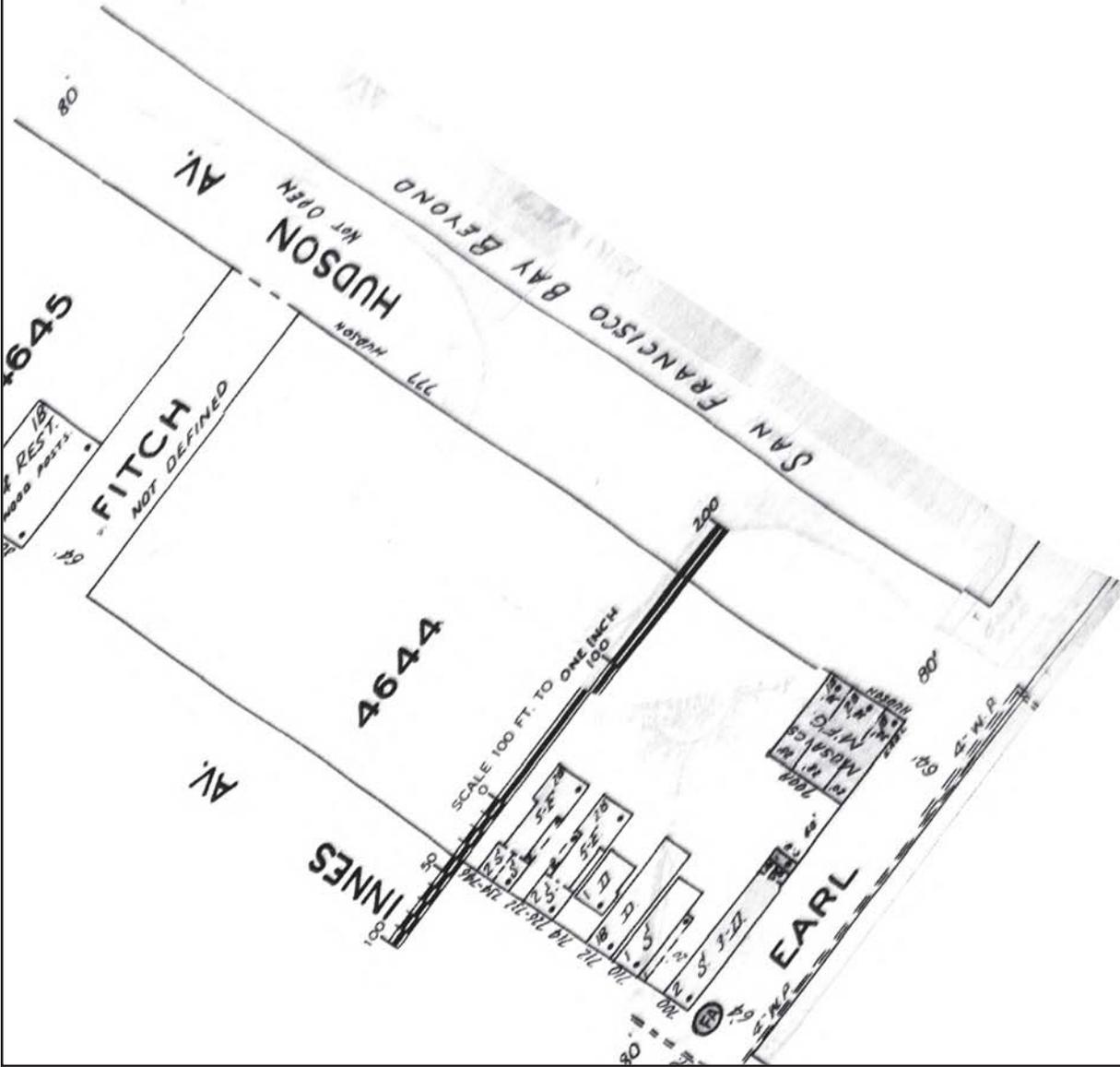


1966 Certified Sanborn Map

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 Address: Earl Street/Innes Avenue
 City, ST, ZIP: San Francisco CA 94124
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 Certification #: AE49-4842-94CD
 Copyright: 1966

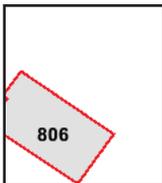
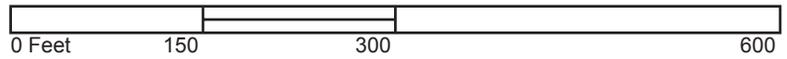


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Volume 8, Sheet 806





India Basin

Earl Street/Innes Avenue
San Francisco, CA 94124

Inquiry Number: 4048497.9
August 29, 2014

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Date EDR Searched Historical Sources:

Aerial Photography August 29, 2014

Target Property:

Earl Street/Innes Avenue

San Francisco, CA 94124

<u><i>Year</i></u>	<u><i>Scale</i></u>	<u><i>Details</i></u>	<u><i>Source</i></u>
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1943	Aerial Photograph. Scale: 1"=500'	Flight Year: 1943	USGS
1946	Aerial Photograph. Scale: 1"=500'	Flight Year: 1946	USGS
1956	Aerial Photograph. Scale: 1"=500'	Flight Year: 1956	USGS
1958	Aerial Photograph. Scale: 1"=500'	Flight Year: 1958	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	USGS/DOQQ
1998	Aerial Photograph. Scale: 1"=500'	Flight Year: 1998	USGS
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	USDA/NAIP
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	USDA/NAIP
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	USDA/NAIP
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	USDA/NAIP



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INQUIRY #: 4048497.9

YEAR: 1943

| = 500'





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YEAR: 1946

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BAY NAVAL SHIPYARD

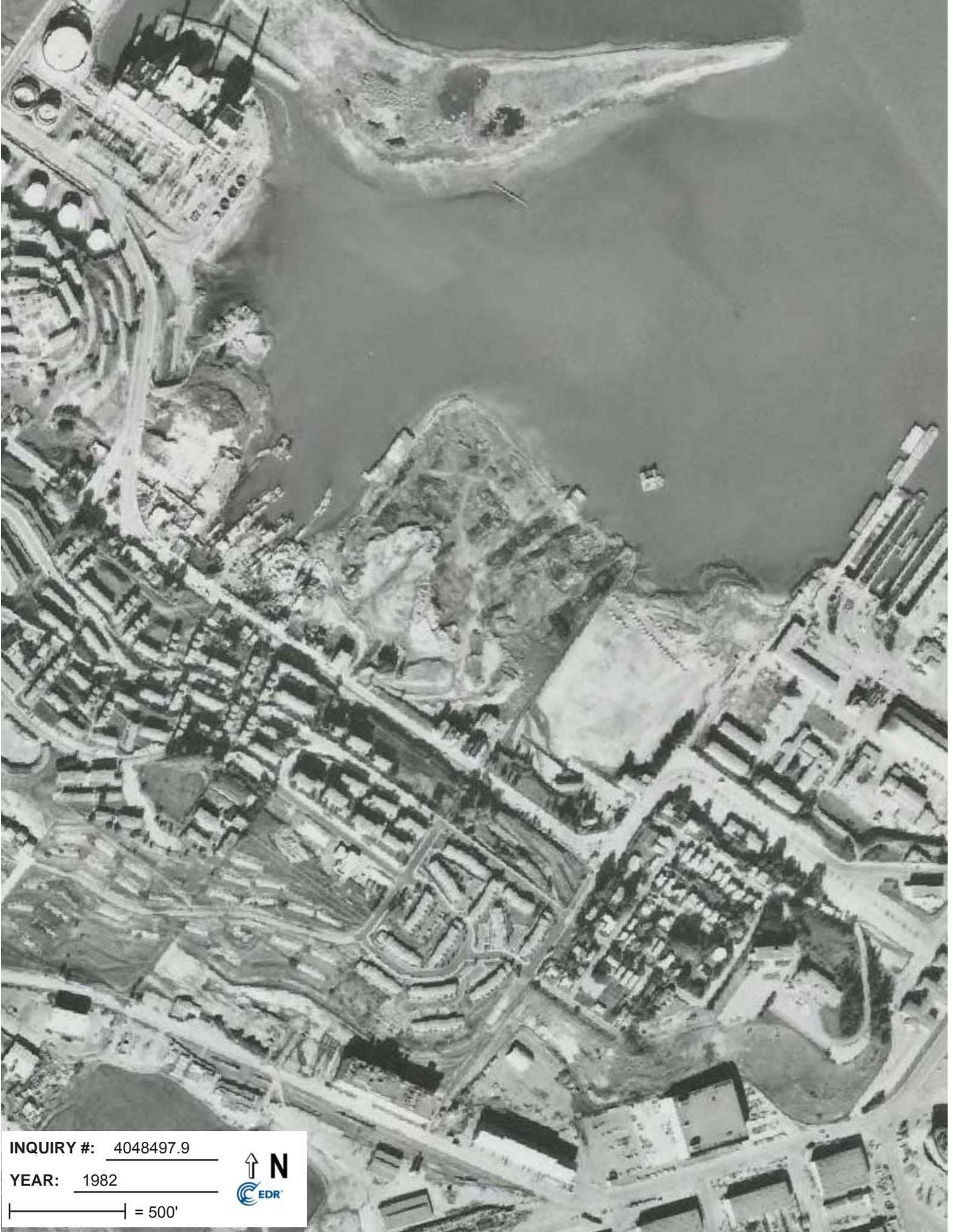


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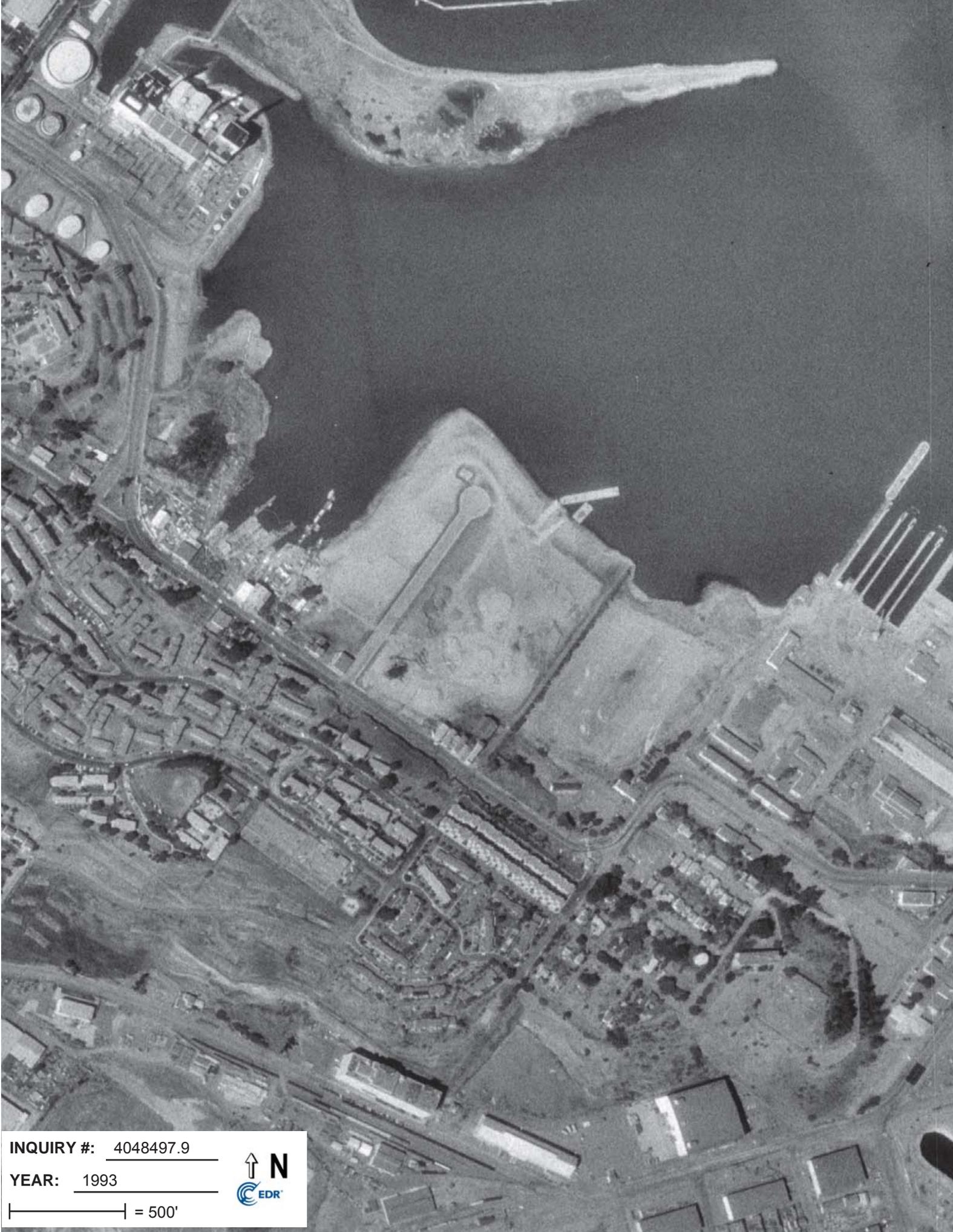


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YEAR: 1993

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YEAR: 2005

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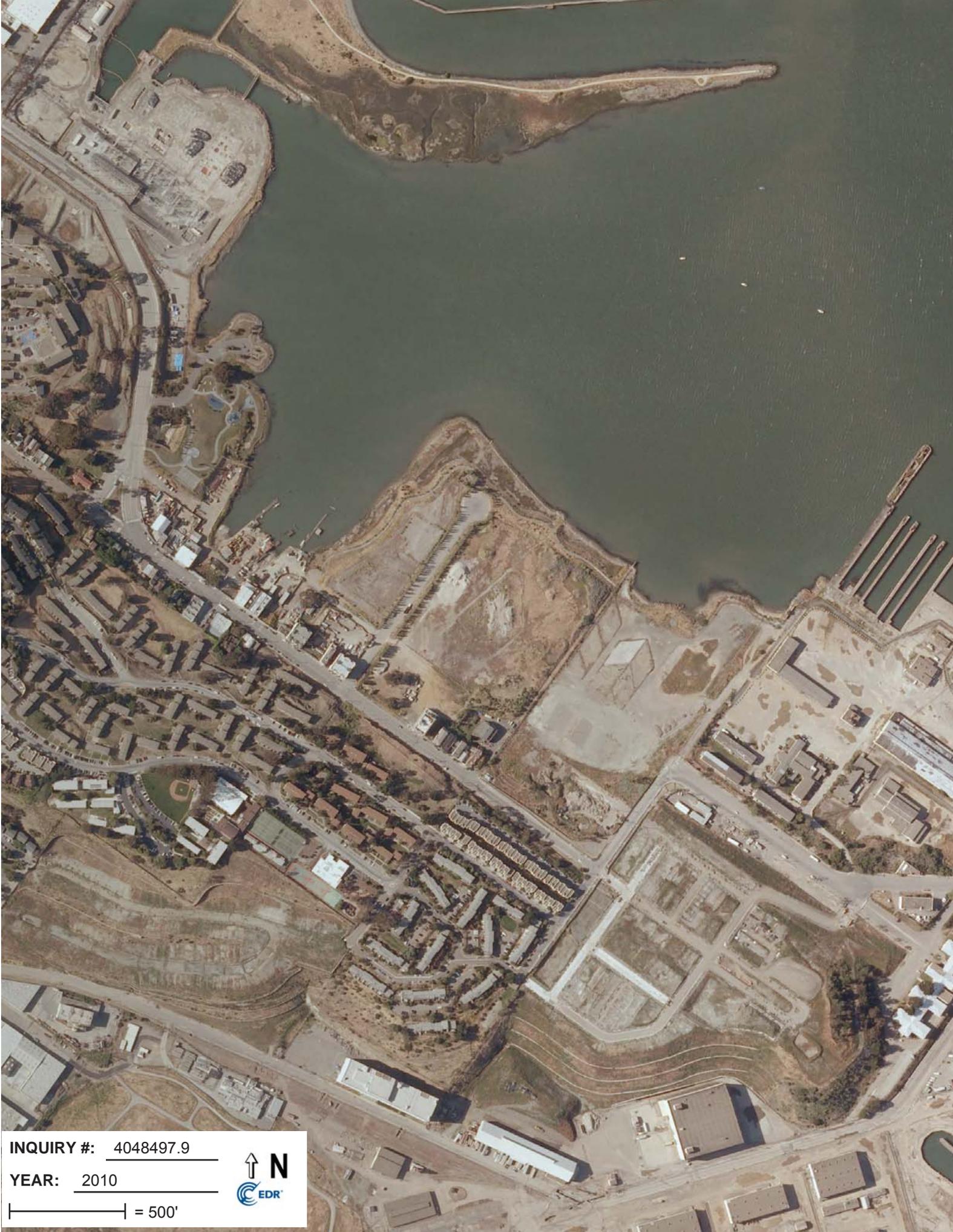


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YEAR: 2009

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INQUIRY #: 4048497.9

YEAR: 2010

| = 500'





INQUIRY #: 4048497.9

YEAR: 2012

| = 500'





India Basin

Earl Street/Innes Avenue
San Francisco, CA 94124

Inquiry Number: 4048497.4
August 26, 2014

EDR Historical Topographic Map Report



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Shelton, Connecticut 06484
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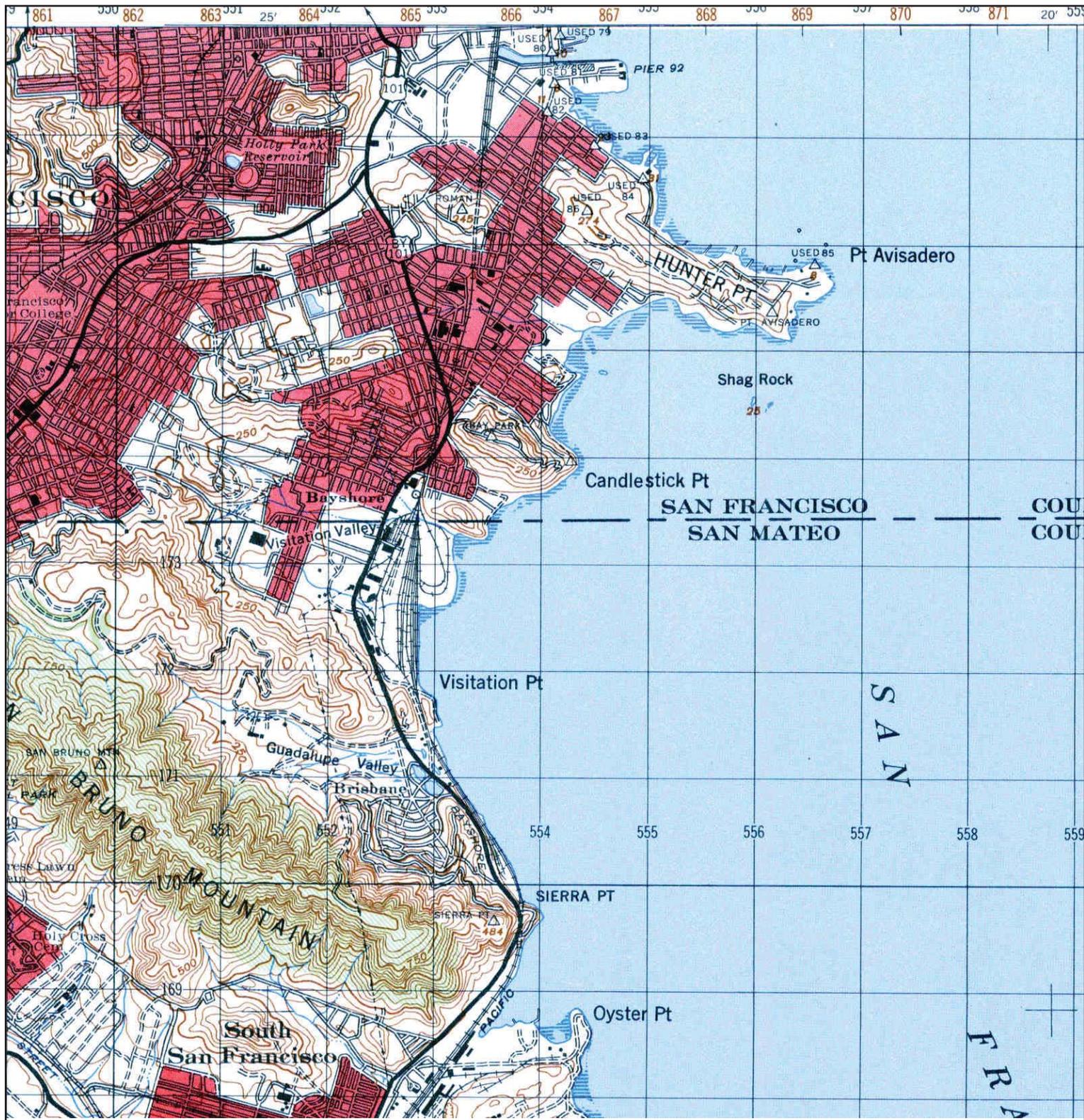
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Historical Topographic Map



<p>N</p>	<p>TARGET QUAD</p> <p>NAME: SAN MATEO</p> <p>MAP YEAR: 1899</p>	<p>SITE NAME: India Basin</p> <p>ADDRESS: Earl Street/Innes Avenue San Francisco, CA 94124</p> <p>LAT/LONG: 37.7318 / -122.3719</p>	<p>CLIENT: Langan Engineering</p> <p>CONTACT: Peter J. Cusack</p> <p>INQUIRY#: 4048497.4</p> <p>RESEARCH DATE: 08/26/2014</p>
	<p>SERIES: 15</p> <p>SCALE: 1:62500</p>		

Historical Topographic Map



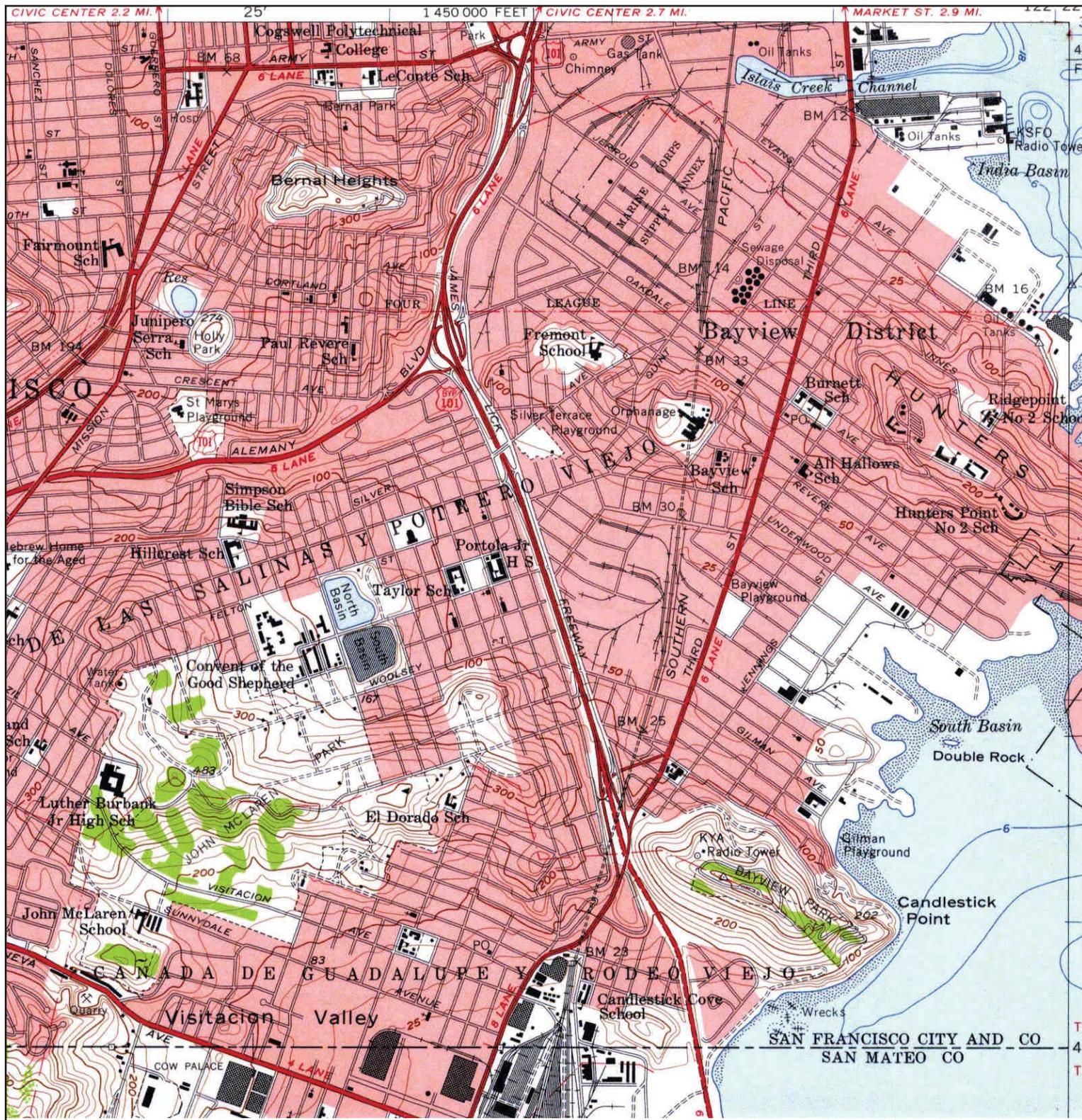
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Historical Topographic Map



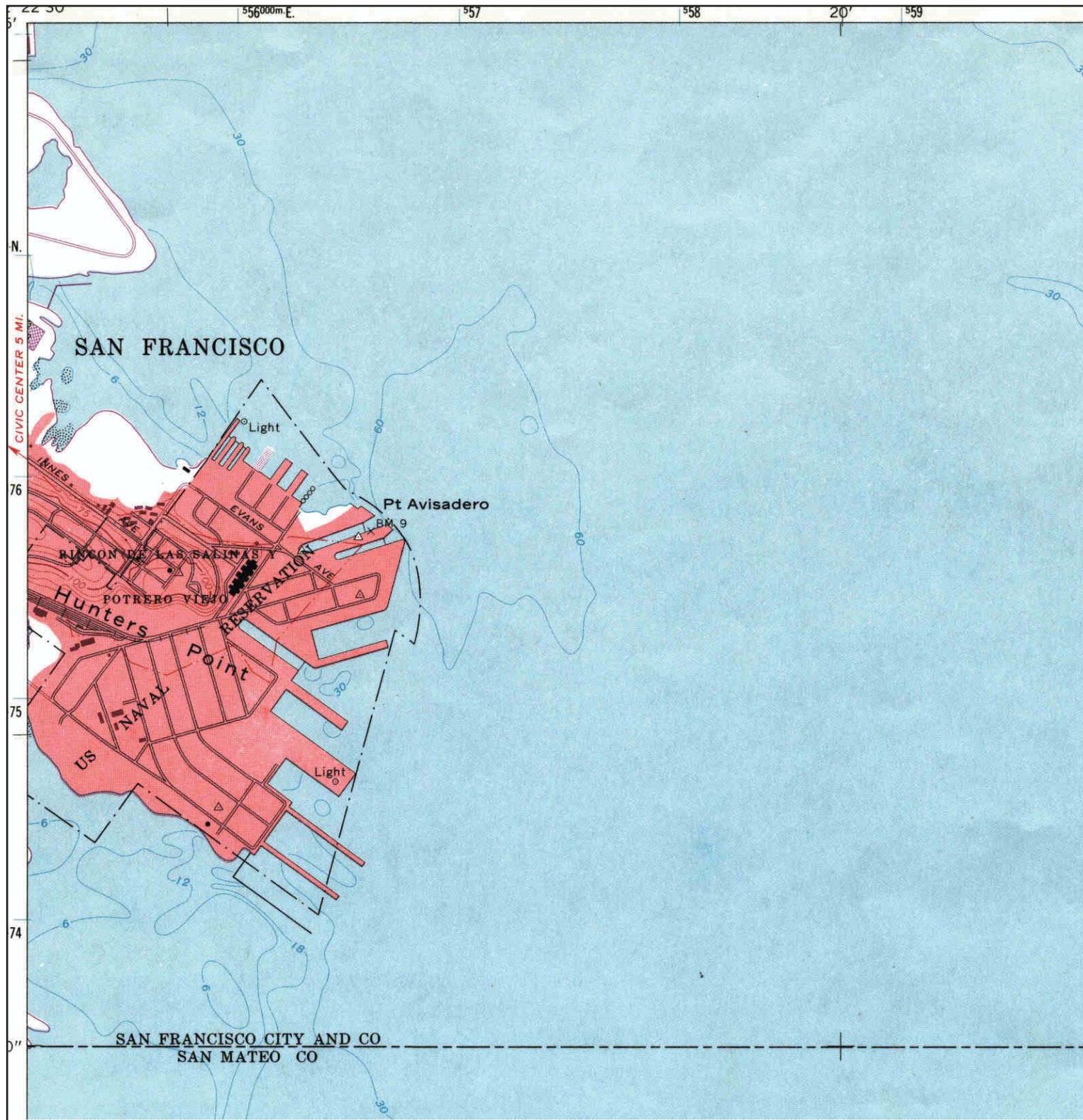
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	<p>SERIES: 7.5 SCALE: 1:24000</p>		

Historical Topographic Map



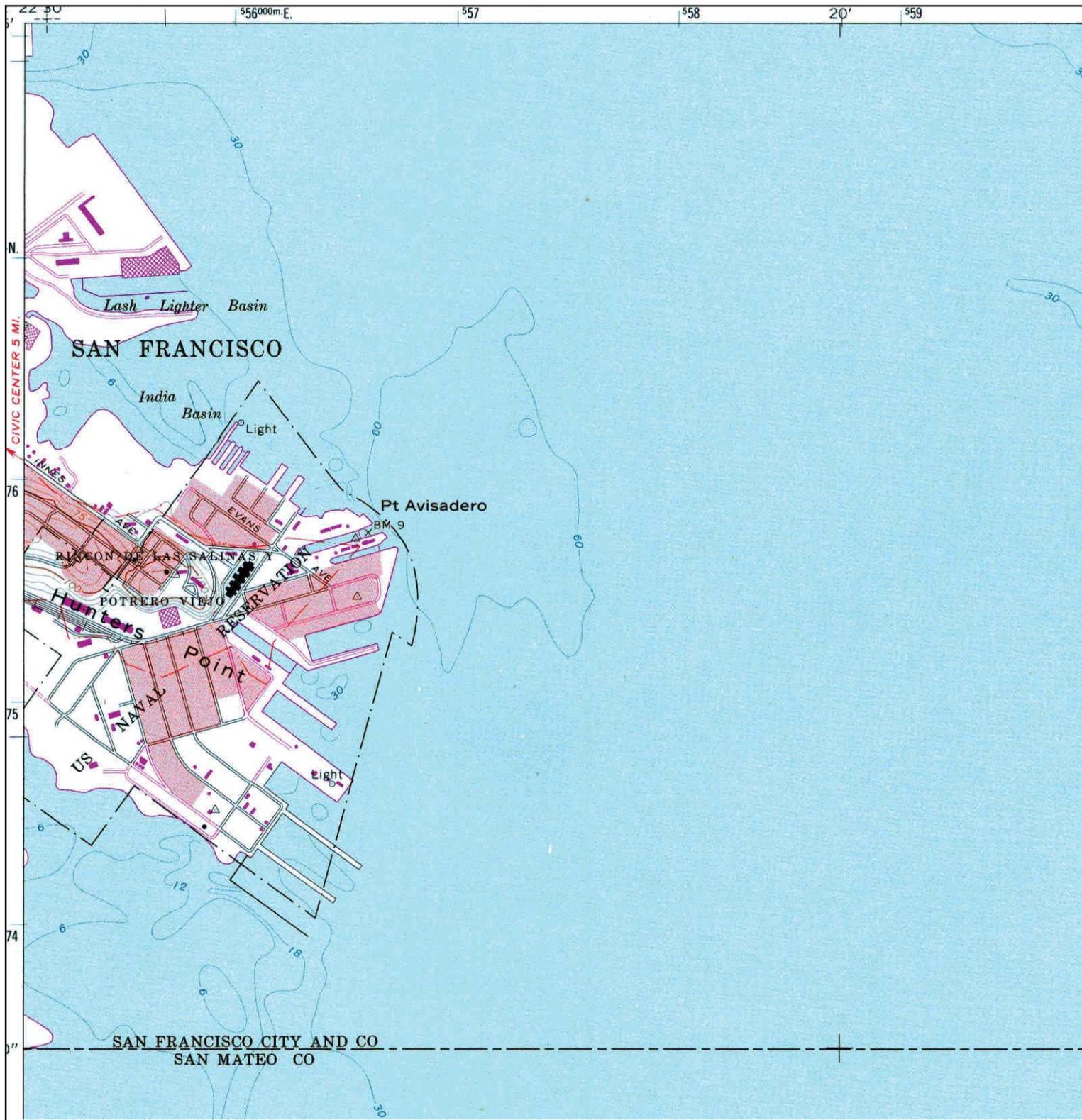
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	<p>SERIES: 7.5 SCALE: 1:24000</p>		

Historical Topographic Map



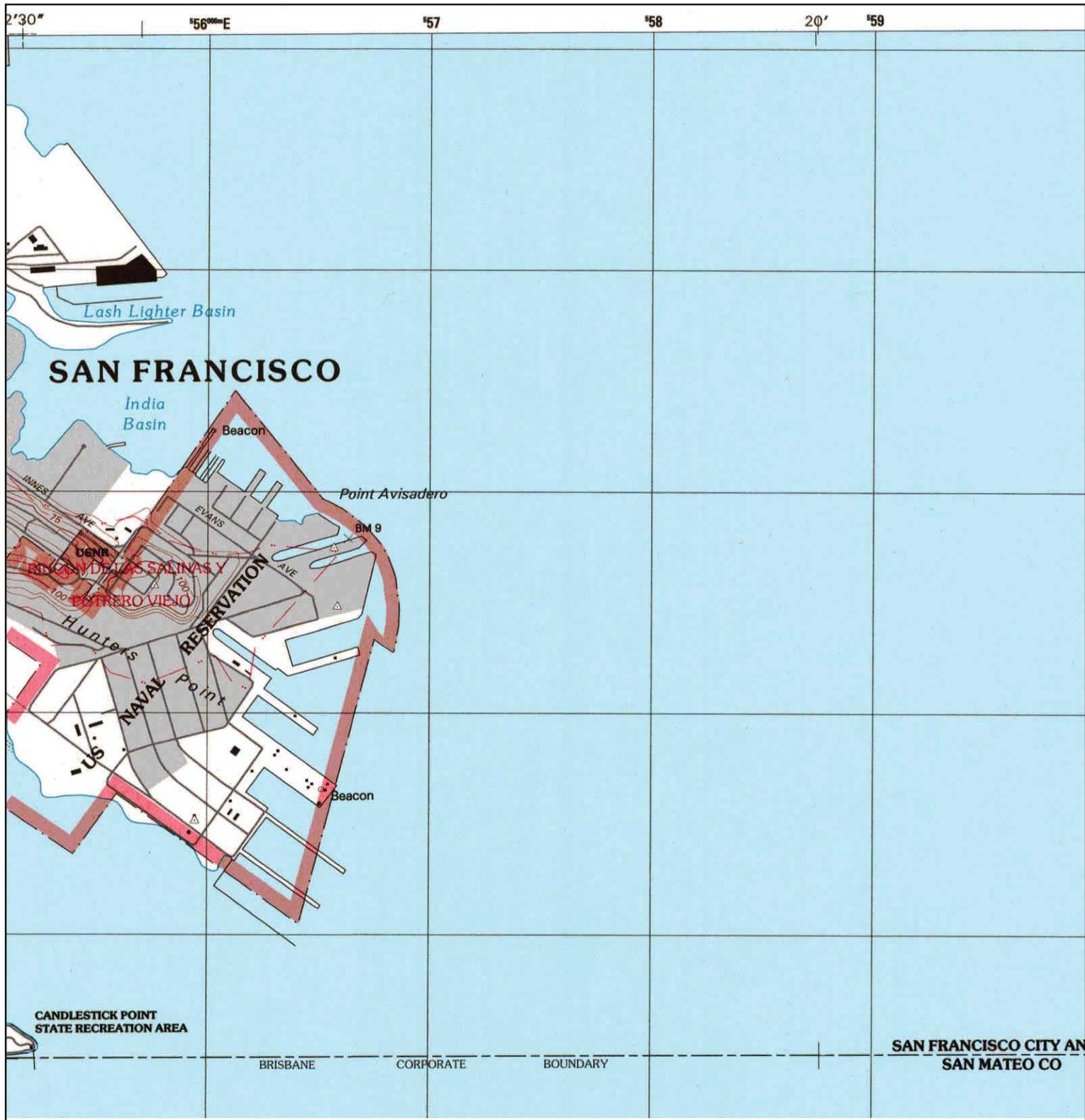
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	MAP YEAR: 1968	San Francisco, CA 94124	INQUIRY#: 4048497.4
	PHOTOREVISED FROM :1956	LAT/LONG: 37.7318 / -122.3719	RESEARCH DATE: 08/26/2014
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Historical Topographic Map



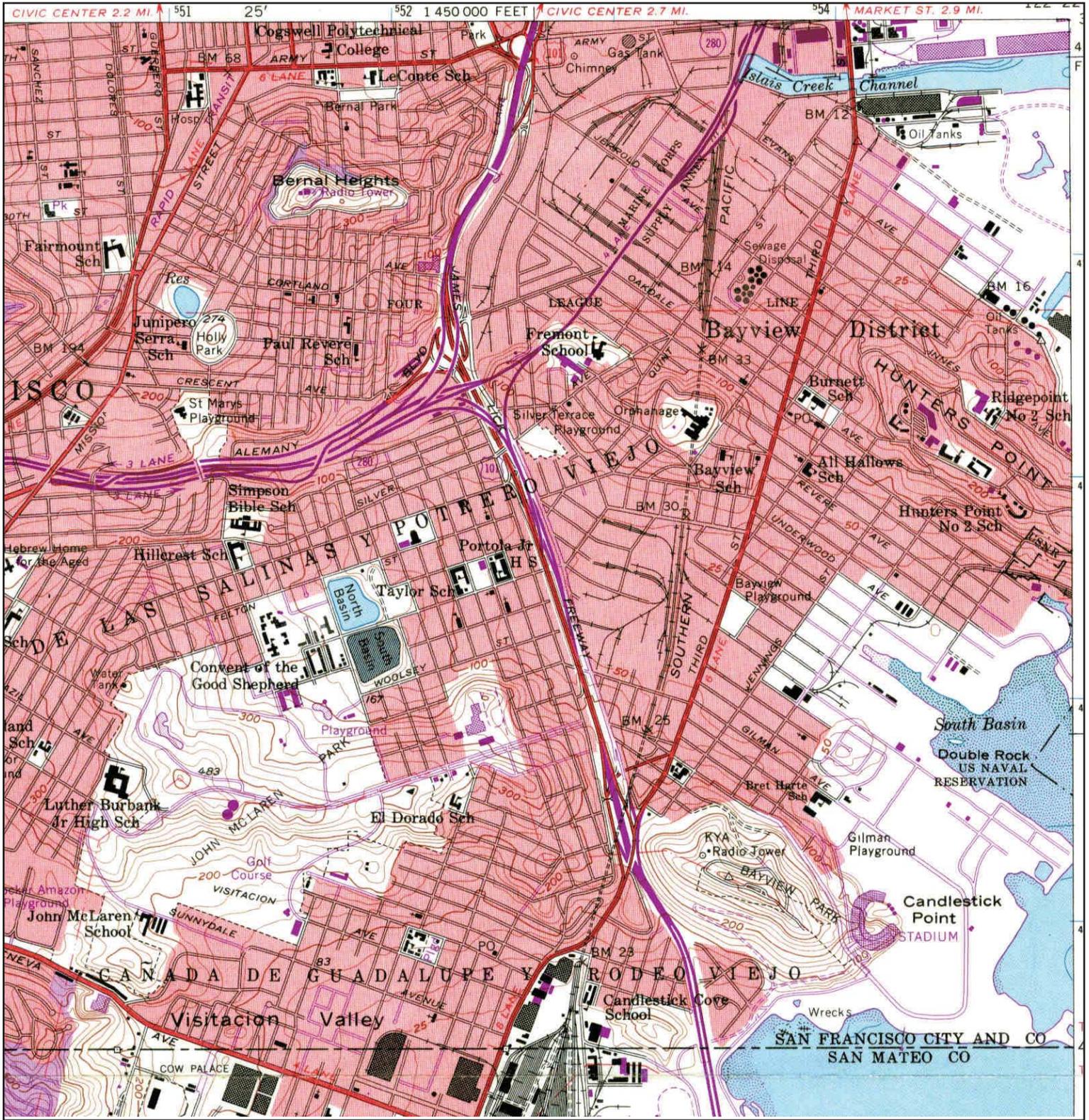
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Historical Topographic Map



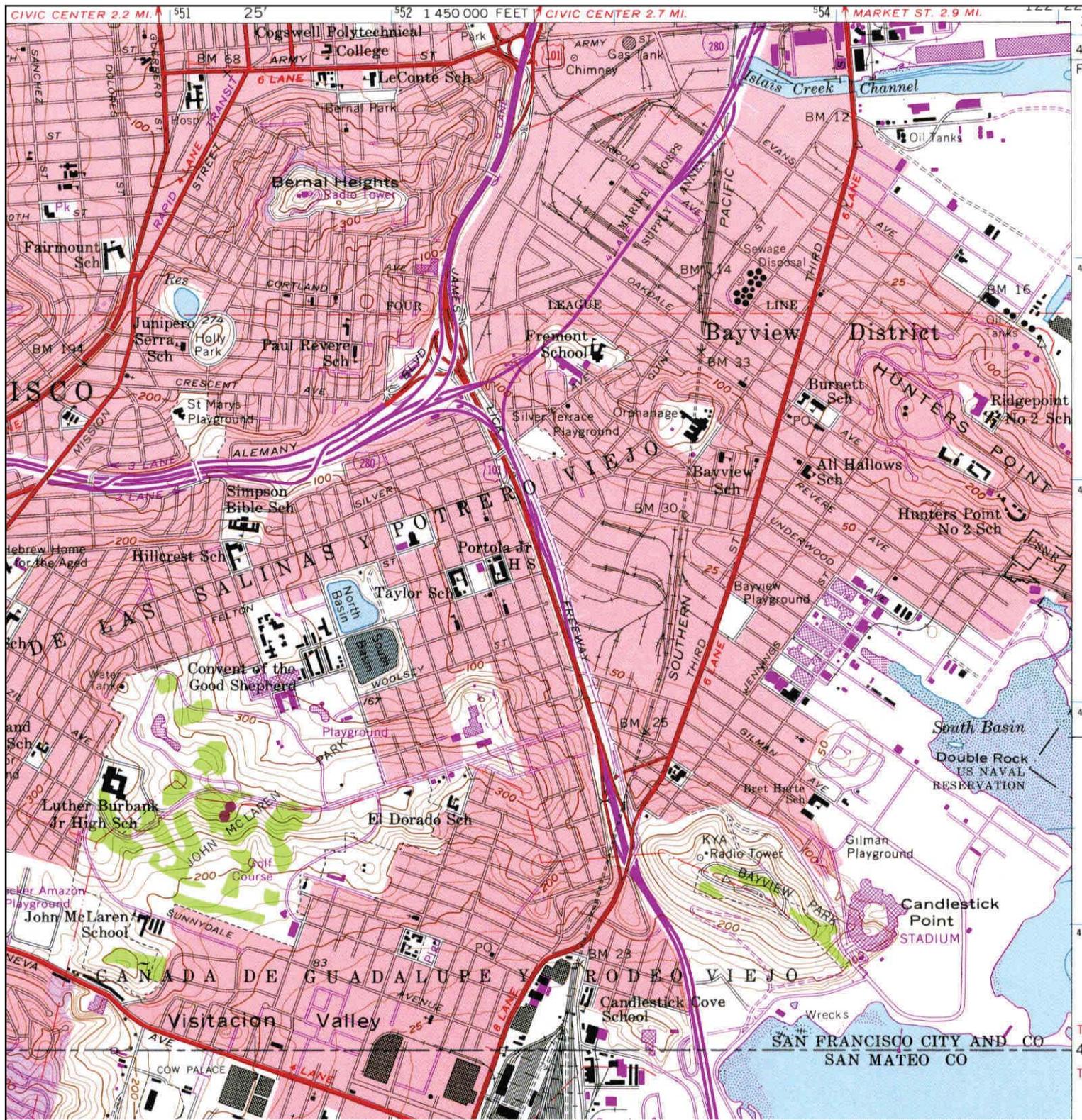
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Historical Topographic Map



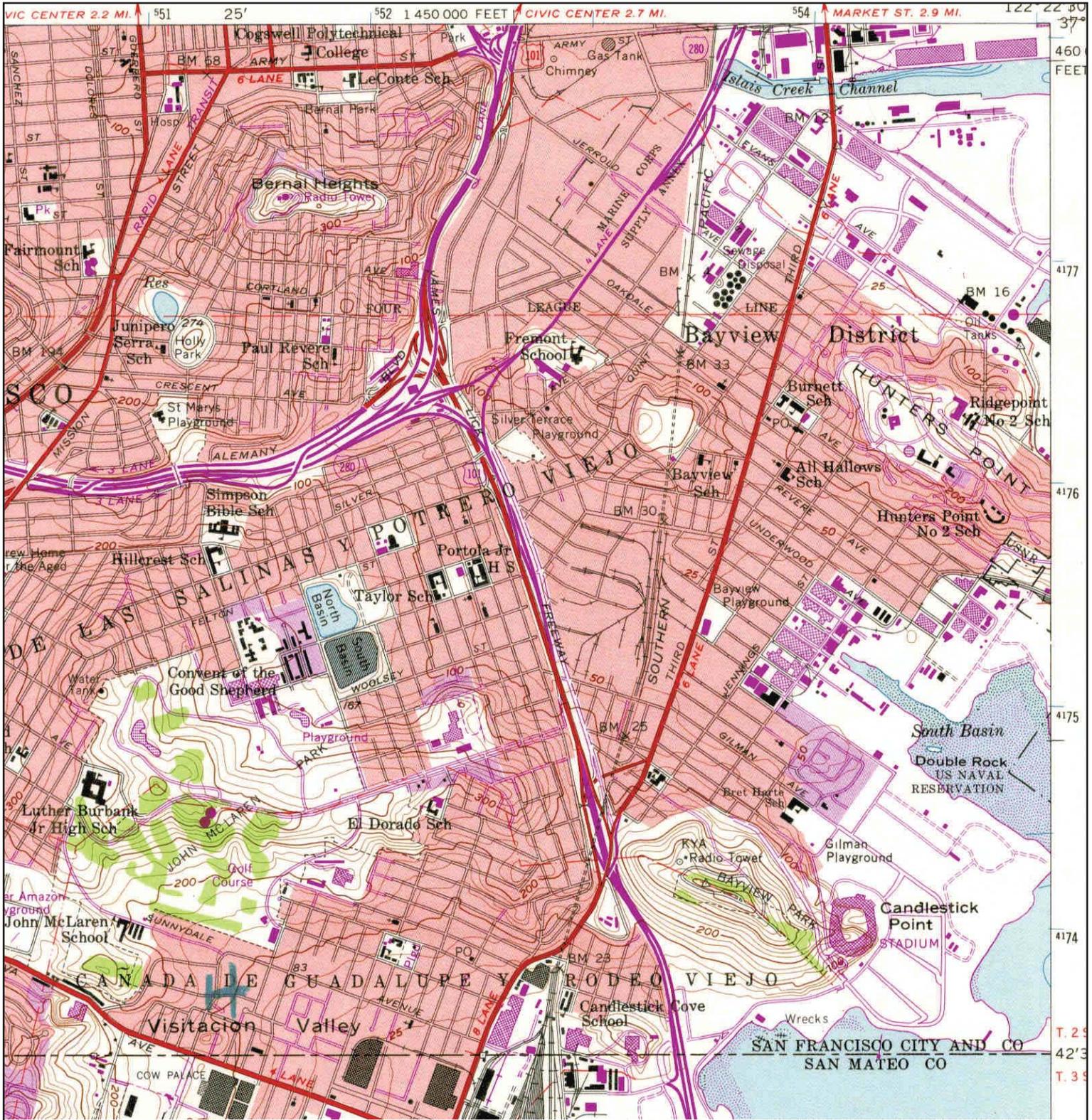
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	MAP YEAR: 1968		SAN FRANCISCO, CA 94124		INQUIRY#: 4048497.4	
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	SCALE: 1:24000					

Historical Topographic Map



<p>N</p> 	ADJOINING QUAD	SITE NAME:	CLIENT:
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	SOUTH	ADDRESS:	CONTACT:
	MAP YEAR: 1973	Earl Street/Innes Avenue	Peter J. Cusack
	PHOTOREVISED FROM :1956	SAN FRANCISCO, CA 94124	INQUIRY#: 4048497.4
	SERIES: 7.5	LAT/LONG: 37.7318 / -122.3719	RESEARCH DATE: 08/26/2014
	SCALE: 1:24000		

Historical Topographic Map



<p>N</p>	ADJOINING QUAD	SITE NAME:	CLIENT:
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	SOUTH	ADDRESS:	CONTACT:
	MAP YEAR: 1980	Earl Street/Innes Avenue	Peter J. Cusack
	PHOTOREVISED FROM :1956	San Francisco, CA 94124	INQUIRY#: 4048497.4
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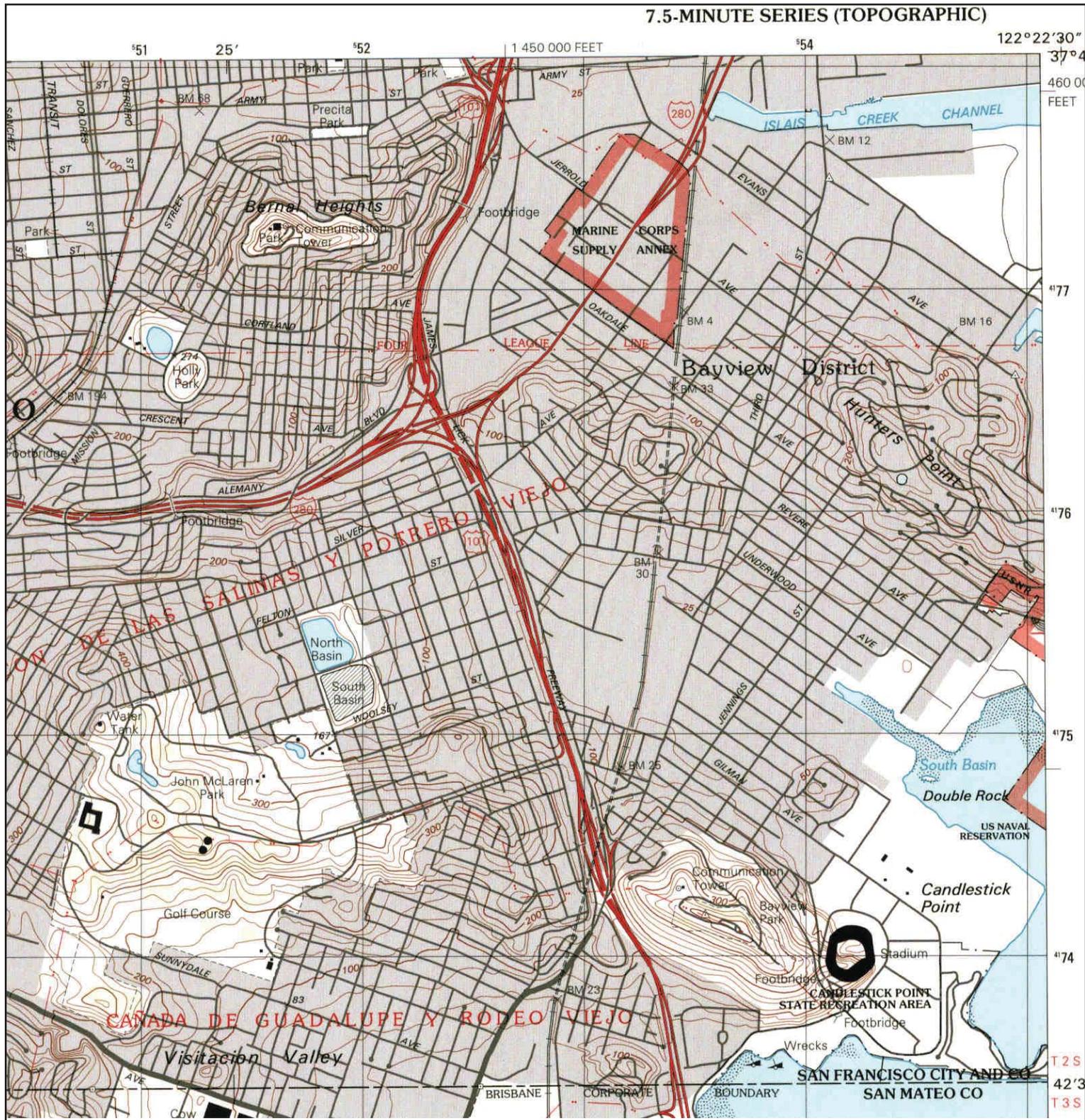
Historical Topographic Map



	ADJOINING QUAD	SITE NAME: India Basin	CLIENT: Langan Engineering
	NAME: SAN FRANCISCO	ADDRESS: Earl Street/Innes Avenue	CONTACT: Peter J. Cusack
	SOUTH	SAN FRANCISCO, CA 94124	INQUIRY#: 4048497.4
	MAP YEAR: 1993	LAT/LONG: 37.7318 / -122.3719	RESEARCH DATE: 08/26/2014
	SERIES: 7.5		
SCALE: 1:24000			

Historical Topographic Map

7.5-MINUTE SERIES (TOPOGRAPHIC)



	ADJOINING QUAD		SITE NAME: India Basin		CLIENT: Langan Engineering	
	NAME: SAN FRANCISCO SOUTH		ADDRESS: Earl Street/Innes Avenue		CONTACT: Peter J. Cusack	
	MAP YEAR: 1995		LAT/LONG: 37.7318 / -122.3719		INQUIRY#: 4048497.4	
	SERIES: 7.5				RESEARCH DATE: 08/26/2014	
	SCALE: 1:24000					

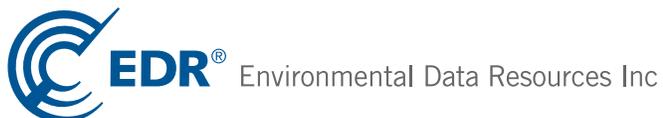
APPENDIX B
ENVIRONMENTAL REGULATORY RECORDS

India Basin

Earl Street/Innes Avenue
San Francisco, CA 94124

Inquiry Number: 4048497.2s
August 27, 2014

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
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 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

EARL STREET/INNES AVENUE
SAN FRANCISCO, CA 94124

COORDINATES

Latitude (North): 37.7318000 - 37° 43' 54.48"
Longitude (West): 122.3719000 - 122° 22' 18.84"
Universal Transverse Mercator: Zone 10
UTM X (Meters): 555347.4
UTM Y (Meters): 4176039.0
Elevation: 16 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 37122-F3 HUNTERS POINT, CA
Most Recent Revision: 1980

West Map: 37122-F4 SAN FRANCISCO SOUTH, CA
Most Recent Revision: 1999

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20120520
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>
DONCO INDUSTRIES INC 894 INNES AVE SAN FRANCISCO, CA 94124	CERCLIS RCRA-SQG HAZNET HWP	CAD983608571
DONCO INDUSTRIES INC 894 INNES AVE SAN FRANCISCO, CA 94124	CHMIRS ENVIROSTOR Status: Inactive - Needs Evaluation	N/A
INDIA BASIN BOATYARD 894 INNES AVE SAN FRANCISCO, CA 94107	CERCLIS PRP	CA0000067603

EXECUTIVE SUMMARY

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

Federal institutional controls / engineering controls registries

LUCIS..... Land Use Control Information System

Federal ERNS list

ERNS..... Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

EXECUTIVE SUMMARY

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 Lists of Landfill / Solid Waste Disposal Sites

ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
WMUDS/SWAT..... Waste Management Unit Database

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

CA FID UST..... Facility Inventory Database
HIST UST..... Hazardous Substance Storage Container Database
SWEEPS UST..... SWEEPS UST Listing

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
LDS..... Land Disposal Sites Listing
MCS..... Military Cleanup Sites Listing
SPILLS 90..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR..... RCRA - Non Generators / No Longer Regulated
DOT OPS..... Incident and Accident Data
DOD..... Department of Defense Sites

EXECUTIVE SUMMARY

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
EML.....	Emissions Inventory Data
INDIAN RESERV.....	Indian Reservations
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
EPA WATCH LIST.....	EPA WATCH LIST
2020 COR ACTION.....	2020 Corrective Action Program List
LEAD SMELTERS.....	Lead Smelter Sites
HWT.....	Registered Hazardous Waste Transporter Database
COAL ASH DOE.....	Steam-Electric Plant Operation Data
MWMP.....	Medical Waste Management Program Listing
PCB TRANSFORMER.....	PCB Transformer Registration Database
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
PROC.....	Certified Processors Database
Financial Assurance.....	Financial Assurance Information Listing
US FIN ASSUR.....	Financial Assurance Information
WDS.....	Waste Discharge System
US AIRS.....	Aerometric Information Retrieval System Facility Subsystem

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR US Hist Auto Stat.....	EDR Exclusive Historic Gas Stations

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF.....	Recovered Government Archive Solid Waste Facilities List
-------------	--

EXECUTIVE SUMMARY

RGA LUST..... Recovered Government Archive Leaking Underground Storage Tank

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 10/25/2013 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>
<i>TREASURE ISLAND NAVAL STATION-</i>	<i>HUNTERS POINT NAVAL SHI</i>	<i>SE 0 - 1/8 (0.098 mi.)</i>	<i>0</i>	<i>20</i>

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 10/25/2013 has revealed that there is 1 CERCLIS 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>TREASURE ISLAND NAVAL STATION-</i>	<i>HUNTERS POINT NAVAL SHI</i>	<i>SE 0 - 1/8 (0.098 mi.)</i>	<i>0</i>	<i>20</i>

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 03/11/2014 has revealed that there is 1 RCRA-LQG 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>
HUNTERS POINT REDEVELOPMENT PR	690 HUDSON AVE	SSE 1/8 - 1/4 (0.131 mi.)	C6	76

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 03/19/2014 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>
TREASURE ISLAND NAVAL STATION-	HUNTERS POINT NAVAL SHI	SE 0 - 1/8 (0.098 mi.)	0	20

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 03/19/2014 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>
TREASURE ISLAND NAVAL STATION-	HUNTERS POINT NAVAL SHI	SE 0 - 1/8 (0.098 mi.)	0	20

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 06/05/2014 has revealed that there are 2 RESPONSE 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>
BAYVIEW PLUME STUDY AREA	NEAR INTERSECTION OF SH	WSW 1/2 - 1 (0.713 mi.)	21	155
BAY AREA DRUM COMPANY	1212 THOMAS AVENUE	WSW 1/2 - 1 (0.765 mi.)	22	161

EXECUTIVE SUMMARY

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 06/05/2014 has revealed that there are 8 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>
SAN FRANCISCO ENERGY COGENERAT Status: Refer: Other Agency	INNES AVE. BETWEEN FITC	S 1/8 - 1/4 (0.133 mi.)	B7	77
HUNTERS POINT ANNEX Status: No Further Action		S 1/4 - 1/2 (0.280 mi.)	E14	93
BAYVIEW PLUME STUDY AREA Status: Backlog	NEAR INTERSECTION OF SH	WSW 1/2 - 1 (0.713 mi.)	21	155
BAY AREA DRUM COMPANY Status: Certified	1212 THOMAS AVENUE	WSW 1/2 - 1 (0.765 mi.)	22	161
1228 UNDERWOOD AVENUE SITE Status: No Further Action	1228 UNDERWOOD AVE.	WSW 1/2 - 1 (0.841 mi.)	23	202
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
PG & E HUNTERS POINT Status: Active	1000 EVANS AVE HUNTERS	NW 1/4 - 1/2 (0.401 mi.)	16	97
HUNTERS POINT NAVAL SHIPYARD, Status: Active Status: Certified	965 ACRES; SE PORTION O	SSE 1/2 - 1 (0.928 mi.)	24	205
MOBILE DEBRIS BOX SERVICE Status: Inactive - Needs Evaluation	1301V YOSEMITE AVENUE	SW 1/2 - 1 (0.968 mi.)	25	383

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 07/30/2014 has revealed that there are 7 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>
COMMERCIAL PROPERTY Status: Completed - Case Closed	690 HUDSON AVE	SSE 1/8 - 1/4 (0.131 mi.)	C5	74

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MEE CORP. Status: Completed - Case Closed	895 INNES AVE	W 1/8 - 1/4 (0.210 mi.)	D9	81
RFJ MEISWINKEL CO. Status: Completed - Case Closed	930 INNES AVE	W 1/8 - 1/4 (0.238 mi.)	11	86
G. PAIZIS TRUSTEE Status: Completed - Case Closed	996 INNES AVE	WNW 1/4 - 1/2 (0.322 mi.)	15	94
COMMERCIAL PROPERTY Status: Completed - Case Closed	50 CRISP ROAD	SSW 1/4 - 1/2 (0.409 mi.)	F17	152
COMMERCIAL PROPERTY COMMERCIAL	50 CRISP ROAD 50 CRISP ROAD	SSW 1/4 - 1/2 (0.409 mi.) SSW 1/4 - 1/2 (0.409 mi.)	F18 F19	153 153

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 07/30/2014 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		NNW 1/4 - 1/2 (0.499 mi.)	20	155

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 07/30/2014 has revealed that there are 2 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>
MEE CORPORATION	895 INNES AV	W 1/8 - 1/4 (0.210 mi.)	D8	79
RFJ MEISWINKEL CO.	930 INNES AVE	W 1/8 - 1/4 (0.238 mi.)	11	86

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 06/05/2014 has revealed that there are 2 VCP 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>
SAN FRANCISCO ENERGY COGENERAT	INNES AVE. BETWEEN FITC	S 1/8 - 1/4 (0.133 mi.)	B7	77
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
PG & E HUNTERS POINT	1000 EVANS AVE HUNTERS	NW 1/4 - 1/2 (0.401 mi.)	16	97

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 07/01/2014 has revealed that there is 1 US BROWNFIELDS 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>
900 INNES AVENUE	900 INNES AVENUE	W 1/8 - 1/4 (0.215 mi.)	D10	84

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>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BAY AREA DRUM COMPANY	1212 THOMAS AVENUE	WSW 1/2 - 1 (0.765 mi.)	22	161
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
HUNTERS POINT NAVAL SHIPYARD,	965 ACRES; SE PORTION O	SSE 1/2 - 1 (0.928 mi.)	24	205

Other Ascertainable Records

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 12/31/2012 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		S 1/4 - 1/2 (0.280 mi.)	E13	92

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 11/25/2013 has revealed that there is 1 ROD site within approximately 1 mile of the target property.

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>TREASURE ISLAND NAVAL STATION-</i>	<i>HUNTERS POINT NAVAL SHI</i>	<i>SE 0 - 1/8 (0.098 mi.)</i>	<i>0</i>	<i>20</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>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>BAY AREA DRUM COMPANY</i>	<i>1212 THOMAS AVENUE</i>	<i>WSW 1/2 - 1 (0.765 mi.)</i>	<i>22</i>	<i>161</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 [CALSITES]. 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 2 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>W 1/8 - 1/4 (0.210 mi.)</i>	<i>D9</i>	<i>81</i>
GEORGE PAIZI TRUSTEE	966 INNES	WNW 1/4 - 1/2 (0.268 mi.)	12	91

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

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	S 0 - 1/8 (0.121 mi.)	B4	74

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 8 records.

<u>Site Name</u>	<u>Database(s)</u>
VACANT	LUST, CA FID UST, SWEEPS UST, LOS ANGELES CO. HMS
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 (STREET)	LUST
SF PIER 98 INDIA BASIN	FINDS
SF PIER 98 INDIA BASIN	RGA LF

overview MAP - 4048497.2s



★ 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

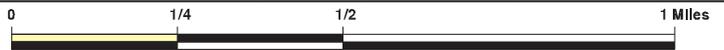
▨ Indian Reservations BIA

▨ County Boundary

▨ Oil & Gas pipelines from USGS

■ National Wetland Inventory

▨ Areas of Concern

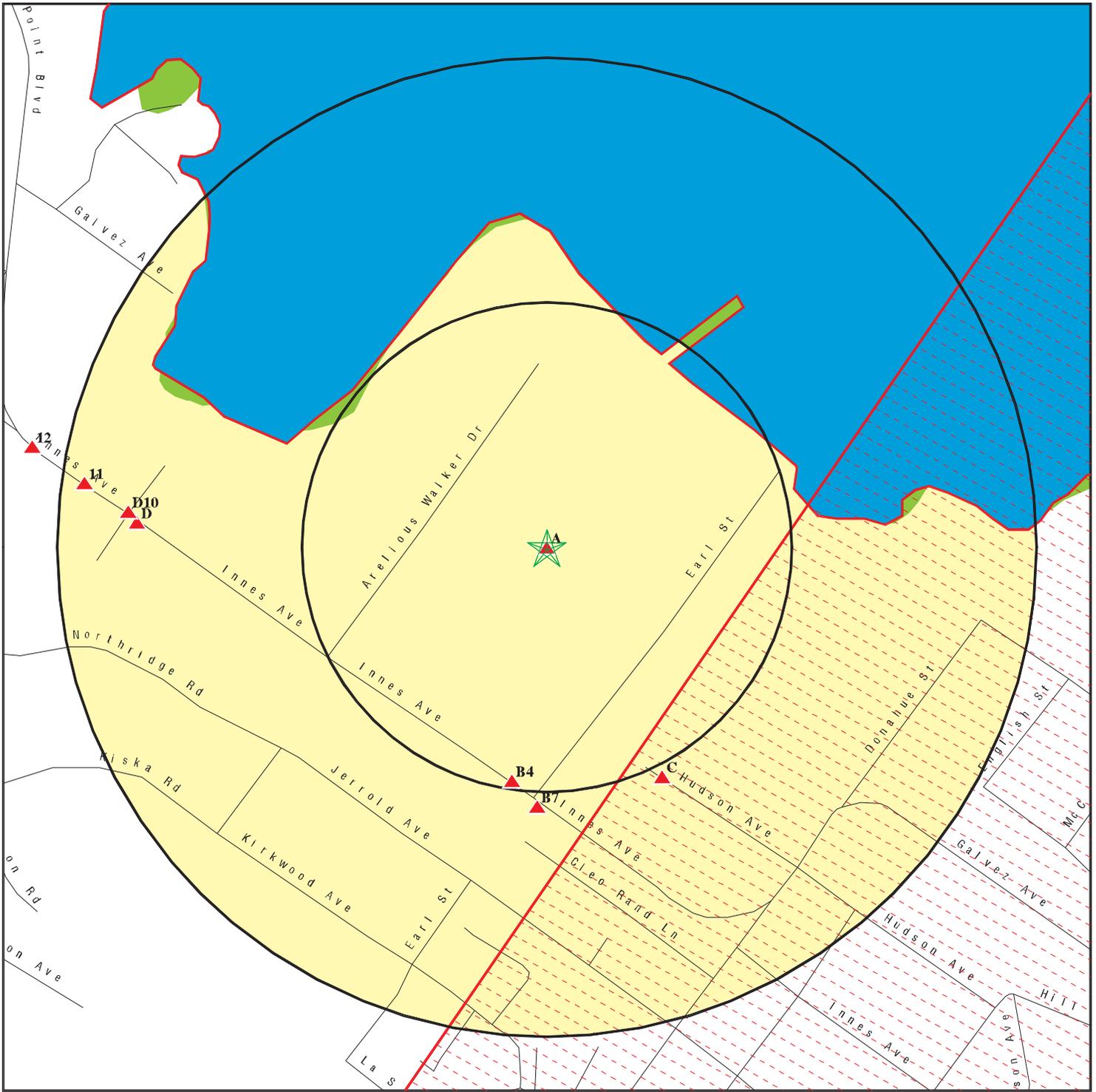


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: India Basin
 ADDRESS: Earl Street/Innes Avenue
 San Francisco CA 94124
 LAT/LONG: 37.7318 / 122.3719

CLIENT: Langan Engineering
 CONTACT: Peter J. Cusack
 INQUIRY #: 4048497.2s
 DATE: August 27, 2014 7:35 am

detail MAP - 4048497.2s



- ★ 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
- ⚡ 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: India Basin
 ADDRESS: Earl Street/Innes Avenue
 San Francisco CA 94124
 LAT/LONG: 37.7318 / 122.3719

CLIENT: Langan Engineering
 CONTACT: Peter J. Cusack
 INQUIRY #: 4048497.2s
 DATE: August 27, 2014 7:36 am

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
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		1	0	0	0	NR	1
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
CERCLIS	0.500	2	1	0	0	NR	NR	3
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site List</i>								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	1	NR	NR	NR	1
RCRA-SQG	0.250	1	0	0	NR	NR	NR	1
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
US ENG CONTROLS	0.500		1	0	0	NR	NR	1
US INST CONTROL	0.500		1	0	0	NR	NR	1
LUCIS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	TP		NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL RESPONSE</i>								
RESPONSE	1.000		0	0	0	2	NR	2
<i>State- and tribal - equivalent CERCLIS ENVIROSTOR</i>								
ENVIROSTOR	1.000	1	0	1	2	5	NR	9
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		0	3	4	NR	NR	7

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
State and tribal registered storage tank lists								
UST	0.250		0	2	NR	NR	NR	2
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
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	1	1	NR	NR	2
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	1	0	NR	NR	1
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	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
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
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
Local Lists of Registered Storage Tanks								
CA FID UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
SWEEPS UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
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
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP	1	NR	NR	NR	NR	NR	1
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
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
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		1	0	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		0	1	1	NR	NR	2
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
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
HWP	1.000	1	0	0	0	0	NR	1
HWT	0.250		0	0	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
PRP	TP	1	NR	NR	NR	NR	NR	1
US FIN ASSUR	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
WDS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	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		0	0	NR	NR	NR	0
EDR US Hist Cleaners	0.250		1	0	NR	NR	NR	1

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0

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 **DONCO INDUSTRIES INC**
Target **894 INNES AVE**
Property **SAN FRANCISCO, CA 94124**

CERCLIS **1015730663**
RCRA-SQG **CAD983608571**
HAZNET
HWP

Site 1 of 3 in cluster A

Actual:
16 ft.

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
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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

DONCO INDUSTRIES INC (Continued)

1015730663

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

DONCO INDUSTRIES INC (Continued)

1015730663

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

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

DONCO INDUSTRIES INC (Continued)

1015730663

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

DONCO INDUSTRIES INC (Continued)

1015730663

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

DONCO INDUSTRIES INC (Continued)

1015730663

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

DONCO INDUSTRIES INC (Continued)

1015730663

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: 8.33999999999
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
Facility County: San Francisco

HWP:
EPA Id: CAD983608571
Cleanup Status: UNKNOWN
Latitude: 37.73208
Longitude: -122.3758
Facility Type: Historical - Non-Operating
Facility Size: Not reported
Team: Not reported
Supervisor: Not reported
Site Code: Not reported
Assembly District: 17
Senate District: 11
Public Information Officer: Not reported

A2 DONCO INDUSTRIES INC
Target 894 INNES AVE
Property SAN FRANCISCO, CA 94124

CHMIRS 1000483603
ENVIROSTOR N/A

Site 2 of 3 in cluster A

Actual: CHMIRS:
16 ft. OES Incident Number: 02-1594
OES notification: 03/23/2002
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

DONCO INDUSTRIES INC (Continued)

1000483603

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:	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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

DONCO INDUSTRIES INC (Continued)

1000483603

Unknown: 0
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:

Facility ID: 80001502
Status: Inactive - Needs Evaluation
Status Date: 06/29/2009
Site Code: Not reported
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
Assembly: 17
Senate: 11
Special Program: Not reported
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 ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s) EDR ID Number
EPA ID Number

A3 INDIA BASIN BOATYARD
Target 894 INNES AVE
Property SAN FRANCISCO, CA 94107

CERCLIS 1000855624
PRP CA0000067603

Site 3 of 3 in cluster A

Actual:
16 ft.

CERCLIS:
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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

INDIA BASIN BOATYARD (Continued)

1000855624

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
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.:

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

INDIA BASIN BOATYARD (Continued)

1000855624

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

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: CONSENT AGREEMENT (ADMINISTRATIVE)
Date Started: / /
Date Completed: 06/30/00

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

INDIA BASIN BOATYARD (Continued)

1000855624

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:
PRP name: JAMES, CHARLES

NPL
Region
SE
< 1/8
515 ft.

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CA 94124

NPL 1000403627
CERCLIS CA1170090087
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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
Substance ID: U072
Substance: DICHLOROBENZENE, 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Alias ID: SAN FRANCISCO, CA 94124
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 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

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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, 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. 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 (bgs). 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 1E-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. An Explanation of Significant Differences for Operable Unit 02 of the Treasure Island Naval Station-Hunters Point Annex Site was completed in October 1998. This Explanation of Significant Differences (ESD) updates the soil cleanup values presented in the Record of Decision for Parcel B, Hunters Point Shipyard (the Site) dated October 7, 1997 (Parcel B ROD). In the Parcel B ROD, the soil cleanup values presented were calculated to correspond to: -A human health risk level of 10E-6 (one in one million) or less for carcinogens except where ambient levels exceed 10E-6. -A hazard index (HI) of 1 or less for noncarcinogens, except where ambient levels exceed an HI of 1 because of the fill material. -Lead levels of less than 221 milligrams per kilogram (mg/kg). The soil cleanup values were based on the U.S. Environmental Protection Agency, Region IX (EPA) 1995 preliminary remediation goals (PRG) with Navy adjustments to incorporate the produce uptake pathway and Hunters Point Shipyard ambient levels (HPAL) for metals (only). This ESD revises the soil cleanup values presented to incorporate EPA's 1999 PRGs and the revised nickel ambient levels. An Explanation of Significant Differences for Operable Unit 02 of the Treasure Island Naval Station - Hunters Point Annex Site was completed in May 2000. OU02 Amendment: Actions since the October 1997 ROD include changes to the boundary of Parcel B, additional investigations, removal and remedial actions, treatability studies, and regulatory actions. The boundary of Parcel B has changed twice since the October 1997 ROD. The first change affected the southeastern boundary with Parcel C. The Navy revised the boundary between Parcels B and C to consolidate the area subject to similar contamination and potential remedial action and include the area as part of Parcel C. This change moved IR-06 to Parcel C. The Navy documented the change in the boundary in a memorandum to the administrative record file on February 1, 2002. The adjustment of the parcel boundary to move IR-06 to Parcel C reduced the area of Parcel B from 63 to 59 acres. The second change affected the southwestern boundary with the former Parcel A. Minor adjustments in the boundary in this area were made to ensure that soil contamination related to activities in Parcel B was contained within

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

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the boundary of Parcel B. The Navy documented this boundary adjustment in the finding of suitability to transfer documents for Parcel A. The adjustment involved only a small fraction of an acre, and the area of Parcel B remained about 59 acres. In this amended ROD, the boundary between Parcels B and F is considered the mean lower low water line. The Navy is preparing a memorandum to the administrative record file to document this definition. This memorandum will also document that the piers along the shoreline of Parcel B have been transferred into Parcel F. The 1997 ROD identified excavation of contaminated soil, off-site disposal, and placement of clean backfill as the primary components of the selected remedy. The Navy conducted a series of excavations at Parcel B to remove contaminated soil, including (1) pre-ROD exploratory excavations in 1996, (2) remedial action excavations from 1998 to 2001, and (3) a removal action to excavate soil contaminated by fuel-related compounds in 2004. The Navy conducted exploratory excavations at 18 sites across HPS between July 1996 and January 1997. These excavations included removal actions at five sites at Parcel B. The volume of the excavations was limited during this initial, exploratory phase. A total of approximately 1,700 cubic yards of soil was removed from the five sites at Parcel B. The Navy conducted remedial actions for soil in two phases: 1998 to 1999, and 2000 to 2001. The Navy excavated about 54,400 cubic yards of soil from 84 areas at Parcel B between July 1998 and September 1999. The remedial design (RD) for this phase included confirmation sampling after an excavation had been completed. However, the excavations failed to remove contaminants to below cleanup goals for soil in many excavations, and the soil remedial action paused in September 1999 while the Navy reevaluated the cleanup goals presented in the 1997 ROD. The Navy summarized revised cleanup goals in the May 2000 Explanation of Significant Differences (ESD). Between May 2000 and December 2001, the Navy excavated and disposed of off site approximately 47,200 cubic yards of soil from 43 areas, some of which had been originally excavated from 1998 to 1999. This second phase of excavation followed an amended RD that included pre-excavation sampling to delineate excavation areas. New excavation areas were opened during the second phase, and some excavations begun in 1998 to 1999 were reopened. Similar to the first phase, the second phase of excavations did not remove all contaminants to below cleanup levels for soil, and the remedial action was halted for reevaluation. The Navy excavated a total of 101,600 cubic yards of soil from 106 areas at Parcel B during both phases, compared with the estimate of 38,000 cubic yards at 85 areas in the 1997 ROD. Details of the remedial action excavations are presented in the construction summary report. The Navy encountered black sandblast grit at Excavation 7-4 in 2001 and analyzed this material for radioactivity. Minimal radioactivity was detected in the field, and laboratory analysis of a sample found only naturally occurring radium. In a previous study, EPA radiological experts performed an independent evaluation and confirmed that the radiation levels were only slightly above background. The Navy removed about 29,000 cubic yards of soil from 12 excavations at sites across HPS between July 2004 and January 2005 as part of its total petroleum hydrocarbons (TPH) program to remove soil that was contaminated by fuel-related products. The Navy removed and disposed off site about 9,800 cubic yards of soil from two areas at Parcel B during this action. The Navy is conducting three Time-Critical Removal Actions (TCRAs) to address (1) radiological contamination basewide, including Parcel B, (2) methane at IR-07, and (3) mercury at IR-26. - TCRA for Radionuclides. The Navy is conducting a TCRA to address potential radioactive contamination in buildings, fill areas, former building sites, storm drains, and sanitary sewers at Parcel B. The Final Action Memorandum for the Base-wide Radiological Removal Action describes the need for the response action as well as the cleanup criteria. The TCRA involves (1) surveying structures, former building sites, and radiologically impacted areas; (2) decontaminating (and demolishing if

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necessary) buildings and former building sites; (3) excavating radiologically impacted storm drain and sanitary sewer lines and other areas, as necessary; and (4) screening, separating, and disposing of radioactive anomalies and contaminated excavated materials at an off-site, low-level radioactive waste facility. Activities for the TCRA at Parcel B began in 2006. The Navy excavated more than 59,400 cubic yards of material and disposed of about 3,800 cubic yards off site as low-level radioactive waste. The Navy demolished Building 157 as part of the TCRA and removed more than 22,900 linear feet of storm drain and sanitary sewer lines. The Navy also investigated Building 140 and its associated channels, pumps, and pipes for radiological contamination. All information related to each radiologically impacted area at Parcel B will be summarized in individual final status survey reports or the removal action completion report (RACR), which will be reviewed and approved by the Base Realignment and Closure Cleanup Team (BCT) and the California Department of Public Health (CDPH). - TCRA for Methane at IR-07. The Navy is conducting a TCRA to address methane detected in soil gas samples in the eastern portion of IR-07. The Navy excavated and screened about 12,000 cubic yards of soil, including about 2,500 cubic yards of construction and demolition debris during August through October 2008. The TCRA found that debris was confined to a layer that extended to about 6 feet below ground surface (bgs) and was above the water table, which was at about 18 feet bgs at the excavation site. Therefore, it is not likely that debris placed by the Navy as fill is the source of methane. Material below 6 feet bgs was predominantly clean, engineered fill without debris or staining. Excavation continued to the native Bay Mud at a depth of 27 feet bgs. A layer of material at the top of the Bay Mud was observed to be highly organic and odiferous. An unmarked polyvinyl chloride sewer line, apparently installed after the Navy's presence at HPS ended in 1974, also was found during the excavation; a portion of the line was removed and the ends were capped. Both the native organic material and the sewer line may have been sources of methane; debris used as fill located above the water table does not appear to be a likely source of methane. - TCRA for Mercury at IR-26. The Navy is conducting a TCRA to address the source of mercury in groundwater at IR-26 (near wells IR26MW47A and IR26MW49A). The Navy removed about 6,000 cubic yards of soil beneath and adjacent to former Excavation EE-05 during September through October 2008. The TCRA found high concentrations of mercury in soil samples collected near well IR26MW47A. These soils were the likely source of the elevated concentrations of mercury measured in groundwater samples collected at wells IR26MW47A and IR26MW49A. Parcel B is owned by the federal government and is under the jurisdiction of the Navy. Most of the buildings at Parcel B are vacant, although a small number are used for commercial enterprises such as artist studios. Except for the few occupied buildings, Parcel B is unoccupied and unused. Most of Parcel B is fenced, and access is limited. Parcel B is currently planned to be transferred to the City and County of San Francisco. Based on the City and County of San Francisco's reuse plan, Parcel B is expected to be zoned to accommodate mixed uses, including a mixed residential/retail area, a research and development area, a cultural and educational area, and open space. The mixed-use and research and development areas could include single-family homes, upper-story housing, or live/work arrangements, and a variety of commercial enterprises, artist studios, retail, and business services on the ground floor. The cultural and educational area could include museums. The open space areas will provide public access and use of the waterfront as well as provide a corridor for the Bay Trail (hiking and bicycle access) close to the shoreline. Groundwater beneath HPS is not currently used for drinking water, irrigation, or industrial supply. Drinking water is supplied to HPS by the City and County of San Francisco through its municipal supply from the Hetch Hetchy watershed in the Sierra Nevada. The evaluation of beneficial use considers the current Water

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Quality Control Plan (Basin Plan) for the San Francisco Bay Basin, which identifies the following existing and potential beneficial uses for groundwater: municipal and domestic water supply, industrial water supply, industrial process water supply, and agricultural water supply. The Water Board has concluded that the A-aquifer at HPS is unsuitable as a potential source of drinking water. The Navy also considers the A-aquifer at Parcel B unsuitable as a potential source of drinking water based on an evaluation of the site-specific factors identified in EPA's letter to the Navy. Based on total dissolved solids data alone, the B-aquifer at Parcel B would be considered suitable as a potential source of drinking water. However, results of the evaluation of site-specific factors indicate that the B-aquifer has a low potential for use as a source of drinking water. These site-specific factors include (1) the City and County of San Francisco's prohibition on installing domestic wells and the proximity of sewer lines and storm drains, (2) the lack of current or historical use of the aquifer for water supply, (3) the limited size of this groundwater resource, and (4) the proximity of saltwater to the aquifer and the potential for saltwater intrusion if significant quantities of groundwater are withdrawn from the aquifer. The evaluation of the B-aquifer suggests that it has a low potential as a source of drinking water. However, the groundwater ingestion pathway was included in the HHRA for the B-aquifer groundwater because of agreements with the BCT on the methodology. Parcel B does not have any naturally occurring surface streams or ponds. Storm water at Parcel B is currently handled via surface swales and storm sewers. A ROD Amendment addressing Parcel B (OU2) was completed in January, 2009. Operable Unit 3: Parcel C historically included about 79 acres in the central portion of the shipyard was formerly part of the industrial support area, and was used for shipping, ship repair, and office and commercial activities. Industrial support facilities for ship repair dominated the land use at Parcel C and included a foundry, a power plant, a sheet manufacturing shop, a paint shop, and various machine shops. Seventy buildings are located within the boundaries of Parcel C. The docks at Parcel C were formerly part of the industrial production area. Portions of Parcel C were also used by NRDL. In 1997 and 2002, the boundaries of Parcels B and C were redefined, and IR-06 and IR-25 became part of Parcel C. In 2008, the Navy divided the former Parcel C into two new parcels: Parcel C and Parcel UC-2. Parcel UC-2 is not part of this Record of Decision (ROD); the final ROD for Parcel UC-2 was signed in December 2009. The current Parcel C encompasses about 73 acres. The original redevelopment plan developed by the San Francisco Redevelopment Agency in 1997 divided Parcel C into reuse areas. The reuse areas include educational/cultural, maritime/industrial, mixed use, open space, and research and development. To facilitate discussion of all areas of the parcel in the context of contamination and cleanup issues, the area was divided into redevelopment blocks. Fourteen Installation Restoration (IR) sites are in Parcel C, but four of these (IR-45, IR-49, IR-50, and IR-51) are facility-wide sites consisting of utilities that cut across other IR sites or are the locations of former transformer storage areas. The redevelopment blocks (and associated reuses) for Parcel C are 20B, 22, and 25 (educational/cultural); CMI-1 (maritime/industrial); 10, 11, 13, and 26 (mixed use); COS-1, COS-2, and COS-3 (open space); and 18, 20A, 23, and 24 (research and development). The western portion of Parcel C comprises the original promontory, with native soil over shallow bedrock, while most of the parcel consists of flat lowlands. The lowlands were constructed by placing borrowed fill material from various sources, including crushed serpentinite bedrock from the adjacent highland, construction debris, and waste materials (such as used sandblast materials). Most surface elevations in Parcel C are between 0 to 10 feet above mean sea level. The serpentinite bedrock and serpentine bedrock-derived fill material consist of minerals that naturally contain asbestos and relatively high

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concentrations of arsenic, manganese, nickel, and other ubiquitous metals. The hydrostratigraphic units present at Parcel C include the shallow A-aquifer, the aquitard zone, the B-aquifer, and a bedrock water-bearing zone. The bedrock water-bearing zone is designated as F-WBZ in this report. Depth to the top of the A-aquifer occurs at approximately 8 to 10 feet below ground surface (bgs) across most of Parcel C. Groundwater is not currently used for any purpose at Parcel C. On September 25, 2003, the Water Board concurred with the Navy that A-aquifer groundwater at HPS meets the exception criteria in the State Water Resources Control Board Sources of Drinking Water Resolution No. 88-63. Therefore, the groundwater in the A-aquifer is not suitable as a potential source of drinking water. On July 29, 2008, the Water Board concurred with the Navy that the B-aquifer groundwater in the central area of Parcel C also meets the Resolution 88-63 exception criteria, and clarified that the exception for the A- and B-aquifer applies to F-WBZ where the F-WBZ is in direct contact with or hydrogeologically connected to the overlying A- and B-aquifers. The B-aquifer in the area of Building 134 is distinct and separate from the B-aquifer in the central area of Parcel C, and the Water Board considers the B-aquifer in the area of Building 134 as part of the B-aquifer in Parcel B. However, based on the low permeability of the B-aquifer in the area of Building 134, the B-aquifer groundwater in this area has a low potential as a future source of drinking water. The City and County of San Francisco (CCSF) regulates the installation and use of water wells within city boundaries under Article 12B of the CCSF Health Code. Under the Health Code, the withdrawal and use of groundwater within the City and County is administrated by the San Francisco Public Utilities Commission (SFPUC). SFPUC water policies are administrated as provided in the 2005 North Westside Groundwater Basin Management Plan, and in the 2005 Urban Water Management Plan (UWMP) for CCSF. San Francisco overlies all or part of seven groundwater basins. HPS Parcel C lies within the Islais Valley Basin. The UWMP identified the Islais Valley Basin as generally inadequate to supply a significant amount of groundwater for municipal supply due to low yield. As such, the SFPUC does not provide for the use of groundwater from the Islais Valley Basin. CCSF currently obtains its municipal water supply from the Hetch Hetchy watershed in the Sierra Nevada and plans to continue using the Hetch Hetchy watershed as a drinking water source in the future. The general pattern of groundwater flow is radially away from the former Parcel A topographic high (west of Parcel C) and toward the shoreline. At Parcel C, the general direction of groundwater flow is to the east, where groundwater discharges into the bay. Locally, the groundwater flow direction is southeast or northeast, directly toward the bay or dry dock, at bayside perimeter locations of the parcel. Leaking storm drains, sewer lines, and water supply lines also influence groundwater movement across Parcel C. The principal sources of groundwater recharge for the A-aquifer at Parcel C are considered to be the horizontal flow from the F-WBZ from areas upgradient of Parcel C, precipitation infiltration, and leaking sections of water lines. Discharge from the A-aquifer occurs principally as lateral flow of groundwater to the bay at the shore or through ruptured utility corridors. The principal sources of groundwater recharge for the B-aquifer at Parcel C are considered to be the horizontal flow from the upgradient F-WBZ and recharge from the overlying A-aquifer, particularly through infiltration of precipitation, in places where the two aquifers are in direct contact. Based on the limited extent of the B-aquifer in the central area of Parcel C and its lack of hydraulic connection to other aquifers, there is no potential for groundwater in the Parcel C central area B-aquifer to flow to the B-aquifer in adjacent parcels. Parcel C ecology is limited to those plant and animal species adapted to the industrial environment. More than 90 percent of Parcel C is covered by pavement and former industrial buildings. With little open space for flora and fauna, Parcel C is considered to have insignificant habitat value and

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poses an insignificant risk to terrestrial ecological receptors. No threatened or endangered species are known to inhabit Parcel C or its immediate vicinity. Although fuel and steam lines at Parcel C were removed or closed in 2002, the storm drains and sanitary sewer lines beneath the parcel remain key site characteristics. The HPS storm and sanitary combined sewer system was installed in the 1940s and underwent a series of separation projects (1958 to 1976), but was never completely separated. Based on gamma surveys of key manholes in the Historical Radiological Assessment (HRA), the determination was made that potential contamination of the storm and sanitary sewer system was likely near former NRDL sites or sites associated with radium use. Therefore, the Navy also recommended removal of sanitary and storm sewers at Parcels B, C, D, E, and E-2. Radionuclides that may be present include cesium-137, cobalt-60, plutonium-239, radium-226, strontium-90, and thorium-232. Some of the storm drain and sanitary sewer lines in IR-06 and IR-25 (Survey Units 5, 7, 15, 16, 17, 18, and portions of 56) were removed in 2007 as part of the Parcel B radiological time-critical removal action (TCRA). The remaining lines in Parcel C are scheduled to be removed during 2010 through 2012. Potential contamination at Parcel C is associated with metals, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs) in soil; VOCs, PAHs, semivolatile organic compounds (SVOCs), and metals in groundwater; and radiologically impacted structures and soil. Assessment of contamination and risk for Parcel C is based on the Final Feasibility Study (FS) Report for Parcel C (July 31, 2008), including the revised human health risk assessment (HHRA) and the radiological addendum to the FS Report. The Final FS Report for Parcel C considered new information associated with a Parcel C interim removal action and groundwater data gaps investigation. Both the FS and HHRA are detailed in the Final FS Report for Parcel C. The FS Report and radiological addendum (June 20, 2008) summarize the most recent information available on Parcel C and provide the basis for the ROD for Parcel C. The Navy has completed a number of removal actions and treatability studies at Parcel C. Two key soil removal actions reduced or eliminated certain risks to human health and ecological receptors. More than 3,000 samples were collected and approximately 9,600 cubic yards (cy) of soil was excavated during the exploratory excavations and the steam and fuel lines time-critical removal action (TCRA). Past and ongoing treatability studies at Parcel C have focused on technologies to reduce VOCs in groundwater and soil, including ZVI injection and sequential anaerobic/aerobic bioremediation. Based on these removal actions and studies, the sources and extent of the remaining contamination in soil and groundwater have been well characterized. Industrial operations, former fuel lines, and underground storage tanks (UST) are the significant sources of chemicals in soil at Parcel C. The predominant chemicals in Parcel C soil are VOCs, PAHs, and metals. The 28 former USTs (either removed or closed in place) stored various liquids, including boiler oil, diesel fuel, gasoline, solvents, waste oil, and brine and water. Metal contamination is associated with the pickling operation at Building 258, the former foundry at Building 241, and with fuel additives. Pickling is the acid treatment of metallic surfaces to remove any surface impurities before further processing. Elevated concentrations of ubiquitous metals, such as arsenic and manganese, may be related to the bedrock fill quarried to build the shipyard in the 1940s. The fill may have contained elevated concentrations of select ubiquitous metals from the bedrock. Therefore, the Navy has worked with the regulatory agencies to identify remedial alternatives that address metals in soil, regardless of their source. SVOCs other than PAHs, pesticides, and PCBs were detected in localized areas in Parcel C soil. The sources of contamination in groundwater have been detected at four groundwater remedial units (RU), referred to as RU-C1, RU-C2, RU-C4, and RU-C5. The sources include dip tanks, sumps, former paint spray and cleaning rooms, industrial machining, USTs,

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solvent tanks, a pickling and degreasing area, floor drains and sewer lines, a former tank farm, and a former oil-water separator. The predominant chemicals present in Parcel C groundwater are VOCs, and discrete VOC plumes are found in each RU. Dense Non-Aqueous Phase Liquids (DNAPL) has been detected at RU-C5; however, it is currently believed to exist on site only as distributed pockets of immobile liquid. Viscous light nonaqueous phase liquid is present, but limited to one well in RU-C1 (IR28MW129A). Areas of concern for metals also have been identified in groundwater at RU-C1 (chromium VI and zinc) and RU-C5 (chromium VI). The plumes are based on groundwater monitoring information obtained before 2004. Recent findings from a treatability study and ongoing groundwater monitoring suggest a reduction in contaminant concentrations and the extent of the plumes since 2004. The current groundwater sample data will be reviewed during the remedial design (RD) to focus future groundwater remediation. The Navy identified radiologically impacted sites-including buildings, equipment, and infrastructure-at Parcel C associated with former use of general radioactive materials and decontamination of ships used during the 1946 atomic weapons testing in the South Pacific. Radiologically impacted buildings (203, 205 and discharge tunnel, 211, 214, 224, 241, 253, 271, and 272), storm drains, and sanitary sewers are all of concern in Parcel C. Storm drains and sewer lines were removed in 2007 at portions of IR-06 and IR-25 in Parcel C to address radiological concerns. Storm drains and sewer lines were addressed in these locations because they were connected to lines in Parcel B. The TCRA to address the remaining radiologically impacted sites in Parcel C began in 2010 and is scheduled for completion in 2012. All interim reports will be summarized in a final removal action completion report (RACR) which will be reviewed and approved by the BRAC Cleanup Team (BCT). Although the TCRA will not be completed by the time the ROD is signed, the TCRA is intended to achieve cleanup goals identical to the remedial action objectives (RAO) specified in this ROD. If the TCRA does not achieve its cleanup goals, cleanup will continue in accordance with the remedial action selected in this ROD until the RAOs are achieved. No tenants currently are at Parcel C; the parcel is a former industrial use area with restricted access that is undergoing remediation. The reuses defined in the San Francisco Redevelopment Agency's 1997 reuse plan were evaluated by the following exposure scenarios: residential (mixed-use and research and development blocks), industrial (maritime/industrial and educational/cultural blocks), and recreational (open space blocks). In 2010, the SFRA issued an amendment to the 1997 reuse plan which revised the reuses in Parcel C to show "Land Use Districts" within the area corresponding to the current Parcel C, as "HPS Shoreline Open Space" which is open space reuse scenario; and "Shipyard North Residential," Shipyard Village Center Cultural," and "Shipyard Research and Development," which are residential reuses. While the ROD was not revised to reflect the 2010 amended land use, the most up-to-date land use and associated human health risk exposure scenario will be evaluated at the time of the RD. The groundwater in the A-aquifer and upper F-WBZ, as discussed in the revised FS, is not suitable for use as drinking water. Exposures to the A-aquifer were evaluated based on indoor air inhalation and transport to the bay. The groundwater in the B-aquifer (RU-C5 only) was evaluated as a source of drinking water, though it has low potential for use as drinking water. The B-aquifer in the central area of Parcel C has been granted a Resolution No. 88-63 exception by the Water Board and is not suitable for use as a drinking water supply. Use of the B-aquifer groundwater at HPS is controlled by the City and County of San Francisco (CCSF), and the San Francisco Public Utility Commission (SFPUC) does not provide for use of groundwater in this area of the City. A ROD addressing Operable Unit 03 of the Treasure Island Naval Station-Hunters Point Annex Site was completed in September 2010. OU4: Former Parcel D, which includes about 98 acres in the central portion of the shipyard, was formerly part of the industrial

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support area and was used for shipping, ship repair, and office and commercial activities. Portions of former Parcel D were also used by NRD. Parcel D-1 is located on the southeastern portion of the former 98-acre Parcel D, and Parcel UC-1 is located on the northern portion of former Parcel D. Parcel D-1 is 48.7 acres, and Parcel UC-1 is 3.9 acres. The remainder of former Parcel D is divided into Parcel D-2 and Parcel G. The original redevelopment plan developed by the San Francisco Redevelopment Agency in 1997 divided Parcels D-1 and UC-1 into reuse areas. The reuse areas for Parcel D-1 include maritime industrial and industrial reuse. Parcel UC-1 is proposed for mixed use and Spear Avenue will serve as an access street and utility corridor. To facilitate discussion of all areas of the parcel in the context of contamination and cleanup issues, the area was divided into redevelopment blocks. The redevelopment blocks (and associated reuses) on Parcel D-1 are 42 (industrial) and DMI-1 (maritime industrial). The redevelopment block (and associated reuse) on Parcel UC-1 is 30A (mixed use). Part of Block 30A is also within Parcel G. Reuse areas and redevelopment blocks may change in the future. Potential contamination at Parcel D-1 is from metals and polycyclic aromatic hydrocarbons (PAHs) in soil, metals and volatile organic compounds (VOCs) in groundwater, and radiologically impacted structures and soil. Potential contamination at Parcel UC-1 includes metals in soil and radiologically impacted structures and soil. Assessment of contamination and risk for Parcels D-1 and UC-1 is based on the Final Revised Feasibility Study (FS) Report for Parcel D, (November 30, 2007), including the revised human health risk assessment (HHRA) and the radiological addendum to the FS Report. The Revised FS Report for Parcel D considered new information associated with several cleanup actions completed within Former Parcel D and at other adjacent parcels at HPS. Both the FS and HHRA are detailed in the Final Revised FS Report for Parcel D. The FS Report and radiological addendum (April 11, 2008) summarize the most recent information available on former Parcel D and provide the basis for this Record of Decision (ROD) and other RODs for Parcels D-2 and G. Although a number of removal actions have been completed within Parcels D-1 and UC-1, chemical contamination remains. Based on recent studies and investigations, the sources and extent of the remaining contamination in soil and groundwater have been well characterized. Industrial activities have resulted in elevated concentrations of PAHs and metals in soil. Elevated concentrations of metals, such as arsenic and manganese, may be related to the bedrock fill quarried to build the shipyard in the 1940s. The fill may have contained elevated concentrations of select metals from the bedrock. Therefore, the Navy has worked with the regulatory agencies to identify remedial alternatives that address metals in soil, regardless of their source. In adjacent Parcel G, the Navy identified the former Pickling and Plate Yard as the source of the elevated concentrations of chromium VI and possibly nickel in groundwater. Use of solvents during industrial operations also released VOCs into groundwater (IR-71). Chromium VI and nickel are not currently found in concentrations that would require remediation at Parcel D-1 or UC-1. However, the Navy is monitoring groundwater in these parcels to evaluate whether these metals have migrated into Parcels D-1 and UC-1. Recent findings from a treatability study and ongoing groundwater monitoring suggest that there has been a reduction in the contaminant and plume extent since 2004. This reduction will result in a potential reconfiguration of the IR-71 plume and also will verify whether other plumes that originate in Parcel G may have migrated into Parcels D-1 and UC-1. The current groundwater sample data will be reviewed during the remedial design (RD) to focus groundwater remediation. The Navy identified radiologically impacted sites, including buildings, equipment, and infrastructure at former Parcel D (including areas within Parcels D-1 and UC-1) associated with the former use of general radioactive materials and decontamination of ships used during atomic weapons testing in the South Pacific. Parcel UC-1 includes

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radiologically impacted Building 819 as well as storm drains and sanitary sewers. Parcel D-1 includes a radiologically impacted Building (274); former building sites (313, 313A, 322, 383, the Gun Mole Pier, and the NRDL site on Mahan Street); and storm drains and sanitary sewers. The Navy is conducting a time-critical removal action (TCRA) to address potential radioactive contamination in buildings, former building sites, storm drains, and sanitary sewers (Navy 2006). The TCRA involves (1) surveying radiologically impacted structures and former building sites; (2) decontaminating (and demolishing if necessary) buildings and former building sites; (3) excavating radiologically impacted storm drain and sanitary sewer lines; and (4) screening, separating, and disposing of radioactively contaminated excavated materials at an off-site, low-level radioactive waste facility. Activities for the TCRA began in 2006. The Navy excavated more than 47,000 cubic yards of material and disposed of about 5,600 cubic yards off site as low-level radioactive waste in adjacent Parcel G. As part of the TCRA, the Navy removed more than 21,800 linear feet of storm drain and sanitary sewer lines for radiological contamination in Parcel G. To date, the Navy has not excavated radiologically impacted materials from Parcel D-1. However, survey and excavation began in April 2009 in Parcel UC-1 and roughly 95 percent of its sewers and storm drains have been removed to date. Additional storm drain and sewer line removal, along with sampling, remediation, and final status surveys are also underway. It is projected that 21,250 cubic yards of soil and 2,004 linear feet of storm drain and sanitary sewer lines will be removed in Parcel UC-1. Survey and excavation activities at Parcel D-1 have been contracted and scheduled for the remainder of 2009 and through 2010; it is projected that approximately 43,500 cubic yards of soil and 19,250 linear feet of storm drain and sanitary sewer lines will be removed in Parcel D-1. All Final Status Survey Reports and Survey Unit Package Reports will be summarized in a removal action completion report (RACR), which will be reviewed and approved by the Base Realignment and Closure (BRAC) Cleanup Team (BCT) and the California Department of Public Health (CDPH). Although the TCRA may not be completed by the time the ROD is signed, the TCRA is intended to achieve cleanup goals that are identical to the remedial action objectives (RAO) identified in this ROD. In the event that the TCRA does not achieve its cleanup goals, cleanup will continue in accordance with the remedial action selected in this ROD until the RAOs are achieved. A Record of Decision addressing Operable Unit 04 of the Treasure Island Naval Station - Hunters Point Annex Site was completed in September, 2009. OU 08: The Navy has divided former Parcel D into four new parcels: Parcel D-2, Parcel G, Parcel UC-1, and Parcel D-1. The redevelopment plan developed by San Francisco Redevelopment Agency (SFRA) in 1997 proposed Parcel D-2 as an area for research and development reuse. The SFRA redevelopment plan allows for residential uses in research and development reuse areas. Parcel D-2 is not associated with any Installation Restoration (IR) site. Parcel D-2, which includes Building 813 and the site of a former UST (UST S-812), was originally part of Parcel A. Building 813 is a large warehouse that was used as offices, a supply storehouse, and the Disaster Control Center. During research to support the Historical Radiological Assessment (HRA), documentation was found indicating a single leaking 300 uCi strontium-90 check source may have been stored in Building 813 in the past. As a result, the Navy recommended further evaluation of potential radiological contamination at Building 813. Underground Storage Tank (UST) S-812 was used to store fuel oil for a boiler in Building 813. According to the HRA, UST S-812 was not radiologically impacted. Subsequently, in 2004, the southeastern boundary of Parcel A was revised to exclude Building 813 so it could be surveyed for potential radiological contamination. The boundary revision resulted in inclusion of Building 813 within Parcel D. After the Parcel A boundary had been revised, Parcel A was transferred to the City and County of San Francisco pursuant to a Finding of

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Suitability for Transfer. Parcel D-2 consists of flat lowlands that are part of the original promontory of Franciscan Formation bedrock that underlies Hunter's Point Shipyard (HPS). Metals are naturally occurring in the minerals in the bedrock. The hydrogeologic setting at Parcel D-2 consists of a bedrock water-bearing zone, with groundwater likely present in limited fractures. Groundwater is not currently used for any purpose at Parcel D-2. Parcel D-2 ecology is limited to plant and animal species adapted to the industrial environment. The parcel is covered with Building 813 and surrounding pavement. Viable terrestrial habitat is limited at Parcel D-2 because the ground surface is paved or covered by structures. No threatened or endangered species are known to inhabit Parcel D-2 or its immediate vicinity. In 1993, the Navy performed a Site Inspection (SI) to evaluate potential contamination at Parcel A. Building 813 was investigated, and an inventory of the building was prepared to identify any potential sources of contamination. No sources of contamination inside the building were identified at that time. In 1976, UST S-812 was installed adjacent to Building 813 and used to store fuel oil for a boiler in Building 813. In 1991, UST S-812 was removed, and soil and groundwater samples were collected for chemical analysis. The site was then backfilled and paved. The 1991 soil and groundwater analytical results showed concentrations of metals below ambient levels. One soil sample contained a semi-volatile organic compound (phenanthrene at 190 micrograms per kilogram [ug/kg]). The only volatile organic compound (VOC) detected was total xylenes at 5 ug/kg. Diesel was the only total petroleum hydrocarbon (TPH) compound detected in the soil samples. One sample from the UST excavation contained TPH as diesel (TPH-d) at 14 milligrams per kilogram (mg/kg). The product pipe samples contained TPH-d at levels ranging from 18 to 32 mg/kg. The Water Board issued a closure letter for UST S-812 in January 2000. Seven VOCs (benzene; 1,2-dichloroethane; 1,1-dichloroethene; tetrachloroethene; 1,1,1-trichloroethane; trichloroethene; and toluene) were detected in the groundwater sample from the UST excavation. Each VOC was quantified at an estimated value less than, or equal to 6 micrograms per liter (ug/L) and below the laboratory practical quantitation limit (PQL). In 1993, and in response to regulatory agency concerns, the Navy conducted an additional groundwater investigation. VOCs were not detected in any of the groundwater samples in concentrations at or above the PQL of 10 ug/L. With the exception of acetone, no VOCs were detected above the method detection limit; the acetone detection was determined to be a result of laboratory contamination. The Navy therefore concluded that no further evaluation of the groundwater was necessary. Based on the SI and the subsequent groundwater results, the area that is now Parcel D-2 (Building 813 and the area immediately surrounding it) did not qualify to be included in the Remedial Investigation. In 1995, a no further action Record of Decision (ROD) was signed for Parcel A, which included this area at the time. In 2004, the Navy completed a base-wide HRA. During research to support the HRA, documentation was found indicating that a single leaking 300 uCi strontium-90 check source may have been stored on the first floor of Building 813 in the past. As a result, the Navy recommended further evaluation of potential radiological contamination at Building 813. Subsequently, the southeastern boundary of Parcel A was revised to exclude Building 813 so it could be surveyed for potential radiological contamination. As a result of the boundary revision, Building 813 was included within Parcel D. The HPS storm and sanitary combined sewer system was installed in the 1940s and underwent a series of separation projects (1958 to 1976), but was never completely separated. Based on gamma surveys of key manholes in the HRA, the determination was made that potential contamination of the storm and sanitary sewer system was likely near former NRDL sites or sites associated with radium use. Therefore, the Navy also recommended removal of sanitary and storm sewers at Parcels B, C, D, E and E-2. In 2006, the Navy began

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

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implementation of a Time critical removal action (TCRA) to address the Parcel D-2 storm and sanitary sewers. The TCRA was conducted in stages. First, piping laterals were removed to within the 10-foot safety buffer surrounding the structure or other associated obstructions. If no radiological contamination was present in this segment of the line, then the exposed ends of the lateral were capped or plugged and the remaining portions left in place. Next, however, if evidence of radiological contamination was encountered, the remaining lateral was removed in 10-linear-foot sections until the line had been determined to be free of radioactive contamination or to the face of Building 813 or other obstruction (stairways or loading docks) as practicable, whichever came first. Six of the eight drain lines left in place at Building 813 were associated with a roof drain system. The Navy concluded there was a low potential for radiological contamination to enter the storm sewer systems from the roof drains. The Navy further concluded that roof drain pipes are not contaminated and may be left in place within the 10-foot safety buffer. Sewer lines located on the north side of Building 813 were not excavated because of their proximity to the retaining wall that separates Parcel D-2 from the adjacent property and to prevent undermining the Building 813 loading dock. These lines either drain stormwater from the roof of Building 813 or are associated with upgradient storm drain lines emanating from the non-radiologically impacted SFRA property (formerly Parcel A, which was released for unrestricted use). Only two sanitary sewer lines (06-D12-00-10 and 06-D12-00-8D) were found to emanate from the eastern and southern sides of Building 813. A 10-foot section of line 06-D12-00-10 and a 20-foot section of line 06-D12-00-8D were not removed during excavation. Trench segment 06-D12-00-10 is a 6-inch-diameter, concrete-encased vitreous clay pipe. A total of 27 pieces of the removed sections of this pipe segment were surveyed, which includes a 100 percent surface scan, static measurements, and two swipe samples. None of the 27 pieces of segment 06-D12-00-10 showed activity above the release criteria. The pipe segment did not contain any sediment for collection and analysis. Segment 06-D12-00-8D is a 4-inch-diameter, cast-iron pipe not included in the Navy's design drawings for the sewer system. Although 20 feet of pipe segment 06-D12-00-8D was not removed, this pipe runs at a diagonal toward manhole MH207, and the majority of its length is within the 10-foot safety buffer. Manhole MH207 was removed as part of the Fisher/Spear (Utility Corridor 1) sewer removal action performed in 2009. No sediment was available in MH207 for sampling. A total of four pieces (about 28 linear feet) of 06-D12-00-8D sewer pipe was removed during the excavation. There was insufficient sediment in the pipe to collect a sample. However, radiological surveys were performed on each of the four excavated pipe pieces, which includes a 100 percent surface scan, static measurements, and two swipe samples. No activity above the release criteria was found during the survey. Based on analytical results and the radiological surveys, the Navy concluded that the storm drain piping remaining in place on Parcel D-2 after the TCRA was not radiologically impacted. The excavated storm drain and sanitary sewer trenches were backfilled to grade and covered with road base. The removal action is described in detail in the February 2010 Final Removal Action Completion Report, Revision 1. In 2007, the Navy surveyed Building 813 to evaluate whether strontium-90 or other radionuclides were a concern. Survey results concluded Building 813 could be released from radiological control pending regulatory agency approval. CDPH reviewed all radiological documentation on Building 813 and on April 1, 2008, concurred that no action was required and that Building 813 was acceptable for unrestricted use. In 2009, the Navy completed removal of the sanitary and storm sewers. A total of 1,988 linear feet of trench (including overburden soil, peripheral material, excavated soil, and pipe/manhole) was excavated during the TCRA. One of the seven manholes (MH208) was disposed of as low-level radioactive waste (LLRW)

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TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

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because cesium-137 activity was detected above the release limit, and only 3 linear feet of pipe was disposed of as LLRW based on elevated static measurements. Identification of elevated activity in piping or manholes does not necessarily indicate historical use or storage of radioactive material at the nearest radiologically-impacted area because the HPS combined storm drain and sanitary sewer systems have been modified and repaired over many years, and flow patterns may have changed. The identification of cesium-137 activity above the release limit in MH208 sediment is consistent with the conceptual site model for the radiologically-impacted storm drain and sanitary sewers at HPS. The Navy has conducted surveys showing all areas of Parcel D-2 storm drains and sanitary sewers meet the risk criteria for release. DTSC and CDPH reviewed all radiological documentation on the storm drains and sanitary sewers in Parcel D-2, and on August 9, 2010, concurred that no further action was required and that Parcel D-2 was acceptable for unrestricted use. A Record of Decision addressing Operable Unit 08 of the Treasure Island Naval Station - Hunters Point Annex Site was completed in June, 2010. Operable Unit (OU) 09: Parcel D, which includes about 98 acres in the central portion of the shipyard, was formerly part of the industrial support area and was used for shipping, ship repair, and office and commercial activities. The docks at Parcel D were formerly part of the industrial production area. Portions of Parcel D were also used by NRD. Parcel G is located within the central portion of the former 98-acre Parcel D; the rest of former Parcel D is divided into Parcel D-2, Parcel UC-1, and Parcel D-1 (the remainder of Parcel D). In addition, a small area perpendicular to H Street has been added to Parcel G so that the boundary is now straight along H Street. This division supports the potential early transfer of Parcel G to the City and County of San Francisco. The original redevelopment plan developed by the San Francisco Redevelopment Agency in 1997 divided Parcel G into reuse areas. The reuse areas include educational/cultural, mixed use, open space, and industrial reuse. To facilitate discussion of all areas of the parcel in the context of contamination and cleanup issues - the area was divided into redevelopment blocks. Parcel G consists of flat lowlands that were constructed by placing borrowed fill material from various sources, including crushed serpentinite bedrock from the adjacent highland and dredged sediments with surface elevations between 0 to 10 feet above mean sea level. The serpentinite bedrock and serpentine bedrock-derived fill material consist of minerals that naturally contain asbestos and relatively high concentrations of arsenic, manganese, nickel, and other metals. The hydrostratigraphic units present at Parcel G are the same as at Parcel D: the A-aquifer, the aquitard zone, the B-aquifer, and a bedrock water-bearing zone. Groundwater beneath Parcel G includes the shallow A-aquifer and the deeper B-aquifer; groundwater is not currently used for any purpose at Parcel G. Groundwater in the A-aquifer is not suitable as a potential source of drinking water. Groundwater in the B-aquifer has a low potential as a future source of drinking water. Groundwater flow patterns at Parcel G are complex because they are potentially affected by (1) a groundwater sink located in adjacent Parcel E; (2) a groundwater mound located near the western boundary of Parcel G (beneath IR-33, IR-44, IR-66, and IR-67); (3) leaks of groundwater into former sanitary sewers or storm drains; (4) recharge from water supply lines; and (5) tides in the Bay. Most groundwater at Parcel G flows toward the Bay, except in the western portion of Parcel G, which historically has flowed away from the mound and toward the groundwater sink in Parcel E, where groundwater elevations are below mean sea level. The sink is believed to have been caused by leaks of groundwater into sanitary sewer lines, which were then pumped off site to the local publicly owned treatment works, thereby lowering groundwater levels in the area. Flow patterns continue to change now that the pumping has been discontinued and as sewer and storm drain lines are removed throughout HPS. Potential contamination at Parcel G is

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associated with metals and PAHs in soil, metals and VOCs in groundwater, and radiologically impacted structures and soil. Assessment of contamination and risk for Parcel G is based on the Final Revised FS Report for Parcel D, (November 30, 2007) including the revised human health risk assessment (HHRA), and the radiological addendum to the FS Report. The Revised FS Report for Parcel D considered new information associated with several cleanup actions completed within Parcel G and at other adjacent parcels at HPS. Both the FS and HHRA activities are detailed in the Final Revised FS Report for Parcel D. The FS Report and radiological addendum (April 11, 2008) summarize the most recent information available on former Parcel D and provide the basis for the RODs for Parcel G and the other three parcels. Although a number of removal actions have been completed within Parcel G, chemical contamination remains. Based on recent studies and investigations, the sources and extent of the remaining contamination in soil and groundwater have been well characterized. Industrial activities have resulted in elevated concentrations of PAHs and lead in soil. Elevated concentrations of metals other than lead, such as arsenic and manganese, may be related to the bedrock fill quarried to build the shipyard in the 1940s. The fill may have contained elevated concentrations of select metals from the bedrock. Therefore, the Navy has worked with the regulatory agencies to identify remedial alternatives that address metals in soil, regardless of their source. The Navy also identified the former Pickling and Plate Yard (IR-09) within Parcel G as the source of the elevated concentrations of chromium VI and possibly nickel in groundwater. Cultural resource issues have delayed the removal of the pickling and plating sump. Use of solvents during industrial operations also released VOCs into groundwater (IR-71). The plume configuration is based on groundwater monitoring information collected before 2004. Recent findings from a treatability study and ongoing groundwater monitoring suggest that there has been a reduction in the contaminant and plume extent since 2004. This reduction will result in a reconfiguration of the plumes. The current groundwater sample data will be reviewed during the remedial design (RD) to focus the groundwater remediation activities. The Navy identified radiologically impacted sites, including buildings, equipment, and infrastructure at Parcel D (including areas within Parcel G) associated with the former use of general radioactive materials and decontamination of ships used during atomic weapons testing in the South Pacific. Radiologically impacted buildings (351, 351A, 364, 365, 366/351B, 401, 408, and 411); former building sites (317); and storm drains and sanitary sewers are all of concern in Parcel G. In addition, a focused area in Building 439 was found to require remediation during the radiological investigation. The Navy decided to conduct a timecritical removal action (TCRA) to address potential radioactive contamination in buildings, former building sites, storm drains, and sanitary sewers at Parcel G. The TCRA involves (1) surveying radiologically impacted structures and former building sites; (2) decontaminating (and demolishing if necessary) buildings and former building sites; (3) excavating radiologically impacted storm drain and sanitary sewer lines; and (4) screening, separating, and disposing of radioactively contaminated excavated materials at an off-site, low-level radioactive waste facility. Activities for the TCRA at Parcel G began in 2006. The Navy excavated more than 47,000 cubic yards of material and disposed of about 5,600 cubic yards off site as low-level radioactive waste. As part of the TCRA, the Navy removed more than 21,800 linear feet of storm drain and sanitary sewer lines for radiological contamination in Parcel G. Removal actions and backfill has been completed for approximately 80% of the storm drain and sanitary sewer trench units. Ongoing TCRA activities will continue post ROD until release criteria have been met. Upon completion of the storm drain and sanitary sewer trench TCRA, Survey Unit Package Reports will be completed and distributed to the BCT and CDPH for all trench units. As of January 2009, 90% of the radiological surveys, remediation, and draft

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

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preparation of the final status surveys are complete in all Parcel G Buildings, to include Buildings 351, 351A, 366, 401, 408, 411, and 439. Following building surveys, Buildings 364, 365, and 408 were demolished, and have had their building footprints surveyed and remediated. Materials from Buildings 364, 365, and 408 have had their construction debris appropriately radiologically and chemically screened, and transported to the appropriate disposal facility. TCRA activities continue in the localized area surrounding former Building Sites 364, 365, and 317. Final Status Survey Reports are currently being produced for all radiologically impacted buildings and sites in Parcel G for upcoming distribution. All Final Status Survey Reports and Survey Unit Package Reports for Parcel G will be summarized in the Parcel G removal action completion report (RACR), which will be reviewed and approved by the BRAC Cleanup Team (BCT) and the California Department of Public Health (CDPH). Although the TCRA may not be completed by the time the ROD is signed, the TCRA is intended to achieve cleanup goals that are identical to the RAOs identified in this ROD. In the event that the TCRA does not achieve its cleanup goals, cleanup will continue in accordance with the remedial action selected in this ROD until the RAOs are achieved. The reuses defined in the San Francisco Redevelopment Agency's 1997 Reuse Plan were evaluated by the following exposure scenarios: residential (mixed-use and research and development blocks), industrial (industrial and educational/cultural blocks), and recreational (open space block). The groundwater in the A aquifer, as discussed in the Feasibility Study, is not suitable for use as drinking water. Exposures to the A aquifer were evaluated based on indoor air inhalation and transport to the Bay. The groundwater in the B-aquifer was evaluated as a drinking water source, though it has low potential for use as drinking water. A Record of Decision addressing OU09 of the Treasure Island Naval Station - Hunters Point Annex was completed in February 2009. Operable Unit 10: The former Parcel C historically included about 79 acres in the central portion of the shipyard, as formerly part of the industrial support area, and was used for shipping, ship repair, and office and commercial activities. Industrial support facilities for ship repair dominated the land use at the former Parcel C and included a foundry, a power plant, a sheet manufacturing shop, a paint shop, and various machine shops; 70 buildings are located within the boundaries of the former Parcel C. The docks at the former Parcel C were formerly part of the industrial production area. Portions of the former Parcel C were also used by Naval Radiological Defense Laboratory (NRDL). In 2002, the boundaries of Parcel B and C were redefined, and IR-06 and IR-25 became part of the former Parcel C. In 2009, the Navy divided the former Parcel C into new parcels: Parcel UC-2 and Parcel C. Parcel UC-2 was split from the former Parcel C because transfer of this property provides access to Fisher Avenue and the nearby utility corridor for redevelopment. Parcel UC-2 is about 3.9 acres; the current Parcel C is not addressed in this Record of Decision (ROD). Historical use of the southern portion of Parcel UC-2 is as a roadway (Fisher Avenue) and the northern portion is as a triangularly shaped parking lot (at the corner of Fisher Avenue and Robinson Street) for Building 101. The roadway was constructed by placing borrowed fill, and the parking lot is located on the original promontory with native soil over shallow bedrock. These features apply to most of the parcel, with a limited amount of property directly adjacent to them; there are no buildings. Along the western side of Fisher Avenue is a sharp rise of 5 to 15 feet that is vegetated with ice plant and annual grass. The storm drains and sanitary sewers in Parcel UC-2 are considered radiologically impacted because operations at HPS resulted in the disposal of radioactive materials through these systems. These wastes included materials from ship and personnel decontamination, fallout samples, and radioactive materials from refurbishment of radioluminescent devices, including radium-bearing paint. The original redevelopment plan developed by the San Francisco Redevelopment Agency in 1997

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divided Parcel UC-2 into reuse areas. The reuse areas include mixed use and research and development. The area was divided into redevelopment blocks to facilitate discussion of all areas of the parcel in the context of contamination and cleanup issues. The redevelopment blocks (and associated reuses) for Parcel UC-2 are 10 (mixed use) and 17 (research and development); unlabelled areas are planned future roads. The IR-06 plume that crosses into Parcel UC-2 primarily contains low-level carbon tetrachloride; carbon tetrachloride has not been consistently detected in any other area of IR-06 and does not have an identified source. Current and Potential Future Site Uses

The Parcel UC-2 reuses (mixed-use and research and development) specified in the San Francisco Redevelopment Agency's 1997 reuse plan were evaluated for the residential exposure scenario. The groundwater in the A-aquifer, as discussed in the revised Feasibility Study (FS), is not suitable for use as drinking water. Additionally, drinking water standards do not apply to the A-aquifer or the upper bedrock water bearing zone when it is the uppermost groundwater unit. Exposures to the A-aquifer were evaluated based on indoor air inhalation and transport to the San Francisco Bay. A Record of Decision addressing Operable Unit 10 of the Hunters Point Shipyard was completed in December, 2009.

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

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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
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.:

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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

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

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Elevation

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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.:

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

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Direction
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Elevation

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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
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

Map ID
Direction
Distance
Elevation

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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
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

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Direction
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Elevation

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1000403627

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

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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
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.:

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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

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: / /

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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.:

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (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: 025
Action: FEDERAL FACILITY REMOVAL
Date Started: 03/01/08
Date Completed: 03/31/09
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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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.:

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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: 009
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 12/17/09
Date Completed: 02/15/13
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: 08/05/13
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: 006
Action: FEDERAL FACILITY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 09/28/90
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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
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: 003
Action: FEDERAL FACILITY REMEDIAL ACTION

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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.:

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: 006
Action: FEDERAL FACILITY REMEDIAL DESIGN
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.:

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.:

Action Code: 008
Action: FEDERAL FACILITY REMEDIAL ACTION
Date Started: 03/01/13
Date Completed: / /
Priority Level: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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 ACTION
Date Started: 08/05/13
Date Completed: / /
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.:

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

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354 additional US CERCLIS Financial: record(s) in the EDR Site Report.

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: 09/30/2010

Action ID: 001
Action Name: Explanation Of Significant Differences
Action Completion date: 10/20/1998
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Non-fundamental change (ESD)

Action ID: 002
Action Name: Explanation Of Significant Differences
Action Completion date: 05/05/2000
Operable Unit: 02

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Contaminated Media : Soil
Engineering Control: Non-fundamental change (ESD)

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/28/1995
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: No Action

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 11/28/1995
Operable Unit: 01
Contaminated Media : Soil
Engineering Control: No Action

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 10/09/1997
Operable Unit: 02
Contaminated Media : Debris
Engineering Control: Grouting

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 10/09/1997
Operable Unit: 02
Contaminated Media : Debris
Engineering Control: Liner

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 10/09/1997
Operable Unit: 02
Contaminated Media : Groundwater
Engineering Control: Monitoring

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 10/09/1997
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 10/09/1997
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 002
Action Name: RECORD OF DECISION
Action Completion date: 10/09/1997
Operable Unit: 02
Contaminated Media : Soil

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
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TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Engineering Control: Surface Drainage Control

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 09/11/2009
Operable Unit: 04
Contaminated Media : Buildings/Structures
Engineering Control: Decontamination

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 09/11/2009
Operable Unit: 04
Contaminated Media : Buildings/Structures
Engineering Control: Disposal

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 09/11/2009
Operable Unit: 04
Contaminated Media : Buildings/Structures
Engineering Control: Excavation

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 09/11/2009
Operable Unit: 04
Contaminated Media : Buildings/Structures
Engineering Control: Sampling

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 09/11/2009
Operable Unit: 04
Contaminated Media : Groundwater
Engineering Control: Bioremediation (In-Situ)

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 09/11/2009
Operable Unit: 04
Contaminated Media : Groundwater
Engineering Control: Monitoring

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 09/11/2009
Operable Unit: 04
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 09/11/2009
Operable Unit: 04
Contaminated Media : Soil
Engineering Control: Excavation

Map ID
Direction
Distance
Elevation

MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 09/11/2009
Operable Unit: 04
Contaminated Media : Soil
Engineering Control: Sampling

Action ID: 003
Action Name: RECORD OF DECISION
Action Completion date: 09/11/2009
Operable Unit: 04
Contaminated Media : Soil
Engineering Control: Soil Cover

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Buildings/Structures
Engineering Control: Decontamination

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Buildings/Structures
Engineering Control: Demolition

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Buildings/Structures
Engineering Control: Disposal

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Buildings/Structures
Engineering Control: Excavation

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Bioremediation (In-Situ)

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Chemical Reduction, (N.O.S.)

Action ID: 004

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Monitoring

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Groundwater
Engineering Control: Natural Attenuation

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Soil
Engineering Control: Cap

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Soil
Engineering Control: Monitoring

Action ID: 004
Action Name: RECORD OF DECISION
Action Completion date: 09/20/2010
Operable Unit: 03
Contaminated Media : Soil
Engineering Control: Soil Vapor Extraction (in-situ)

Action ID: 007
Action Name: RECORD OF DECISION
Action Completion date: 06/22/2010
Operable Unit: 08
Contaminated Media : Buildings/Structures
Engineering Control: No Further Action

Action ID: 007
Action Name: RECORD OF DECISION

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Action Completion date: 06/22/2010
Operable Unit: 08
Contaminated Media : Groundwater
Engineering Control: No Further Action

Action ID: 007
Action Name: RECORD OF DECISION
Action Completion date: 06/22/2010
Operable Unit: 08
Contaminated Media : Soil
Engineering Control: No Further Action

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Buildings/Structures
Engineering Control: Decontamination

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Buildings/Structures
Engineering Control: Demolition

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Buildings/Structures
Engineering Control: Disposal

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Buildings/Structures
Engineering Control: Excavation

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Buildings/Structures
Engineering Control: Sampling

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Groundwater
Engineering Control: Chemical Reduction, (N.O.S.)

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Operable Unit: 09
Contaminated Media : Groundwater
Engineering Control: In-Situ Chemical Oxidation (ISCO)

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Soil
Engineering Control: Cap

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Soil
Engineering Control: Sampling

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Soil Gas
Engineering Control: Monitoring

Action ID: 008
Action Name: RECORD OF DECISION
Action Completion date: 02/18/2009
Operable Unit: 09
Contaminated Media : Soil Gas
Engineering Control: Sampling

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 12/17/2009
Operable Unit: 10
Contaminated Media : Buildings/Structures
Engineering Control: Decontamination

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 12/17/2009
Operable Unit: 10

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Contaminated Media : Buildings/Structures
Engineering Control: Disposal

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 12/17/2009
Operable Unit: 10
Contaminated Media : Buildings/Structures
Engineering Control: Excavation

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 12/17/2009
Operable Unit: 10
Contaminated Media : Groundwater
Engineering Control: Monitoring

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 12/17/2009
Operable Unit: 10
Contaminated Media : Groundwater
Engineering Control: Natural Attenuation

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 12/17/2009
Operable Unit: 10
Contaminated Media : Soil
Engineering Control: Decontamination

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 12/17/2009
Operable Unit: 10
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 12/17/2009
Operable Unit: 10
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 009
Action Name: RECORD OF DECISION
Action Completion date: 12/17/2009
Operable Unit: 10
Contaminated Media : Soil
Engineering Control: Soil Cover

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Buildings/Structures

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Engineering Control: Decontamination

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Buildings/Structures
Engineering Control: Demolition

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Buildings/Structures
Engineering Control: Disposal

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Groundwater
Engineering Control: Bioremediation (In-Situ)

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Groundwater
Engineering Control: Monitoring

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Sediment
Engineering Control: Shoreline Stabilization

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Sediment
Engineering Control: Wetlands Replacement

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Air Monitoring

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Cap

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Disposal

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Excavation

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Soil
Engineering Control: Soil Cover

Action ID: 001
Action Name: ROD Amendment
Action Completion date: 01/28/2009
Operable Unit: 02
Contaminated Media : Soil
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: 10/09/1997
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: 10/09/1997

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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: 09/30/2009
Comple. Date: 09/11/2009
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: Covenant
Actual Date: 09/30/2009
Comple. Date: 09/11/2009
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: 09/30/2009
Comple. Date: 09/11/2009
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

Inst. Control: Covenant
Actual Date: 09/30/2009
Comple. Date: 09/11/2009
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: 09/30/2009
Comple. Date: 09/11/2009
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: 08/30/2010
Comple. Date: 09/20/2010
Operable Unit: 03
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: 08/30/2010
Comple. Date: 09/20/2010
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

EPA Region: 09
County: SAN FRANCISCO
Event Code: Not reported
Inst. Control: Institutional Controls, (N.O.S.)
Actual Date: 08/30/2010
Comple. Date: 09/20/2010
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: 09/30/2009
Comple. Date: 02/18/2009
Operable Unit: 09
Contaminated Media : Buildings/Structures

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: 09/30/2009
Comple. Date: 02/18/2009
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: 09/30/2009
Comple. Date: 02/18/2009
Operable Unit: 09
Contaminated Media : Groundwater

EPA ID: CA1170090087
Site ID: 0902722
Name: TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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: 09/30/2009
Comple. Date: 02/18/2009
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: 09/30/2009
Comple. Date: 02/18/2009
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: Deed Restriction
Actual Date: 09/30/2009
Comple. Date: 02/18/2009
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: 08/08/2010
Comple. Date: 12/17/2009
Operable Unit: 10
Contaminated Media : Groundwater

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (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: Institutional Controls, (N.O.S.)
Actual Date: 08/08/2010
Comple. 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: 08/08/2010
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: 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: 08/08/2010
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: 01/28/2009

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TREASURE ISLAND NAVAL STATION-HUNTERS POINT ANNEX (Continued)

1000403627

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: 01/28/2009
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: Covenant
Actual Date: 11/30/2008
Comple. Date: 01/28/2009
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
Comple. Date: 01/28/2009
Operable Unit: 02
Contaminated Media : Soil

ROD:

Full-text of USEPA Record of Decision(s) is available from EDR.

PRP name: U.S. NAVY

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

B4
South
< 1/8
0.121 mi.
637 ft.

NICK S CLEANERS
714 INNES AV
SAN FRANCISCO, CA

EDR US Hist Cleaners 1009131303
N/A

Site 1 of 2 in cluster B

Relative:
Higher

EDR Historical Cleaners:

Name: NICHOLSON R W
Year: 1949
Type: CLEANERS AND DYERS

Actual:
44 ft.

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

C5
SSE
1/8-1/4
0.131 mi.
693 ft.

COMMERCIAL PROPERTY
690 HUDSON AVE
SAN FRANCISCO, CA 94124

LUST S108209214
N/A

Site 1 of 2 in cluster C

Relative:
Higher

LUST:

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

Actual:
26 ft.

[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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COMMERCIAL PROPERTY (Continued)

S108209214

Status History:

Global Id: T10000001201
Status: Open - Case Begin Date
Status Date: 05/04/2009

Global Id: T10000001201
Status: Completed - Case Closed
Status Date: 01/22/2010

Global Id: T10000001201
Status: Open - Remediation
Status Date: 06/08/2009

Regulatory Activities:

Global Id: T10000001201
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T10000001201
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

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: 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: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T10000001201
Action Type: ENFORCEMENT

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COMMERCIAL PROPERTY (Continued)

S108209214

Date: 06/08/2009
Action: Meeting

Global Id: T10000001201
Action Type: ENFORCEMENT
Date: 06/08/2009
Action: Clean Up Fund - Letter to RP - #11870

C6
SSE
1/8-1/4
0.131 mi.
693 ft.

HUNTERS POINT REDEVELOPMENT PROJECT
690 HUDSON AVE
SAN FRANCISCO, CA 94124

Site 2 of 2 in cluster C

RCRA-LQG **1008402369**
CAR000164376

Relative:
Higher

RCRA-LQG:

Actual:
26 ft.

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
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

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

HUNTERS POINT REDEVELOPMENT PROJECT (Continued)

1008402369

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
 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

Hazardous Waste Summary:

Waste code: D008
 Waste name: LEAD

Violation Status: No violations found

B7
 South
 1/8-1/4
 0.133 mi.
 700 ft.

SAN FRANCISCO ENERGY COGENERATION PLANT
INNES AVE. BETWEEN FITCH & EARL STS.
SAN FRANCISCO, CA 94901

VCP S106568308
ENVIROSTOR N/A

Site 2 of 2 in cluster B

Relative:
Higher

VCP:
 Facility ID: 38490010
 Site Type: Voluntary Cleanup
 Site Type Detail: Voluntary Cleanup
 Site Mgmt. Req.: NONE SPECIFIED
 Acres: Not reported
 National Priorities List: NO
 Cleanup Oversight Agencies: SMBRP, RWQCB 2 - San Francisco Bay
 Lead Agency: NONE SPECIFIED
 Lead Agency Description: Not reported
 Project Manager: Janet Naito
 Supervisor: Barbara Cook
 Division Branch: Cleanup Berkeley
 Site Code: 200652
 Assembly: 06
 Senate: 02
 Special Programs Code: Voluntary Cleanup Program
 Status: Refer: Other Agency
 Status Date: 12/31/2001
 Restricted Use: NO

Actual:
61 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SAN FRANCISCO ENERGY COGENERATION PLANT (Continued)

S106568308

Funding: Responsible Party
Lat/Long: 0 / 0
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: 10097, 10199
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: 110033605757
Alias Type: EPA (FRS #)
Alias Name: 200652
Alias Type: Project Code (Site Code)
Alias Name: 38490010
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: 03/24/1995
Comments: Recommendation: REFOA. The City has been working with property owner to minimize potential risks posed by the Site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 06/04/2001
Comments: Signed VCA.

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:

Facility ID: 38490010
Status: Refer: Other Agency
Status Date: 12/31/2001
Site Code: 200652
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: Not reported
NPL: NO
Regulatory Agencies: SMBRP, RWQCB 2 - San Francisco Bay
Lead Agency: NONE SPECIFIED
Program Manager: Janet Naito
Supervisor: Barbara Cook
Division Branch: Cleanup Berkeley
Assembly: 06
Senate: 02
Special Program: Voluntary Cleanup Program
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

SAN FRANCISCO ENERGY COGENERATION PLANT (Continued)

S106568308

Funding:	Responsible Party
Latitude:	0
Longitude:	0
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	* CONTAMINATED SOIL * WASTE OIL & MIXED OIL
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	110033605757
Alias Type:	EPA (FRS #)
Alias Name:	200652
Alias Type:	Project Code (Site Code)
Alias Name:	38490010
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:	03/24/1995
Comments:	Recommendation: REFOA. The City has been working with property owner to minimize potential risks posed by the Site.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	06/04/2001
Comments:	Signed VCA.

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

D8
West
1/8-1/4
0.210 mi.
1107 ft.

MEE CORPORATION
895 INNES AV
SAN FRANCISCO, CA
Site 1 of 3 in cluster D

UST U004003792
N/A

Relative:
Higher

SAN FRANCISCO CO. UST:

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 Add:	Not reported
Mailing Address:	255 Shipley Street
Mailing City, St, Zip:	Not reported
Permit Number:	Not reported
Permit Approved By:	Not reported

Actual:
30 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MEE CORPORATION (Continued)

U004003792

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MEE CORPORATION (Continued)

U004003792

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

D9
West
1/8-1/4
0.210 mi.
1107 ft.

MEE CORP.
895 INNES AVE
SAN FRANCISCO, CA 94124

HIST CORTESE **S104165333**
LUST **N/A**

Site 2 of 3 in cluster D

Relative:
Higher

HIST CORTESE:	
Region:	CORTESE
Facility County Code:	38
Reg By:	LTNKA
Reg Id:	38-0705

Actual:
30 ft.

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
Email:	vpal@waterboards.ca.gov
Phone Number:	Not reported

Global Id:	T0607500614
Contact Type:	Local Agency Caseworker

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MEE CORP. (Continued)

S104165333

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

Status History:

Global Id: T0607500614
Status: Open - Case Begin Date
Status Date: 08/18/1995

Global Id: T0607500614
Status: Completed - Case Closed
Status Date: 01/12/1996

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MEE CORP. (Continued)

S104165333

How Discovered:	Tank Closure
How Stopped:	Remove Contents
Report Date:	8/10/1995
Case Closed:	1/12/1996
Closed Date:	1/12/1996
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

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

MEE CORP. (Continued)

S104165333

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

D10
West
1/8-1/4
0.215 mi.
1133 ft.

900 INNES AVENUE
900 INNES AVENUE
SAN FRANCISCO, CA 94124

US BROWNFIELDS

1016603612
N/A

Site 3 of 3 in cluster D

Relative:
Higher

US BROWNFIELDS:

Recipient name: R9 TBA (STAG Funded)
 Grant type: TBA

Actual:
29 ft.

Property name: 900 INNES AVENUE
 Property #: Multiple (7 parcels)
 Parcel size: 2.4

Property Description: Previously operated as boat-building and ship repair facilities. Operated by multiple owners; Donco Industries (marine repair) is notable for illegal dredging activities at the site.

Latitude: 37.73224099999999
 Longitude: -122.37572699999998
 HCM label: Address Matching-House Number
 Map scale: Not reported
 Point of reference: Entrance Point of a Facility or Station
 Datum: World Geodetic System of 1984
 ACRES property ID: 172062
 Start date: Not reported
 Completed date: Not reported
 Acres cleaned up: Not reported
 Cleanup funding: Not reported
 Cleanup funding source: Not reported
 Assessment funding: 59431
 Assessment funding source: US EPA - TBA Funding
 Redevelopment funding: Not reported
 Redev. funding source: Not reported
 Redev. funding entity name: Not reported
 Redevelopment start date: Not reported
 Assessment funding entity: EPA
 Cleanup funding entity: Not reported
 Grant type: N/A
 Accomplishment type: Phase I Environmental Assessment
 Accomplishment count: 1
 Cooperative agreement #: n/a
 Ownership entity: Private
 Current owner: Tenderloin Housing Clinic
 Did owner change: N
 Cleanup required: Unknown
 Video available: No
 Photo available: Yes

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

900 INNES AVENUE (Continued)

1016603612

Institutional controls required:	U
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	No
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controlled substance found:	Not reported
Controlled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	Not reported
PCBs found:	Y
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	Not reported
Sediments found:	Y
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	2.4
Future use greenspace acreage:	2.4
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

900 INNES AVENUE (Continued)

1016603612

Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
nickel cleaned up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported

11
West
1/8-1/4
0.238 mi.
1258 ft.

RFJ MEISWINKEL CO.
930 INNES AVE
SAN FRANCISCO, CA 94124

LUST U003897750
UST N/A

Relative:
Higher

Actual:
30 ft.

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

Click here to access the California GeoTracker records for this facility:

Contact:
 Global Id: T0607536728

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RFJ MEISWINKEL CO. (Continued)

U003897750

Contact Type: Regional Board Caseworker
Contact Name: UUU
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY ST SUITE 1400
City: OAKLAND
Email: Not reported
Phone Number: Not reported

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

Status History:
Global Id: T0607536728
Status: Open - Site Assessment
Status Date: 08/10/2006

Global Id: T0607536728
Status: Open - Case Begin Date
Status Date: 08/10/2006

Global Id: T0607536728
Status: Completed - Case Closed
Status Date: 11/17/2006

Regulatory Activities:
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: ENFORCEMENT
Date: 10/02/2006
Action: Notice of Responsibility

Global Id: T0607536728
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

UST:
Facility ID: 7016
Latitude: 37.7338975
Longitude: -122.3749372

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RFJ MEISWINKEL CO. (Continued)

U003897750

Permitting Agency: SAN FRANCISCO COUNTY

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
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): Automatic Tank Gauging
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RFJ MEISWINKEL CO. (Continued)

U003897750

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RFJ MEISWINKEL CO. (Continued)

U003897750

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:	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

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

RFJ MEISWINKEL CO. (Continued)

U003897750

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
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

12
 WNW
 1/4-1/2
 0.268 mi.
 1413 ft.

GEORGE PAIZI TRUSTEE
966 INNES
SAN FRANCISCO, CA 94116

HIST CORTESE **S102430722**
N/A

Relative:
Higher

HIST CORTESE:	
Region:	CORTESE
Facility County Code:	38
Reg By:	LTNKA
Reg Id:	38-0264

Actual:
33 ft.

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

E13
South
1/4-1/2
0.280 mi.
1476 ft.

HUNTERS POINT SHIPYARD ANNEX
SAN FRANCISCO, CA
Site 1 of 2 in cluster E

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: 2012
 Telephone: 916-557-7461
 NPL Status: Not Listed
 RAB: Not reported
 CTC: 1216.8
 Current Owner: Local Government; Other Federal Government; Private Sector; State Government
 Current Prog: Not reported
 Future Prog: Not reported
 Acreage: Not reported

Actual:
141 ft.

History:

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.

Latitude: 37.727778
 Longitude: -122.372500

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

E14 **HUNTERS POINT ANNEX**
South
1/4-1/2 **SAN FRANCISCO, CA 94124**
0.280 mi.
1477 ft. **Site 2 of 2 in cluster E**

ENVIROSTOR **S107736487**
N/A

Relative:
Higher

ENVIROSTOR:

Facility ID: 80000784
 Status: No Further Action
 Status Date: 04/02/2014
 Site Code: Not reported
 Site Type: Military Evaluation
 Site Type Detailed: FUDS
 Acres: 967
 NPL: NO
 Regulatory Agencies: SMBRP
 Lead Agency: SMBRP
 Program Manager: Carrie Tatoian-Cain
 Supervisor: Dan Ward
 Division Branch: Cleanup Sacramento
 Assembly: 17
 Senate: 11
 Special Program: Not reported
 Restricted Use: NO
 Site Mgmt Req: NONE SPECIFIED
 Funding: DERA
 Latitude: 37.72777
 Longitude: -122.3725
 APN: NONE SPECIFIED
 Past Use: NONE SPECIFIED
 Potential COC: NONE SPECIFIED
 Confirmed COC: NONE SPECIFIED
 Potential Description: NONE SPECIFIED
 Alias Name: CA99799F592900
 Alias Type: Federal Facility ID
 Alias Name: J09CA1033
 Alias Type: INPR
 Alias Name: 80000784
 Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: No Department of Defense Action Indicated (NDAI)
 Completed Date: 03/10/2014
 Comments: This approval is only for former buildings 815, 820, 830, and 831 (the Formerly Used Defense Site eligible portion of the former Hunters Point Shipyard Annex). Also Please note that this determination is based on information in DTSC's possession at this time concerning Department of Defense (DoD) activities on the sites listed above. DTSC reserve the right to address any appropriate environmental or human health related issue, should additional information concerning the environmental condition of this site becomes available in the future.

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT ANNEX (Continued)

S107736487

Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

**15
WNW
1/4-1/2
0.322 mi.
1700 ft.**

**G. PAIZIS TRUSTEE
996 INNES AVE
SAN FRANCISCO, CA 94124**

**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
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

**Actual:
43 ft.**

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

Status History:

Global Id: T0607500229
Status: Open - Case Begin Date
Status Date: 11/17/1989

Global Id: T0607500229
Status: Completed - Case Closed
Status Date: 01/26/1996

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

G. PAIZIS TRUSTEE (Continued)

S101592205

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

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

G. PAIZIS TRUSTEE (Continued)

S101592205

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
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

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

G. PAIZIS TRUSTEE (Continued)

S101592205

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

**16
 NW
 1/4-1/2
 0.401 mi.
 2119 ft.**

**PG & E HUNTERS POINT
 1000 EVANS AVE HUNTERS POINT POWER PLANT
 SAN FRANCISCO, CA 94124**

**VCP S100351554
 ENVIROSTOR N/A**

**Relative:
 Lower**

VCP:

**Actual:
 15 ft.**

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
 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: YES
 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

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: 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: Remedial Investigation Workplan
Completed Date: 07/18/2007
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: 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: 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: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 11/30/2012
Comments: Site restoration activities were completed.

Completed Area Name: Area H
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 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

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

PG & E HUNTERS POINT (Continued)

S100351554

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
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

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PG & E HUNTERS POINT (Continued)

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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.

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

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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

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

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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: 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: 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: 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.

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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: 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: 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: 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

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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 the air 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

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late-December 2009, concurrent with public comment period on the administrative record for this action.

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
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

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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 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

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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
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.

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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: 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

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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
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

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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 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

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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
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

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PG & E HUNTERS POINT (Continued)

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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: 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: 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: Risk Assessment Report
Completed Date: 10/06/2011
Comments: Not reported

Completed Area Name: Area A
Completed Sub Area Name: Not reported

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PG & E HUNTERS POINT (Continued)

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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: Remedial Action Implementation Workplan
Completed Date: 06/15/2012
Comments: DTSC concurred with Remedial Designs.

Completed Area Name: Area B
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 10/17/2013
Comments: Soil excavation was performed to remove soil up to the confirmation sample location achieving the site cleanup goals or until groundwatter, an arae boundary or a physical boundary was reached. A total of 35,457 tons of soil (25,082 tons for soil remediation and an additional 10,375 tons for groundwater remediation) were excavated and siposed from Area B-South. All soil was classified as non-RCRA CA hazardous waste and transported first by truck in sealed bags to

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PG & E HUNTERS POINT (Continued)

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WSG on Cargo Way and them by railcar to ECDC in Utah. Chemical oxidants were applied to the excavation base where it extended to groundwater prior to backfilling the excavation to treat entrenched petroleum hydrocarbons. Replacement groundwater monitoring wells were installed and are being monitored. Still need to address TPH in the area adjacent to the lagoon and to determine whether the BCS and lagoon release response system need to continue operation before the area can be certified.

Completed Area Name: Area I
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 11/08/2013
Comments: Not reported

Completed Area Name: Jennings Street and White Cap Area
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Implementation Workplan
Completed Date: 06/13/2013
Comments: Not reported

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 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: 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: *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.

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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: 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: Long Term Monitoring Report
Completed Date: 10/01/2012
Comments: Report documents sampling conducted in April 2012. MW-22 & JSPMW-4 contained measurable petroleum product and were not sampled. Results generally consistent with the November 2011 monitoring event. Next sampling event scheduled for October 2012.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 05/23/2013
Comments: Report documents October 2012 sampling event. Wells MW-13 and WCPMW-10 contained measurable product.

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: Jennings Street and White Cap Area
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 06/07/2012
Comments: Not reported

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.

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PG & E HUNTERS POINT (Continued)

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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: Area B
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 11/30/2012
Comments: Site restoration activities completed.

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

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PG & E HUNTERS POINT (Continued)

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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: Jennings Street and White Cap Area
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: 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: Technical Report
Completed Date: 10/30/2012
Comments: Bi-weekly asbestos reports and the monthly air monitoring reports are accepted.

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PG & E HUNTERS POINT (Continued)

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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: 06/13/2013
Comments: Conditional approval provided.

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: SITES WITH NO OPERABLE UNIT
Completed Sub Area Name: Former Utility Tunnel underneath Evans Avenue between Areas A and J
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: Area E
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 04/05/2013
Comments: field work completed.

Completed Area Name: Jennings Street and White Cap Area
Completed Sub Area Name: Not reported
Completed Document Type: Work Notice
Completed Date: 03/20/2013
Comments: Work Notice for the upcoming groundwater treatment work. Work will start at the beginning of April with the installation of injection wells on portions of Jennings Street and the White Cap Construction property. Groundwater will then be treated with a treatment agent called Regenox to break down the petroleum hydrocarbons into safe water-soluble compounds.

Completed Area Name: SITES WITH NO OPERABLE UNIT
Completed Sub Area Name: Former Utility Tunnel underneath Evans Avenue between Areas A and J
Completed Document Type: Technical Report
Completed Date: 03/28/2013
Comments: A petroleum sheen was noted on water emanating from the Plant Western end of a former utility tunnel that runs beneath Evans Avenue on

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December 5, 2012. After removing the water and cleaning the pavement, soil and water samples were subsequently collected beneath and alongside the Plant Western end of a former utility tunnel to determine whether there was a significant source of petroleum hydrocarbons in groundwater or in the soils/bedrock immediately underlying a former utility tunnel that could have caused this release. Petroleum hydrocarbons were not detected or were detected at low concentrations well below the 3,129 mg/kg TPH remedial action goal established for soil at the site. Therefore, no significant TPH source was found in groundwater or soils/bedrock immediately underlying the tunnel. PG&E will continue to monitor conditions in the tunnel as part of the ongoing stormwater monitoring program established in the Stormwater Pollution Prevention Plan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 09/05/2013
Comments: Report documents the results from the first quarter 2013 sampling event that took place March 28 and 29, 2013. Water levels were measured in 53 monitoring wells and 12 monitoring wells were sampled for analytical testing. The report also documents the operation and maintenance of the Area B-South short-term capture system.

Completed Area Name: Area B
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 01/06/2014
Comments: Not reported

Completed Area Name: Area B
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 09/17/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 10/22/2013
Comments: DTSC accepts the report. Report has been adequately revised to address our comments.

Completed Area Name: Area B
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Implementation Workplan
Completed Date: 10/22/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 11/11/2013
Comments: Report accepted. No reoccurrence of free petroleum product noted in Areas C/D or B-South.

Completed Area Name: PROJECT WIDE

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Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 01/06/2014
Comments: Not reported

Completed Area Name: Area E
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 04/04/2014
Comments: Not reported

Completed Area Name: Jennings Street and White Cap Area
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 03/17/2014
Comments: Not reported

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: Annual Oversight Cost Estimate
Completed Date: 10/30/2012
Comments: Cost estimate for project codes 201724 and 201869

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: Amendment - Order/Agreement
Completed Date: 12/11/2013
Comments: Voluntary Cleanup Agreement was amended to modify the boundaries of Area E.

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: Correspondence
Completed Date: 12/17/2013
Comments: DTSC concurred with 1) discontinuing groundwater monitoring in Areas B-North, B-Central, and D; 2) abandonment of monitoring wells MW-3, MW-23, MW-24 and MW-25; and 3) abandonment of monitoring well MW-26 if it is not required to monitor conditions downgradient of MW-27 in Area C.

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: 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: 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: 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.

Future Area Name: Area J
Future Sub Area Name: Not reported
Future Document Type: Land Use Restriction
Future Due Date: 2015
Future Area Name: Area J
Future Sub Area Name: Not reported
Future Document Type: Certification
Future Due Date: 2015
Future Area Name: Area I
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

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Future Document Type: Certification
Future Due Date: 2014
Future Area Name: Area I
Future Sub Area Name: Not reported
Future Document Type: Land Use Restriction
Future Due Date: 2014
Future Area Name: Area E
Future Sub Area Name: Not reported
Future Document Type: Removal Action Workplan
Future Due Date: 2014
Future Area Name: Area J
Future Sub Area Name: Not reported
Future Document Type: Remedial Action Completion Report
Future Due Date: 2015
Future Area Name: Jennings Street and White Cap Area
Future Sub Area Name: Not reported
Future Document Type: Remedial Action Completion Report
Future Due Date: 2015
Schedule Area Name: Area A
Schedule Sub Area Name: Not reported
Schedule Document Type: Certification
Schedule Due Date: 01/31/2014
Schedule Revised Date: 05/30/2014
Schedule Area Name: Area H
Schedule Sub Area Name: Not reported
Schedule Document Type: Certification
Schedule Due Date: 01/31/2014
Schedule Revised Date: 05/30/2014
Schedule Area Name: Area B
Schedule Sub Area Name: Not reported
Schedule Document Type: Certification
Schedule Due Date: 06/25/2014
Schedule Revised Date: Not reported
Schedule Area Name: Area E
Schedule Sub Area Name: Not reported
Schedule Document Type: Remedial Investigation Report
Schedule Due Date: 05/31/2014
Schedule Revised Date: Not reported

ENVIROSTOR:

Facility ID: 38490002
Status: Active
Status Date: 03/27/2007
Site Code: 201869
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
Assembly: 17
Senate: 11
Special Program: Designation of Single Agency
Restricted Use: YES

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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: Arsenic Lead Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs TPH-diesel TPH-MOTOR OIL
Confirmed COC: Arsenic Lead Polynuclear aromatic hydrocarbons (PAHs TPH-diesel TPH-MOTOR OIL Polychlorinated biphenyls (PCBs
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
Alias Type: Envirostor ID Number
Completed Info:
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.

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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: 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: 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,

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PG & E HUNTERS POINT (Continued)

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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: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 11/30/2012
Comments: Site restoration activities were completed.

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

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PG & E HUNTERS POINT (Continued)

S100351554

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
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

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: 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: 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.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 06/23/2008

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
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PG & E HUNTERS POINT (Continued)

S100351554

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
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

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Elevation

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PG & E HUNTERS POINT (Continued)

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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: 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: Monitoring Report
Completed Date: 03/20/2009

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Direction
Distance
Elevation

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PG & E HUNTERS POINT (Continued)

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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: 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: 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: 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: 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: 02/26/2009
Comments: This summary report includes air monitoring data from January 5, 2009

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Direction
Distance
Elevation

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PG & E HUNTERS POINT (Continued)

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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 the air 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

Map ID
Direction
Distance
Elevation

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PG & E HUNTERS POINT (Continued)

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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: 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.

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Direction
Distance
Elevation

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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: 10/22/2009
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
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

Map ID
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Distance
Elevation

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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: 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
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

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Direction
Distance
Elevation

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PG & E HUNTERS POINT (Continued)

S100351554

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
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

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PG & E HUNTERS POINT (Continued)

S100351554

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: 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
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.

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Elevation

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PG & E HUNTERS POINT (Continued)

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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
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

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: 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.

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

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: 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: 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: PROJECT WIDE

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

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PG & E HUNTERS POINT (Continued)

S100351554

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: Risk Assessment Report
Completed Date: 10/06/2011
Comments: Not reported

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

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PG & E HUNTERS POINT (Continued)

S100351554

Completed Date: 07/24/2012
Comments: Not reported

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: Area B
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 10/17/2013
Comments: Soil excavation was performed to remove soil up to the confirmation sample location achieving the site cleanup goals or until groundwater, an area boundary or a physical boundary was reached. A total of 35,457 tons of soil (25,082 tons for soil remediation and an additional 10,375 tons for groundwater remediation) were excavated and disposed from Area B-South. All soil was classified as non-RCRA CA hazardous waste and transported first by truck in sealed bags to WSG on Cargo Way and then by railcar to ECDC in Utah. Chemical oxidants were applied to the excavation base where it extended to groundwater prior to backfilling the excavation to treat entrenched petroleum hydrocarbons. Replacement groundwater monitoring wells were installed and are being monitored. Still need to address TPH in the area adjacent to the lagoon and to determine whether the BCS and lagoon release response system need to continue operation before the area can be certified.

Completed Area Name: Area I
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 11/08/2013
Comments: Not reported

Completed Area Name: Jennings Street and White Cap Area
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Implementation Workplan
Completed Date: 06/13/2013
Comments: Not reported

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 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.

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Direction
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Elevation

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PG & E HUNTERS POINT (Continued)

S100351554

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: 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: *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: 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: Long Term Monitoring Report
Completed Date: 10/01/2012
Comments: Report documents sampling conducted in April 2012. MW-22 & JSPMW-4 contained measurable petroleum product and were not sampled. Results generally consistent with the November 2011 monitoring event. Next sampling event scheduled for October 2012.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 05/23/2013
Comments: Report documents October 2012 sampling event. Wells MW-13 and WCPMW-10 contained measurable product.

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

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Direction
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Elevation

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PG & E HUNTERS POINT (Continued)

S100351554

Completed Date: 06/07/2012
Comments: Not reported

Completed Area Name: Jennings Street and White Cap Area
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 06/07/2012
Comments: Not reported

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: Area B
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 11/30/2012
Comments: Site restoration activities completed.

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

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Direction
Distance
Elevation

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Site

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PG & E HUNTERS POINT (Continued)

S100351554

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: Jennings Street and White Cap Area
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: 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

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PG & E HUNTERS POINT (Continued)

S100351554

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: Technical Report
Completed Date: 10/30/2012
Comments: Bi-weekly asbestos reports and the monthly air monitoring reports are accepted.

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: 06/13/2013
Comments: Conditional approval provided.

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: SITES WITH NO OPERABLE UNIT
Completed Sub Area Name: Former Utility Tunnel underneath Evans Avenue between Areas A and J
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

Map ID
Direction
Distance
Elevation

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Database(s)

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EPA ID Number

PG & E HUNTERS POINT (Continued)

S100351554

Completed Area Name: Area E
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 04/05/2013
Comments: field work completed.

Completed Area Name: Jennings Street and White Cap Area
Completed Sub Area Name: Not reported
Completed Document Type: Work Notice
Completed Date: 03/20/2013
Comments: Work Notice for the upcoming groundwater treatment work. Work will start at the beginning of April with the installation of injection wells on portions of Jennings Street and the White Cap Construction property. Groundwater will then be treated with a treatment agent called Regenox to break down the petroleum hydrocarbons into safe water-soluble compounds.

Completed Area Name: SITES WITH NO OPERABLE UNIT
Completed Sub Area Name: Former Utility Tunnel underneath Evans Avenue between Areas A and J
Completed Document Type: Technical Report
Completed Date: 03/28/2013
Comments: A petroleum sheen was noted on water emanating from the Plant Western end of a former utility tunnel that runs beneath Evans Avenue on December 5, 2012. After removing the water and cleaning the pavement, soil and water samples were subsequently collected beneath and alongside the Plant Western end of a former utility tunnel to determine whether there was a significant source of petroleum hydrocarbons in groundwater or in the soils/bedrock immediately underlying a former utility tunnel that could have caused this release. Petroleum hydrocarbons were not detected or were detected at low concentrations well below the 3,129 mg/kg TPH remedial action goal established for soil at the site. Therefore, no significant TPH source was found in groundwater or soils/bedrock immediately underlying the tunnel. PG&E will continue to monitor conditions in the tunnel as part of the ongoing stormwater monitoring program established in the Stormwater Pollution Prevention Plan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 09/05/2013
Comments: Report documents the results from the first quarter 2013 sampling event that took place March 28 and 29, 2013. Water levels were measured in 53 monitoring wells and 12 monitoring wells were sampled for analytical testing. The report also documents the operation and maintenance of the Area B-South short-term capture system.

Completed Area Name: Area B
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 01/06/2014
Comments: Not reported

Completed Area Name: Area B
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 09/17/2013

Map ID
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Distance
Elevation

MAP FINDINGS

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EPA ID Number

PG & E HUNTERS POINT (Continued)

S100351554

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 10/22/2013
Comments: DTSC accepts the report. Report has been adequately revised to address our comments.

Completed Area Name: Area B
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Implementation Workplan
Completed Date: 10/22/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 11/11/2013
Comments: Report accepted. No reoccurrence of free petroleum product noted in Areas C/D or B-South.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 01/06/2014
Comments: Not reported

Completed Area Name: Area E
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 04/04/2014
Comments: Not reported

Completed Area Name: Jennings Street and White Cap Area
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 03/17/2014
Comments: Not reported

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.

Map ID
Direction
Distance
Elevation

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Database(s)

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PG & E HUNTERS POINT (Continued)

S100351554

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

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: Amendment - Order/Agreement
Completed Date: 12/11/2013
Comments: Voluntary Cleanup Agreement was amended to modify the boundaries of Area E.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/17/2013
Comments: DTSC concurred with 1) discontinuing groundwater monitoring in Areas B-North, B-Central, and D; 2) abandonment of monitoring wells MW-3, MW-23, MW-24 and MW-25; and 3) abandonment of monitoring well MW-26 if it is not required to monitor conditions downgradient of MW-27 in Area C.

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: 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: 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: CEQA - Initial Study/ Neg. Declaration
Completed Date: 06/10/2010
Comments: Not reported

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PG & E HUNTERS POINT (Continued)

S100351554

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.

Future Area Name: Area J
Future Sub Area Name: Not reported
Future Document Type: Land Use Restriction
Future Due Date: 2015
Future Area Name: Area J
Future Sub Area Name: Not reported
Future Document Type: Certification
Future Due Date: 2015
Future Area Name: Area I
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: 2014
Future Area Name: Area I
Future Sub Area Name: Not reported
Future Document Type: Land Use Restriction
Future Due Date: 2014
Future Area Name: Area E
Future Sub Area Name: Not reported
Future Document Type: Removal Action Workplan
Future Due Date: 2014
Future Area Name: Area J
Future Sub Area Name: Not reported
Future Document Type: Remedial Action Completion Report
Future Due Date: 2015
Future Area Name: Jennings Street and White Cap Area
Future Sub Area Name: Not reported
Future Document Type: Remedial Action Completion Report
Future Due Date: 2015
Schedule Area Name: Area A
Schedule Sub Area Name: Not reported
Schedule Document Type: Certification
Schedule Due Date: 01/31/2014
Schedule Revised Date: 05/30/2014
Schedule Area Name: Area H
Schedule Sub Area Name: Not reported
Schedule Document Type: Certification
Schedule Due Date: 01/31/2014
Schedule Revised Date: 05/30/2014
Schedule Area Name: Area B
Schedule Sub Area Name: Not reported
Schedule Document Type: Certification
Schedule Due Date: 06/25/2014
Schedule Revised Date: Not reported
Schedule Area Name: Area E
Schedule Sub Area Name: Not reported

Map ID
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PG & E HUNTERS POINT (Continued)

S100351554

Schedule Document Type: Remedial Investigation Report
Schedule Due Date: 05/31/2014
Schedule Revised Date: Not reported

F17
SSW
1/4-1/2
0.409 mi.
2159 ft.
COMMERCIAL PROPERTY
50 CRISP ROAD
SAN FRANCISCO, CA 94124
Site 1 of 3 in cluster F

LUST **S103964323**
N/A

Relative:
Higher

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

Status History:

Global Id: T0607591197
Status: Open - Case Begin Date
Status Date: 08/24/2000

Global Id: T0607591197
Status: Completed - Case Closed
Status Date: 09/18/2000

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 Direction
 Distance
 Elevation

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 EPA ID Number

COMMERCIAL PROPERTY (Continued)

S103964323

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
Action:	Leak Reported

F18 **COMMERCIAL PROPERTY**
SSW **50 CRISP ROAD**
1/4-1/2 **SAN FRANCISCO, CA 94124**
0.409 mi.
2159 ft. **Site 2 of 3 in cluster F**

LUST **S105194750**
N/A

Relative: Higher	LUST REG 2:	
	Region:	2
Actual: 25 ft.	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	

F19 **COMMERCIAL**
SSW **50 CRISP ROAD**
1/4-1/2 **SAN FRANCISCO, CA 94124**
0.409 mi.
2159 ft. **Site 3 of 3 in cluster F**

LUST **S105627936**
N/A

Relative: Higher	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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

COMMERCIAL (Continued)

S105627936

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
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

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

COMMERCIAL (Continued)

S105627936

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

20
NNW
1/4-1/2
0.499 mi.
2634 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.

21
WSW
1/2-1
0.713 mi.
3764 ft.

BAYVIEW PLUME STUDY AREA
NEAR INTERSECTION OF SHAFTER AVENUE AND HAWES STREET
SAN FRANCISCO, CA 94124

Cortese S107735890
RESPONSE N/A
ENVIROSTOR

Relative:
Higher

CORTESE:
 Region: CORTESE
 Envirostor Id: 70000015
 Site/Facility Type: STATE RESPONSE
 Cleanup Status: BACKLOG
 Status Date: 07/26/2011
 Site Code: 201572
 Latitude: 37.726956
 Longitude: -122.38348
 Owner: Not reported
 Enf Type: Not reported
 Swat R: Not reported
 Flag: export

Actual:
22 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAYVIEW PLUME STUDY AREA (Continued)

S107735890

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 Unit Name: Not reported

RESPONSE:

Facility ID: 70000015
Site Type: State Response
Site Type Detail: State Response or NPL
Acres: 10
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Juanita (Nina) Bacey
Supervisor: Karen Toth
Division Branch: Cleanup Berkeley
Site Code: 201572
Site Mgmt. Req.: NONE SPECIFIED
Assembly: 17
Senate: 11
Special Program Status: Not reported
Status: Backlog
Status Date: 07/26/2011
Restricted Use: NO
Funding: Orphan Funds
Latitude: 37.72695
Longitude: -122.3834
APN: NONE SPECIFIED
Past Use: DRY CLEANING
Potential COC : Tetrachloroethylene (PCE)
Confirmed COC: Tetrachloroethylene (PCE)
Potential Description: OTH, SV
Alias Name: 110033618020
Alias Type: EPA (FRS #)
Alias Name: 201572
Alias Type: Project Code (Site Code)
Alias Name: 70000015
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/04/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/01/2000
Comments: Responses for Various sites

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

BAYVIEW PLUME STUDY AREA (Continued)

S107735890

Completed Document Type: State/Federal Funded Site Work Order
Completed Date: 09/15/2009
Comments: Work Order-001 for a field investigation of the Bayview Plume, including a workplan, field work, and a technical memo.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: State/Federal Funded Site Work Order
Completed Date: 05/17/2006
Comments: Work Order Amendment #3 issued to Weiss Associates for additional sampling

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: State/Federal Funded Site Contract
Completed Date: 06/04/2009
Comments: Fully executed on June 4, 2009

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 09/01/2005
Comments: Remedial Investigation Workplan approved.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 01/19/2006
Comments: Technical memorandum approved showing higher VOC concentrations in soil gas at depth. Additional investigation recommended.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 01/06/2006
Comments: Groundwater sampling completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 03/10/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 01/05/2007
Comments: Fieldwork was soil sampling in area around Revere and Jenning Streets to look for the source area of the plume.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 04/02/2007
Comments: Levels were detected above CHHSLs value. Based on the results it appears to be related to volatilization of groundwater. No source has been identified to date.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAYVIEW PLUME STUDY AREA (Continued)

S107735890

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 10/31/2006
Comments: Approved for two mobilizations.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 05/19/2010
Comments: Workplan is approved by email. Work will be scheduled the week of June 21, 2010.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 07/02/2010
Comments: All field work completed. (6/21 - 7/2)

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Report
Completed Date: 01/03/2011
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:

Facility ID: 70000015
Status: Backlog
Status Date: 07/26/2011
Site Code: 201572
Site Type: State Response
Site Type Detailed: State Response or NPL
Acres: 10
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Juanita (Nina) Bacey
Supervisor: Karen Toth
Division Branch: Cleanup Berkeley
Assembly: 17
Senate: 11
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Orphan Funds
Latitude: 37.72695
Longitude: -122.3834

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAYVIEW PLUME STUDY AREA (Continued)

S107735890

APN: NONE SPECIFIED
Past Use: DRY CLEANING
Potential COC: Tetrachloroethylene (PCE)
Confirmed COC: Tetrachloroethylene (PCE)
Potential Description: OTH, SV
Alias Name: 110033618020
Alias Type: EPA (FRS #)
Alias Name: 201572
Alias Type: Project Code (Site Code)
Alias Name: 70000015
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/04/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/01/2000
Comments: Responses for Various sites

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: State/Federal Funded Site Work Order
Completed Date: 09/15/2009
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Completed Document Type: State/Federal Funded Site Work Order
Completed Date: 05/17/2006
Comments: Work Order Amendment #3 issued to Weiss Associates for additional sampling

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Completed Sub Area Name: Not reported
Completed Document Type: State/Federal Funded Site Contract
Completed Date: 06/04/2009
Comments: Fully executed on June 4, 2009

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 09/01/2005
Comments: Remedial Investigation Workplan approved.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 01/19/2006
Comments: Technical memorandum approved showing higher VOC concentrations in soil gas at depth. Additional investigation recommended.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAYVIEW PLUME STUDY AREA (Continued)

S107735890

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 01/06/2006
Comments: Groundwater sampling completed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 03/10/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 01/05/2007
Comments: Fieldwork was soil sampling in area around Revere and Jenning Streets to look for the source area of the plume.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 04/02/2007
Comments: Levels were detected above CHHSLs value. Based on the results it appears to be related to volatilization of groundwater. No source has been identified to date.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 10/31/2006
Comments: Approved for two mobilizations.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Workplan
Completed Date: 05/19/2010
Comments: Workplan is approved by email. Work will be scheduled the week of June 21, 2010.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 07/02/2010
Comments: All field work completed. (6/21 - 7/2)

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Report
Completed Date: 01/03/2011
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAYVIEW PLUME STUDY AREA (Continued)

S107735890

Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

22
WSW
1/2-1
0.765 mi.
4041 ft.

BAY AREA DRUM COMPANY
1212 THOMAS AVENUE
SAN FRANCISCO, CA 94124

HIST Cal-Sites
CA BOND EXP. PLAN
HIST CORTESE
LUST
SLIC
LIENS
RESPONSE
ENVIROSTOR

S100833360
N/A

Relative:
Higher

Actual:
21 ft.

Calsite:
Region: BERKELEY
Facility ID: 38280112
Facility Type: RP
Type: RESPONSIBLE PARTY
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: DEPT OF TOXIC SUBSTANCES CONTROL
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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:	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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

Unknown Type:	0
Facility ID:	38280112
Activity:	SS
Activity Name:	SITE SCREENING
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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:	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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

Activity: FRIFS
Activity Name: FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
AWP Code: VACAN
Proposed Budget: 0
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

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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:	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

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MAP FINDINGS

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Database(s)

EDR ID Number
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BAY AREA DRUM COMPANY (Continued)

S100833360

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:	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:	REMEDIAL 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:	REMEDIAL ACTION PLAN / RECORD OF DECISION
AWP Code:	Not reported

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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:	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

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BAY AREA DRUM COMPANY (Continued)

S100833360

Liquids Removed (Gals):	5500
Liquids Treated (Gals):	0
Action Included Capping:	Not reported
Well Decommissioned:	X
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

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MAP FINDINGS

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EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

For Commercial Reuse: 0
For Industrial Reuse: 0
For Residential Reuse: 0
Unknown Type: 0
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

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MAP FINDINGS

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Database(s)

EDR ID Number
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BAY AREA DRUM COMPANY (Continued)

S100833360

AWP Completion Date:	Not reported
Revised Due Date:	Not reported
Comments Date:	03191999
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:	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

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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

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Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (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
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

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BAY AREA DRUM COMPANY (Continued)

S100833360

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
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

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BAY AREA DRUM COMPANY (Continued)

S100833360

Comments Date: 06042002
Comments: vacant lot. Groundwater degradation enhancement was performed
Comments Date: 06042002
Comments: in March 2002.
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

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BAY AREA DRUM COMPANY (Continued)

S100833360

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
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:

Responsible 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

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BAY AREA DRUM COMPANY (Continued)

S100833360

Site Activity Status: through the ground water.
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 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.

HIST 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

Status History:

Global Id: T0607581979
Status: Open - Site Assessment
Status Date: 08/14/2001

Global Id: T0607581979
Status: Open - Case Begin Date
Status Date: 08/14/2001

Global Id: T0607581979
Status: Completed - Case Closed
Status Date: 09/16/2003

Regulatory Activities:

Global Id: T0607581979
Action Type: ENFORCEMENT
Date: 04/08/2003
Action: Notice of Responsibility

Global Id: T0607581979
Action Type: REMEDIATION
Date: 01/01/1950
Action: Excavation

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: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0607581979
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

SLIC:

Region: STATE
Facility Status: Completed - Case Closed
Status Date: 09/01/1996
Global Id: SL18336756
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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

[Click here to access the California GeoTracker records for this facility:](#)

LIENS:

Envirostor Id: 38280112
Latitude: 37.726664
Longitude: -122.38414
Project Mgr: None specified
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 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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 : Benzene Chlordane DDD Lead Polychlorinated biphenyls (PCBs) Polynuclear aromatic hydrocarbons (PAHs) Tetrachloroethylene (PCE) Toxaphene Trichloroethylene (TCE) Vinyl chloride Acetone Antimony and compounds Cadmium and compounds Carbon tetrachloride Chlorobenzene Chloroform 1,1-Dichloroethane Ethylbenzene Mercury and compounds Nickel 1,1,2,2-Tetrachloroethane Thallium and compounds Xylenes Zinc

Confirmed COC: 1,1,2,2-Tetrachloroethane Thallium and compounds Polychlorinated biphenyls (PCBs) Polynuclear aromatic hydrocarbons (PAHs) Tetrachloroethylene (PCE) Toxaphene Trichloroethylene (TCE) Vinyl chloride Acetone Antimony and compounds Cadmium and compounds Carbon tetrachloride Chlorobenzene Chloroform 1,1-Dichloroethane Ethylbenzene Mercury and compounds Nickel Benzene Chlordane DDD Lead Xylenes Zinc

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

Alias Type: APN

Alias Name: 4792024

Alias Type: APN

Alias Name: 4792025

Alias Type: APN

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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

Completed Area Name: PROJECT WIDE

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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.

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.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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

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MAP FINDINGS

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BAY AREA DRUM COMPANY (Continued)

S100833360

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 / 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: 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: 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: 08/29/1990

Map ID
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MAP FINDINGS

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Database(s)

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BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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: 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

Map ID
Direction
Distance
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Database(s)

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EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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: Consent Decree
Completed Date: 09/04/2007
Comments: Settlement 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: 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: 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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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: 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

Map ID
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Database(s)

EDR ID Number
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BAY AREA DRUM COMPANY (Continued)

S100833360

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 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: 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

Map ID
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Database(s)

EDR ID Number
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BAY AREA DRUM COMPANY (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: 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: 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

Map ID
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EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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:

Facility ID: 38280112
Status: Certified
Status Date: 06/30/2003
Site Code: 201400
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
Assembly: 17
Senate: 11
Special Program: Not reported
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: Benzene Chlordane DDD Lead Polychlorinated biphenyls (PCBs) Polynuclear aromatic hydrocarbons (PAHs) Tetrachloroethylene (PCE) Toxaphene Trichloroethylene (TCE) Vinyl chloride Acetone Antimony and compounds Cadmium and compounds Carbon tetrachloride Chlorobenzene Chloroform 1,1-Dichloroethane Ethylbenzene Mercury and compounds Nickel 1,1,2,2-Tetrachloroethane Thallium and compounds Xylenes Zinc
Confirmed COC: 1,1,2,2-Tetrachloroethane Thallium and compounds Polychlorinated biphenyls (PCBs) Polynuclear aromatic hydrocarbons (PAHs) Tetrachloroethylene (PCE) Toxaphene Trichloroethylene (TCE) Vinyl chloride Acetone Antimony and compounds Cadmium and compounds Carbon tetrachloride Chlorobenzene Chloroform 1,1-Dichloroethane Ethylbenzene Mercury and compounds Nickel Benzene Chlordane DDD Lead Xylenes Zinc
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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
Alias Name:	200011
Alias Type:	Project Code (Site Code)
Alias Name:	201399

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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
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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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 / 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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: 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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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: Consent Decree
Completed Date: 09/04/2007
Comments: Settlement with Freud Farley & Karl Kluck. Payments due \$100,000 by July 16, 2007 and \$150,000 By April 16, 2010

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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: 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

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 COMPANY (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: 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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

Completed Sub Area Name: Not reported
Completed Document Type: Remedial Investigation Report
Completed Date: 04/20/1990
Comments: Report prepared to summarize activities and results to date.

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: 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: 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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BAY AREA DRUM COMPANY (Continued)

S100833360

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: 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

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

23
WSW
1/2-1
0.841 mi.
4438 ft.

1228 UNDERWOOD AVENUE SITE
1228 UNDERWOOD AVE.
SAN FRANCISCO, CA 94124

VCP S109548306
ENVIROSTOR N/A

Relative:
Higher

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

Actual:
21 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

1228 UNDERWOOD AVENUE SITE (Continued)

S109548306

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

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: Cost Recovery Closeout Memo
Completed Date: 05/10/2011
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.

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

1228 UNDERWOOD AVENUE SITE (Continued)

S109548306

Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

ENVIROSTOR:

Facility ID: 60001063
Status: No Further Action
Status Date: 03/20/2009
Site Code: 201839
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
Assembly: 17
Senate: 11
Special Program: Voluntary Cleanup Program
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 37.72639
Longitude: -122.3853
APN: 4807018
Past Use: JUNKYARD
Potential COC: Arsenic Nickel
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: Cost Recovery Closeout Memo
Completed Date: 05/10/2011
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),

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

1228 UNDERWOOD AVENUE SITE (Continued)

S109548306

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.

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

24
SSE
1/2-1
0.928 mi.
4901 ft.

HUNTERS POINT NAVAL SHIPYARD, PARCEL B
965 ACRES; SE PORTION OF SF, CA
SAN FRANCISCO, CA 94124

HIST Cal-Sites
Cortese
ENVIROSTOR

S101272855
N/A

Relative:
Lower

Actual:
8 ft.

Calsite:
 Region: BERKELEY
 Facility ID: 38440001
 Facility Type: CLOSE
 Type: CLOSED MILITARY BASE
 Branch: NO
 Branch Name: OMF-NORTHERN CALIF
 File Name: Not reported
 State Senate District: 05011986
 Status: CERTIFIED AS HAVING BEEN REMEDIATED SATISFACTORILY UNDER DTSC OVERSIGHT
 Status Name: CERTIFIED
 Lead Agency: DEPT OF TOXIC SUBSTANCES CONTROL
 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
For Industrial Reuse:	0
For Residential Reuse:	0
Unknown Type:	0
Facility ID:	38440001
Activity:	RIFS
Activity Name:	REMEDIATION 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (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: 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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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 P

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

oint. 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 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

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Comments Date: 11301995
Comments: indicated no or minimum 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
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

Region: BERKELEY
Facility ID: 38440002
Facility Type: CLOSE
Type: CLOSED MILITARY BASE
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: DEPT OF TOXIC SUBSTANCES CONTROL
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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 EXCAVA-TED 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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, PETRO-
LEUM 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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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 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
Comments Date: 09071999
Comments: and construction specifications for soil remediation and ground

Map ID
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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Comments Date: 09071999
Comments: water 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. And in case of exceedences, there will be a contingency plan to mitigate the threat. Due to high salinity and low yield, the groundwater 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.
Comments Date: 11301993
Comments: RA - PAR-B -- Removal Action Completed at Parcel "B". This RA consisted of various activities at the Tank Farm.
Comments Date: 11301993
Comments: Removal of: asbestos-containing material from piping, pumps, and tanks; petroleum fuel and solvents; nine foundations; demolition of two pump houses and Buildings 111 and 112; approximately 140 cubic yards of soil were excavated and disposed of off-site. Approximate cost = \$385,000; funding = DSMOA.
Comments Date: 12221994
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.
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 *

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Special Programs Code: BRAC2
Special Programs Name: BASE REALIGNMENT & CLOSURE, 2ND ROUND
Special Programs Code: DSMOA
Special Programs Name: DEFENSE MEMORANDUM OF AGREEMENT

Region: BERKELEY
Facility ID: 38440003
Facility Type: CLOSE
Type: CLOSED MILITARY BASE
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: DEPT OF TOXIC SUBSTANCES CONTROL
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

Map ID
Direction
Distance
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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

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MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (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

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,

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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 C TRIPLE A MACHINE SHOP HUNTERS PT NAVAL SHIPYARD- 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
Region: BERKELEY
Facility ID: 38440004
Facility Type: CLOSE
Type: CLOSED MILITARY BASE
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: DEPT OF TOXIC SUBSTANCES CONTROL
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

Map ID
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

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MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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: REMEDIAL 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

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MAP FINDINGS

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Database(s)

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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 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

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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
Region: BERKELEY
Facility ID: 38440005
Facility Type: CLOSE
Type: CLOSED MILITARY BASE
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: DEPT OF TOXIC SUBSTANCES CONTROL
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

Map ID
Direction
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Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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-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

Map ID
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Elevation

MAP FINDINGS

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

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EDR ID Number
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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

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EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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: 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

Map ID
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Elevation

MAP FINDINGS

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
Direction
Distance
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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
Direction
Distance
Elevation

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EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (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:	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

Map ID
Direction
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Elevation

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Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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: 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: FOSL
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

Map ID
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Elevation

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Database(s)

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EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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: 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

MAP FINDINGS

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

he 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 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 vacume 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

Map ID
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Elevation

MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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.)

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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.
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 feed 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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.

MAP FINDINGS

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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 product 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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, PARCEL E
BASEWIDETRIPLE 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

Region: BERKELEY
Facility ID: 38440007
Facility Type: CLOSE
Type: CLOSED MILITARY BASE
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: DEPT OF TOXIC SUBSTANCES CONTROL
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Region: CORTESE
Envirostor Id: 38440003
Site/Facility Type: FEDERAL SUPERFUND - LISTED
Cleanup Status: ACTIVE
Status Date: 05/01/1986
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported

Region: CORTESE
Envirostor Id: 38440007
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:

Facility ID: 38440005
Status: Active
Status Date: 05/01/1986
Site Code: 200050
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
Assembly: 17
Senate: 11
Special Program: Navy
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: * UNSPECIFIED OIL CONTAINING WASTE * UNSPECIFIED SOLVENT MIXTURES * Polychlorinated Biphenyls Asbestos Containing Materials (ACM * Sludge - Paint Arsenic * Asbestos and Naturally Occurring Asbestos (NOA Lead Methane Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes TPH-diesel TPH-gas TPH-MOTOR OIL Trichloroethylene (TCE PCBs (unspeciated mixture, high risk, e.g. Aroclor 1254

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Confirmed COC: Arsenic * Asbestos and Naturally Occurring Asbestos (NOA Lead Methane 30470-NO Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes TPH-diesel TPH-gas Trichloroethylene (TCE TPH-MOTOR OIL

Potential Description: 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
Completed Sub Area Name: B-258
Completed Document Type: Finding of Suitability to Lease
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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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

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.

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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Completed Area Name: PARCEL-E
Completed Sub Area Name: Not reported
Completed Document Type: Proposed Plan
Completed Date: 02/13/2013
Comments: Proposed Plan went out for public comment on 2/13/2013. All comments received will be addressed in the upcoming Parcel E / UC-3 Record of Decision.

Completed Area Name: PARCEL-E
Completed Sub Area Name: Not reported
Completed Document Type: Record of Decision
Completed Date: 12/23/2013
Comments: The selected remedy presented in the ROD consists of the following actions to address risks posed by contaminated media: Soil: remove and dispose of contaminated soil in selected areas that contain nonradioactive chemicals (including metals, PCBs, SVOCs, and TPH) at concentrations exceeding risk-based levels; treat VOC contamination in soil and soil gas at Building 406 by using in-situ soil vapor extraction (SVE); install durable covers throughout Parcel E to eliminate the exposure pathways to remaining contaminants in soil; install shoreline protection consisting of natural materials to eliminate the exposure pathways to remaining contaminants in shoreline sediment; monitor and maintain the different parts of the selected remedies to ensure they are working properly; and implement institutional controls to restrict specific land uses and activities. Groundwater: treat VOC contamination in groundwater at inland plumes using injected biological nutrients to accelerate the breakdown of VOCs to nontoxic compounds; install a below-ground barrier in the northwest portion of IR-02 to control discharge of contaminated groundwater (containing primarily metals and PCBs) into San Francisco Bay; and monitor groundwater concentrations and plumes to support the selected remedies, including documenting the beneficial impact to groundwater quality following implementation of the selected remedies. Non-Aqueous Phase Liquids (NAPL) at IR-03: remove or treat contaminated materials at the Former Oily Waste Ponds (primarily NAPL); install a below-ground barrier to control discharge of NAPL and contaminated groundwater into San Francisco Bay; and treat VOC and TPH contamination in groundwater using injected biological nutrients to accelerate the breakdown of chemicals to nontoxic compounds. Radionuclides: perform surveys in areas with potential radiological contamination (including structures, former building sites, and buried storm drain and sewer lines), and separate and dispose of materials and soil with radiological contamination found during the surveys; and perform the following activities throughout IR-02 and IR-03: (1) scan the entire area for radioactivity to a depth of at least 1 foot, (2) separate and dispose of materials and soil with radiological contamination found during the surveys, (3) construct a 2-foot-thick soil cover to eliminate exposure pathways, and (4) use institutional controls to restrict specific land uses and activities.

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

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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: 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 Landfill Area, which comprises the entire Parcel E-2 Landfill and its immediate perimeter; (2) The Panhandle Area, located west and southwest of the Landfill Area; (3) The East Adjacent Area, located to the east of the Landfill Area; and (4) The Shoreline Area 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 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

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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: 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
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

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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: 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: 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

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

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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.

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.

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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: 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
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: 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

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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 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-2
Completed Sub Area Name: IR 01/21
Completed Document Type: Removal Action Completion Report
Completed Date: 05/30/2013
Comments: Approximately 42,200 cubic yards of PCB, TPH, lead, copper, and PCE-contaminated soil were excavated, screened, and removed from the upland area and along the Parcel E-2 shoreline of the Bay. Excavation depths ranged from 3 feet to 18 feet below ground surface. The highest contaminants removed included 260 mg/kg PCBs, 15,907 mg/kg TPH, 32,000 mg/kg lead, 12,000 mg/kg copper, and 4.45 mg/kg PCE. Additionally, over 3,000 cubic yards of concrete, asphalt, trash, and large keel blocks/debris were removed from the site, 56 radioactive commodities were recovered and removed, and 17 "material potentially presenting an explosive hazard" items were determined to be material documented as safe, demilitarized, and recycled as scrap metal.

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

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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 injections 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 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

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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: 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: 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 UC-3
Completed Sub Area Name: Not reported
Completed Document Type: Proposed Plan
Completed Date: 02/13/2013
Comments: Proposed Plan went out for public comment on 2/13/2013. All comments

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received will be addressed in the upcoming Parcel E / UC-3 Record of Decision.

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: 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.

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 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 UC-3
Completed Sub Area Name: Not reported
Completed Document Type: Record of Decision
Completed Date: 01/21/2014
Comments: The selected remedy presented in the Draft ROD consists of the

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following actions to address risks posed by contaminated media: = Removal of contaminated soil from selected areas that contain high concentrations of chemicals and dispose of contaminated soil offsite. = Removal and disposal of materials and soil with radiological contamination. = Installation of a durable cover consisting of asphalt and concrete surfaces corresponding to reuse area MU-3 on the eastern portion of Parcel UC-3. = Sample, clean, and close steam lines, as needed, within Parcel UC-3. = Soil gas monitoring at the IR Site 56 plume, where volatile organic compound (VOC) contamination is present in groundwater. = Groundwater treatment by injection of biological nutrients to break down VOCs to nontoxic compounds. = Monitor and maintain the durable cover. = Groundwater monitoring of the VOC plume. = Use institutional controls (ICs) to restrict specific land uses and activities within portions of Parcel UC-3.

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

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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 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

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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
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: 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

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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
Completed Date: 04/01/2007
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
Completed Sub Area Name: IR-03
Completed Document Type: Treatability Study Report
Completed Date: 03/01/2013
Comments: This Site Characterization and Bench-Scale Treatability Study Report was conducted to define the extent of non-aqueous phase liquid (NAPL) and evaluate NAPL remediation by in-situ thermal treatment at Installation Restoration Site 03 (IR-03).

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: The objective of this time-critical removal action (TCRA) was to remove the Shielding Range berm and fan-shaped area. A total of 3,828 cubic yards of soil was excavated and removed from the 1.1-acre Shielding Range. The TCRA included removal and screening of soil, sediment, and debris, and a final conditions survey. Cobalt-60 and Radium-226 were not detected above their radiological release criterion. Elevated concentrations of Cesium-137 and Strontium-90 remain and it is recommended that these remaining radionuclides of concern be addressed in the forthcoming remedial design.

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

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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 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

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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 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

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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-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: 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 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

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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
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

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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
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 utilities 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 whether 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.

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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: Parcel E-2
Completed Sub Area Name: IR 01/21
Completed Document Type: Fieldwork
Completed Date: 11/20/2012
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

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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.

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: Parcel E-2
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 09/07/2011

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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. 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 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

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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: 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
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 03/25/2013
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: Site Characterization Workplan
Completed Date: 06/06/2013
Comments: This Work Plan describes soil and sediment sampling activities to refine the lateral and vertical extent of chemicals of concern in impacted areas previously identified in the Final Parcel E Feasibility Study (2012). Data obtained during this investigation will be used to characterize the horizontal and vertical extent of soil and sediment contamination considered for remediation and further refine excavation volume estimates.

Completed Area Name: PARCEL-E
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 06/07/2013
Comments: The objectives were to [1] confirm and potentially expand the boundaries of the proposed excavation areas defined in the Parcel E Feasibility Study (FS) and [2] provide more refined volumetric estimates of material to be removed from each area. To meet these

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objectives, soil samples were systematically collected from initial delineation borings surrounding the perimeter of each proposed excavation area to more accurately characterize the areal and volumetric extent of each location. The samples were analyzed for the specific contaminants of concern identified that are associated with each proposed excavation area. Additionally, soil samples were also collected from step-out contingency locations surrounding the perimeter. The refined lateral and vertical boundaries of the proposed excavation areas were then used to calculate the total volume of soil to be removed from each specific excavation area, and finally the total volume to be removed from all of Parcel E. Based on the redefined extents of the proposed excavation areas, the total approximate volume of soil to be excavated from Parcel E is 42,604 cubic yards. These estimated areas and approximate excavation volume will ultimately be incorporated into the remedial design (RD) for Parcel E.

- 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 response action was necessary during this monitoring period.
- Completed Area Name: PARCEL-E
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 08/30/2013
Comments: All confirmation scans and soil sample results indicate that the former Building 506 site meets the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of the former Building 506 site for unrestricted radiological free release.
- Completed Area Name: PARCEL-E
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 08/30/2013
Comments: All confirmation scans and soil sample results indicate that the former Building 508 site meets the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of the former Building 508 site for unrestricted radiological free release.
- Completed Area Name: PARCEL-E
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 10/11/2013
Comments: All confirmation scans and soil sample results indicate that the former Building 507 site meets the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of the former Building 507 site for unrestricted radiological free release.
- Completed Area Name: Parcel E-2
Completed Sub Area Name: IR 01/21
Completed Document Type: Monitoring Report
Completed Date: 07/26/2013

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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Comments: All methane and non-methane organic compound (NMOC) detections during the monitoring period were below the corresponding methane and NMOC action levels; therefore, no action or follow-up monitoring was necessary during this period.

Completed Area Name: Parcel E-2

Completed Sub Area Name: IR 01/21

Completed Document Type: Technical Workplan

Completed Date: 06/28/2013

Comments: The Work Plan describes the activities that will be implemented in order to conduct [1] a soil gas survey in the Panhandle, East Adjacent, and Shoreline Areas of Parcel E-2 (areas adjacent to the Parcel E-2 Landfill) to determine if soil gas mitigation will be necessary in conjunction with installation of a liner across the parcel as part of the upcoming remedial action; and [2] a landfill gas (LFG) generation study to estimate the gas generation rates from the Parcel E-2 landfill, determine the content of the landfill gas (to facilitate an evaluation of potential treatment technologies), and estimate the radius of influence of future gas extraction wells. The data from the activities performed in accordance with this Work Plan will be used in development of the Remedial Design for Parcel E-2.

Completed Area Name: PARCEL-E

Completed Sub Area Name: IR-03

Completed Document Type: Pilot Study/Treatability Workplan

Completed Date: 06/28/2013

Comments: This Work Plan documents the strategy for performing a Non-Aqueous Phase Liquid (NAPL) Treatment Pilot Study (NTPS) to demonstrate the effectiveness of NAPL remedial technologies consistent with the selected remedy for Parcel E. The NTPS is comprised of a pre-design characterization, pilot study for In Situ Thermal Remediation (ISTR), bench testing and pilot study for In Situ Solidification Stabilization (ISS), treatment performance monitoring, and preparation of a Pilot Study Completion Report. If successful, the results from the NTPS will be used to determine if one or more of the two technologies, ISTR and/or ISS, is feasible for the full-scale Remedy at Installation Restoration (IR) Site 03.

Completed Area Name: PARCEL-E

Completed Sub Area Name: Not reported

Completed Document Type: Technical Report

Completed Date: 01/22/2014

Comments: DTSC concurs with CDPH-EMB's memorandum supporting release for unrestricted use, with respect to radiological issues, at the former Building 503 Site.

Completed Area Name: Parcel E-2

Completed Sub Area Name: IR 01/21

Completed Document Type: Monitoring Report

Completed Date: 04/29/2013

Comments: All methane and non-methane organic compounds (NMOC) detections during the monitoring period were below the corresponding methane and NMOC action levels; therefore, no action or follow-up monitoring was necessary due to methane and NMOC concentrations during this period.

Completed Area Name: Parcel UC-3

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Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 01/25/2013
Comments: This fact sheet provides a summary of the Proposed Plan for Parcels E and UC-3 on the Hunters Point Naval Shipyard.

Completed Area Name: Parcel UC-3
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 01/25/2013
Comments: Parcels E and UC-3 Proposed Plan Public Comment Period announced from February 13, 2013, to March 15, 2013. In addition, members of the public are invited to attend a Public Meeting on February 28, 2013, from 6:00 p.m. to 8:00 p.m in the Alex L. Pitchre Jr. Room in the Southeast Community Facility Commission Building.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2011
Comments: Completed under RWQCB oversight and provided here for informational purposes.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2012
Comments: Completed under RWQCB oversight and provided here for informational purposes.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2013
Comments: Completed under RWQCB oversight and provided here for informational purposes.

Completed Area Name: PARCEL-E
Completed Sub Area Name: IR-03
Completed Document Type: Design/Implementation Workplan
Completed Date: 10/30/2013
Comments: An In-Situ Thermal Remediation (ISTR) using Thermal Conduction Heating (TCH) pilot study is planned at Hunters Point Naval Shipyard Installation Restoration (IR) Site 03 (IR- 03) to aggressively remove mobile Non Aqueous Phase Liquid (NAPL) that potentially may threaten San Francisco Bay. ISTR is used to alter subsurface conditions to mobilize and extract NAPL from the subsurface, therefore the technology performance objectives are based on achieving mass removal assessed as reductions in NAPL saturation. The objective of this pilot study is to examine the effectiveness of ISTR using TCH to extract and treat all mobile NAPL within the target treatment zone. This goal will be measured as a reduction in average total NAPL saturation in soil to levels below residual saturation.

Completed Area Name: Parcel E-2
Completed Sub Area Name: IR 01/21
Completed Document Type: Operations and Maintenance Report

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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Completed Date: 08/23/2013
 Comments: Cap inspections were conducted and documented quarterly (September 17 and December 4, 2012, and March 19 and June 19, 2013). During the inspections there were no signs of damage to security fences, and batteries were replaced in electronic animal repelling devices. The vegetation on the landfill cap and surrounding areas was mowed with a tractor-pulled rotary mower on the weeks of 9/17/2012 and 6/17/2013 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: 10/23/2013
 Comments: All methane and non-methane organic compound (NMOC) detections during the monitoring period were below the corresponding methane and NMOC action levels; therefore, no action or follow-up monitoring was necessary due to methane or NMOC concentrations during this period.

Completed Area Name: PARCEL-E
 Completed Sub Area Name: Not reported
 Completed Document Type: Supplemental Site Investigation Tech Memo
 Completed Date: 03/17/2014
 Comments: The Technical Memorandum describes soil and sediment sampling and analysis conducted to characterize the lateral and vertical extent of chemicals of concern (COC) identified in soil samples collected from pothole excavations completed during previous investigations in Parcel E. The data from this investigation will be used to support plans for remediation previously described in the 2012 Final Feasibility Study report and 2013 Record of Decision for Parcel E.

Completed Area Name: Parcel E-2
 Completed Sub Area Name: Not reported
 Completed Document Type: Remedial Action Implementation Workplan
 Completed Date: 04/15/2014
 Comments: This Remedial Action Work Plan describes field activities necessary to perform a remedial action to address the hot spots portion of the selected remedy (Alternative 5) detailed in the final Record of Decision for Parcel E-2 at Hunters Point Naval Shipyard, San Francisco, California. The major field activities associated with this removal action include: site preparation, pre-excavation hot spot delineation, hot spot excavation, post-excavation confirmation sampling, backfilling of excavated hot spots using imported fill material, site restoration, and waste characterization and disposal. The stated objectives of this project are to delineate and excavate near shore and inland soil hot spots at Parcel E-2 that pose a risk to humans and wildlife, as detailed in the Remedial Design.

Completed Area Name: Parcel E-2
 Completed Sub Area Name: IR 01/21
 Completed Document Type: Monitoring Report
 Completed Date: 02/06/2014
 Comments: All methane and non-methane organic compound (NMOC) detections during the monitoring period were below the corresponding methane and NMOC action levels; therefore, no action or follow-up monitoring was

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necessary due to methane or NMOC concentrations during this period.

Completed Area Name: Parcel E-2
Completed Sub Area Name: IR 01/21
Completed Document Type: Monitoring Report
Completed Date: 04/09/2014
Comments: All methane and non-methane organic compound (NMOC) detections during the monitoring period were below the corresponding methane and NMOC action levels; therefore, no action or follow-up monitoring was necessary due to methane or NMOC concentrations during this period.

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]

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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, 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: PARCEL-E
Completed Sub Area Name: B-414
Completed Document Type: Finding of Suitability to Lease
Completed Date: 11/14/1995
Comments: Not reported

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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 no longer being located in Parcel E-2, and the planned reuse for Parcel E-2 is now limited entirely to open space.

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:
= 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

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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-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
 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 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

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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-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: Treatability Study Report
Completed Date: 03/25/2013
Comments: Trichloroethene (TCE) concentrations above Preliminary Remediation Goals from the Parcel E Feasibility Study were identified in vadose-zone soil at IR Site 04 and IR Site 36. At IR Site 36, the majority of the TCE mass in vadose-zone soil is present in a layer of fill between 1.5 and 5 feet below ground surface. At both IR sites, the TCE identified in vadose-zone soil may be the main source for TCE detected in soil gas.

Completed Area Name: PARCEL-E
Completed Sub Area Name: Not reported
Completed Document Type: Treatability Study Workplan
Completed Date: 07/12/2012

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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 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

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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: 03/18/2013
Comments: All survey and sample results indicate that Building 521 meets the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of Building 521 for unrestricted radiological free release.

Completed Area Name: PARCEL-E
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 03/29/2013
Comments: All survey and sample results indicate that Building 500 meets the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of Building 500 for unrestricted radiological free release.

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
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 06/07/2013

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Comments: All survey and sample results indicate that the Former Building 529 Site meets the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of the Former Building 529 Site for unrestricted radiological free release.

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
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 06/07/2013
Comments: All survey and sample results indicate that the Former Building 509 Site meets the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of the Former Building 509 Site for unrestricted radiological free release.

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 engineering design will be presented in the RD for Parcel E-2.

Completed Area Name: PARCEL-E
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 03/12/2013
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: 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

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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
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 03/12/2013
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: 03/15/2013
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: 03/19/2013
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
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.

Future Area Name: Parcel E-2
Future Sub Area Name: IR 01/21
Future Document Type: Operations and Maintenance 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: 2015
Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported

Map ID
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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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Future Document Type:	Public Participation Plan / Community Relations Plan
Future Due Date:	2016
Future Area Name:	Parcel UC-3
Future Sub Area Name:	Not reported
Future Document Type:	Design/Implementation Workplan
Future Due Date:	2015
Future Area Name:	Parcel UC-3
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Completion Report
Future Due Date:	2016
Future Area Name:	Parcel E-2
Future Sub Area Name:	Not reported
Future Document Type:	Removal Action Completion Report
Future Due Date:	2015
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
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:	Removal Action Completion Report
Future Due Date:	2016
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

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EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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: 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: Not reported
Future Document Type: Remedial Action Completion Report
Future Due Date: 2018
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Public Participation Plan / Community Relations Plan
Schedule Due Date: 05/14/2014
Schedule Revised Date: Not reported

Facility ID: 38440001
Status: Certified
Status Date: 06/21/1998
Site Code: 200050
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
Assembly: 17
Senate: 11
Special Program: Not reported
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: * ORGANIC LIQUIDS WITH METALS * Metals - Lead Lead
Confirmed COC: Lead
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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
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
Alias Type: GeoTracker Global ID
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: 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

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EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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Completed Date: 10/15/1991
Comments: Not reported

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
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 minimum 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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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.

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

Facility ID: 38440002
Status: Active
Status Date: 05/01/1986
Site Code: 200050
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
Assembly: 17
Senate: 11
Special Program: Navy
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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Potential COC: - WAREHOUSING
Arsenic * Asbestos and Naturally Occurring Asbestos (NOA Total Chromium (1:6 ratio Cr VI:Cr III Lead Mercury (elemental Methane Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes TPH-diesel TPH-gas TPH-MOTOR OIL Trichloroethylene (TCE Vinyl chloride

Confirmed COC: Arsenic * Asbestos and Naturally Occurring Asbestos (NOA Total Chromium (1:6 ratio Cr VI:Cr III Lead Mercury (elemental Methane Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes TPH-diesel TPH-gas Trichloroethylene (TCE Vinyl chloride TPH-MOTOR OIL

Potential Description: OTH, SOIL

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
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
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

Completed Info:

Completed Area Name: PARCEL-B
Completed Sub Area Name: IR 07/18
Completed Document Type: Certification
Completed Date: 05/29/2013
Comments: The remedial actions implemented for IR Site 07 and Site 18 soils and sediments consist of a combination of soil excavation (including methane source removal), offsite disposal, durable cover installation, shoreline revetment, and institutional controls. The implemented remedial action for groundwater consists of groundwater monitoring and institutional controls.

Completed Area Name: PROJECT WIDE

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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: 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 1x10⁻⁶ 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: 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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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: 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
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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 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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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
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

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(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: 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 RWQCB is uploaded on this site.

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, 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: 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

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Elevation

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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 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

Map ID
Direction
Distance
Elevation

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EDR ID Number
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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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
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

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Elevation

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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
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

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Direction
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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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 revisios 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
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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
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

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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: Site Characterization Workplan
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: 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: *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

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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: 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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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: 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
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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.

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.

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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).

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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 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: Supplemental Site Investigation Tech Memo
Completed Date: 03/29/2013
Comments: The primary objectives of the Soil Vapor Investigation were to (1) refine areas requiring institutional controls (ARIC) based on the potential for soil gas exposure through the vapor intrusion pathway as determined in the Records of Decision (ROD) and (2) determine which parcel areas should be reduced, expanded, or eliminated from current soil gas ARIC designation.

Completed Area Name: PARCEL-B
Completed Sub Area Name: Not reported
Completed Document Type: Record of Decision w/ESD

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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: 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: 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: 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: 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

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EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (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: 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: 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: 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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

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Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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: This report presents a revised approach for developing soil gas action levels for vapor intrusion exposure by making corrections to the toxicity values used to calculate soil gas action levels.

Completed Area Name: PARCEL-B

Map ID
Direction
Distance
Elevation

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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 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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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 for the soil cover, asphalt pavement cover, groundwater monitoring wells, 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 Installation Restoration Program at HPNS.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 12/10/2013
Comments: The stated purpose of the Five-Year Review is to evaluate the performance of the remedies implemented at Hunters Point Naval Shipyard to verify that they remain protective of human health and the environment. The Five-Year review includes document and data review, site inspections, personnel interviews, regulatory agency comments, and report development. The review is documented in this report that will state whether each remedy is or will be protective,

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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document any deficiencies identified in the review, and recommend actions for improvement if the remedy has not performed as designed. All implemented remedies continue to be protective of human health and the environment while the remaining remedies are expected to be protective of human health and the environment upon completion at Hunters Point Naval Shipyard.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 10/14/2013
Comments: The report documents data collected from January through June 2013, comprising the first and second quarters of 2013 as part of the basewide groundwater monitoring program.

Completed Area Name: PARCEL-B
Completed Sub Area Name: IR 07/18
Completed Document Type: Long Term Monitoring Report
Completed Date: 11/08/2013
Comments: This report summarizes operation and maintenance (O&M) activities performed following implementation of the remedial action (RA) at Installation Restoration (IR) Sites 07 and 18 in Parcel B, Hunters Point Naval Shipyard (HPNS), San Francisco, California. The RA was successfully completed in July 2011, as documented in the 2012 Final Remedial Action Completion Report for Installation Restoration Sites 07 and 18 at Parcel B. This is the second Annual O&M Summary Report prepared by the Department of the Navy (Navy) for IR Sites 07 and 18, since the RA was completed. The activities performed during the second annual O&M period included quarterly site inspections beginning in the third quarter 2012 and periodic site maintenance. This annual report only summarizes the O&M activities associated with the durable covers, including the shoreline revetment, soil cover, and asphaltic pavement. Groundwater monitoring (i.e., long-term monitoring) is performed under the basewide groundwater monitoring program, and groundwater results are reported in separate periodic groundwater monitoring reports for HPNS.

Completed Area Name: PARCEL-B
Completed Sub Area Name: IR 07/18
Completed Document Type: Technical Report
Completed Date: 05/23/2013
Comments: This document presents the methodology and evaluations used to estimate the dose and risk future users of the radiologically impacted area requiring institutional controls (ARIC) at Installation Restoration (IR) Program Sites IR-07 and IR-18, Hunters Point Naval Shipyard (HPNS), San Francisco, California.

Completed Area Name: PARCEL-B
Completed Sub Area Name: IR 10
Completed Document Type: Technical Workplan
Completed Date: 07/09/2013
Comments: This Soil Vapor Extraction (SVE) System Startup and Operations Plan was developed to describe the procedures for startup, maintenance, monitoring, shutdown, and closure of the SVE system to be operated at Installation Restoration Site 10 as part of the remedial action being performed at Parcel B (excluding IR Sites 07 and 18) at Hunters Point Naval Shipyard. The SVE system located at IR Site 10 was expanded

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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between December 3 and 6, 2012, and will be operated as part of the final remedy, in accordance with the Final Amended Parcel B Record of Decision and the Final Remedial Design, to remove residual volatile organic compounds (primarily trichloroethene) in soil gas below the Building 123 foundation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2012
Comments: Completed under RWQCB oversight and provided here for informational purposes.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2013
Comments: Completed under RWQCB oversight and provided here for informational purposes.

Completed Area Name: PARCEL-B
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Implementation Workplan
Completed Date: 12/27/2013
Comments: The purpose of this addendum is to describe how the remedial action (RA) currently being implemented at Parcel B (excluding IR-07 and IR-18) will be expanded to include a data gaps investigation to support future site management decisions at petroleum Corrective Action Area (CAA)-21, CAA-22, Area of Concern (AOC) 46-A, AOC 46-B, AOC 46-C, and AOC 24-C (hereafter referred to as the oCombined Site). In November 2012, petroleum hydrocarbon contamination was discovered along the shoreline during construction of the revetment structure as part of the Parcel B RA. This RAWP Addendum describes the approach for characterizing the nature and extent of TPH contamination at the Combined Site and the approach for updating the current conceptual site model. The RWQCB is the primary regulatory oversight agency with regards to petroleum characterization and remediation at Hunters Point Naval Shipyard.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Long Term Monitoring Report
Completed Date: 10/01/2012
Comments: Documents groundwater data collected basewide from October 2011 through June 2012 during the fourth quarter 2011, first quarter 2012, and second quarter 2012 monitoring events.

Completed Area Name: PARCEL-B
Completed Sub Area Name: IR 07/18
Completed Document Type: Correspondence
Completed Date: 06/21/2012

Map ID
Direction
Distance
Elevation

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Database(s)

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EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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).

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: 5 Year Review Reports
Future Due Date: 2018
Future Area Name: PARCEL-B
Future Sub Area Name: IR 07/18
Future Document Type: Operations and Maintenance Report
Future Due Date: 2015
Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Public Participation Plan / Community Relations Plan
Future Due Date: 2016
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
Future Area Name: PARCEL-B
Future Sub Area Name: IR 07/18
Future Document Type: Land Use Restriction
Future Due Date: 2014
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: Not reported
Future Document Type: Finding of Suitability to Transfer
Future Due Date: 2014
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Public Participation Plan / Community Relations Plan
Schedule Due Date: 05/14/2014
Schedule Revised Date: Not reported

Facility ID: 38440003
Status: Active
Status Date: 05/01/1986
Site Code: 200050
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Program Manager: Ryan Miya
 Supervisor: Denise Tsuji
 Division Branch: Cleanup Berkeley
 Assembly: 17
 Senate: 11
 Special Program: Navy
 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: Arsenic * Asbestos and Naturally Occurring Asbestos (NOA Total Chromium (1:6 ratio Cr VI:Cr III Lead Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes 1,2-Dichloroethylene (cis Tributyltin oxide (TBTO Arsenic Asbestos Containing Materials (ACM Benzene Lead Naturally Occurring Asbestos (NOA Polychlorinated biphenyls (PCBs Radioactive Isotopes Tetrachloroethylene (PCE TPH-MOTOR OIL Trichloroethylene (TCE Vinyl chloride Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes TPH-diesel TPH-gas TPH-MOTOR OIL Trichloroethylene (TCE Polynuclear aromatic hydrocarbons (PAHs TPH-diesel TPH-gas TPH-MOTOR OIL
 Confirmed COC: Arsenic * Asbestos and Naturally Occurring Asbestos (NOA Total Chromium (1:6 ratio Cr VI:Cr III Lead Tributyltin oxide (TBTO Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes 1,2-Dichloroethylene (cis Arsenic Benzene Radioactive Isotopes Tetrachloroethylene (PCE TPH-MOTOR OIL 40001-NO Polychlorinated biphenyls (PCBs Trichloroethylene (TCE Naturally Occurring Asbestos (NOA Vinyl chloride Lead Polynuclear aromatic hydrocarbons (PAHs Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes TPH-diesel TPH-gas Trichloroethylene (TCE TPH-MOTOR OIL TPH-diesel TPH-gas TPH-MOTOR OIL
 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

Map ID
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Distance
Elevation

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Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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-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: 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.

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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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: 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.

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

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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.

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

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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: 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)‐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

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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 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

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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: 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

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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 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: 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)-C1 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) (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: Remedial Investigation Workplan
Completed Date: 12/17/1993
Comments: Not reported

Completed Area Name: PROJECT WIDE

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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: 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 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

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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: 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 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: 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.

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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: 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

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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: 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

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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.

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: 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

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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
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 necessary.

Completed Area Name: PARCEL-C
Completed Sub Area Name: Not reported
Completed Document Type: Site Summary Report

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

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EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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: 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: 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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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
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: Remedial Action Implementation Workplan
Completed Date: 09/04/2013
Comments: This Work Plan describes the technologies and procedures that will be used to remediate soil and groundwater in Remedial Units (RUs) C1, C4, and C5, and Building 241 located in Parcel C at Hunters Point Naval Shipyard (HPNS), San Francisco, California. The work to be executed in RU-C1, RU-C4, and RU-C5, and Building 241 is in general compliance with the Final Remedial Design (RD) for Parcel C. The objective of the Final RD and this Work Plan is to implement the selected remedy as established in the Final Record of Decision for Parcel C, Hunters Point Shipyard, San Francisco, California. As the ROD specifies, the Final RD describes soil remediation using excavation, soil vapor extraction (SVE), and capping, and in situ remediation of chlorinated volatile organic compounds (CVOCs) in groundwater using zero-valent iron (ZVI), anaerobic bioremediation of CVOCs in groundwater, aerobic bioremediation of volatile organic compounds (VOCs) and CVOCs in groundwater, and monitored natural attenuation (MNA).

Completed Area Name: UC-2
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Plan
Completed Date: 05/02/2013
Comments: This operation and maintenance plan (OMP) describes the long-term maintenance and monitoring requirements for the durable cover at Parcels UC-1 and UC-2. This OMP is intended to fulfill the substantive portions of the operations and maintenance (O&M) requirements identified in the applicable or relevant and appropriate requirements for the remedy in the Records of Decision for Parcels UC-1 and UC-2.

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.

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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, 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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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E-2) have not yet reached the RAMP/RD phase, and investigations are ongoing.

Completed Area Name: PARCEL-C
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Implementation Workplan
Completed Date: 03/29/2013
Comments: The purpose of this Remedial Action Work Plan is to describe the approach and methods to be used during the Remedial Actions (RA) at Remedial Unit C2 (RU-C2). Media requiring remediation include soil, soil gas, and groundwater. RU-C2 includes two discrete groundwater plumes of dissolved volatile organic compounds, as well as soil-gas and soil contamination at a number of locations. The primary objective of this RA is to address groundwater using in-situ treatment methods. Secondary objectives include treatment of localized soil source areas using soil-vapor extraction and excavation of contaminated soils.

Completed Area Name: PARCEL-C
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 04/03/2014
Comments: Final formal approval will be parcel-wide RURR memo for Parcel C.

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: UC-2
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 12/10/2013
Comments: The stated purpose of the Five-Year Review is to evaluate the performance of the remedies implemented at Hunters Point Naval Shipyard to verify that they remain protective of human health and the environment. The Five-Year review includes document and data review, site inspections, personnel interviews, regulatory agency comments, and report development. The review is documented in this report that will state whether each remedy is or will be protective, document any deficiencies identified in the review, and recommend actions for improvement if the remedy has not performed as designed. All implemented remedies continue to be protective of human health and the environment while the remaining remedies are expected to be protective of human health and the environment upon completion at Hunters Point Naval Shipyard.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2011
Comments: Completed under RWQCB oversight and provided here for informational purposes.

Completed Area Name: PROJECT WIDE

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2012
Comments: Completed under RWQCB oversight and provided here for informational purposes.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2013
Comments: Completed under RWQCB oversight and provided here for informational purposes.

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: 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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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.

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: 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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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: 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;

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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(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: 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 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: 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: 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
Completed Document Type: Correspondence
Completed Date: 06/13/2012
Comments: Summary of independent regulatory testing conducted by DTSC/CDPH and USEPA.

Future Area Name: UC-2
Future Sub Area Name: Not reported
Future Document Type: 5 Year Review Reports
Future Due Date: 2018
Future Area Name: UC-2
Future Sub Area Name: Not reported
Future Document Type: Operations and Maintenance Report
Future Due Date: 2015
Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Public Participation Plan / Community Relations Plan
Future Due Date: 2016

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Record of Decision w/ESD
Future Due Date: 2015
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
Future Area Name: UC-2
Future Sub Area Name: Not reported
Future Document Type: Land Use Restriction
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: 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: 2015
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
Schedule Area Name: UC-2
Schedule Sub Area Name: Not reported
Schedule Document Type: Certification
Schedule Due Date: 06/17/2014
Schedule Revised Date: Not reported
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Public Participation Plan / Community Relations Plan
Schedule Due Date: 05/14/2014
Schedule Revised Date: Not reported
Schedule Area Name: UC-2
Schedule Sub Area Name: Not reported
Schedule Document Type: Remedial Action Completion Report
Schedule Due Date: 01/27/2014
Schedule Revised Date: Not reported
Schedule Area Name: UC-2
Schedule Sub Area Name: Not reported
Schedule Document Type: Finding of Suitability to Transfer
Schedule Due Date: 05/15/2014
Schedule Revised Date: Not reported

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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Facility ID: 38440004
Status: Active
Status Date: 05/01/1986
Site Code: 200050
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
Assembly: 17
Senate: 11
Special Program: Navy
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: Arsenic * Asbestos and Naturally Occurring Asbestos (NOA Lead Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes Trichloroethylene (TCE Chromium VI Manganese and compounds Zinc Arsenic Benzene Lead Naturally Occurring Asbestos (NOA Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes Tetrachloroethylene (PCE Trichloroethylene (TCE Vinyl chloride Chloroform Arsenic Lead Polychlorinated biphenyls (PCBs Trichloroethylene (TCE Chloroform Manganese and compounds Polynuclear aromatic hydrocarbons (PAHs Arsenic Lead Naturally Occurring Asbestos (NOA Radioactive Isotopes 1,1,1-Trichloroethane (TCA Trichloroethylene (TCE Chloroform Manganese and compounds Polynuclear aromatic hydrocarbons (PAHs Benzo[b]fluoranthene Benzo[a]pyrene Arsenic Naturally Occurring Asbestos (NOA Radioactive Isotopes Trichloroethylene (TCE Chloroform Chromium VI
Confirmed COC: Arsenic * Asbestos and Naturally Occurring Asbestos (NOA Lead Zinc Manganese and compounds Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes Trichloroethylene (TCE Chromium VI Arsenic Benzene Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes Tetrachloroethylene (PCE Polychlorinated biphenyls (PCBs Trichloroethylene (TCE Chloroform Naturally Occurring Asbestos (NOA Vinyl chloride Lead Arsenic Lead Polynuclear aromatic hydrocarbons (PAHs Polychlorinated biphenyls (PCBs Trichloroethylene (TCE Chloroform Manganese and compounds Arsenic Lead Polynuclear aromatic hydrocarbons (PAHs Benzo[b]fluoranthene Radioactive Isotopes Trichloroethylene (TCE Chloroform Manganese and compounds Naturally Occurring Asbestos (NOA Benzo[a]pyrene 1,1,1-Trichloroethane (TCA 30001-NO Naturally Occurring Asbestos (NOA 30020-NO

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Potential Description: Trichloroethylene (TCE Chloroform Chromium VI
OTH, SOIL, CSS, OTH, SOIL, SV, OTH, SOIL, SV, OTH, SOIL, SV, OTH,
SOIL, SV, SOIL, 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
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-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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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.

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
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
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: 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
Completed Sub Area Name: Not reported
Completed Document Type: Feasibility Study Report

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Completed Date: 05/16/2008
Comments: No further comments on final document.

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: 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 the remedy.

Completed Area Name: D-1
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 02/07/2014
Comments: This Radiological RACR documents the radiological surveys and remediation that were performed in the northern half of Parcel D-1, also referred to as Phase I. The work described in this document is Phase I of two separate work efforts to complete the radiological release of Parcel D-1. This document was prepared to summarize the results of the radiological work performed within Parcel D-1 to protect the public health and welfare, and the environment from actual or potential releases of radiological contaminants and to document the achievement of radiological removal action objectives.

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

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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.

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

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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: D-1
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 03/18/2013
Comments: All survey and sample results indicate that Building 274 meets the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of Building 274 for unrestricted radiological free release.

Completed Area Name: D-1
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 08/30/2013
Comments: All confirmation scans and soil sample results indicate that the former Building 313, 313A, and 322 sites meet the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of the former Building 313, 313A, and 322 sites for unrestricted radiological free release.

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

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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) 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: 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

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will be presented under a separate cover.

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
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: 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

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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 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

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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 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: 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-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

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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 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.

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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: D-1
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 08/30/2013
Comments: All confirmation scans and soil sample results indicate that the former Building 383 site meet the established release criteria. Therefore, CDPH-EMB and DTSC concur with recommendation of the former Building 383 site for unrestricted radiological free release.

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

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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
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: 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

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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: 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

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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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
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

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

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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.

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

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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
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: Technical Report

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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

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.

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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 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

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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: 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 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

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and disposed of off-site.

Completed Area Name: G
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Tech Memo
Completed Date: 03/29/2013
Comments: The primary objectives of the Soil Vapor Investigation were to (1) refine areas requiring institutional controls (ARIC) based on the potential for soil gas exposure through the vapor intrusion pathway as determined in the Records of Decision (ROD) and (2) determine which parcel areas should be reduced, expanded, or eliminated from current soil gas ARIC designation.

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: 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: 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: 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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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: 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: 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) 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.

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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: 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: 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: 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: 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

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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
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: UC-1
Completed Sub Area Name: Not reported
Completed Document Type: Operations and Maintenance Plan
Completed Date: 05/02/2013
Comments: This operation and maintenance plan (OMP) describes the long-term maintenance and monitoring requirements for the durable cover at Parcels UC-1 and UC-2. This OMP is intended to fulfill the substantive portions of the operations and maintenance (O&M) requirements identified in the applicable or relevant and appropriate requirements for the remedy in the Records of Decision for Parcels UC-1 and UC-2.

Completed Area Name: D-1
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Implementation Workplan
Completed Date: 01/22/2014
Comments: The objective of this Work Plan is to implement the selected remedy as established in the 2009 Final Record of Decision for Parcels D-1 and UC-1 (ROD). The selected remedy includes limited removal of chemicals in soil and a durable cover over the entire parcel to break potential exposure pathways. This Work Plan describes the procedures that will be implemented to install the durable cover.

Completed Area Name: D-1
Completed Sub Area Name: Not reported
Completed Document Type: Supplemental Site Investigation Tech Memo
Completed Date: 03/29/2013
Comments: The primary objectives of the Soil Vapor Investigation were to (1) refine areas requiring institutional controls (ARIC) based on the potential for soil gas exposure through the vapor intrusion pathway

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as determined in the Records of Decision (ROD) and (2) determine which parcel areas should be reduced, expanded, or eliminated from current soil gas ARIC designation.

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: G
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 04/08/2014
Comments: This RACR documents the completion of a remedial action (RA) in accordance with the Final Remedial Action Work Plan (RAWP) to address constituents of concern (COCs) in soil at Parcel G, Hunters Point Naval Shipyard. The RA included installation and repair of durable covers, including asphalt covers and building foundations, that provide physical barriers to minimize exposure of humans and wildlife to potential COCs in soil. The RA was implemented between January and July 2013.

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
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.

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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: 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: D-1
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 10/11/2013
Comments: DTSC concurs with CDPH-EMB's memorandum supporting release for unrestricted use, with respect to radiological issues, at the former South Pier Area.

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Completed Area Name: UC-1
Completed Sub Area Name: Not reported
Completed Document Type: 5 Year Review Reports
Completed Date: 12/10/2013
Comments: The stated purpose of the Five-Year Review is to evaluate the performance of the remedies implemented at Hunters Point Naval Shipyard to verify that they remain protective of human health and the environment. The Five-Year review includes document and data review, site inspections, personnel interviews, regulatory agency comments, and report development. The review is documented in this report that will state whether each remedy is or will be protective, document any deficiencies identified in the review, and recommend actions for improvement if the remedy has not performed as designed. All implemented remedies continue to be protective of human health and the environment while the remaining remedies are expected to be protective of human health and the environment upon completion at Hunters Point Naval Shipyard.

Completed Area Name: G - MULTIPLE SITES
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 09/05/2013
Comments: Based on the historic data as well as the supplemental sampling results collected in the vicinity of each tank, DTSC concurs with the recommendation to grant regulatory closure for the eight CERCLA tanks within Parcel G at Hunters Point Naval Shipyard.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2011
Comments: Completed under RWQCB oversight and provided here for informational purposes.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2012
Comments: Completed under RWQCB oversight and provided here for informational purposes.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 06/29/2013
Comments: Completed under RWQCB oversight and provided here for informational purposes.

Completed Area Name: UC-1
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 10/02/2013
Comments: This addendum describes the activities to be performed during the soil gas investigation in Parcel UC-1 at Hunters Point Naval Shipyard (HPNS). The 2009 Record of Decision states that soil gas surveys will be conducted for the following purposes, which are the objectives of this soil gas investigation: [1] To evaluate potential vapor

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

intrusion risks; [2] To identify VOCs for which risk-based numeric action levels in soil gas would be established (based on a cumulative risk of 10-6); [3] To identify where the initial area requiring institutional controls (ARIC) for VOCs would be retained and where it would be released; and [4] To evaluate the need for additional remedial action in order to remove ARIC.

Completed Area Name: D-1
Completed Sub Area Name: Not reported
Completed Document Type: Remedial Action Completion Report
Completed Date: 04/11/2014
Comments: In 2010, the Navy implemented a remedial action (RA) to remove soil hot spots and stockpiles in Parcels B, D-1, and G at Hunters Point Naval Shipyard, San Francisco, California. The 2010 RA activities are documented in a Final Remedial Action Completion Report (RACR). At the time that the original hotspot and stockpile RA was being performed, two hotspot locations in Parcel D-1 (BD29 and BE26) were inaccessible because both were located within an active radiological screening yard. Active operation of the radiological screening yard in Parcel D-1 was temporarily suspended in 2012, thus allowing for the hotspot removal to be completed. This RACR Addendum documents the successful removal of the last two soil hotspot locations in Parcel D-1 (BD29 and BE26) implemented in 2013.

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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 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: 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: 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.

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
Completed Document Type: Correspondence
Completed Date: 06/13/2012
Comments: Summary of independent regulatory testing conducted by DTSC/CDPH and USEPA.

Future Area Name: UC-1
Future Sub Area Name: Not reported
Future Document Type: 5 Year Review Reports
Future Due Date: 2018
Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Public Participation Plan / Community Relations Plan
Future Due Date: 2016
Future Area Name: UC-1
Future Sub Area Name: Not reported
Future Document Type: Operations and Maintenance Report
Future Due Date: 2015
Future Area Name: G
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 B (Continued)

S101272855

Future Document Type: Operations and Maintenance Report
Future Due Date: 2014
Future Area Name: G
Future Sub Area Name: Not reported
Future Document Type: Operations and Maintenance Report
Future Due Date: 2015
Future Area Name: D-1
Future Sub Area Name: Not reported
Future Document Type: Finding of Suitability to Transfer
Future Due Date: 2015
Future Area Name: D-1
Future Sub Area Name: Not reported
Future Document Type: Land Use Restriction
Future Due Date: 2016
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: Certification
Future Due Date: 2014
Future Area Name: UC-1
Future Sub Area Name: Not reported
Future Document Type: Land Use Restriction
Future Due Date: 2015
Future Area Name: G
Future Sub Area Name: Not reported
Future Document Type: Land Use Restriction
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: D-1
Future Sub Area Name: Not reported
Future Document Type: Remedial Action Completion Report
Future Due Date: 2016
Future Area Name: UC-1
Future Sub Area Name: Not reported
Future Document Type: Remedial 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: Finding of Suitability to Transfer
Future Due Date: 2014
Schedule Area Name: UC-1
Schedule Sub Area Name: Not reported
Schedule Document Type: Certification
Schedule Due Date: 06/17/2014
Schedule Revised Date: Not reported
Schedule Area Name: PROJECT WIDE
Schedule 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 B (Continued)

S101272855

Schedule Document Type: Public Participation Plan / Community Relations Plan
Schedule Due Date: 05/14/2014
Schedule Revised Date: Not reported
Schedule Area Name: UC-1
Schedule Sub Area Name: Not reported
Schedule Document Type: Finding of Suitability to Transfer
Schedule Due Date: 05/15/2014
Schedule Revised Date: Not reported

Facility ID: 38440007
Status: Active
Status Date: 07/21/1999
Site Code: 200050
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
Assembly: 17
Senate: 11
Special Program: Navy
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: BRAC 91
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: Lead Mercury (elemental Polychlorinated biphenyls (PCBs Radioactive Isotopes Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs Radioactive Isotopes
Confirmed COC: 30020-NO Polychlorinated biphenyls (PCBs Lead Mercury (elemental Polychlorinated biphenyls (PCBs Polynuclear aromatic hydrocarbons (PAHs 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
Alias Name: 38440004
Alias Type: Envirostor ID Number
Alias Name: 38440005
Alias Type: Envirostor ID Number
Alias Name: 38440007
Alias Type: Envirostor ID Number

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Completed Info:

Completed Area Name: PARCEL-F
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 05/03/2013

Comments: The primary goal of this investigation was to collect and analyze physical and radiological data prior to the creation of a radiological addendum to the Parcel F Feasibility Study in support of the development and evaluation of remedial alternatives for offshore sediments at Parcel F. To meet project objectives, a two-phase approach was taken. The Phase 1 Screening Survey of Parcel F was performed in 2009. The Phase 2 DGI was subsequently split into two portions u the first portion of the Phase 2 DGI (Phase 2a) was conducted in the fall of 2011; the second portion of the Phase 2 DGI (Phase 2b) is scheduled to take place in 2012. This technical memorandum presents results from the 2009 Phase 1 Screening Survey and the 2011 Phase 2a DGI that are specifically related to the Parcel F Submarine Area, Parcel B Revetment Wall Areas, and San Francisco Bay Reference Sites.

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.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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, 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: 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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
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HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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, 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 Report
Completed Date: 06/12/2001

MAP FINDINGS

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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.

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: PARCEL-F
Completed Sub Area Name: Not reported
Completed Document Type: Technical Report
Completed Date: 12/09/2013

Comments: This Technical Memorandum documents the results of the Phase 2b sampling conducted for the radiological data gap investigation (DGI) of offshore sediments (Parcel F) at Hunters Point Naval Shipyard (HPNS) in San Francisco, California. The Phase 2 DGI was split into two portions. The first portion of the Phase 2 DGI (Phase 2a sampling) was designed to focus on the Parcel F Submarine Area, the Parcel B Revetment Wall Areas, and six San Francisco Bay reference sites (Bay Farm, Paradise Cove, Alameda Buoy, Alcatraz, Red Rock, and Oyster Point) and was completed in October 2011. The second portion of the Phase 2 DGI (Phase 2b) was designed to cover the remaining Parcel F areas that were not covered in Phase 2a, including portions of the Berths North Area, Berths South Area, South Basin Area, and Submarine Area. Phase 2b also included confirmation sampling at additional locations in the South Basin Experimental Ship Shielding Area to delineate any potential cobalt-60 contamination as well as in the area of former Piers B and C (removed in 2011) to document the absence of radiological contamination. Phase 2b also includes re-analysis of archived Phase 1 samples that were found to contain radium-226 concentrations exceeding the Project Action Limit for the purposes of verifying these exceedances and determining the need for potential step-out sampling to delineate these exceedances. Phase 2b sampling was completed in February 2013. No sediment radionuclide activity levels from the Phase 2b data were found to be toxic above background under either the intertidal or subtidal exposure scenarios. Results of the Phase 2b clam tissue analysis indicated no evidence of bioaccumulation at Parcel F for any of the six radionuclides of concern. Finally, while the geochronology data are uncertain, the overall sediment stability data for Phase 2b indicate that the level of stability of site sediments is high enough that they are not likely to be eroded based on energies previously measured at the site.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Enforceable Schedule

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

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: 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: 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: PROJECT WIDE
Future Sub Area Name: Not reported
Future Document Type: Public Participation Plan / Community Relations Plan
Future Due Date: 2016
Future Area Name: PARCEL-F
Future Sub Area Name: Not reported
Future Document Type: Certification
Future Due Date: 2018
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
Schedule Area Name: PROJECT WIDE

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HUNTERS POINT NAVAL SHIPYARD, PARCEL B (Continued)

S101272855

Schedule Sub Area Name: Not reported
Schedule Document Type: Public Participation Plan / Community Relations Plan
Schedule Due Date: 05/14/2014
Schedule Revised Date: Not reported

25
SW
1/2-1
0.968 mi.
5111 ft.

MOBILE DEBRIS BOX SERVICE
1301V YOSEMITE AVENUE
SAN FRANCISCO, CA 94124

ENVIROSTOR S103953942
N/A

Relative:
Lower

ENVIROSTOR:

Facility ID: 38990012
Status: Inactive - Needs Evaluation
Status Date: 07/16/2009
Site Code: Not reported
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: 0.5
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Denise Tsuji
Division Branch: Cleanup Berkeley
Assembly: 17
Senate: 11
Special Program: EPA - PASI
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 37.72357
Longitude: -122.3866
APN: 4846001
Past Use: LDF
Potential COC: Lead TPH-MOTOR OIL Chromium VI
Confirmed COC: TPH-MOTOR OIL Lead
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

Actual:
8 ft.

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

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

MOBILE DEBRIS BOX SERVICE (Continued)

S103953942

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: 8 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
SAN FRANCISCO	S107591769	BAY VIEW GREEN WASTE MGT. COMPANY	1300 CARROL WAY	94124	SWF/LF
SAN FRANCISCO	S109285368	COMMERCIAL (STREET)	1200 EVANS AND KIETH STREET	94124	LUST
SAN FRANCISCO	S101592211	VACANT	2225 INGALLS STREET	94124	LUST, CA FID UST, SWEEPS UST, LOS ANGELES CO. HMS
SAN FRANCISCO	1003878799	CANDLESTICK PT STATE REC AREA	S OF HUNTERS PT	94124	CERC-NFRAP
SAN FRANCISCO	S114732584	SF PIER 98 INDIA BASIN	PIER 98		RGA LF
SAN FRANCISCO	S109689876	SF PIER 98 INDIA BASIN	PIER 98		SWF/LF
SAN FRANCISCO	1014678447	SF PIER 98 INDIA BASIN	PIER 98		FINDS
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: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: N/A
Date Made Active in Reports: 01/28/2014	Last EDR Contact: 07/08/2014
Number of Days to Update: 78	Next Scheduled EDR Contact: 10/20/2014
	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: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: N/A
Date Made Active in Reports: 01/28/2014	Last EDR Contact: 07/08/2014
Number of Days to Update: 78	Next Scheduled EDR Contact: 10/20/2014
	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: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: N/A
Date Made Active in Reports: 01/28/2014	Last EDR Contact: 07/08/2014
Number of Days to Update: 78	Next Scheduled EDR Contact: 10/20/2014
	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: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: 703-412-9810
Date Made Active in Reports: 02/13/2014	Last EDR Contact: 05/29/2014
Number of Days to Update: 94	Next Scheduled EDR Contact: 09/08/2014
	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: 04/01/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/08/2014	Telephone: 703-603-8704
Date Made Active in Reports: 08/22/2014	Last EDR Contact: 07/08/2014
Number of Days to Update: 45	Next Scheduled EDR Contact: 10/20/2014
	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: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: 703-412-9810
Date Made Active in Reports: 02/13/2014	Last EDR Contact: 05/29/2014
Number of Days to Update: 94	Next Scheduled EDR Contact: 09/08/2014
	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: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
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: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
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: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
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: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
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: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
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: 03/19/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 703-603-0695
Date Made Active in Reports: 07/15/2014	Last EDR Contact: 06/05/2014
Number of Days to Update: 116	Next Scheduled EDR Contact: 09/22/2014
	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: 03/19/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 703-603-0695
Date Made Active in Reports: 07/15/2014	Last EDR Contact: 06/05/2014
Number of Days to Update: 116	Next Scheduled EDR Contact: 09/22/2014
	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: 05/28/2014	Source: Department of the Navy
Date Data Arrived at EDR: 05/30/2014	Telephone: 843-820-7326
Date Made Active in Reports: 06/17/2014	Last EDR Contact: 08/14/2014
Number of Days to Update: 18	Next Scheduled EDR Contact: 12/01/2014
	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: 09/30/2013	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 10/01/2013	Telephone: 202-267-2180
Date Made Active in Reports: 12/06/2013	Last EDR Contact: 07/03/2014
Number of Days to Update: 66	Next Scheduled EDR Contact: 07/14/2014
	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: 06/05/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 06/06/2014	Telephone: 916-323-3400
Date Made Active in Reports: 07/09/2014	Last EDR Contact: 08/06/2014
Number of Days to Update: 33	Next Scheduled EDR Contact: 11/17/2014
	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: 06/05/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 06/06/2014	Telephone: 916-323-3400
Date Made Active in Reports: 07/09/2014	Last EDR Contact: 08/06/2014
Number of Days to Update: 33	Next Scheduled EDR Contact: 11/17/2014
	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: 05/19/2014	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 05/20/2014	Telephone: 916-341-6320
Date Made Active in Reports: 05/22/2014	Last EDR Contact: 08/18/2014
Number of Days to Update: 2	Next Scheduled EDR Contact: 12/01/2014
	Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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: 07/30/2014	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/31/2014	Telephone: see region list
Date Made Active in Reports: 08/22/2014	Last EDR Contact: 07/31/2014
Number of Days to Update: 22	Next Scheduled EDR Contact: 09/29/2014
	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

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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 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 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 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 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calaveras, 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 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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
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
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
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: 07/30/2014
Date Data Arrived at EDR: 07/31/2014
Date Made Active in Reports: 08/25/2014
Number of Days to Update: 25

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 07/31/2014
Next Scheduled EDR Contact: 09/29/2014
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
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
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
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
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
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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

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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/28/2014
Date Data Arrived at EDR: 05/01/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 47

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
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: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

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
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 73

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

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: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/14/2014	Source: EPA Region 6
Date Data Arrived at EDR: 05/15/2014	Telephone: 214-665-6597
Date Made Active in Reports: 07/15/2014	Last EDR Contact: 07/22/2014
Number of Days to Update: 61	Next Scheduled EDR Contact: 11/20/2014
	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: 07/30/2014	Source: EPA Region 4
Date Data Arrived at EDR: 08/12/2014	Telephone: 404-562-8677
Date Made Active in Reports: 08/22/2014	Last EDR Contact: 04/22/2014
Number of Days to Update: 10	Next Scheduled EDR Contact: 08/11/2014
	Data Release Frequency: Semi-Annually

State and tribal registered storage tank lists

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 07/30/2014	Source: SWRCB
Date Data Arrived at EDR: 07/31/2014	Telephone: 916-341-5851
Date Made Active in Reports: 08/20/2014	Last EDR Contact: 07/31/2014
Number of Days to Update: 20	Next Scheduled EDR Contact: 09/29/2014
	Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 08/01/2009	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 09/10/2009	Telephone: 916-327-5092
Date Made Active in Reports: 10/01/2009	Last EDR Contact: 07/18/2014
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/20/2014
	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: 05/20/2014	Source: EPA Region 10
Date Data Arrived at EDR: 06/10/2014	Telephone: 206-553-2857
Date Made Active in Reports: 08/15/2014	Last EDR Contact: 07/22/2014
Number of Days to Update: 66	Next Scheduled EDR Contact: 11/10/2014
	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: 08/14/2014	Source: EPA Region 9
Date Data Arrived at EDR: 08/15/2014	Telephone: 415-972-3368
Date Made Active in Reports: 08/22/2014	Last EDR Contact: 07/22/2014
Number of Days to Update: 7	Next Scheduled EDR Contact: 11/10/2014
	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).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

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: 05/28/2014
Date Data Arrived at EDR: 05/01/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 47

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
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: 07/25/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 25

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
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: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
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: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
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: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

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: 06/05/2014
Date Data Arrived at EDR: 06/06/2014
Date Made Active in Reports: 07/09/2014
Number of Days to Update: 33

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/06/2014
Next Scheduled EDR Contact: 11/17/2014
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: 05/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 45

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

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
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
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: 07/01/2014
Date Data Arrived at EDR: 07/03/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 25

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 07/03/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

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: 07/25/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 06/16/2014
Date Data Arrived at EDR: 06/17/2014
Date Made Active in Reports: 07/11/2014
Number of Days to Update: 24

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/17/2014
Next Scheduled EDR Contact: 09/29/2014
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 02/20/2014
Date Made Active in Reports: 03/27/2014
Number of Days to Update: 35

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
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: 08/01/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

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: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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.

Date of Government Version: 05/28/2014	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 06/20/2014	Telephone: 202-307-1000
Date Made Active in Reports: 07/15/2014	Last EDR Contact: 06/04/2014
Number of Days to Update: 25	Next Scheduled EDR Contact: 09/15/2014
	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	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	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: 06/05/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 06/06/2014	Telephone: 916-323-3400
Date Made Active in Reports: 07/09/2014	Last EDR Contact: 08/06/2014
Number of Days to Update: 33	Next Scheduled EDR Contact: 11/17/2014
	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	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/30/1995	Telephone: 916-227-4364
Date Made Active in Reports: 09/26/1995	Last EDR Contact: 01/26/2009
Number of Days to Update: 27	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: 12/31/2013	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 02/28/2014	Telephone: 916-255-6504
Date Made Active in Reports: 03/20/2014	Last EDR Contact: 07/14/2014
Number of Days to Update: 20	Next Scheduled EDR Contact: 10/27/2014
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 05/28/2014	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 06/20/2014	Telephone: 202-307-1000
Date Made Active in Reports: 07/15/2014	Last EDR Contact: 06/04/2014
Number of Days to Update: 25	Next Scheduled EDR Contact: 09/15/2014
	Data Release Frequency: No Update Planned

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: 06/02/2014
Number of Days to Update: 8	Next Scheduled EDR Contact: 09/15/2014
	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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
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: 05/05/2014
Date Data Arrived at EDR: 05/06/2014
Date Made Active in Reports: 05/19/2014
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/09/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Varies

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: 06/09/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 07/09/2014
Number of Days to Update: 28

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/11/2014
Next Scheduled EDR Contact: 09/22/2014
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: 03/31/2014
Date Data Arrived at EDR: 04/01/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 105

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
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: 02/04/2014
Date Data Arrived at EDR: 04/29/2014
Date Made Active in Reports: 05/09/2014
Number of Days to Update: 10

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/28/2014
Next Scheduled EDR Contact: 11/10/2014
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: 07/30/2014
Date Data Arrived at EDR: 07/31/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 22

Source: State Water Quality Control Board
Telephone: 866-480-1028
Last EDR Contact: 07/31/2014
Next Scheduled EDR Contact: 09/29/2014
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 07/30/2014	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/31/2014	Telephone: 866-480-1028
Date Made Active in Reports: 08/25/2014	Last EDR Contact: 07/31/2014
Number of Days to Update: 25	Next Scheduled EDR Contact: 09/29/2014
	Data Release Frequency: Quarterly

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: 03/11/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/13/2014	Telephone: (415) 495-8895
Date Made Active in Reports: 04/09/2014	Last EDR Contact: 07/02/2014
Number of Days to Update: 27	Next Scheduled EDR Contact: 10/13/2014
	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: 08/06/2014
Number of Days to Update: 42	Next Scheduled EDR Contact: 11/17/2014
	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: 07/18/2014
Number of Days to Update: 62	Next Scheduled EDR Contact: 10/27/2014
	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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 55

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 06/04/2014
Next Scheduled EDR Contact: 09/22/2014
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.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/24/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 31

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/30/2014
Next Scheduled EDR Contact: 10/13/2014
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: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/10/2014
Next Scheduled EDR Contact: 09/22/2014
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: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
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: 01/30/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 132

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/06/2014
Next Scheduled EDR Contact: 09/15/2014
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: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/30/2014
Next Scheduled EDR Contact: 09/08/2014
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 06/25/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Every 4 Years

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
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
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
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
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
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
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
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Annually

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: 05/06/2014
Date Data Arrived at EDR: 05/16/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/09/2014
Next Scheduled EDR Contact: 10/27/2014
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: 06/01/2013
Date Data Arrived at EDR: 07/17/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 107

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
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: 07/22/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 91

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 06/05/2014
Next Scheduled EDR Contact: 09/22/2014
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: 07/07/2014
Date Data Arrived at EDR: 07/10/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/10/2014
Next Scheduled EDR Contact: 10/20/2014
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: 11/18/2013
Date Data Arrived at EDR: 02/27/2014
Date Made Active in Reports: 03/12/2014
Number of Days to Update: 13

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/13/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	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: 04/01/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/23/2014	Telephone: 202-564-8600
Date Made Active in Reports: 07/28/2014	Last EDR Contact: 07/22/2014
Number of Days to Update: 66	Next Scheduled EDR Contact: 11/10/2014
	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	Source: EPA/NTIS
Date Data Arrived at EDR: 02/26/2013	Telephone: 800-424-9346
Date Made Active in Reports: 04/19/2013	Last EDR Contact: 05/30/2014
Number of Days to Update: 52	Next Scheduled EDR Contact: 09/08/2014
	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	Source: Department of Health Services
Date Data Arrived at EDR: 07/27/1994	Telephone: 916-255-2118
Date Made Active in Reports: 08/02/1994	Last EDR Contact: 05/31/1994
Number of Days to Update: 6	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: 05/19/2014	Source: State Water Resources Control Board
Date Data Arrived at EDR: 05/20/2014	Telephone: 916-445-9379
Date Made Active in Reports: 05/28/2014	Last EDR Contact: 05/20/2014
Number of Days to Update: 8	Next Scheduled EDR Contact: 09/01/2014
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 01/15/2014	Source: Department of Conservation
Date Data Arrived at EDR: 03/18/2014	Telephone: 916-445-2408
Date Made Active in Reports: 04/24/2014	Last EDR Contact: 06/20/2014
Number of Days to Update: 37	Next Scheduled EDR Contact: 09/29/2014
	Data Release Frequency: Varies

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: 06/30/2014	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 07/01/2014	Telephone: 916-323-3400
Date Made Active in Reports: 07/28/2014	Last EDR Contact: 07/01/2014
Number of Days to Update: 27	Next Scheduled EDR Contact: 10/13/2014
	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: 26	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: 06/17/2014
Number of Days to Update: 18	Next Scheduled EDR Contact: 10/06/2014
	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: 06/28/2014	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 07/03/2014	Telephone: 916-327-4498
Date Made Active in Reports: 08/21/2014	Last EDR Contact: 06/09/2014
Number of Days to Update: 49	Next Scheduled EDR Contact: 09/22/2014
	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: 06/25/2014
Number of Days to Update: 13	Next Scheduled EDR Contact: 10/13/2014
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 05/30/2014	Source: State Water Resources Control Board
Date Data Arrived at EDR: 05/30/2014	Telephone: 916-445-9379
Date Made Active in Reports: 07/07/2014	Last EDR Contact: 08/08/2014
Number of Days to Update: 38	Next Scheduled EDR Contact: 11/10/2014
	Data Release Frequency: Varies

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: 12/31/2012	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/16/2013	Telephone: 916-255-1136
Date Made Active in Reports: 08/26/2013	Last EDR Contact: 07/18/2014
Number of Days to Update: 41	Next Scheduled EDR Contact: 10/27/2014
	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: 12/31/2012	Source: California Air Resources Board
Date Data Arrived at EDR: 03/25/2014	Telephone: 916-322-2990
Date Made Active in Reports: 04/28/2014	Last EDR Contact: 06/26/2014
Number of Days to Update: 34	Next Scheduled EDR Contact: 10/06/2014
	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: 07/18/2014
Number of Days to Update: 34	Next Scheduled EDR Contact: 10/27/2014
	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: 07/25/2014
Number of Days to Update: 54	Next Scheduled EDR Contact: 11/03/2014
	Data Release Frequency: Varies

COAL ASH DOE: Steam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005	Source: Department of Energy
Date Data Arrived at EDR: 08/07/2009	Telephone: 202-586-8719
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 07/18/2014
Number of Days to Update: 76	Next Scheduled EDR Contact: 10/27/2014
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 05/23/2014	Source: Department of Public Health
Date Data Arrived at EDR: 06/13/2014	Telephone: 916-558-1784
Date Made Active in Reports: 07/09/2014	Last EDR Contact: 06/09/2014
Number of Days to Update: 26	Next Scheduled EDR Contact: 09/22/2014
	Data Release Frequency: Varies

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: 08/01/2014
Number of Days to Update: 83	Next Scheduled EDR Contact: 11/10/2014
	Data Release Frequency: Varies

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 04/15/2013	Source: EPA
Date Data Arrived at EDR: 07/03/2013	Telephone: 202-564-6023
Date Made Active in Reports: 09/13/2013	Last EDR Contact: 07/01/2014
Number of Days to Update: 72	Next Scheduled EDR Contact: 10/13/2014
	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: 08/19/2014
Number of Days to Update: 9	Next Scheduled EDR Contact: 12/08/2014
	Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 06/16/2014	Source: Department of Conservation
Date Data Arrived at EDR: 06/17/2014	Telephone: 916-323-3836
Date Made Active in Reports: 07/10/2014	Last EDR Contact: 06/17/2014
Number of Days to Update: 23	Next Scheduled EDR Contact: 09/29/2014
	Data Release Frequency: Quarterly

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 05/05/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 05/14/2014	Telephone: 916-255-3628
Date Made Active in Reports: 05/22/2014	Last EDR Contact: 07/25/2014
Number of Days to Update: 8	Next Scheduled EDR Contact: 11/10/2014
	Data Release Frequency: Varies

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: 05/19/2014
Date Data Arrived at EDR: 05/20/2014
Date Made Active in Reports: 05/22/2014
Number of Days to Update: 2

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
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: 06/19/2014
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 38

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Quarterly

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

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: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated 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: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: N/A

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: 07/14/2014
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/15/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/27/2014
Date Data Arrived at EDR: 05/28/2014
Date Made Active in Reports: 07/07/2014
Number of Days to Update: 40

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

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: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

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

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 06/04/2014
Date Data Arrived at EDR: 06/12/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Varies

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: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/14/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 47

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/11/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

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 RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/13/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 196	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 12/30/2013	Last EDR Contact: 06/01/2012
Number of Days to Update: 182	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

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: 04/22/2014	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 04/24/2014	Telephone: 510-567-6700
Date Made Active in Reports: 05/09/2014	Last EDR Contact: 06/30/2014
Number of Days to Update: 15	Next Scheduled EDR Contact: 10/13/2014
	Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 07/25/2014	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 07/28/2014	Telephone: 510-567-6700
Date Made Active in Reports: 08/20/2014	Last EDR Contact: 06/30/2014
Number of Days to Update: 23	Next Scheduled EDR Contact: 10/13/2014
	Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 07/23/2014	Source: Amador County Environmental Health
Date Data Arrived at EDR: 06/26/2014	Telephone: 209-223-6439
Date Made Active in Reports: 07/25/2014	Last EDR Contact: 06/19/2014
Number of Days to Update: 29	Next Scheduled EDR Contact: 09/22/2014
	Data Release Frequency: Varies

BUTTE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 08/22/2013
Number of Days to Update: 20

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing

Cupa Facility Listing

Date of Government Version: 07/02/2014
Date Data Arrived at EDR: 07/03/2014
Date Made Active in Reports: 07/30/2014
Number of Days to Update: 27

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/26/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 06/11/2014
Date Data Arrived at EDR: 06/13/2014
Date Made Active in Reports: 07/07/2014
Number of Days to Update: 24

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 08/08/2014
Next Scheduled EDR Contact: 11/24/2014
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: 02/24/2014
Date Data Arrived at EDR: 02/25/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 21

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 08/05/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List

Cupa Facility list

Date of Government Version: 05/05/2014
Date Data Arrived at EDR: 05/06/2014
Date Made Active in Reports: 05/13/2014
Number of Days to Update: 7

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/30/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

EL DORADO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List

CUPA facility list.

Date of Government Version: 05/29/2014
Date Data Arrived at EDR: 05/30/2014
Date Made Active in Reports: 07/07/2014
Number of Days to Update: 38

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/05/2014
Next Scheduled EDR Contact: 11/17/2014
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: 06/30/2014
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 08/19/2014
Number of Days to Update: 35

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 07/11/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 06/09/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 07/07/2014
Number of Days to Update: 26

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 04/28/2014
Date Data Arrived at EDR: 04/30/2014
Date Made Active in Reports: 05/13/2014
Number of Days to Update: 13

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

KERN COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 08/08/2014
Next Scheduled EDR Contact: 11/24/2014
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: 05/28/2014
Date Data Arrived at EDR: 05/30/2014
Date Made Active in Reports: 06/20/2014
Number of Days to Update: 21

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 07/23/2014
Date Data Arrived at EDR: 07/25/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 28

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 11/03/2014
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: 06/19/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/31/2014
Date Data Arrived at EDR: 06/06/2014
Date Made Active in Reports: 07/17/2014
Number of Days to Update: 41

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 07/21/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/21/2014
Date Data Arrived at EDR: 07/21/2014
Date Made Active in Reports: 08/19/2014
Number of Days to Update: 29

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/21/2014
Next Scheduled EDR Contact: 11/03/2014
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: 08/14/2014
Next Scheduled EDR Contact: 11/03/2014
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/07/2014
Date Data Arrived at EDR: 02/25/2014
Date Made Active in Reports: 03/25/2014
Number of Days to Update: 28

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/16/2014
Next Scheduled EDR Contact: 11/03/2014
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 07/23/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 08/20/2014
Number of Days to Update: 23

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 11/03/2014
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: 07/28/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 08/20/2014
Number of Days to Update: 23

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/13/2014
Date Data Arrived at EDR: 03/27/2014
Date Made Active in Reports: 04/28/2014
Number of Days to Update: 32

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 10/27/2014
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/09/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 06/27/2014
Number of Days to Update: 16

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 07/02/2014
Date Data Arrived at EDR: 07/07/2014
Date Made Active in Reports: 08/18/2014
Number of Days to Update: 42

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 05/27/2014
Date Data Arrived at EDR: 05/29/2014
Date Made Active in Reports: 06/24/2014
Number of Days to Update: 26

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List

CUPA Facility List

Date of Government Version: 06/09/2014
Date Data Arrived at EDR: 06/13/2014
Date Made Active in Reports: 06/27/2014
Number of Days to Update: 14

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 06/02/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/09/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 07/09/2014
Number of Days to Update: 28

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 05/30/2014
Next Scheduled EDR Contact: 09/15/2014
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: 05/30/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 11/06/2013
Date Data Arrived at EDR: 11/07/2013
Date Made Active in Reports: 12/04/2013
Number of Days to Update: 27

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2014
Date Data Arrived at EDR: 05/15/2014
Date Made Active in Reports: 05/22/2014
Number of Days to Update: 7

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2014
Date Data Arrived at EDR: 05/15/2014
Date Made Active in Reports: 05/28/2014
Number of Days to Update: 13

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/01/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/20/2014
Number of Days to Update: 8

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

PLACER COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/09/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 07/09/2014
Number of Days to Update: 29

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 06/09/2014
Next Scheduled EDR Contact: 09/22/2014
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: 07/08/2014
Date Data Arrived at EDR: 07/11/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 17

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/23/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Quarterly

Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 07/08/2014
Date Data Arrived at EDR: 07/11/2014
Date Made Active in Reports: 08/18/2014
Number of Days to Update: 38

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/23/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/06/2014
Date Data Arrived at EDR: 04/08/2014
Date Made Active in Reports: 04/29/2014
Number of Days to Update: 21

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/11/2014
Next Scheduled EDR Contact: 10/20/2014
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: 05/05/2014
Date Data Arrived at EDR: 07/17/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 11

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 05/30/2014
Date Data Arrived at EDR: 05/30/2014
Date Made Active in Reports: 07/07/2014
Number of Days to Update: 38

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
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: 09/23/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 23

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/09/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2013
Date Data Arrived at EDR: 11/19/2013
Date Made Active in Reports: 12/31/2013
Number of Days to Update: 42

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

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: 06/04/2014
Next Scheduled EDR Contact: 09/22/2014
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: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
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: 08/07/2014
Next Scheduled EDR Contact: 11/27/2014
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/20/2014
Date Data Arrived at EDR: 06/23/2014
Date Made Active in Reports: 07/11/2014
Number of Days to Update: 18

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/19/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 06/11/2014
Date Data Arrived at EDR: 06/13/2014
Date Made Active in Reports: 07/09/2014
Number of Days to Update: 26

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 04/03/2014
Date Data Arrived at EDR: 04/04/2014
Date Made Active in Reports: 05/01/2014
Number of Days to Update: 27

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/16/2014
Next Scheduled EDR Contact: 09/29/2014
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 06/16/2014
Date Data Arrived at EDR: 06/19/2014
Date Made Active in Reports: 07/10/2014
Number of Days to Update: 21

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/13/2014
Next Scheduled EDR Contact: 09/29/2014
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: 08/22/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/02/2014
Date Data Arrived at EDR: 06/03/2014
Date Made Active in Reports: 06/23/2014
Number of Days to Update: 20

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 06/02/2014
Next Scheduled EDR Contact: 09/15/2014
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: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 06/02/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: Annually

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 05/12/2014
Date Data Arrived at EDR: 05/19/2014
Date Made Active in Reports: 05/28/2014
Number of Days to Update: 9

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 08/08/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List

CUPA facility listing.

Date of Government Version: 05/27/2014
Date Data Arrived at EDR: 05/28/2014
Date Made Active in Reports: 06/20/2014
Number of Days to Update: 23

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/22/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 06/12/2014
Date Made Active in Reports: 06/20/2014
Number of Days to Update: 8

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

SOLANO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/19/2014
Date Data Arrived at EDR: 06/26/2014
Date Made Active in Reports: 07/25/2014
Number of Days to Update: 29

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/13/2014
Next Scheduled EDR Contact: 09/29/2014
Data Release Frequency: Quarterly

Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 06/19/2014
Date Data Arrived at EDR: 06/26/2014
Date Made Active in Reports: 07/25/2014
Number of Days to Update: 29

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/13/2014
Next Scheduled EDR Contact: 09/29/2014
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List

Cupa Facility list

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/02/2014
Date Made Active in Reports: 02/11/2014
Number of Days to Update: 40

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/26/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 07/03/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 25

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/26/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 06/09/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 07/17/2014
Number of Days to Update: 36

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 06/09/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 05/16/2014
Date Data Arrived at EDR: 05/16/2014
Date Made Active in Reports: 06/13/2014
Number of Days to Update: 28

Source: Division of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 08/08/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

VENTURA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 04/28/2014	Source: Ventura County Environmental Health Division
Date Data Arrived at EDR: 05/20/2014	Telephone: 805-654-2813
Date Made Active in Reports: 05/27/2014	Last EDR Contact: 08/14/2014
Number of Days to Update: 7	Next Scheduled EDR Contact: 12/01/2014
	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: 07/01/2014
Number of Days to Update: 49	Next Scheduled EDR Contact: 10/13/2014
	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: 08/13/2014
Number of Days to Update: 37	Next Scheduled EDR Contact: 12/01/2014
	Data Release Frequency: Quarterly

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: 04/28/2014	Source: Ventura County Resource Management Agency
Date Data Arrived at EDR: 04/30/2014	Telephone: 805-654-2813
Date Made Active in Reports: 05/19/2014	Last EDR Contact: 07/28/2014
Number of Days to Update: 19	Next Scheduled EDR Contact: 11/10/2014
	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: 05/27/2014	Source: Environmental Health Division
Date Data Arrived at EDR: 06/17/2014	Telephone: 805-654-2813
Date Made Active in Reports: 07/11/2014	Last EDR Contact: 06/16/2014
Number of Days to Update: 24	Next Scheduled EDR Contact: 09/29/2014
	Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 06/30/2014	Source: Yolo County Department of Health
Date Data Arrived at EDR: 07/07/2014	Telephone: 530-666-8646
Date Made Active in Reports: 08/18/2014	Last EDR Contact: 06/19/2014
Number of Days to Update: 42	Next Scheduled EDR Contact: 10/06/2014
	Data Release Frequency: Annually

YUBA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 05/19/2014
Date Data Arrived at EDR: 05/22/2014
Date Made Active in Reports: 06/19/2014
Number of Days to Update: 28

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 07/31/2014
Next Scheduled EDR Contact: 11/17/2014
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: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Annually

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: 07/17/2014
Next Scheduled EDR Contact: 10/27/2014
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: 05/01/2014
Date Data Arrived at EDR: 05/07/2014
Date Made Active in Reports: 06/10/2014
Number of Days to Update: 34

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/21/2014
Date Made Active in Reports: 08/25/2014
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 11/03/2014
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 08/13/2014
Number of Days to Update: 29

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 08/07/2014
Number of Days to Update: 48

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/16/2014
Next Scheduled EDR Contact: 09/29/2014
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.

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.

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, 2005 and 2010 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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

INDIA BASIN
EARL STREET/INNES AVENUE
SAN FRANCISCO, CA 94124

TARGET PROPERTY COORDINATES

Latitude (North): 37.7318 - 37° 43' 54.48"
Longitude (West): 122.3719 - 122° 22' 18.84"
Universal Transverse Mercator: Zone 10
UTM X (Meters): 555347.4
UTM Y (Meters): 4176039.0
Elevation: 16 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map: 37122-F3 HUNTERS POINT, CA
Most Recent Revision: 1980

West Map: 37122-F4 SAN FRANCISCO SOUTH, CA
Most Recent Revision: 1999

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).

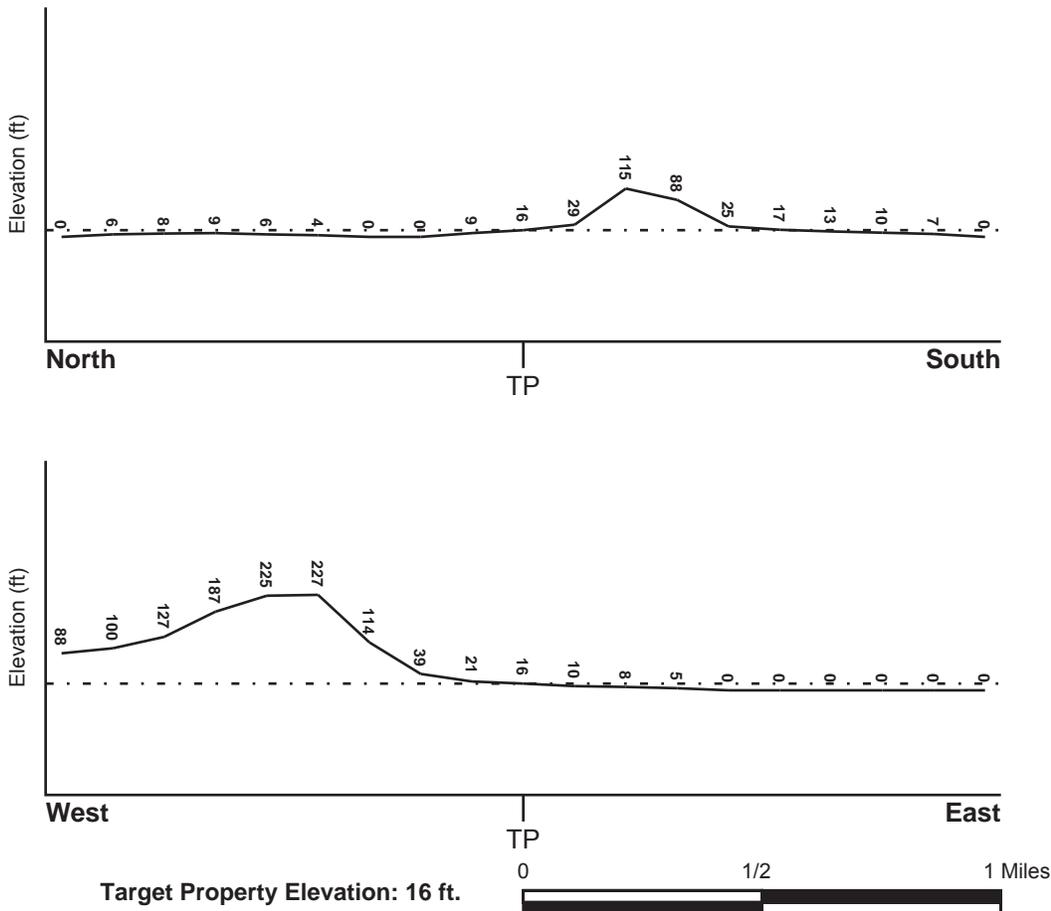
TOPOGRAPHIC INFORMATION

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 NNE

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</u>
SAN FRANCISCO, CA	<u>Electronic Data</u>
	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</u>
HUNTERS POINT	<u>Data Coverage</u>
	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:	1/4 - 1/2 Mile South
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</u> <u>FROM TP</u>	<u>GENERAL DIRECTION</u> <u>GROUNDWATER FLOW</u>
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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
A1	1/8 - 1/4 Mile West	SE
A2	1/8 - 1/4 Mile West	SE
A3	1/4 - 1/2 Mile WNW	SW
4	1/4 - 1/2 Mile WNW	W
B5	1/2 - 1 Mile NNW	NW
B6	1/2 - 1 Mile NNW	NW
C7	1/2 - 1 Mile NNW	Varies
C8	1/2 - 1 Mile NNW	Varies
D9	1/2 - 1 Mile SW	NW
D10	1/2 - 1 Mile SW	NW
E11	1/2 - 1 Mile SW	NE
E12	1/2 - 1 Mile SW	NE
E13	1/2 - 1 Mile SW	NE
F14	1/2 - 1 Mile WSW	Not Reported
F15	1/2 - 1 Mile WSW	Not Reported
G16	1/2 - 1 Mile WSW	S
G17	1/2 - 1 Mile WSW	S

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

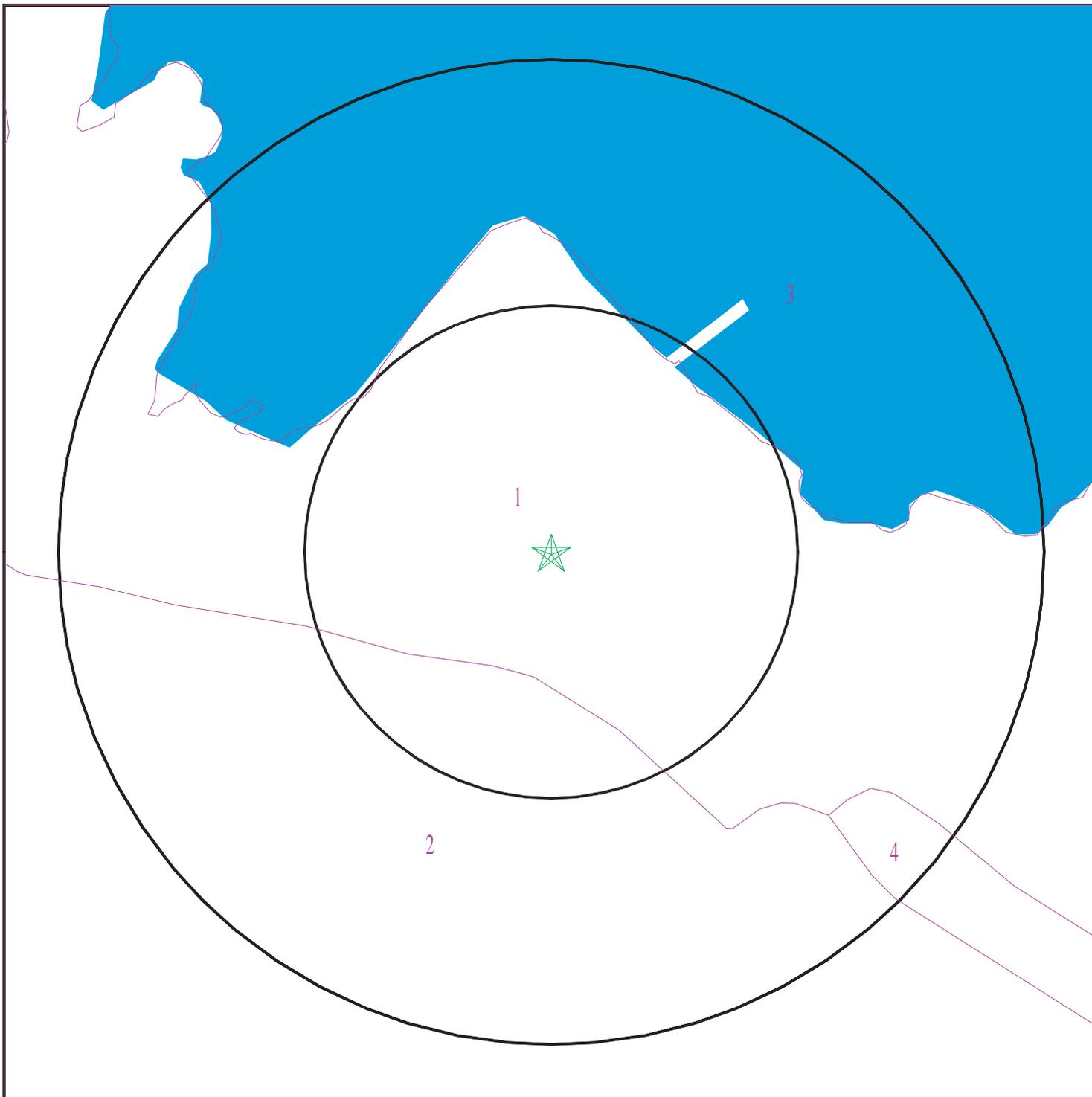
Era: Paleozoic
System: Permian
Series: Ultramafic rocks
Code: uM (*decoded above as Era, System & Series*)

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 - 4048497.2s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: India Basin
ADDRESS: Earl Street/Innes Avenue
San Francisco CA 94124
LAT/LONG: 37.7318 / 122.3719

CLIENT: Langan Engineering
CONTACT: Peter J. Cusack
INQUIRY #: 4048497.2s
DATE: August 27, 2014 7:36 am

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: 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

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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:

Soil Map ID: 3

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.

Soil Map ID: 4

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: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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:

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		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 4048497.2s



- 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: India Basin
 ADDRESS: Earl Street/Innes Avenue
 San Francisco CA 94124
 LAT/LONG: 37.7318 / 122.3719

CLIENT: Langan Engineering
 CONTACT: Peter J. Cusack
 INQUIRY #: 4048497.2s
 DATE: August 27, 2014 7:36 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID	Direction	Distance	Elevation	Database	EDR ID Number
A1	Site ID:	38-0705			
West	Groundwater Flow:	SE		AQUIFLOW	70058
1/8 - 1/4 Mile	Shallow Water Depth:	9.0			
Higher	Deep Water Depth:	18.0			
	Average Water Depth:	Not Reported			
	Date:	11/10/1995			
<hr/>					
A2	Site ID:	38-0705			
West	Groundwater Flow:	SE		AQUIFLOW	70059
1/8 - 1/4 Mile	Shallow Water Depth:	87			
Higher	Deep Water Depth:	90			
	Average Water Depth:	Not Reported			
	Date:	01/12/1996			
<hr/>					
A3	Site ID:	38-0264			
WNW	Groundwater Flow:	SW		AQUIFLOW	69777
1/4 - 1/2 Mile	Shallow Water Depth:	3.0			
Higher	Deep Water Depth:	10.5			
	Average Water Depth:	Not Reported			
	Date:	01/19/1996			
<hr/>					
4	Site ID:	38-10588			
WNW	Groundwater Flow:	W		AQUIFLOW	69850
1/4 - 1/2 Mile	Shallow Water Depth:	3.10			
Higher	Deep Water Depth:	7.15			
	Average Water Depth:	Not Reported			
	Date:	10/10/1989			
<hr/>					
B5	Site ID:	38-0207			
NNW	Groundwater Flow:	NW		AQUIFLOW	51272
1/2 - 1 Mile	Shallow Water Depth:	8.58			
Lower	Deep Water Depth:	18.90			
	Average Water Depth:	Not Reported			
	Date:	01/12/1995			
<hr/>					
B6	Site ID:	10208			
NNW	Groundwater Flow:	NW		AQUIFLOW	51273
1/2 - 1 Mile	Shallow Water Depth:	8.58			
Lower	Deep Water Depth:	18.90			
	Average Water Depth:	Not Reported			
	Date:	01/12/1995			
<hr/>					
C7	Site ID:	38-0847			
NNW	Groundwater Flow:	Varies		AQUIFLOW	70676
1/2 - 1 Mile	Shallow Water Depth:	9.0			
Higher	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
C8 NNW 1/2 - 1 Mile Higher	Site ID:	38-0847	AQUIFLOW	70677
	Groundwater Flow:	Varies		
	Shallow Water Depth:	9.0		
	Deep Water Depth:	9.50		
	Average Water Depth:	Not Reported		
Date:	11/01/1997			
D9 SW 1/2 - 1 Mile Higher	Site ID:	38-0664	AQUIFLOW	70765
	Groundwater Flow:	NW		
	Shallow Water Depth:	54		
	Deep Water Depth:	76		
	Average Water Depth:	Not Reported		
Date:	07/06/1995			
D10 SW 1/2 - 1 Mile Higher	Site ID:	38-0664	AQUIFLOW	70766
	Groundwater Flow:	NW		
	Shallow Water Depth:	80.0		
	Deep Water Depth:	86.0		
	Average Water Depth:	Not Reported		
Date:	09/26/1995			
E11 SW 1/2 - 1 Mile Higher	Site ID:	38-0677	AQUIFLOW	70669
	Groundwater Flow:	NE		
	Shallow Water Depth:	1.0		
	Deep Water Depth:	2.5		
	Average Water Depth:	Not Reported		
Date:	01/01/1987			
E12 SW 1/2 - 1 Mile Higher	Site ID:	38-0677	AQUIFLOW	70670
	Groundwater Flow:	NE		
	Shallow Water Depth:	8.0		
	Deep Water Depth:	9.5		
	Average Water Depth:	Not Reported		
Date:	10/17/1995			
E13 SW 1/2 - 1 Mile Higher	Site ID:	38-0677	AQUIFLOW	70671
	Groundwater Flow:	NE		
	Shallow Water Depth:	8.0		
	Deep Water Depth:	9.0		
	Average Water Depth:	Not Reported		
Date:	09/29/1998			
F14 WSW 1/2 - 1 Mile Higher	Site ID:	38-00510	AQUIFLOW	51246
	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

F15	Site ID:	38-0510		
WSW	Groundwater Flow:	Not Reported	AQUIFLOW	51244
1/2 - 1 Mile	Shallow Water Depth:	Not Reported		
Higher	Deep Water Depth:	Not Reported		
	Average Water Depth:	11.5		
	Date:	06/27/1994		

G16	Site ID:	38-11091		
WSW	Groundwater Flow:	S	AQUIFLOW	69102
1/2 - 1 Mile	Shallow Water Depth:	Not Reported		
Lower	Deep Water Depth:	Not Reported		
	Average Water Depth:	12.5		
	Date:	11/30/1998		

G17	Site ID:	38-11091		
WSW	Groundwater Flow:	S	AQUIFLOW	69105
1/2 - 1 Mile	Shallow Water Depth:	Not Reported		
Lower	Deep Water Depth:	Not Reported		
	Average Water Depth:	10 ft		
	Date:	09/29/1998		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
94124	83	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.

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, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R 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 Public Health

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 C
PHOTOGRAPHS**



Photograph 1 – View of the Site, facing northeast



Photograph 2 – View of the Site, facing northwest

23 August 1999

Project 2576.04

City and County of San Francisco Department of Public Works
Bureau of Construction Management
Site Assessment and Remediation Division
Attn: John T. Chester
1680 Mission Street, 1st Floor
San Francisco, California 94103

Subject: India Basin Shoreline Park Soil Sampling Results
San Francisco, California

Dear Mr. Chester,

Treadwell & Rollo, Inc. is pleased to present the results of the soil composite sample collection and analysis for the San Francisco Department of Public Works (SFDPW) at the subject site as outlined in our proposal dated 22 July 1999. The sampling was conducted to characterize soil in areas that will be cut and filled as part of park improvements.

We performed the following tasks to collect the five composite soil samples for total arsenic, lead, and nickel analysis:

- Prepared and submitted *Application For Soil Borings* with filing fee to the San Francisco Department of Public Health (SFDPH);
- Visited the site and painted and flagged boring locations;
- Contacted Underground Service Alert (USA) for utility location;
- Advanced and grouted 17 shallow borings and note lithology; and
- Collected five composite soil samples for laboratory analysis of total arsenic, lead, and nickel.

On 29 July 1999, Precision Sampling Inc. (Precision) mobilized a direct-push rig suitable for work at the site. Precision advanced 17 borings to depths of approximately 2 to 8 feet as outlined in Table 1 and shown on the attached figure. Treadwell & Rollo collected soil samples for composite sample preparation as indicated in Table 1. Soil types are also noted in Table 1. Borings were grouted from the bottom up with a cement-bentonite grout. Treadwell & Rollo coordinated with the SFDPH for borehole grout inspection.

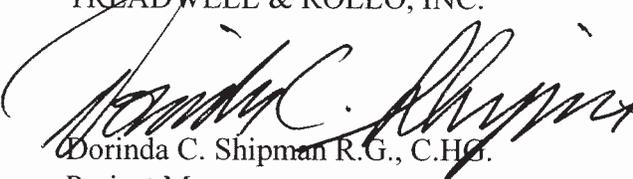
John T. Chester
23 August 1999
Page 2

The five composite samples were submitted for total arsenic, lead, and nickel analysis using EPA Method 6010/7000 on a 3 to 4 day turn-around-time. The Area D or fill area soil was held for analysis pending results for cut area samples (Areas A through C). If the cut area sample results (Areas A through C, samples C-1 through C-4) were below levels of concern, the fill area (Area D) sample (C-5) would not be analyzed.

Draft analytical results were transmitted to Pam Hollis of the SFDPH and to John Chester of SFDPW on 5 August 1999. The laboratory report is attached and results are summarized in Table 2. Pam discussed these results with the project team. Based on the fact that planter boxes will be installed, a geotextile fabric will be in place at the bottom of the planter boxes, and a ban on fruit trees will be enforced, the sample C-5 was not analyzed.

We appreciate the opportunity to work with the SFDPW. If you have any questions, please call Dorinda Shipman at 415-955-9040.

Sincerely,
TREADWELL & ROLLO, INC.


Dorinda C. Shipman R.G., C.H.G.
Project Manager


Donald D. Treadwell, Ph.D., P.E., G.E.
Principal

Attachments

Copy to: Pam Hollis, San Francisco Department of Public Health

**Table 1
Soil Sampling Summary
India Basin Shoreline Park**

Area	Boring	Sample Depths	Soil Description	Composite Sample
Area A Southern Path from Parking Lot	B-1	4 feet	Brown Sand with gravel (Fill)	C-1 Composite of 3 samples collected from 2 feet and 1 from 4 feet
	B-2	2 feet	Brown Sand with gravel (Fill)	
	B-3	2 feet	Reddish-Brown Sand with gravel (Fill)	
	B-4	2 feet	Reddish-Brown Sand with gravel (Fill)	
Area B Future Stairway	B-5	4 feet	Reddish-Brown Sand with gravel (Fill)	C-2 Composite of 3 samples collected from 2 feet and 1 from 4 feet
	B-6	2 feet	Reddish-Brown Sand with gravel (Fill)	
	B-7	2 feet	Reddish-Brown Sand with gravel (Fill)	
	B-8	2 feet	Brown Sand with gravel (Fill)	
Area C Path to Future Basketball Court	B-9	4 and 8 feet	Grayish-brown Sand with gravel (Fill)	C-3 Composite of 2 samples collected from 4 feet, 1 from 6 feet, and 1 from 8 feet C-4 Composite of 4 samples collected from 2 feet
	B-10	2 and 6 feet	Grayish-brown Sand with gravel, concrete, and brick fragments (Fill)	
	B-11*	2 and 4 feet	Grayish-brown Sand with gravel and concrete fragments (Fill)	
	B-12*	2 feet	Grayish-brown Sand with gravel and concrete fragments (Fill)	
	B-13*	2 feet	Grayish-brown Sand with gravel and concrete fragments (Fill)	
Area D Fill Area	B-14	2 feet	Grayish-brown Sand with gravel and concrete fragments (Fill)	C-5 Composite of 4 samples collected from 2 feet
	B-15	2 feet	Grayish-brown Sand with gravel (Fill)	
	B-16	2 feet	Grayish-brown Sand with gravel (Fill)	
	B-17	2 feet	Grayish-brown Sand with gravel (Fill)	

*- Initially hit refusal at these locations at 2 feet below ground surface. Observed movement over the surrounding area indicating that an obstruction may be present in the vicinity of these borings.

John T. Chester
23 August 1999
Page 4

Table 2
Analytical Result Summary
India Basin shoreline Park

Sample	Arsenic	Lead	Nickel
C-1	5.4	220	79
C-2	5.5	70	100
C-3	1.8	47	370
C-4	5.1	190	380

Results are in milligrams per kilogram (mg/kg).



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900, Fax (510) 486-0532

A N A L Y T I C A L R E P O R T

Prepared for:

Treadwell & Rollo
555 Montgomery Street
Suite 1300
San Francisco, CA 94111

Date: 16-AUG-99
Lab Job Number: 140698
Project ID: 2576.04
Location: India Basin ShorelinePark

Reviewed by:

Reviewed by:

This package may be reproduced only in its entirety.



Laboratory Number: 140698
Client: Treadwell & Rollo
Project Name: India Basin Shoreline Park

Receipt Date: 07/30/99

CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for twenty-four soil samples received from the above referenced project. The samples were received cold and intact.

Metals: The matrix spike recovery for lead and nickel was outside acceptance limits. The associated blank spike recoveries were acceptable for all target elements. No other analytical problems were encountered.

510 } EPA - spike known
491b } qtz into a
0900 } sample
} Blank spike quality
} batch.
MATRIX SPIKE → This may be
some impact on the sample

140698

Treadwell & Rollo

555 Montgomery Street, Suite 1300
 San Francisco, California
 (415) 955-9040
 (415) 955-9041 Fax

CHAIN OF CUSTODY RECORD

Project No. 2576.04 Project Name INDIA BASIN SHORELINE PARK Date 7/29/99 Page 1 of 1

Date	Sample Number	Analysis			Number of Containers
		TOTAL ARSENIC	TOTAL LEAD	TOTAL NICKEL	
7/29/99	B-1-4'	X	X	X	1
7/29/99	B-2-2'	X	X	X	1
7/29/99	B-3-2'	X	X	X	1
7/29/99	B-4-2'	X	X	X	1
7/29/99	B-5-4'	X	X	X	1
7/29/99	B-6-2'	X	X	X	1
7/29/99	B-7-2'	X	X	X	1
7/29/99	B-8-2'	X	X	X	1
7/29/99	B-9-4'	X	X	X	1 *
7/29/99	B-9-8'	X	X	X	1 *
7/29/99	B-10-2'	X	X	X	1 **
7/29/99	B-10-6'	X	X	X	1 *
7/29/99	B-11-2'	X	X	X	1 **
7/29/99	B-11-4'	X	X	X	1 *
7/29/99	B-12-2'	X	X	X	1 **
7/29/99	B-13-2'	X	X	X	1 **
7/29/99	B-14-2'	X	X	X	1
7/29/99	B-15-2'	X	X	X	1
7/29/99	B-16-2'	X	X	X	1
7/29/99	B-17-2'	X	X	X	1
Total Number of Containers					20

Relinquished by (Sampler):
MICAH RAPAPORT
 Signature *[Signature]*
 Printed Name **MICAH RAPAPORT**
 Company _____
 Date 7/29/99 Time 1700
 Received by:
 STORAGE: *[Signature]*
 Signature *[Signature]*
 Printed Name **MICAH RAPAPORT**
 Company _____
 Date 7/29/99 Time 1700
 Relinquished by:
 STORAGE: *[Signature]*
 Signature *[Signature]*
 Printed Name **MICAH RAPAPORT**
 Company _____
 Date 7/30/99 Time 1414
 Method of Shipment _____
 Received by (Lab):
[Signature]
 Signature **STEVEN E. STANTLEY**
 Printed Name _____
 Lab **Curtis Tompkins**
 Date 7/29/99 Time 14:14
 Lab Comments
[Signature]
 3 TO 4 DAY
TAT

1
2
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7
8
9
10
12
15
13
14
18
19
21
22
23
24

pls 4:1 COMPOSITE
-5 C-1
pls 4:1 COMPOSITE
-10 C-2
-25 pls Hold

Remarks: -15 * pls 4:1 COMPOSITE C-3
 -20 * pls 4:1 COMPOSITE C-4

CLIENT: Treadwell & Rollo
 PROJECT ID: 2576.04
 LOCATION: India Basin ShorelinePark
 MATRIX: Soil

DATE REPORTED: 08/04/99

Metals Analytical Report

Arsenic

Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
COMP C-1	140698-005	07/29/99	07/30/99	5.4	0.25	1	49706	EPA 6010B	08/04/99
COMP C-2	140698-010	07/29/99	07/30/99	5.5	0.25	1	49706	EPA 6010B	08/04/99
COMP C-3	140698-015	07/29/99	07/30/99	1.8	0.25	1	49706	EPA 6010B	08/04/99
COMP C-4	140698-020	07/29/99	07/30/99	5.1	0.24	1	49706	EPA 6010B	08/04/99



Curtis & Tompkins, Ltd.

CLIENT: Treadwell & Rollo
 PROJECT ID: 2576.04
 LOCATION: India Basin ShorelinePark
 MATRIX: Soil

DATE REPORTED: 08/04/99

Metals Analytical Report

Lead

Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
COMP C-1	140698-005	07/29/99	07/30/99	220	0.15	1	49706	EPA 6010B	08/04/99
COMP C-2	140698-010	07/29/99	07/30/99	70	0.15	1	49706	EPA 6010B	08/04/99
COMP C-3	140698-015	07/29/99	07/30/99	47	0.15	1	49706	EPA 6010B	08/04/99
COMP C-4	140698-020	07/29/99	07/30/99	190	0.15	1	49706	EPA 6010B	08/04/99



Curtis & Tompkins, Ltd.

CLIENT: Treadwell & Rollo
 PROJECT ID: 2576.04
 LOCATION: India Basin ShorelinePark
 MATRIX: Soil

DATE REPORTED: 08/04/99

Metals Analytical Report

Nickel

Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
COMP C-1	140698-005	07/29/99	07/30/99	79	0.98	1	49706	EPA 6010B	08/04/99
COMP C-2	140698-010	07/29/99	07/30/99	100	1.0	1	49706	EPA 6010B	08/04/99
COMP C-3	140698-015	07/29/99	07/30/99	370	1.0	1	49706	EPA 6010B	08/04/99
COMP C-4	140698-020	07/29/99	07/30/99	380	0.98	1	49706	EPA 6010B	08/04/99



Curtis & Tompkins, Ltd.



Curtis & Tompkins, Ltd.

CLIENT: Treadwell & Rollo
JOB NUMBER: 140698

DATE REPORTED: 08/04/99

**BATCH QC REPORT
PREP BLANK**

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Arsenic	ND	0.25	mg/Kg	1	49706	EPA 6010B	08/04/99
Lead	ND	0.15	mg/Kg	1	49706	EPA 6010B	08/04/99
Nickel	ND	1	mg/Kg	1	49706	EPA 6010B	08/04/99

ND = Not Detected at or above reporting limit



Curtis & Tompkins, Ltd.

CLIENT: Treadwell & Rollo
JOB NUMBER: 140698

DATE REPORTED: 08/04/99

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Arsenic	100	94	96	mg/Kg	94	96	80-120	2	35	49706	EPA 6010B	08/04/99
Lead	25	22.05	22.3	mg/Kg	88	89	80-120	1	35	49706	EPA 6010B	08/04/99
Nickel	25	24.05	23.5	mg/Kg	96	94	80-120	2	35	49706	EPA 6010B	08/04/99



Curtis & Tompkins, Ltd.

CLIENT: Treadwell & Rollo
JOB NUMBER: 140698

DATE REPORTED: 08/04/99

**BATCH QC REPORT
SAMPLE DUPLICATE**

Compound	Sample	Sample Result	Duplicate Result	Units	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Arsenic	140698-005	5.392	5.072	mg/Kg	6	35	49706	EPA 6010B	08/04/99
Lead	140698-005	218.1	223.4	mg/Kg	2	35	49706	EPA 6010B	08/04/99
Nickel	140698-005	79.41	72.25	mg/Kg	9	35	49706	EPA 6010B	08/04/99



Curtis & Tompkins, Ltd.

CLIENT: Treadwell & Rollo
JOB NUMBER: 140698

DATE REPORTED: 08/04/99

BATCH QC REPORT
SAMPLE SPIKE

Compound	Spike Amount	Sample	Sample Result	Spike Result	Units	Percent Rec.	Rec. Limit	QC Batch	Method	Analysis Date
Arsenic	98.04	140698-005	5.392	91.18	mg/Kg	88	65-135	49706	EPA 6010B	08/04/99
Lead	24.51	140698-005	218.1	260.3	mg/Kg	172* NM	65-135	49706	EPA 6010B	08/04/99
Nickel	24.51	140698-005	79.41	123	mg/Kg	178*	65-135	49706	EPA 6010B	08/04/99

* = Out of Limits
NM = Not Meaningful



Willie Lewis Brown, Jr., Mayor
Mark A. Primeau, Architect, AIA, Director



Department of Public Works
Bureau of Construction Management
1680 Mission Street, S.F., CA 94103
P.O. Box 429360
San Francisco, CA 94142-9360
Donald J. Eng, P.E., Bureau Manager

Date: August 26, 1999

To: Marvin Yee, Parks and Recreation
Th: Steve Mullinnix, DPW-BCM/SAR *SMx*
Fr: John Chester, DPW-BCM/SAR *AC*

Proj: India Basin Shoreline Park Phase II
Job Number 1484N

Re: Phase II Soil Sample Results

cc: Martha Ketterer, BOE w/ attach. Pam Hollis, DPH w/o attach.
John Pons, BOE w/o attach. Frank Filice, BOE w/o attach.

I am attaching a copy of Treadwell and Rollo Inc.'s summary letter discussing soil sampling information and analytical results from the India Basin park site.

Project team members reviewed and commented on the data and have agreed to the following construction procedures:

1. The cut material will provide up to 4 feet of fill in the proposed garden and court area.
2. The garden will be of "raised bed" design and constructed using 18 to 24 inches of clean import top soil.
3. During garden construction, a geotextile fabric will be placed at the interface between the onsite fill and the import soil.
4. Fruit trees will not be planted in the park.
5. Leveling or grading will not be performed during grubbing work.
6. Dust control measures will be included in the Contract Specifications for this project.

If anybody has any comments, changes, or additions to the above items please contact me at 554-8378.



City and County of San Francisco
Department of Public Works
Bureau of Engineering
Landscape Architecture

Transmittal

To: *MARTITA JUNO*
PUBLIC HEALTH

Enclosed:

- Letter/Memo
- Other

Plans

Samples

Transmitted as Checked:

- For Information
- For Approval
- For Review and Comment
- Other

- As Requested
- Approved as Submitted
- Approved as Noted

- Return for Correction
- Return to Us
- Resubmit for Approval

Remarks:

THE NAME OF THE BUSINESS AND LOCATION IS
PACIFIC BOAT & SHIP REPAIR
894 INNES AVE.

THE SLAND HEAP IS AT THE VERY BACK END OF
THE PROPERTY. THANK YOU FOR INVESTIGATING
THIS.

Martita Juno

Sherman Horn
Landscape Architect, Section Chief

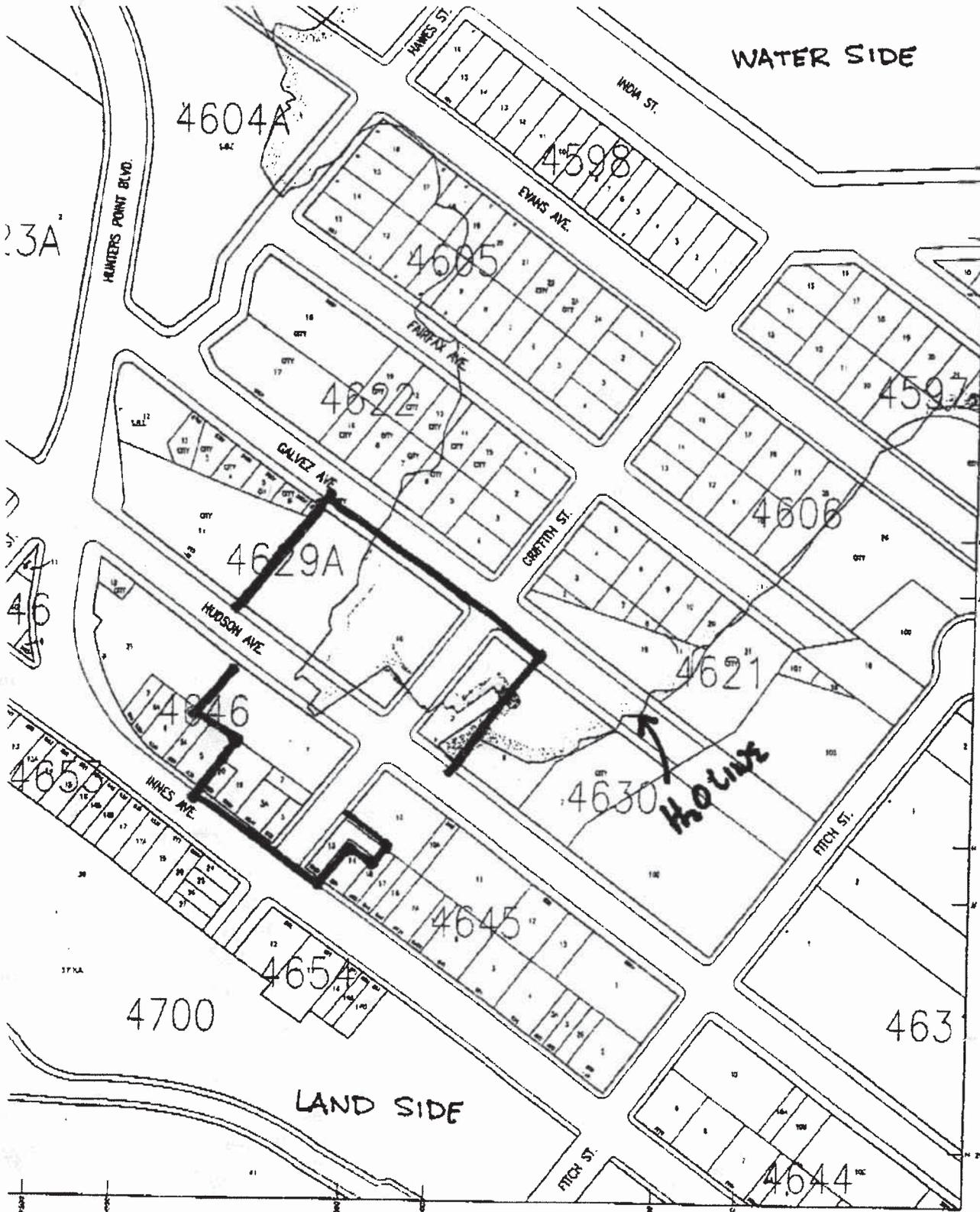
Distribution:

Job
Location
Job Number
Date
Via

(415) 554-8285
554-8296

1680 Mission Street

San Francisco 94109



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 The data is based on the California Cadastral System. Data is
 NOT Warranted. The City & County of San Francisco does not guarantee
 the accuracy of the data. The City & County of San Francisco is not responsible for any
 loss or damage resulting from the use of this data.

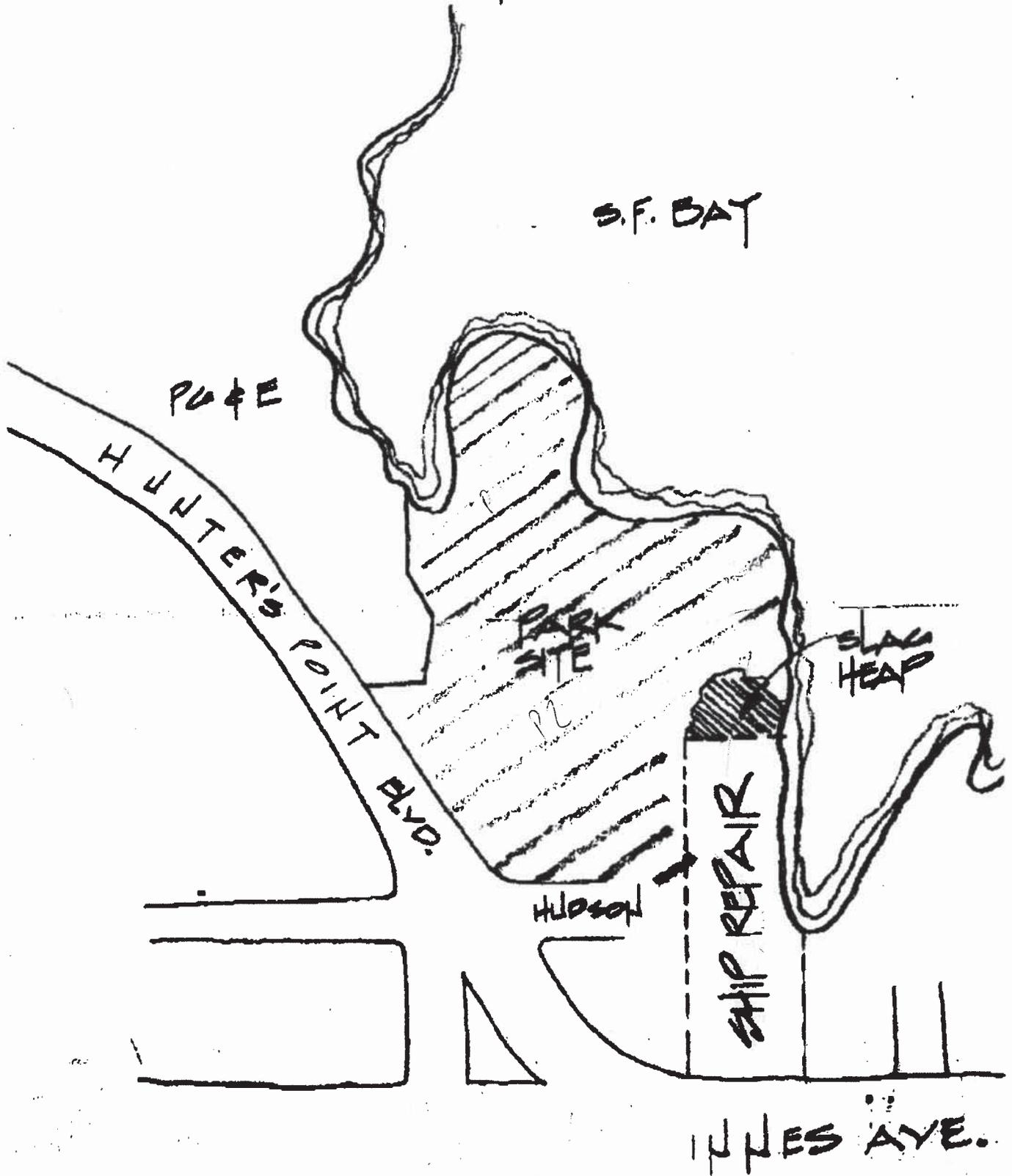


Digital Basemap
 Cadastral / Features Layer

Source
 San Francisco Digital Basemap & GIS Library Project
 Data Provided
 November 13, 1998

0-1

LOCATION MAP



Pacific Ship & Boat Repair
 June 16, 1993
 Page 9

<u>Sample No.</u>	<u>TTLC [Cu]</u>	<u>STLC [Cu]</u>	<u>TTLC [Pb]</u>	<u>STLC [Pb]</u>	<u>Hazard</u>
5E0mj	2,200.0	3.7	10.0	ND	No
5F0mj	1,800.0	3.4	20.0	ND	No
1A12mj	3,700.0	82.0	600.0	36.0	Yes
2B6mj	3,330.0	33.0	490.0	23.0	Yes
3C18mj	4,200.0	120.0	590.0	27.0	Yes
4D24mj	4,000.0	15.0	930.0	52.0	Yes
C0mj	3,700.0	110.0	380.0	24.0	Yes
C6mj	3,500.0	62.0	480.0	21.0	Yes
C12mj	3,700.0	35.0	520.0	19.0	Yes
C24mj	3,200.0	48.0	340.0	15.0	Yes
Z00mj	ND	ND	ND	ND	No
C24mj (Oil/Grease)		260.0 mg/kg			

II. Recommendations

I. Analytical Results

On June 1, 1993, we received the final report of the sample analysis [Attachment G]. Result for pH of Sample No. 3C18mj51293 was not provided. In accordance with Title 22, California Code of Regulations (CCR), Division 4.5, Section 66261.24(a)(2)(A), the Total Threshold Limit Concentrations (TTL C) and the Soluble Threshold Limit Concentration (STL C) values for Inorganic Persistent and Bioaccumulative Substances are provided. The following table lists the TTL C and STL C values for Copper and Lead. Hazardous levels for these two compounds were prevalent in the samples.

<u>Compound</u>	<u>TTL C</u> (ppm)	<u>STL C</u> (ppm)
Copper [Cu]	2,500.0	25.0
Lead [Pb]	1,000.0	5.0

The following information is a summary of the analytical results for the samples analyzed by Curtis and Tompkins, Ltd. The other inorganic compounds were not listed because they did not exceed TTL C and STL C levels. All results are provided in units defined as parts per million (ppm). Italicized numbers indicate hazardous levels.



NORTH (approx.)
HAWES STR

Pks & Rec site
(JOB 274)

Pb 80 my/kg
A-1

A-2

Pb 90 my/kg
A-3

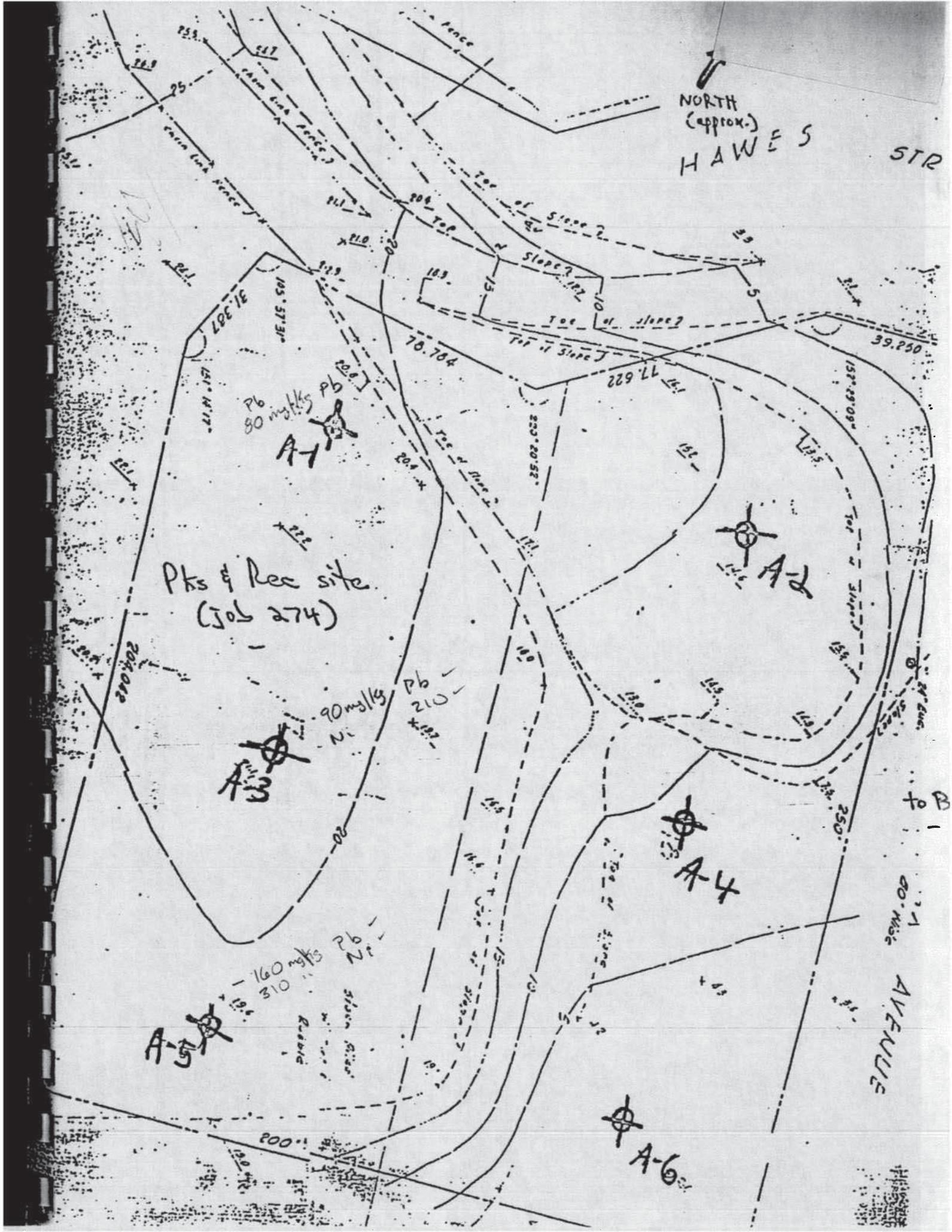
Pb 210
A-4

A-4

Pb 160 my/kg
A-5

A-6

to B
80' WIDE
AVENUE



Wetland Site (Phase 2):

Per meetings with RWQCB staff the problem of old gw data indicating gw concentrations are significantly higher than the SF Bay Water Quality Objectives needs to be addressed prior to moving forward.

Must confirm Pb and Ni concentrations in area where previously detected, and if high levels are substantiated with the new data, then need to determine 1) background concentrations via Navy data and 2) determine whether there is any attenuation occurring between detected high levels and Bay.

A sample plan outline (based on RWQCB staff input), cost proposal for performing the work has been presented to PMs.

Will meet 3/22/99 to discuss next steps.

Hawes Ave Site (Phase 1):

1987 ERM 'India Basin East' report indicates 3 of 6 samples were analyzed and collected somewhere in the vicinity of proposed new upland park development (A1, A3, A5 = metals analysis). Old data indicate elevated lead and nickel detected in composite samples A1, A3, A5 (elevated for disposal purposes, if soil to be excavated and off-hauled, receiving landfill likely to request soil data.) Organic data does not appear to be an issue based on old 1987 data.

[CDM Ben Swann: do you have the C&O Report for India Basin]

PES Environmental Review: [JC does not have the C&O Report] -

1. **Galvez Parcel:** ERM West reports elevated Pb and Ni, see above.
2. **McGarvey Parcel:** C&O Report: 5 of 12 samples indicate hazmaterials, PES believes hazard to be overstated:
 - a. Nickel: Source is background naturally occurring Serpentinite
 - b. Lead: for in place management not a problem [off site disposal may require additional analysis]
 - c. High pH (8.4 to 11) lessens the potential for metals migration. (Not an acid soil matrix, basic soil matrix).
 - d. PNAs and TOG > 1,000 ppm source to be asphalt.
3. **Stone Parcel:** C&O Report: 5 of 10 samples contained hazmaterials, PES believes the hazard to be overstated. [JC believes that to manage the soil in place one must get the proper approval from the local DPH and other agencies (RQCB)] C&O may be correct in identifying hazmaterials if soil were to be hauled to offsite disposal facility.
 - a. Nickel: Source is serpentinite
 - b. Lead: 1490 mg/kg in one sample, other samples range 8 to 52. One high level is an isolated occurrence. [Need regulator buy-in on this, what does DPH think?]
 - c. Organics: PNAs likely to be asphalt; chlorinateds are likely lab contaminants.
 - d. PH: high due to presence of concrete.
4. **Kosewic Parcel:** Slag pile at Galvez Avenue ROW sampling and several boreholes.
 - a. PCBs: not detected in borings. Slag pile at 0.89 mg/kg, reported below action levels.
 - b. PH at 7 to 10, likely from concrete.
 - c. PNAs at less than 1 mg/kg, likely from asphalt and therefore not available to migrate to pathways.
 - d. VOCs not detected

3/21/99

Negative Declaration

The neg dec discusses the two sites 1) The Park Site (P1) and 2) Open Space Site (P2). Neg Dec comments on P2 are brief given that at the time P2 was conceptual, no discussion or evaluation of wetlands as part of P2 was performed.

SFDPH reviewed the C&O reports and noted elevated concentrations in one or more of the parcels. DPH "generally agreed" with the PES reports stating that further work is needed for the Galvez Street right-of-way (slag heap) and the Stone Parcel (adjacent to Big J).

Park Plan in areas other than Galvez and Stone Areas:

DPH concurrence w/ PES is conditioned on designing remaining as they were then proposed and understood by DPH. Q: Is the P1 plan the same as when DPH reviewed? DPH understood that:

- Little or no excavation, except as needed to grade and create vehicle access.
- Landscape requires minimal maintenance, low water usage.
- Minimal tree planting e.g. shallow root system.

GRADE AREA
- INSTALL ASPHALT PATH

Galvez slag heap, no work in this area pending:

- Slag removal.
- Confirmatory Sampling.
- Certification Report

Stone Parcel Oily Soil, no work in this area pending:

- Soil Removal.
- Confirmatory Sampling
- Certification Report

RWQCB involvement at P1 was in regards to storm-water run-off to bay. The question of P1 groundwater impacting Bay waters has not been evaluated.

Mitigation Measures:

1. Neg Dec did not evaluate project for wetland at P2 Open Space Site
2. Prior to including Galvez and Stone Parcels into P1 plan, need certification that metals and oil pose no threats to human health and the environment. (... removed and handled by a professional).
3. Perform survey to ensure that oily soil of Stone parcel is not part of Park Plan (P1).
4. Include in any plans and specs 1) dust control 2) stockpile methods 3) health and safety plan id of hazards and proper PPE by workers.

JC needs:

- Map of Galvez and Stone areas in relation to (P1) Park Plan.
- Determination by RWQCB staff that gw impacts to Bay are/are not a P1 issue.
- Determine whether P2 wetland requires neg dec determination (w/out then there will be a failure to fully disclose to public and allow for comment).
- Does P1 plan require off site disposal of soils and if so how much ? and from where ?

Will the P2 wetlands creation fall w/in jurisdiction of "discharge of dredged sediment in the non-aquatic environment? Beneficial reuse of dredged material during wetland creation for upland disposal.



ANALYSIS PERFORMED

PCB 8080
 8240
 8270
 CAM 17 METALS
 SULFIDE
 FLASH POINT
 CYANIDE
 503-E
 COMPOSITE WITH

SAMPLE	LOCATION	DEPTH D.F.S.B.	CONTAMINANT IDENTIFIED											
			PCB 8080	8240	8270	CAM 17 METALS	SULFIDE	FLASH POINT	CYANIDE	503-E	COMPOSITE WITH			
S-1	BH-1	1'	X	X	X	X	X	X	X	X	X			TOTAL OIL & GREASE 3,000 PPM
S-2	BH-1	5'										S-1		
S-3	BH-1	10'										S-1		
S-4	BH-1	20'										S-1		
S-5	BH-2	1'	X	X	X	X	X	X	X	X	X			^{low} BENZALDEHYDE 1.3 PPM; TOTAL OIL & GREASE 4,400 PPM
S-6	BH-2	5'										S-5		
S-7	BH-2	10'										S-5		
S-8	BH-2	20'										S-5		
S-19	BH-2	30'										S-5		
S-9	BH-5	1'	X	X	X	X	X	X	X	X	X			^{low} BUTYLBENZYLPHTHALATE 14 PPM; BIS(2-ETHYLHEXYL) PHTHALATE
S-10	BH-5	5'										S-9		2.9 PPM: TOTAL OIL & GREASE 610 PPM
S-11	BH-5	10'										S-9		BUTYL-2-METHYLPROPYLPHTHALATE 13 PPB, BUTYL-2-METHYLPROPYLPHTHALATE 100PPB
S-20	BH-5	18'										S-9		NICKEL 441 PPM, TRICHLOROETHENE-19 PPB, TETRACHLOROETHENE 29 PPB
S-12	BH-6	1'	X	X	X	X	X	X	X	X	X			^{low} NAPHTHALENE 630 PPB; PYRENE 390 PPB
S-13	BH-6	5'										S-12		TOTAL OIL & GREASE 650 PPM
S-14	BH-6	10'										S-12		
S-15	BH-6	20'										S-12		
S-21	BH-6	30'										S-12		

— STONE PROP —



ANALYSIS PERFORMED

PCB 8080
 8240
 8270
 CAM 17 METALS
 SULFIDE
 FLASH POINT
 503-E
 CYANIDE
 COMPOSITE
 MTH

SAMPLE	LOCATION	DEPTH b.f.s.	PCB 8080	8240	8270	CAM 17 METALS	SULFIDE	FLASH POINT	503-E	COMPOSITE MTH	CONTAMINANT IDENTIFIED
S-16	BH-7	1'	X	X	X	X	X	X	X		TOTAL OIL & GREASE 770 PPM ACETONE 26PPB
S-17	BH-7	5'							S-16		
S-18	BH-7	10'							S-16		
S-22	BH-7	20'							S-16		
S-23	BH-7	28'							S-16		
S-32	BH-8	1'	X	X	X	X	X	X			TOTAL OIL & GREASE 1,600 PPM: PHENANTHRENE 410 PPB
S-33	BH-8	5'							S-32		FLOURANTHENE 610 PPB, PYRENE 730 PPB, BENZO (A)ANTH-
S-34	BH-8	10'							S-32		RACENE 370 PPB, CHRYSENE 460 PPB, BENZO (B)FLUORANTH-
S-35	BH-8	20'							S-32		ENE 450, BENZO (K)FLUORANTHENE 410 PPB
S-36	BH-8	30'							S-32		BENZO (A)PYRENE 660 PPB
S-27	BH-9	1'	X	X	X	X	X	X			TOTAL OIL & GREASE 4,000 PPM, NICKEL 484 PPM
S-28	BH-9	5'							S-27		LEAD 1490 PPM, TRICHLOROETHENE 8 PPB
S-29	BH-9	10'							S-27		PHENANTHRENE 620 PPB, FLUORANTHENE 640 PPB
S-30	BH-9	20'							S-27		PYRENE 750 PPB, BENZO (A)ANTHRACENE 380 PPB
S-31	BH-9	30'							S-27		CHRYSENE 500 PPB, BENZO (B)FLUORANTHENE 400 PPB, BENZO (K)FLUORANTHENE 460 PPB, BENZO (A)PYRENE 730



CROSBY & OVERTON, INC.
 Environmental Management
 8430 Amella Street
 Oakland, California 94621
 FAX (415) 633-0759
 (415) 633-0336 • (800) 821-0424

ANALYSIS PERFORMED

PCB 8080
 8240
 8270
 CAM 17 METALS
 SUKIDE
 FLASH POINT
 CYANIDE
 503-E
 COMPOSITE
 MTH

SAMPLE	LOCATION	DEPTH D.G.B.	PCB 8080	8240	8270	CAM 17 METALS	SUKIDE	FLASH POINT	CYANIDE	503-E	COMPOSITE MTH	CONTAMINANT IDENTIFIED
S-24	BH-10	1'	X	X	X	X	X	X	X			TOTAL OIL & GREASE 390 PPM: NICKEL 285 PPM
S-25	BH-10	5'								S-24		ACETONE 23 PPB
S-26	BH-10	10'								S-24		FLASHPOINT 20°C
S-37	BH-11	1'	X	X	X	X	X	X	X			TOTAL OIL & GREASE 470 PPM
S-38	BH-11	5'								S-37		CIS-1, 2 DICHLOROETHENE 57 PPB, TRICHLOROETHENE 150 PPB
S-39	BH-11	10'								S-37		TETRACHLOROETHENE 270 PPB
S-40	BH-11	20'								S-37		
S-41	BH-11	30'								S-37		
S-42	BH-12	1'	X	X	X	X	X	X	X			HEXANE 50 PPB. TOTAL OIL & GREASE 2,900 PPM
S-43	BH-12	5'								S-42		ACETONE 23 PPB TETRACHLOROETHENE 5 PPB
S-44	BH-12	10'								S-42		
S-45	BH-12	20'								S-42		
S-46	BH-12	30'								S-42		

22 July 1999
Project 2576.04

City and County of San Francisco Department of Public Works
Bureau of Construction Management
Site Assessment and Remediation Division
Attn: John T. Chester
1680 Mission Street, 1st Floor
San Francisco, California 94103

Subject: India Basin Shoreline Park Soil Sampling Proposal
San Francisco, California

Dear Mr. Chester,

Treadwell & Rollo, Inc. is pleased to present this proposal to assist the San Francisco Department of Public Works (SFDPW) to collect and analyze soil composite samples for arsenic, lead, and nickel analysis at the subject site. The sampling is being conducted to characterize soil in areas that will be cut and filled as part of park improvements. Our proposal is based on telephone conversations with you on 20 July 1999, an India Basin Shoreline Phase II Drawing indicating cut and fill areas, and a site visit with you on 21 July 1999.

We propose to perform the following tasks to collect the five composite soil samples for total arsenic, lead, and nickel analysis:

- Prepare and submit *Application For Soil Borings* with filing fee to the San Francisco Department of Public Health (SFDPH),
- Contact Underground Service Alert (USA) for utility location;
- Advance and grout 17 shallow borings and note lithology;
- Collect five composite soil samples for laboratory analysis of total arsenic, lead, and nickel; and
- Submit laboratory report and field observations to SFDPW.

These services are described on a task basis in the following paragraphs.

Task 1 – Soil Boring Permit Application and Mobilization

Treadwell & Rollo will prepare an *Application for Soil Borings* and submit it along with the required filing fee to the San Francisco Department of Public Health (SFDPH). We will prepare a site-specific Health & Safety plan, mobilize field sampling equipment, visit the site to mark the boring locations with white paint, and contact USA for utility

John T. Chester
CCSFDPW
22 July 1999
Page 2

location. Precision Sampling Inc. (Precision) will mobilize a direct-push rig suitable for work at the site.

Task 2 - Sample Collection and Analysis

We will coordinate with the SFDPH for borehole grout inspection. Precision will advance 17 borings to depths of approximately 2 to 8 feet as outlined in Table 1 and shown on the attached figure. Soil will be collected for compositing as indicated in Table 1 and soil types will be noted. The borehole locations will be staked, painted, and noted ~~on site plan~~. Borings will be grouted from the bottom up with a cement-bentonite grout. Precision will steam clean all sampling equipment between boring locations.

ARCHIVE ALIQUOTS

The five composite samples will be submitted for total arsenic, lead, and nickel analysis using EPA Method 6010/7000 on a 3 to 4 day turn-around-time. The Area D or fill area soil will initially be held for analysis pending results for cut area samples (Areas A through C). If the cut area sample results (Areas A through C, samples C-1 through C-4) are below levels of concern, the fill area (Area D) sample (C-5) will not be analyzed.

Task 3 - Data Evaluation and Deliverable

Treadwell & Rollo will prepare a letter summarizing the sampling results and including the final analytical laboratory report and field observations for submittal to SFDPW within 2 weeks of sample collection. Draft analytical results will be transmitted, as they become available.

Estimated Cost

Task 1 - Soil Boring Permit Application and Mobilization		\$1,400
Labor		
Staff Geologist	\$160	
Project Manager	\$230	
Permit Fees	\$1,010	
Task 2 - Sample Collection and Analysis		\$2,840
Labor		
Staff Geologist	\$800	
Project Manager	\$230	
Sampling Equipment	\$240	
Precision Sampling	\$1,440	
Analytical Laboratory	\$130	

John T. Chester
CCSFDPW
22 July 1999
Page 3

Task 3 – Data Evaluation and Deliverable		\$ 230
Labor		
Project Manager/ Senior Hydrogeologist	\$230	
Estimated Total		\$4,500

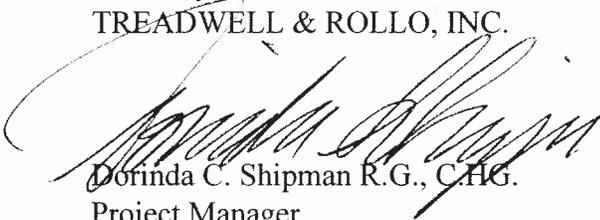
Treadwell & Rollo anticipates completing the soil sampling and analysis for a total of \$4,500 in accordance with our existing as-needed services contract with SFDPW. The total amount will not exceed \$4,500 unless the scope-of-work changes and not without your prior authorization.

SCHEDULE

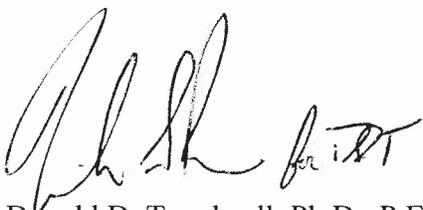
The drilling and sample collection is currently scheduled for 29 July 1999.

We appreciate the opportunity to present this proposal. If you have any questions, please call Dorinda C. Shipman at 415-955-9040.

Sincerely,
TREADWELL & ROLLO, INC.



Dorinda C. Shipman R.G., C.H.G.
Project Manager



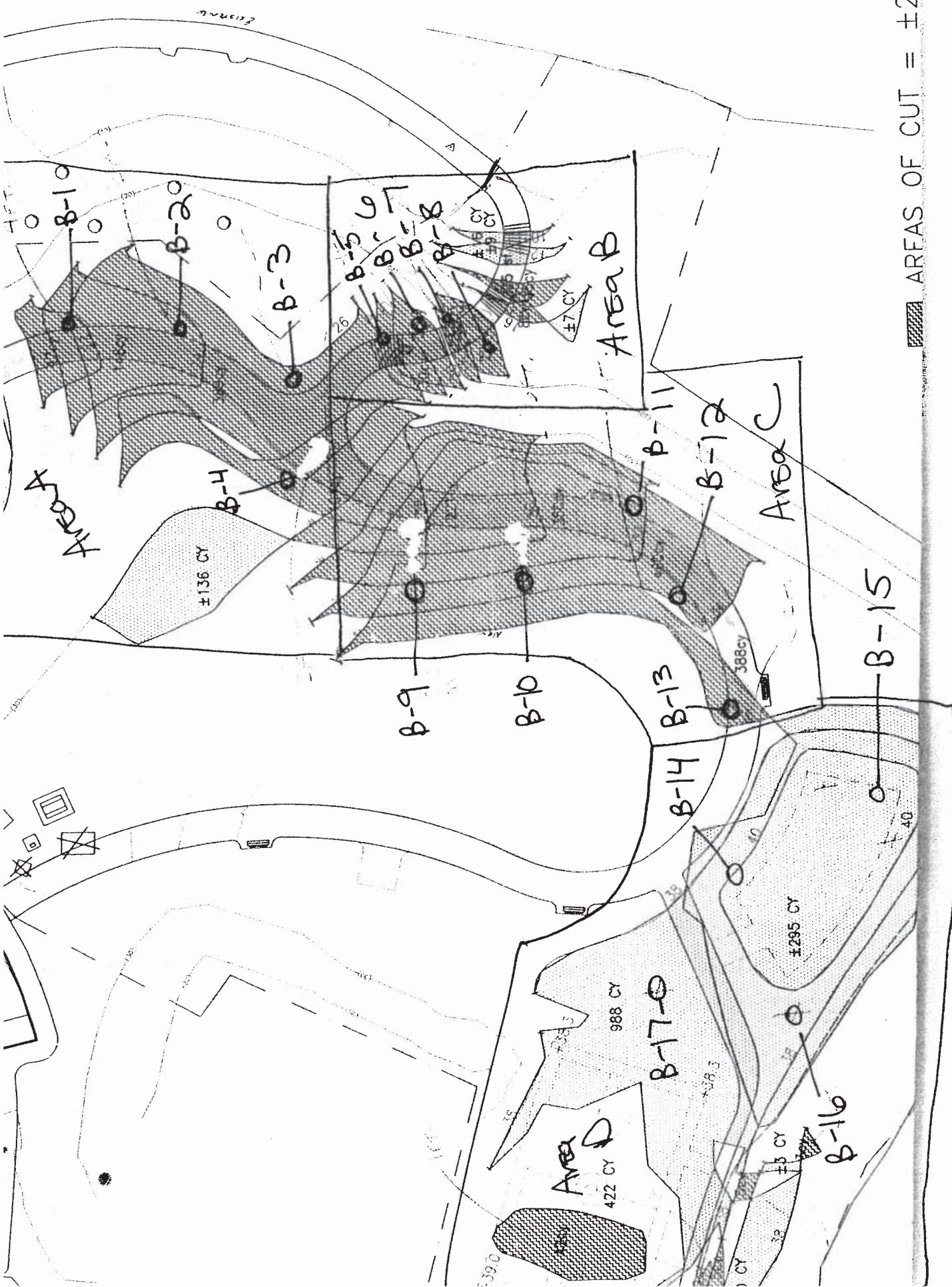
Donald D. Treadwell, Ph.D., P.E., G.E.
Principal

Attachments

John T. Chester
 CCSFDPW
 22 July 1999
 Page 4

Table 1
Sample Collection Summary

Area	Borings	No. of Samples for Compositing and Depths	Composite Samples
Area A Southern Path from Parking Lot	4 total B-1 B-2 B-3 B-4	4 total 4 feet 2 feet 2 feet 2 feet	C-1 Composite of 3 samples collected from 2 feet and 1 from 4 feet
Area B Future Stairway	4 total B-5 B-6 B-7 B-8	4 total 4 feet 2 feet 2 feet 2 feet	C-2 Composite of 3 samples collected from 2 feet and 1 from 4 feet
Area C Path to Future Basketball Court	5 total B-9 B-10 B-11 B-12 B-13	8 total 4 and 8 feet 2 and 6 feet 2 and 4 feet 2 feet 2 feet	C-3 Composite of 2 samples collected from 4 feet, 1 from 6 feet, and 1 from 8 feet C-4 Composite of 4 samples collected from 2 feet
Area D Fill Area	4 total B-14 B-15 B-16 B-17	4 total 2 feet 2 feet 2 feet 2 feet	C-5 Composite of 4 samples collected from 2 feet



AREA OF CUT = ±2400

NEGATIVE DECLARATION

Date of Publication of

Preliminary Negative Declaration: July 16, 1993

Lead Agency: City and County of San Francisco, Department of City Planning
450 McAllister Street, 5th Floor, CA 94102

Agency Contact Person: Jim McCormick

Telephone: (415) 558-6394

Project Title: 92.503E:

India Basin Shoreline Park

Project Sponsor: Recreation and Park Department
and Open Space

Project Contact Person: Deborah Learner

Project Address: Hunters Point Boulevard at Galvez St.

Assessor's Block(s) and Lot(s): 4598/5,16, 4605/6,7,9-20,22,23, 4622/6-8, 12-19, 4629A/3-6,9,11,13.

City and County: San Francisco

Establish a shoreline park at India Basin with two segments on either side of the India Basin Channel. One segment would consist of a shoreline park which would include a picnic area, pedestrian paths, half-court basketball court, fishing pier and small boat launching ramp. The other segment would consist of an open space area with landscaping and a shoreline trail with benches.

Building Permit Application Number, if Applicable: N/A, State Clearinghouse # 93071082

THIS PROJECT COULD NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT. This finding is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15064 (Determining Significant Effect), 15065 (Mandatory Findings of Significance) and 15070 (Decision to Prepare a Negative Declaration), and the following reasons as documented in the Initial Evaluation (Initial Study) for the project, which is attached:

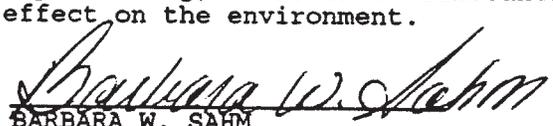
-Over-

Mitigation measures, if any, included in this project to avoid potentially significant effects:

Final Negative Declaration adopted and issued
on August 23, 1993

In the independent judgement of the Department of City Planning, there is no substantial evidence that the project could have a significant effect on the environment.

cc: Robert Passmore
Monica Jacobs
Distribution List
Deborah Learner, (Recreation and Parks)
Martha Ketterer (DPW)
Kent Watson
Pam Hollis, DPH
Richard Lee, DPH
Bulletin Board
Master Decision File


BARBARA W. SAHM
Environmental Review Officer

The proposed project is the creation of a shoreline park at India Basin and improvements to a public open space area south of the park site. Development of the site for park use would include grading and landscaping, addition of earth and gravel paths, picnic tables, benches, a service vehicle-turn around, rock retaining walls, addition of rip-rap for shoreline protection, a half-court basketball court, small boat launching ramp, and a dock and fishing pier (see Figure 1). It is expected that two portable toilets would be installed. No decision has been made as to whether fountains or other drinking water sources would be available. There would be approximately 45 parking spaces provided. These would be located on the southern boundary of the site along an extension of currently unimproved Hudson Avenue and along the road that accesses the boat launch.

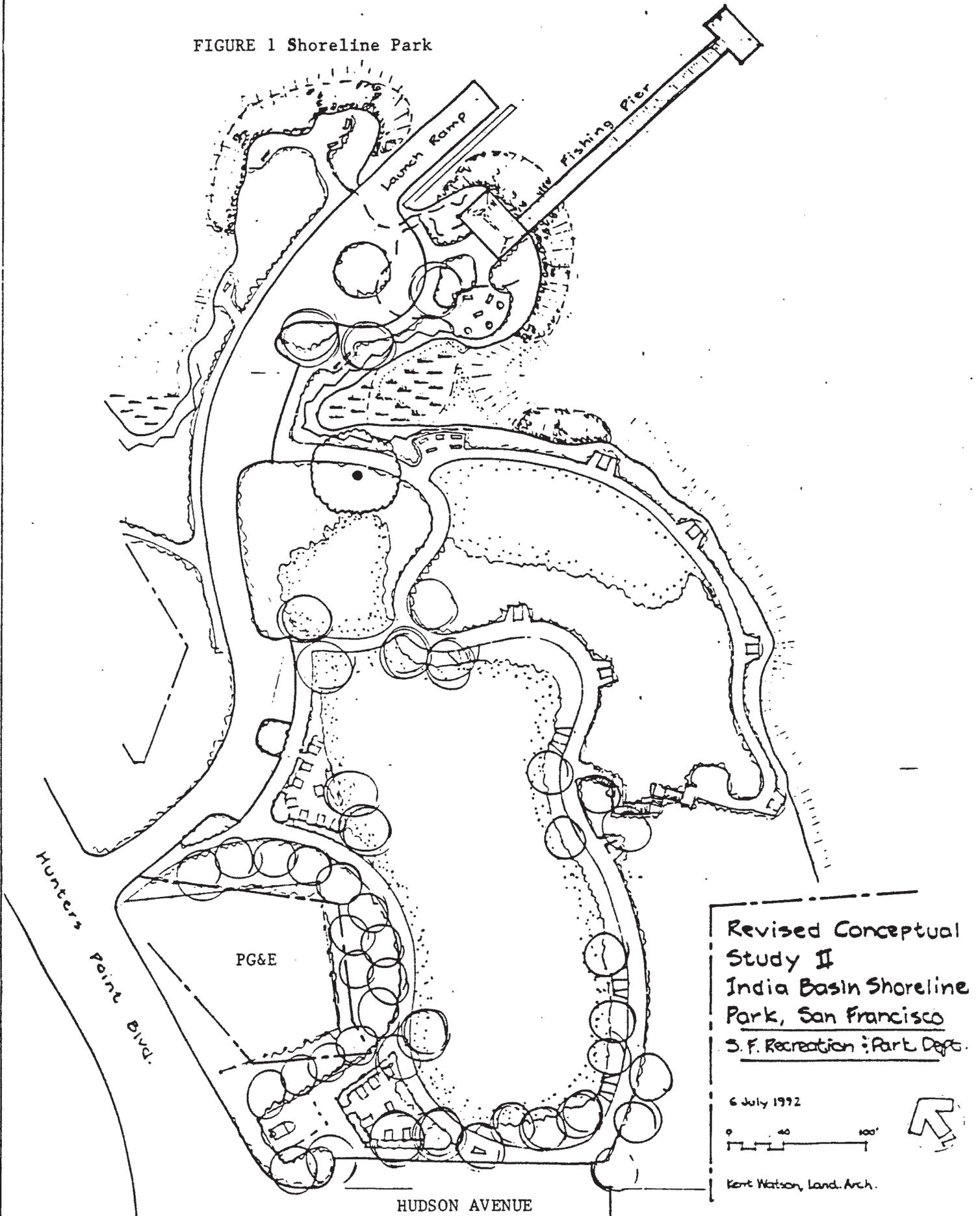
The park site occupies an irregularly shaped 6.9 acre area between Hunters Point Boulevard and the San Francisco Bay. The site lies within M-1 (Light Industrial) and M-2 (Heavy Industrial) zoning districts. Public park uses are principal permitted uses in these districts. The unimproved rights-of-way for Evans and Hudson Avenues, under the Department of Public Works jurisdiction, form the north and south boundaries of the park site, respectively. Access to the site would be via a currently unimproved extension of Galvez Avenue east from Hunters Point Boulevard. Hunters Point Boulevard in the project vicinity is a four lane avenue with free-flowing traffic and low traffic volumes. The open space site would receive limited improvements. The open space site would occupy a 4.5 acre area south of the park site, across India Basin Channel. Plans for the open space site are conceptual at this time. Generally, they would consist of plantings of new native vegetation and development of a pathway and bench seating areas. This area would consist of a relatively narrow 100-200 foot band of open space following the bay for approximately 2,000 feet. (See Figure 2)

The project would require approvals from several public agencies. Because the project would involve activities within 100 feet of the highest tidal action of the San Francisco Bay and would include placing of riprap along the shoreline, as described below, a permit would be required from the Bay Conservation and Development Commission (BCDCD) and from the Corp of Engineers. The project would also need approval of the San Francisco Port Commission because it lies partly within Port Commission jurisdiction. A building permit would be required from the Bureau of Building Inspection (BBI) for the proposed grading and road and pathways construction.

The park site slopes downward to the east towards the Bay. Site elevations range from approximately 45 feet down to sea level. The site consists of sandy and rocky beach at the shoreline, some open dirt surface, and areas of voluntary grass and vegetation. There is a small peninsula shaped portion of the site extending into the bay which would be the location of the boat launch. Adjacent to each side of this peninsula is a small tidal marsh. There is various kinds of debris present on the site, although not in large amounts. There are discarded construction materials, including concrete and asphalt, assorted metallic debris, paper trash and some tires lying about the site. Squatters had been present on the site in the past but they have been evicted over the last three years. The open space site is a level area following the shoreline, similar in character to the park site.

The surrounding area includes the PG&E Hunters Point Power Plant immediately north of the project site, commercial and light industrial uses to the south, including two active boat repair facilities, and apartment buildings located to the west of the site. The apartment buildings are located on top of a hill across Hunters Point Boulevard and separated from the roadway by several hundred feet of undeveloped grassy hillside. The westerly edge of the site is bordered by a PG&E power line that lies within a 135 foot-wide right of way. Creation of the park would create a visual and recreational amenity for surrounding residents and visitors. It would improve the visual appearance of the site by changing a vacant undeveloped site with some exposed soil and scattered debris to a landscaped public park. The park would not have

FIGURE 1 Shoreline Park



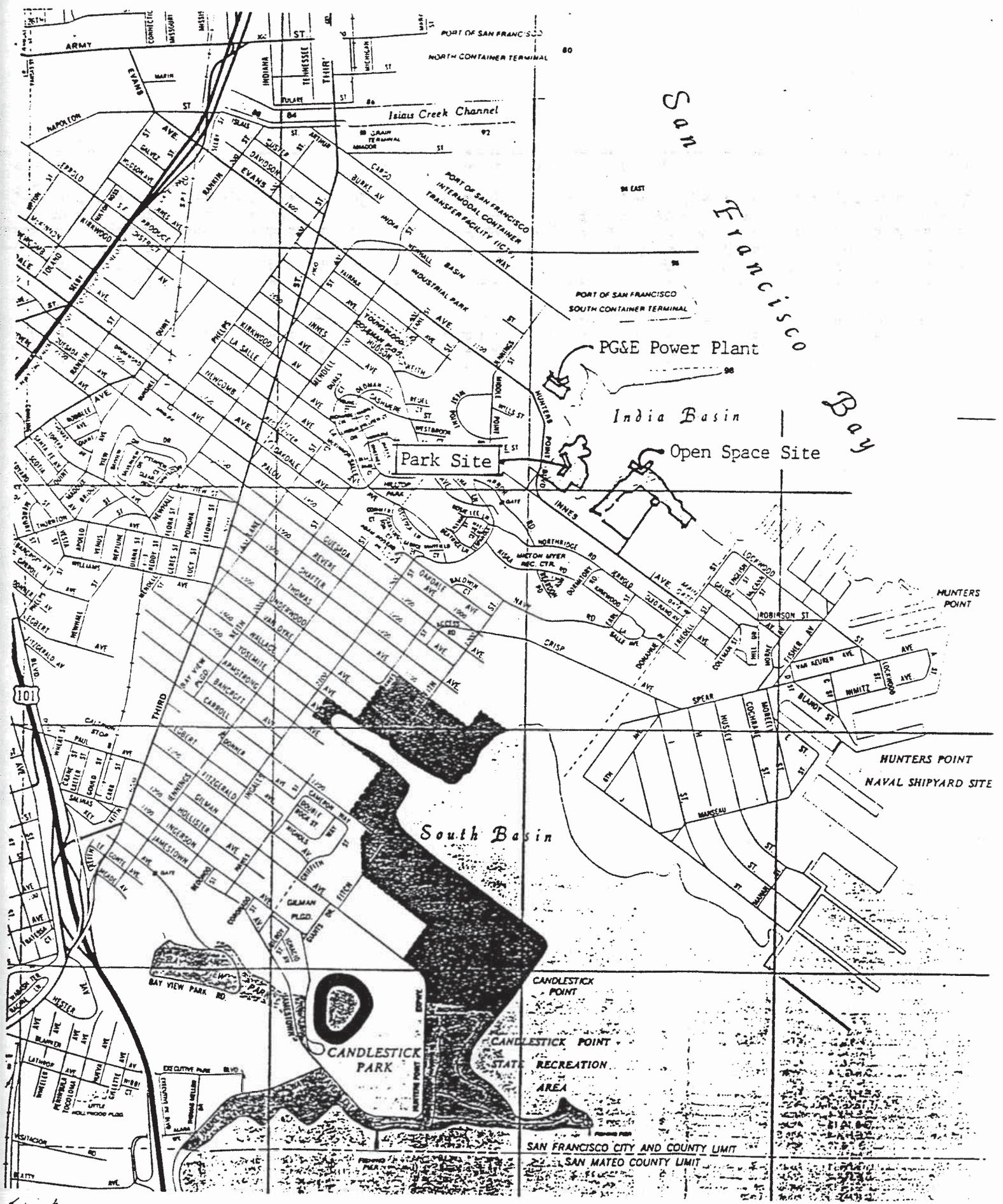


Figure 2: VICINITY MAP

INDIA BASIN SHORELINE PARK. S.F.

lighting and thus would not generate any adverse light or glare effects on neighboring properties.

In order to estimate the likely level of transportation activity at the site, observations were made of comparable sites in the San Francisco area. As stated above, the project would include a boat-launch area. The site would have no other support facilities for boating uses, such as a marina. The boat launching area would be accessed by a single lane ramp at the end of a 540 foot long two-lane road with an approximate 11% grade. The site plan has been designed to accommodate only small car-top boats or lightweight trailers that could be easily maneuvered by hand and parked in a typical head-in parking space. No parking is provided to accommodate larger boats that require approximate double-length parking spaces. Nor could such vehicles easily maneuver on the roadway as proposed. Consequently, it is assumed that owners of full-sized boats would not utilize this facility.

It is not expected that the proposed project would generate a high level of overall activity or traffic and parking demand. The highest concentration of recreational activities that would occur at the site would likely take place on weekends, holidays and other periods such as early evenings that do not coincide with peak commute travel. A boat launch facility at Pier 52 at China Basin, similar to the proposed project, was examined to estimate the likely level of activity and traffic impacts that would be generated by the project. On a clear weekend day there were six vehicles parked at the China Basin site.¹

The picnic and basketball areas would also draw users to the proposed facility. The basketball court would be expected to draw users from the immediate neighborhood. Many users could be expected to walk to the site. Given that the basketball facility would consist solely of an outdoor half-court play area, the number of users of the basketball court at any one time would be small.

There would be 10 separate or individual picnic tables spread throughout the site and two group picnic areas with approximately 8 tables each located near the basketball court in the southwest corner of the site. Use of the picnic areas also would occur at non-peak hours. Additionally, vehicle travel to and from the picnic facilities would not be likely to arrive in a concentrated peak but rather spread over generalized arrival and departure periods for several hours in the morning and afternoon. As stated, Hunters Point Boulevard has free-flowing traffic at the project vicinity. Use of the project site for the proposed park uses would not substantially affect traffic levels or level of service on Hunters Point Boulevard.

As mentioned, there would be approximately 45 parking spaces on the site. This would be likely to accommodate demand at the site for most time periods. Should there be maximum utilization of all available uses at one time, excess parking demand, if any, could be accommodated on-street along Hunters Point Boulevard.

The project is not located near any sensitive noise receptors. As discussed, there is a PG&E power plant located immediately north of the site and active small-scale boat repair facilities located to the south. The nearest housing to the site is several hundred feet to the west across Hunters Point Boulevard. The three principal activities at the site, picnicking, basketball and boating would not generate sustained high noise levels. The park will not be lighted and thus there would be no activity in the nighttime hours.

¹ Letter from Kent Watson to Jim McCormick, Department of City Planning, February 8, 1993, available in the case file.

Existing noise levels could impact the park to some extent. Noise from the power plant and boat repair facilities would be audible in the park. However, field visits to the site during the day indicate that the noise levels at the site would not be obtrusive. Ordinary conversations can be conducted at the site with no interference from these noise sources. They would be experienced as distant background sound that would not interfere with ordinary park activities.

An analysis of potential impacts on biologic resources at the site was conducted by a biologic consultant, Michael Marangio.² This analysis found that most of the site was originally part of the San Francisco Bay and was formed by deposits of fill. The original terrestrial habitat on the western uphill portions of the site was likely to have been Coastal Salt Marsh or mud flats. The site consists primarily of previously disturbed areas as a result of the introduction of fill and the invasion of non-native weedy plant species. There are a variety of plant and animal species present at the site. However, because of the disturbed nature of the site, no special status plant or animal species would be expected and none were observed at the site.

There are two small Coastal Salt Marsh areas on each side of the peninsula that would be the location of the boat launch. If improperly designed, the project could adversely impact these areas. Alternatively, the project could conserve and enhance the marsh habitat through protective design and appropriate landscaping. Recommendations to enhance the marsh habitat were included in the Marangio study. Additional comments and recommendations on the Recreation and Park proposal, particularly regarding protection of the salt marshes, were submitted by the Save the San Francisco Bay Foundation.³ Generally, the recommendations in both documents consist of steps to minimize disruption of the marsh habitat during park development, and augmentation of the marsh through proper landscaping including planting of appropriate coastal marsh plant species. Specific proposals include: fencing areas to be protected during clean up of debris on the site, fencing and implementation of other erosion control measures during grading and construction, elimination of invasive non-native plant species, buffering/separation of the marsh areas from areas of human activity by physical separations such as small bushes and/or distance separating designated areas of activity, e.g. paths and boat launch from the marshes. The sponsor has agreed to fence and mark marsh areas during construction and debris removal activities. The project design has established separation of human activity from the marsh area and minimized paved surfaces to enhance and protect the natural areas on-site. In addition the sponsor has agreed to develop a landscaping plan to further enhance the long-term protection and growth of the natural habitat and to minimize erosion and siltation into San Francisco Bay. (See Mitigation Measure 1.)

The PG&E power plant north of the project site has a 115 kV power line serving the facility which is located immediately adjacent to the park boundary. (See Figure 1). This power line transitions from above ground to below ground next to the area currently designated as the basketball court. The transition site is fenced for security and safety reasons. Heavy equipment access to this site is needed on occasion. The project sponsor would need to insure continued access for this purpose. Additionally, PG&E has requested that

² Michael S. Marangio, Biological Consulting Services, Letter of May 29, 1992 to Kent Watson, available in the case file.

³ Comments from the Save the Bay Foundation are contained in three documents, India Basin Project, Initial Comments, June 2, 1992, Prepared by Robert M. Lucas; Letter of July 2, 1992 from Robert Lucas to Phil Arnold, Recreation and Park Department, Letter of October 8, 1992 to Jim McCormick of the Department of City Planning.

plantings around the power line transition site be low to maintain safe clearance with the power lines and allow for visual inspections of the security fencing surrounding the transition site. The sponsor has agreed to include measures to comply with this request. (See mitigation measure 1).

Flows of electricity generate electro-magnetic fields (EMF). Therefore, electrical equipment, such as the transmission line adjacent to the project site, generate EMFs. The San Francisco Department of Public Health (SFDPH) has taken measurements of magnetic fields at the project site in response to neighborhood concerns expressed previously about potential expansion of the PG&E Hunter's Point power plant.⁴ Measurements at the site are in the 5-10 milligauss range which is higher than anticipated background levels which would be expected to have a reading in the 0-2 milligauss range. It should be noted that all electrical equipment while in operation generates EMFs. Thus, all household appliances generate EMFs. Further, EMFs diminish rapidly with distance from the source. For example, a clothes dryer at four inches generates approximately 5 to 110 milligauss, from 1.5 to 29 milligauss at one foot and less than 0.1 to 1 milligauss at three feet. Comparable figures for a television are 5 to 100 milligauss at four inches, 0.4 to 20 milligauss at one foot and less than 0.1 to 1.5 milligauss at three feet.⁵

A number of scientific studies have been conducted recently to determine if there is a correlation between EMFs and adverse health effects, notably cancer rates. Some of the studies suggest that a correlation exists. Other similar studies have failed to establish a correlation. The potential for a link between EMFs and adverse health effects is generating additional scientific research on the issue. Studies thus far have not established a causal link between EMFs and cancer or other adverse health effects. Therefore, there has been no scientific basis to establish Federal, State or local standards regarding exposure levels to EMFs. While it is not known with certainty at this time if there is any health risk associated with location of human activity near electrical equipment or power sources, the apparent statistical link between exposure and occurrences of illness identified in some of these studies suggests that caution should be exercised when dealing with human exposure to EMFs. It is important to note that park users would not spend large amounts of time in the presence of EMFs at this location as compared to time spent at home or in the workplace when EMFs are present. There is no basis at this time for determining if exposure to EMFs would or would not constitute a potentially significant physical impact on human beings.

The proposed park site was once made up of several privately owned parcels. Environmental assessments were conducted at the each of these sites previously to determine if hazardous wastes might be present.⁶ These studies included

⁴ Telephone communication with Richard Lee, San Francisco Department of Public Health, April 1, 1993.

⁵ Electric and Magnetic Fields: Measurements and Possible Effects on Human Health, What we know. What we don't know in 1990. Special Epidemiological Studies Program, California Department of Health Services.

⁶ East India Basin - Land Acquisition, ERM-West, October 22, 1987 (Galvez Bay Parcel); Preliminary Site Assessment of McGarvey Property/India Basin, Crosby and Overton, Inc. (approximately June 1989); Preliminary Site Assessment of Stone Property/India Basin, (approximately August 1989); Preliminary Site Assessment of Kosewic Property/India Basin, (approximately December 1990); East India Basin Business Park, ERM-West, October 22, 1987 (Ferrari Parcel). These studies are available for review at the Department of City Planning, 450 McAllister Street as part of the project file.

site observations and soil borings and testing. The San Francisco Department of Public Health reviewed these reports as part of the acquisition process by the City of San Francisco. These reports identified the presence of certain potentially hazardous materials in elevated concentrations, occasionally exceeding established standards. Contaminants identified on one or more of the parcels included: lead, nickel, Total Oils and Grease (TOG), cyanide and soil pH.

A subsequent technical review of the prior studies was performed by a separate environmental consultant, PES Environmental Inc., to evaluate the need for future environmental investigation prior to development of the properties for the proposed park use.⁷ This report concluded that, with two exceptions, the levels of materials found on the proposed park parcels are either not sufficient to be considered a threat to human health and environment in any event, or in the case of elevated nickel concentrations, not a concern given that site users would not have the potential for long-term and consistent exposure. It should be noted that some of the elevated measured values reflect the presence of contaminants in materials that do not otherwise present a public health hazard. For example, elevated TOG readings probably reflect the presence of asphalt in fill materials. Elevated nickel concentrations likely reflect the presence of serpentine in the soil. In neither case does the presence of these materials present a public health hazard. The two exceptions cited were a slag heap on the Galvez Street right-of-way and oily soil on the southern boundary of the portion of the site referred to as the Stone Parcel.

The San Francisco Department of Public Health has reviewed the PES study and generally agrees with their findings, including the determination that further work is needed for the Galvez Street right-of way and the Stone parcel. The DPH concurrence with the PES study is conditioned on certain elements of park design remaining as they are now proposed and understood by the DPH, specifically: little or no excavation, except what is needed to grade and create limited vehicular access; landscaping which requires minimal maintenance and low water usage; minimal tree planting, e.g shallow root system plantings.

The slag heap on the Galvez Street right-of-way is the result of dumping of materials on the site by a company that formerly occupied an adjacent site and is no longer in business at this location. The city of San Francisco is currently in the process of taking legal action to require this party to remove the material from Galvez Street in accordance with all applicable hazardous waste regulations. This portion of the site would not be included in the park development until removal/remediation has been completed by the responsible party. Remediation would include complete removal of the waste with confirmatory sampling and a certification report. This action is being undertaken by the City of San Francisco through its City Attorney's office and DPW in consultation with DPH. (See Mitigation Measure 2)

The oily concentration on the Stone Parcel is at the border of the park development site. It is located on an area that would be used as a roadway at the park's southern boundary, adjacent to proposed parking spaces. Similar to the Galvez Street situation, it is assumed that the foreign substances on this parcel were placed there by adjacent property owners or hauled to the site and dumped by other parties. If it can be established that the material is the responsibility of a specific third party, the City would pursue requiring that the material be removed in a manner comparable to the slag heap on Galvez Street, i.e. complete removal of the material with confirmatory sampling and a certification report. If it cannot be established what non-public entity is

⁷ PES Environmental Inc., Results of Technical Review of Environmental Reports India Basin Shoreline Park, San Francisco, CA., contained in letter to Kent Watson, September 2, 1992.

responsible for the material, the City would have to remove it. The City, through the Bureau of Environmental Management, has an "as needed" contract for removal of hazardous wastes. Should the City remove the waste material, the procedure would be overseen by the Bureau of Environmental Management in consultation with the DPH.

There is a potential for exposure to contaminants during earth moving work at the site. The sponsor does not intend to conduct extensive cut and removal operations during grading and landscaping. The sponsor would be bringing fill to the site to aid in grading and landscaping operations. Little or no soil would be removed from the site. The sponsor has agreed to measures which identify steps to be taken during grading activities to prevent exposure of workers to hazardous substances. These include actions to minimize dust and development of a health and safety plan to be utilized during earth moving activities.

The City has adopted an ordinance (Ordinance 253-86, signed by the Mayor on June 27, 1986) which requires analyzing soil for hazardous wastes within specified areas when over 50 cubic yards of soil is to be disturbed and on sites specifically designated by the Director of Public Works. The ordinance specifically includes sites, such as the project site, which are bayward of the high tide line (as shown on maps available from the Department of Public Works (DPW)). As indicated by the discussion above, analysis of the soil on site for hazardous waste has already been undertaken and the principal safety measures have been identified, as described in this document.

Excavation and grading activity would temporarily raise dust levels in the area, but not to a level that would have significant impacts upon air quality, given the dust control measures included in Mitigation Measure 4.

The project would include minor construction into San Francisco Bay in the form of footings for the proposed fishing pier and boat launch. Also, approximately 10,000 square feet of riprap would be installed at the waters edge for shoreline protection. While these activities would temporarily increase turbidity in water at the park's edge, it would not be expected to substantially impact water quality in the short-term. In the long term, shoreline stabilization should enhance localized water quality through reduced erosion and sedimentation into the Bay from the project site. PG&E has expressed a concern, by letter, that any increased turbidity in Bay water could flow into the electric plant's cooling water intake system creating problems for plant operation and maintenance. The mitigation measures agreed to by the sponsor to minimize erosion and sedimentation into the Bay would minimize potential impacts on the PG&E facility.

The project would generate some stormwater runoff into the San Francisco Bay from the entrance road, parking areas and boat launch ramp. Stormwater runoff into the bay is regulated by the Regional Water Quality Control Board (RWQCB). The Board was notified of the proposed project and indicated that the project is below their permitting threshold because the developed area of the park would be less than five acres.⁸ The project would pave a very limited amount of space relative to park area. Further, the project would include landscaping throughout the site where there is now exposed soil in several locations. Thus, the increase in stormwater runoff to the Bay, if any, would be negligible.

While local concerns or other planning considerations may be grounds for modification or denial of the proposal, in the independent judgement of the

⁸ Letter from Wil Bruhns, Senior Engineer, California Regional Water Quality Control Board, San Francisco Bay Region, November 13, 1992, available in the project file.

Department of City Planning, there is no substantial evidence that the project could have a significant effect on the environment.

Mitigation Measures

1. The sponsor would fence and mark marsh areas during construction and debris removal activities. Prior to issuance of a grading or building permit, a landscaping plan would be developed by a licensed landscape architect would be submitted to the Department of City Planning for approval. The plan would provide for the elimination of non-native plant species and new landscaping with species native to San Francisco including planting of appropriate coastal marsh plant species. The plan would provide that plantings around the power line transition site be low to maintain safe clearance with the power lines and allow for visual inspections of the security fencing surrounding the power line transition site. The plan would also specify sedimentation and erosion control measures to minimize run-off of soils into the Bay. The landscape architect would consult with the California Native Plant Society for input into the landscaping design prior to submittal.
2. Prior to inclusion of the Galvez Street right-of-way in park development, the Recreation and Park Department will request that the Department of Public Works, in coordination with the Bureau of Environmental Management and the Department of Public Health (DPH), would have the slag heap at this location removed by a professional qualified to handle and dispose of hazardous wastes. Subsequent to removal, the area would be sampled to verify there is no remaining materials that would constitute a hazard and certification to that affect would be submitted to the Department of City Planning and DPH.
3. A survey would be performed to identify whether the oily soil on the southern boundary of the Stone parcel, as identified in the Crosby and Overton report, falls within the area proposed for development as a park. Prior to any development of this area, if the party responsible for the presence of hazardous wastes at this site can be determined, the City would require that party to remove the waste. Subsequent to removal, the area would be sampled to verify there is no remaining materials that would constitute a hazard and certification to that affect would be submitted to the Department of City Planning and DPH. If no responsible party can be identified, the City would remove the waste and provide for subsequent confirmatory sampling and certification as provided in Mitigation Measure 1 above.
4. In order to prevent exposure of workers to hazardous substances, the project sponsor would include in the specifications of the development contract that:
 - o the contractor would implement strict dust control using a misting attachment on the watering trucks (of non-potable water)
 - o if and when soils are stock-piled, the soils would be sprayed and a "binding agent" would be added to the water to create a "crust" of upper soils
 - o a health and safety plan would be developed for earth moving activities that would, at a minimum, identify:
 - all potential hazards, both physical and chemical;
 - personal protective equipment that is available when warranted;
 - contingency measures if contamination is discovered;
 - and notification procedures for all levels of personnel and responsibility of same for when unusual conditions are discovered.

**ENVIRONMENTAL EVALUATION CHECKLIST
(Initial Study)**

File No: 93-503E Title: East India Basin Shoreline Park and Open Space
 Street Address: Hunter's Point Blvd. at Baker St Assessor's Block/Lot: 4598/5-16, 4605/6, 7, 9-20, 22, 23
4622/6-8, 12-9, 4629A/3-6, 9, 11, 13.
 Initial Study Prepared by: Jim McCormick

<u>A. COMPATIBILITY WITH EXISTING ZONING AND PLANS</u>	<u>Not</u>		
	<u>Applicable</u>	<u>Discussed</u>	
1) Discuss any variances, special authorizations, or changes proposed to the City Planning Code or Zoning Map, if applicable.	—	X	
*2) Discuss any conflicts with any adopted environmental plans and goals of the City or Region, if applicable.	X	—	
 <u>B. ENVIRONMENTAL EFFECTS - Could the project:</u>			
<u>1) Land Use</u>	<u>YES</u>	<u>NO</u>	<u>DISCUSSED</u>
*(a) Disrupt or divide the physical arrangement of an established community?	—	X	—
*(b) Have any substantial impact upon the existing character of the vicinity?	—	X	—
 <u>2) Visual Quality</u>			
*(a) Have a substantial, demonstrable negative aesthetic effect?	—	X	X
(b) Substantially degrade or obstruct any scenic view or vista now observed from public areas?	—	X	—
(c) Generate obtrusive light or glare substantially impacting other properties?	—	X	X
 <u>3) Population</u>			
*(a) Induce substantial growth or concentration of population?	—	X	—
*(b) Displace a large number of people (involving either housing or employment)?	—	X	—
(c) Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	—	X	—
 <u>4) Transportation/Circulation</u>			
*(a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?	—	X	X
(b) Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?	—	X	—

* Derived from State EIR Guidelines, Appendix G, normally significant effect.

	YES	NO	DISCUSSED
(c) Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity?	—	X	—
(d) Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities?	—	X	X
5) <u>Noise</u>			
*(a) Increase substantially the ambient noise levels for adjoining areas?	—	X	X
(b) Violate Title 24 Noise Insulation Standards, if applicable?	—	X	—
(c) Be substantially impacted by existing noise levels?	—	X	X
6) <u>Air Quality/Climate</u>			
*(a) Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?	—	X	—
*(b) Expose sensitive receptors to substantial pollutant concentrations?	—	X	—
(c) Permeate its vicinity with objectionable odors?	—	X	—
(d) Alter wind, moisture or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community or region?	—	X	—
7) <u>Utilities/Public Services</u>			
*(a) Breach published national, state or local standards relating to solid waste or litter control?	—	X	—
*(b) Extend a sewer trunk line with capacity to serve new development?	—	X	—
(c) Substantially increase demand for schools, recreation or other public facilities?	—	X	—
(d) Require major expansion of power, water, or communications facilities?	—	X	—
8) <u>Biology</u>			
*(a) Substantially affect a rare or endangered species of animal or plant or the habitat of the species?	—	X	X
*(b) Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species?	—	X	—
(c) Require removal of substantial numbers of mature, scenic trees?	—	X	—
9) <u>Geology/Topography</u>			
*(a) Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction).	—	X	—
(b) Change substantially the topography or any unique geologic or physical features of the site?	—	X	—

		YES	NO	DISCUSSED	
10)	<u>Water</u>				
	* (a) Substantially degrade water quality, or contaminate a public water supply?	—	X	X	
	* (b) Substantially degrade or deplete ground water resources, or interfere substantially with ground water recharge?	—	X	—	
	* (c) Cause substantial flooding, erosion or siltation?	—	X	X	
11)	<u>Energy/Natural Resources</u>				
	* (a) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	—	X	—	
	(b) Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	—	X	—	
12)	<u>Hazards</u>				
	* (a) Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	—	X	X	
	* (b) Interfere with emergency response plans or emergency evacuation plans?	—	X	—	
	(c) Create a potentially substantial fire hazard?	—	X	—	
13)	<u>Cultural</u>				
	* (a) Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study?	—	X	—	
	(b) Conflict with established recreational, educational, religious or scientific uses of the area?	—	X	—	
	(c) Conflict with the preservation of buildings subject to the provisions of Article 10 or Article 11 of the City Planning Code?	—	X	—	
C.	<u>OTHER</u>	YES	NO	DISCUSSED	
	Require approval and/or permits from City Departments other than Department of City Planning or Bureau of Building Inspection, or from Regional, State or Federal Agencies?	X	—	X	
D.	<u>MITIGATION MEASURES</u>	YES	NO	N/A	DISCUSSED
	1) Could the project have significant effects if mitigation measures are not included in the project?	X	—	—	X
	2) Are all mitigation measures necessary to eliminate significant effects included in the project?	X	—	—	X

E. MANDATORY FINDINGS OF SIGNIFICANCE

YES NO DISCUSSED

- *1) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or pre-history? — X — X
- *2) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? — X —
- *3) Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.) — X —
- *4) Would the project cause substantial adverse effects on human beings, either directly or indirectly? — X —

F. ON THE BASIS OF THIS INITIAL STUDY

- I find the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared by the Department of City Planning.
- X I find that although the proposed project could have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because the mitigation measures, numbers 1-4, in the discussion have been included as part of the proposed project. A **NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

Barbara W. Sahm

BARBARA W. SAHM
Environmental Review Officer
for

LUCIAN R. BLAZEJ
Director of Planning

DATE: 7/10/93

BWS:OER/23/4-13-92

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S Francisco, CA 94117
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Department of Public Health
101 Grove St, Room 207
Attn: Pam Hollis

Department of Public Health
101 Grove St, Room 207
Attn: Richard Lee

DRAFT



SITE MITIGATION PLAN
INDIA BASIN REDEVELOPMENT PROJECT
India Basin Shoreline Park
900 Innes Avenue
India Basin Open Space
San Francisco, California

Prepared For:

**San Francisco Recreation and Park Department
City and County of San Francisco
30 Van Ness Avenue, 3rd Floor
San Francisco, California 94102**

**BUILD: Inc.
315 Linden Street
San Francisco, California 94102**

Prepared By:

**Northgate Environmental Management, Inc.
428 13th Street, 4th Floor
Oakland, California 94612**

**February 28, 2017
Project No. 1370.01**

DRAFT

Site Mitigation Plan
India Basin Redevelopment Project

India Basin Shoreline Park
900 Innes Avenue
India Basin Open Space
San Francisco, California

February 28, 2017

Prepared For:

San Francisco Recreation and Park Department
City and County of San Francisco
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1.0 INTRODUCTION

On behalf of the San Francisco Recreation and Park Department (SFRPD) and BUILD Development, Inc. (BUILD), Northgate Environmental Management, Inc. (Northgate) has prepared this Site Mitigation Plan (SMP) for portions of the India Basin Redevelopment Project (the Project) owned by SFRPD. The Project areas owned by SFRPD consist of:

- India Basin Shoreline Park (IBSP);
- 900 Innes Avenue (900 Innes); and,
- India Basin Open Space (IBOS).

A fourth area of the Project is owned by BUILD and is referred to as 700 Innes Avenue (700 Innes). The Project is located in San Francisco, California, with IBSP and 900 Innes bounded to the west and southwest by Hunters Point Boulevard and Innes Avenue. IBOS is located east of 900 Innes, and follows the shoreline northwest to northeast along the northern boundary of the 700 Innes property. India Basin, an extension of the San Francisco Bay, borders the shoreline of the Project. The 700 Innes property is not the subject of this SMP. The Project is bordered by commercial and residential properties of the Bayview-Hunters Point neighborhood. A Site Location Map is shown on Figure 1 and the Site Vicinity is shown on Figure 2.

The SFRPD intends to redevelop two of the three areas (IBSP and 900 Innes) for use as a public park. BUILD intends to redevelop 700 Innes as a mixed-use development and IBOS for public recreational access to the shoreline and for habitat restoration. Figure 3 provides a Redevelopment Project Site Overview (from the *Initial Study, India Basin Mixed-Use Project (Planning Department Case No. 014-002541ENV, June 1, 2016)*). The concept-level public park configuration is shown on Figure 4 for IBSP and 900 Innes, and the concept master plan is shown on Figure 5 for 700 Innes and IBOS. Redevelopment of the three SFRPD-owned properties will be completed in phases over the next several years.

Regrading activities that will be performed during redevelopment are subject to provisions of the City and County of San Francisco's Maher Ordinance Program (Article 22A of the San Francisco Health Code), administered by the Department of Public Health (DPH). Under the Maher Ordinance Program, a SMP is required to establish environmental mitigation measures that will be followed during redevelopment activities. The Maher Ordinance applies to land at elevations above the mean high water line (MHW) that are bayward of the historic 1852 high tide line (HTL). In general, land-based earthwork will consist of regrading the project areas to meet design grades, followed by construction of above-grade features.



Work completed in the San Francisco Bay (defined here as bay-side of current MHW) will be governed by resource agency permits issued by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), U.S. Army Corps of Engineers (USACE) and the San Francisco Bay Conservation and Development Commission (BCDC). Therefore, in-Bay work is not the subject of this SMP.

This SMP includes procedures to be used during construction to protect the health and safety of construction workers, the surrounding community, and the environment during and after redevelopment. Procedures governing worker health and safety, dust and noise controls, storm water runoff controls, handling of materials subject to regrading, transportation and disposal of excavated materials (if necessary), and security, are specified. This SMP also contains contingency plans to be implemented during soil earthwork if unanticipated adverse environmental conditions are encountered.

This SMP has been prepared to satisfy applicable federal, state, and local laws and regulations. This SMP provides guidelines for the redevelopment contractors, who will be retained by SFRPD and BUILD, to prepare Site-specific health and safety plans that will govern activities to protect the public and the environment.



2.0 BACKGROUND

2.1 Project Description

The Project is located on the eastern shore of the San Francisco Peninsula, in the Bayview – Hunters Point neighborhood of San Francisco, within San Francisco County. Surface elevations range from approximately mean sea level (msl) at the shoreline to as high as 45 feet relative to North American Vertical Datum 1988 (NAVD88) at IBSP. The general surface topography slopes to the east and northeast towards India Basin.

2.1.1 IBSP

The IBSP Site consists of an approximately 6.6-acre waterfront park located within the larger India Basin Redevelopment Project. IBSP currently consists of paved paths and grassy areas, with play structures and picnic facilities. Current planning and design development for IBSP include creating a revitalized park that helps connect the San Francisco Bay Trail. Wetland restoration activities along the park’s shoreline will be completed. Regrading the upland portion of IBSP will involve the excavation and replacement of roughly 30,000 cubic yards (CY) of fill materials. The higher existing elevations will be lowered by as much as 15 feet, whereas lower existing elevations will be raised by as much as 18 feet. Imported material may be used to construct final surfaces. A cut and fill exhibit, grading plan, and materials plan are presented in Appendix A.

2.1.2 900 Innes Avenue

900 Innes consists of 11 parcels, totaling approximately 2.4 acres, located adjacent to IBSP. 900 Innes currently consists of paved areas, with multiple docks and boat launches. There are six historic buildings on the property. Current planning and design development include creating a park that helps connect the San Francisco Bay Trail and create recreational access. Two of the historic buildings (the Shipwright’s Cottage and the nearby former Boatyard Office) will be retained and restored. A 0.2 acre marsh will be created along the shoreline, and creosote-treated wood piles historically used to support the piers will be removed. Regrading 900 Innes will involve cutting less than 1,000 CY of materials, and filling with roughly 7,000 CY of materials (derived from IBSP cut and imported materials) to reach the design grades. Imported material may be used to construct final surfaces. A cut and fill exhibit, grading plan, and materials plan are presented in Appendix A.



Prior to redevelopment activities, the 900 Innes property will be subject to a separate environmental cleanup action to remediate residual contaminants that are present as a result of historical industrial uses.

2.1.3 India Basin Open Space

IBOS is an approximately 6.2-acre shoreline area. Current concept-level planning and design features for this area include habitat restoration and public recreational access via a proposed beach, pier/boat launch, and boardwalk.

IBOS is comprised of existing wetlands and vegetated land along the low-lying areas of the shoreline followed by a steep vegetated slope up to a pedestrian pathway located along the upland portion. The pedestrian pathway is maintained by SFRPD. The concept design for this part of the Redevelopment Project is attached as Appendix B. Grading of IBOS will be completed in conjunction with redevelopment work on the 700 Innes Property. Grading at IBOS will primarily involve cutting back the slopes connecting the upland areas to the lowlands and to create elevations appropriate for seasonal wetlands and stormwater retention features. Filling in the IBOS is limited to regrading activities to create shoreline access, and to create a sand beach using imported sand.

2.2 Previous Investigations

2.2.1 IBSP

Langan Treadwell Rollo (Langan) prepared a Phase I Environmental Site Assessment (ESA) report for IBSP on June 30, 2015 (*Phase I Environmental Site Assessment, India Basin Shoreline Park, San Francisco, California*).

AECOM prepared a *Final Technical Memorandum, Data Gaps for India Basin Shoreline Park*, on October 11, 2016.

Northgate is currently preparing a Site Characterization Report for IBSP, which will be completed in April, 2017 (In Progress, *Site Characterization Report, India Basin Shoreline Redevelopment Project, India Basin Shoreline Park, San Francisco, California, April, 2017*).

2.2.2 900 Innes Avenue

Weston Solutions, Inc. (Weston) prepared a Phase I/II Investigation, Targeted Brownfields Assessment report for the Site in September 2013 (*Phase I/II Investigation, Targeted*



Brownfields Assessment, Final Report 900 Innes Avenue Site, San Francisco, San Francisco County, California).

Weston prepared an Analysis of Brownfield Cleanup Alternatives (ABCA) in September, 2013 (*Analysis of Brownfield Cleanup Alternatives 900 Innes Avenue Site, San Francisco, San Francisco County, California).*

URS performed additional sampling and analysis of foreshore sediments in September 2015 (*Technical Memorandum, Foreshore Sediment Sampling, 900 Innes Avenue, San Francisco, California, prepared for San Francisco Department of the Environment, Contract No. 4061-12/13).*

AECOM prepared a *Final Technical Memorandum, Data Gaps for 900 Innes*, on October 11, 2016.

Northgate is currently preparing a Site Characterization Report for 900 Innes Avenue, which will be completed in April, 2017 (In Progress, *Site Characterization Report, India Basin Shoreline Redevelopment Project, 900 Innes Avenue, San Francisco, California, April, 2017).*

Northgate is currently preparing a Conceptual Remedial Action Plan (RAP) for 900 Innes Avenue, a draft of which will be available in March, 2017 (*Conceptual Remedial Action Plan, India Basin Shoreline Redevelopment Project, 900 Innes Avenue, San Francisco, California, March, 2017).*

2.2.3 IBOS

Northgate prepared a Soil Characterization Report for IBOS on September 7, 2016 (*Soil Characterization Report, India Basin Shoreline Redevelopment Project, India Basin Open Space, San Francisco, California, September 7, 2017).*

Northgate is currently preparing a Phase I ESA report for IBOS, which will be completed in March, 2017 (In Progress, *Phase I Environmental Site Assessment, India Basin Open Space, San Francisco, California).*



3.0 SUMMARY OF SUBSURFACE CONDITIONS

In general, the Project area is comprised of fill materials that were placed east of the historic San Francisco Bay shoreline during the 1940s through 1960s. Fill thickness varies, but can be as thick as 35 feet at the higher current grade elevations at IBSP, thinning to a few feet in the lower elevation areas nearest the shoreline. Native marine sediments underlie the artificial fill under most areas with the exception of the northern portion of IBSP, where native serpentinite bedrock was observed beneath the fill. The original shoreline is discernible along a small section of the 900 Innes property.

Fill materials generally contain artificial debris, such as rock, concrete, brick and glass in variable amounts. Fill soils consist of a heterogeneous mixture of clays, sands and gravels. Field observations and sample results from IBSP indicate the fill contains variable amounts of reworked serpentinite, derived from local sources. Naturally occurring elevated concentrations of metals (primarily cobalt, chromium and nickel, and to a lesser extent, copper) and naturally occurring asbestos (NOA) are associated with serpentinite. Native marine sediments underlying the fill materials consist of interbedded clays and sands, with lesser gravels.

The Project lies within the Islais Valley groundwater basin of the San Francisco Hydrologic Region. Shallow groundwater is present in the fill materials near the interface with underlying native marine sediments, at approximately the elevation of the San Francisco Bay MHW. The groundwater flow direction beneath the Project is expected to be easterly towards India Basin; flow gradient is expected to be relatively flat, given the Project's proximity to the shoreline and tidal influences. Groundwater has been measured at depths ranging from approximately 4 to 33 feet below the ground surface (bgs). The groundwater level is anticipated to vary due to seasonal and annual fluctuations associated with precipitation and tidal cycles affecting the water level of India Basin/San Francisco Bay. Groundwater beneath the Project is not considered suitable for drinking water because of low yield and general mineral water quality.

The subsurface investigations performed to-date indicate the presence of the following environmental concerns for which mitigation is recommended prior, during and after future development.

3.1 Environmental Conditions

Soil, sediment, groundwater and surface water samples collected during the 2013 through 2017 investigations at the three areas were variously analyzed for:



- CAM-17 metals;
- polynuclear aromatic hydrocarbons (PAHs);
- polychlorinated biphenyls (PCBs);
- organochlorine pesticides;
- total petroleum hydrocarbons as diesel (TPH-d) and oil (TPH-o);
- volatile organic compounds (VOCs);
- total organic carbon (TOC);
- organotins;
- asbestos; and,
- hexavalent chromium, cyanide, fluoride and pH.

Regrading and earthwork activities planned for IBSP, 900 Innes, and IBOS will occur in fill materials above groundwater elevations and landward of off-shore sediments. No dewatering activities or in-Bay dredging work will be completed under this SMP. Data sets for soil quality at each of the properties, which are the subject of this SMP, are included as the following appendices:

- Appendix C contains data tables and figures for IBSP;
- Appendix D contains data tables and figures for 900 Innes Avenue; and
- Appendix E contains data tables and figures for India Basin Open Space.

A summary of soil quality compared to Chemicals of Potential Concern (COPC) for each of the properties is included as Table 1. In the summary table, targeted human health screening levels (HHSLs) that will guide the recommended mitigation measures for protecting the health and safety of redevelopment construction workers and future Park and Open Space workers and visitors are listed. The summary statistics presented for 900 Innes represent expected conditions after remedial actions have been implemented.

Figures 6 through 8 illustrate individual soil sample locations where one or more HHSL is exceeded on IBSP, 900 Innes, and IBOS, respectively. Figure 7 also shows the targeted remediation areas at 900 Innes. These remediation areas will be addressed separately in the 900 Innes RAP.

With the exception of 900 Innes (current conditions), chemical test results from the investigations generally indicate that the quality of soil and groundwater are below the California Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for



commercial land use and construction worker scenarios, or other applicable screening criteria that were used to evaluate conditions. Exceptions include:

- Observations of potentially nuisance-level petroleum hydrocarbons at shallow depths along the low-lying portion of the 900 Innes and IBOS shorelines;
- Individual sample locations throughout the properties where lead and PAHs (using the benzo(a)pyrene [B(a)P] equivalency value) exceeds the HHSL. Both lead and PAHs are known to occur ubiquitously at moderate concentrations in historic fill materials along the San Francisco shoreline;
- Individual sample locations where cobalt and nickel (associated with native serpentinite) occur within background levels but above RWQCB ESLs;
- Individual sample locations where arsenic occur within background levels but above RWQCB ESLs; and,
- At IBSP, NOA, associated with native serpentinite, is present in the fill materials at levels subject to the California Air Resources Board (CARB) asbestos Airborne Toxic Control Measures ATCM for Construction, Grading, Quarrying, and Surface Mining Operations in the California Code of Regulations, Title 17, Section 93105 (17 CCR 93105).

None of the COPCs will significantly impact use of the properties as a public park and open space from a human health perspective provided the mitigation measures outlined in this SMP are implemented.

Though below California's Total Threshold Limit Concentration (TTLC) values, lead, nickel and chromium are present at concentrations that could exceed its California Soluble Threshold Limit Concentration (STLC) when evaluated using the California Waste Extraction Test (WET). The WET measures the leachability of a compound under acidic conditions simulating landfill leachate. If a material exceeds a STLC, then it would classify as a California (non-RCRA) hazardous waste if transported and disposed of at a landfill in California.

Contamination that is present at 900 Innes will be addressed as a separate remedial action before redevelopment activities begin. The cleanup objective for 900 Innes is to remove contaminated materials that are considered hazardous waste according to California's TTLCs and to the degree necessary to allow for redevelopment using the mitigation measures identified in this SMP.



4.0 SITE MITIGATION MEASURES

4.1 Overview

The results of investigations performed on the three properties indicate that subsurface fill materials contain one or more of the following chemical groups at low to moderate concentrations: petroleum hydrocarbons as diesel and motor oil; PAHs; PCBs; the heavy metals arsenic, chromium, copper, lead, mercury, and nickel; and NOA (IBSP only). The frequency of occurrence and concentrations of pesticides and VOCs were negligible. Overall, the fill quality poses low to moderate potential health risks that will need to be addressed as part of redevelopment activities.

The localized areas of materials containing higher concentrations of chemicals at 900 Innes, associated with use of chemicals during previous industrial activities, will be addressed as a separate remedial action before redevelopment activities begin. A Conceptual RAP is currently being developed under the regulatory oversight of the RWQCB, which would remove materials from the property that exceed California TTLC values. Therefore, the mitigation measures identified in this SMP address expected conditions after the 900 Innes remedial action is complete.

The objectives of the mitigation measures are to provide protection against potential exposure to COPCs by construction workers building the Park and Open Space, nearby commercial workers and residents and/or pedestrians, and future Park users.

Based on the COPCs, the primary exposure pathways of concern are inhalation of dust from the subsurface, ingestion of soil particles, and dermal contact with COPCs during excavation and soil handling operations. Construction workers performing excavation activities and soil handling operations may encounter lead, nickel and PAHs at concentrations exceeding HHSLs. The presence of asbestos-containing serpentinite rock in the fill materials at IBSP represents a possible source of airborne asbestos fibers and a potential inhalation risk for construction workers and other passive receptors downwind of the construction area. Therefore, worker notification and other risk management procedures should be implemented by SFRPD and BUILD and/or their contractors to reduce potential human exposures during construction activities.



Once the Park and Open Space areas are constructed, COPC exposure risks to future workers and visitors will be limited by the presence of clean fill and surface materials. Future maintenance workers who could come in contact with COPCs will be protected by institutional controls that will be developed and implemented.

Mitigation measures will consist of handling soils safely during construction activities, and providing a clean layer of cover soil or other surfacing (hardscape, landscape, buildings, etc.) to prevent future exposure to COPCs once the redevelopment has been completed. Mitigation measures include:

- In areas where the Project design includes planting, trees, children's play areas, water features, recreational access areas, and sandy/gravelly beaches, fill soil that exceeds HHSLs will be removed to a depth of two feet below final grade (BFG), and replaced with suitable materials.
- If soil is left in-place which exceeds the HHSL below the 2-foot thick clean cover, it will be covered by a visual barrier (orange plastic fencing) prior to covering with clean fill as described in Section 4.6.
- In areas where the Park and Open Space surfacing will be hardscape, such as concrete, buildings, parking lots, and pathways (see concept plans for the future Park and Open Space (Figures 4 and 5), shallow fill soil will not be removed as part of mitigation, as the hardscape will provide an adequate barrier to exposure of future Park and Open Space users to the underlying soil.
- In areas where future structures are planned, such as restrooms, storage sheds, and buildings, localized volumes of the shallow fill material may need to be removed as necessary to allow for structural foundation elements to be built.

It is the intent of the redevelopment design to maintain an overall cut-fill balance as a result of regrading activities. Therefore, it is not expected that excess materials will be generated and need to be exported and disposed of off of the property. However, in the event that soil export is necessary, waste materials will be properly profiled, classified and disposed of according to current laws and regulations. Though none of the fill soils tested exceed thresholds for classification as a hazardous waste based on California's TTLCs for metals, pesticides, or PCBs, it is possible that materials could fail the STLC, particularly for the heavy metals lead and nickel, and therefore classification as a Class I non-RCRA hazardous waste for off-site disposal purposes is a possibility. There were a couple of instances where NOA values were slightly above its TTLC at IBSP, though the frequency of exceedance overall was very low. Barring



these potential exceptions, excess fill materials likely would be classified as a Class II non-hazardous waste, or as inert recyclable material (i.e., concrete, rock, brick).

4.2 Soil Excavation, Grading, and Placement

SFRPD and BUILD and their contractors will obtain the necessary grading permits and comply with applicable rules and regulations for construction-related project activities, as necessary. A SWPPP will be prepared and implemented, including associated storm water BMPs. All field activities will be conducted in accordance with federal, state, and local requirements for worker safety, such as Occupational Safety and Health Administration (OSHA) regulations for excavation safety, equipment operation, and exposure to dust and other constituents.

Soil excavation, grading and placement will be performed by a licensed engineering contractor with a Class A license and Hazardous Substance Removal Certification, using heavy earthmoving equipment. A California licensed Engineer will provide field oversight on behalf of SFRPD and BUILD to document the origin and destination of all excavated soil. If necessary, excavated soil will be temporarily stockpiled and covered with plastic sheeting pending relocation, segregation, or off-haul. If excess materials are off-hauled, waste profiling of the material will be completed and documented.

4.3 Naturally Occurring Asbestos in Fill Materials at IBSP

Due to the presence of naturally-occurring asbestos associated with serpentinite rock mixed in with historic fill materials at IBSP, the proposed earth-moving construction activities are subject to CARB asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations in the California Code of Regulations, Title 17, Section 93105 (17 CCR 93105) and Cal-OSHA asbestos regulations for construction (8 CCR 1529). A summary of the regulations is provided in Appendix F of this SMP. The regulations require that an Asbestos Dust Mitigation Plan (ADMP) be submitted to, and approved by, the Bay Area Air Quality Management District (BAAQMD). Northgate recommends that an ADMP be prepared for the grading work at IBSP, per regulations, to minimize emissions of asbestos-laden dust and potential exposure to workers and the public during earth-moving activities.

4.4 Petroleum Hydrocarbons in Fill Materials

Petroleum hydrocarbons may be encountered during proposed earthwork at levels considered to be a nuisance because of odor and appearance. The California Health and Safety Code (§ 41700 [1999] Public Nuisance) and the BAAQMD (Regulation 1-301 Public Nuisance) have



regulations prohibiting the emissions of air contaminants which cause nuisance or annoyance to the surrounding community. Though contact with the petroleum hydrocarbons is not considered a health risk to construction workers, management of the materials during construction is recommended to comply with the California Health and Safety Code and BAAQMD regulations, as described in Section 5.6.

4.5 Sub-Grade Testing

In design subgrade areas that may contain COPCs at concentrations that exceed HHSLs, representative soil samples will be collected from the subgrade surface and will be analyzed for COPCs to document remaining conditions. Testing results will be used to evaluate if a visual barrier needs to be placed over the area. Samples will be collected at a frequency of one four-point composite per acre.

4.6 Waste Profile Testing

If excess fill materials will require off-haul, supplemental data will be necessary to fulfill waste profiling requirements. Samples of the excess material will be analyzed for TPH using United States Environmental Protection Agency (EPA) Method 8015, VOCs using EPA Methods 8260, 17 metals using EPA Method 6010/7471, SVOCs using EPA Method 8270, organochlorine pesticides using EPA Method 8081, PCBs using EPA Method 8082, and asbestos using CARB 435. If total concentrations exceed ten times the California STLC, the samples will be additionally analyzed for soluble metals using the California WET specified in 22 CCR, Division 4.5, Chapter 11, Appendix II, and the TCLP, EPA Method 1311, specified in 22 CCR, Division 4.5, Chapter 18, Appendix XIII and 40 Code of Federal Regulations (CFR) 261.24(a).

4.7 Post-Construction Mitigation Measures

If subgrade testing shows that COPCs exceed HHSLs, the surfaces will be covered with a visual indicator barrier before importing clean fill materials to meet final grade elevation requirements. The visual indicator barrier will be a material such as orange vinyl construction fencing or snow fencing to mark the boundary between the imported clean fill and the underlying soil that exceeds HHSLs. The areas where the visual indicator barrier is placed will be documented in the Final Completion Report. If remaining soil exceeds the HHSLs, an Activities and Use Limitation Deed Restriction will be prepared, and the presence of the visual indicator barrier will be cited.



If subgrade samples show COPCs to be present at concentrations above the California TTLC, excavation and removal of the soil will be performed. New subgrade samples will be collected at the bottom the excavation, and if COPC concentrations still exceed the HHSLs, then the visual indicator barrier material will be placed at the bottom of the deeper excavation area.

Surface restoration at IBSP, where NOA is present, will be completed in accordance with BAAQMD requirements for sites with NOA, and with BCDC requirements and guidelines for sites within their 100 foot shoreline band. Various materials will be used to cover surfaces where NOA is present. These materials will include both pervious (e.g., landscaping) and impervious (e.g., hardscaping) options for a variety of conditions and uses associated with park features. As shown on Figure 4, the park will be covered with native planting, lawn, decking, public trails, and paved surfaces.

4.8 Imported Fill Criteria

Imported fill soil will meet RWQCB Tier 1 ESLs for chemical constituents. If soil is from a supplier where representative chemical screening data are available demonstrating that it meets the RWQCB Tier 1 ESL criteria, it can be accepted without further testing. Imported soil from a source where data are not available will be sampled and screened against the RWQCB Tier 1 ESL criteria before it is transported to the Project. The imported fill will be placed over the visual indicator barrier or directly onto the excavation bottom in areas where the visual indicator barrier is absent. The imported fill soil will be brought up to the Park or Open Space design subgrade.

4.9 Contingency Plan for Unexpected Conditions

Should unanticipated subsurface structures or suspected hazardous materials be encountered, work will be suspended and SFRPD will be notified, and the area secured. Such materials may include underground storage tanks (USTs) and associated product lines, sumps, and/or vaults, soil with significant petroleum hydrocarbon odors and/or stains, or other suspect materials. The SFRPD or its representative will notify the DPH of the situation and of the proposed response actions. Any USTs will be removed under permit with the DPH-Hazardous Materials and Waste Program (HMWP) and the San Francisco Fire Department. DPH Site Assessment & Mitigation (DPH SAM) will be provided with a copy of permits and tank closure reports prepared for the HMWP or the Fire Department.



5.0 SOIL MANAGEMENT PROCEDURES

Based on the planned mitigation activities described above, we anticipate that SFRPD and BUILD, or their contractors, will undertake the following tasks related to excavation and disturbance of subsurface materials during construction:

- Demolition and removal of existing asphalt and concrete sections in the areas of regrading and new features;
- Excavation of fill materials to the depths of the design subgrades, up to 15 feet bgs;
- Potential stockpiling of excavated soil for on-Site reuse as fill or off-Site disposal;
- Loading and transporting soil for on-Site reuse as fill;
- Loading and transporting of excess materials for off-Site disposal;
- Importing clean replacement fill to design grades of future Park and Open Space; and,
- Resurfacing property per Park and Open Space design.

We recommend the following procedures be implemented prior to and during construction activities.

5.1 Health and Safety Plan

Based on the specific COPCs identified, the primary exposure pathways of concern are inhalation of dust from the subsurface, ingestion of soil particles, and dermal contact with contaminants during excavation and soil handling operations. Construction workers performing excavation activities and soil handling operations are likely to encounter lead, PAHs, and potentially nickel and NOA (IBSP only) at concentrations that exceed the HHSLs. Therefore, worker notification and other risk management procedures should be implemented by SFRPD/BUILD and/or their contractors to reduce potential human exposures during construction activities.

A Site-specific health and safety plan (SSHSP) will be prepared and implemented to notify and protect workers during construction activities. The SSHSP will be prepared in accordance with state and federal OSHA regulations (29 CFR 1910.120) and approved by a Certified Industrial Hygienist (CIH). Copies of the SSHSP will be made available for review to construction workers during their orientation and/or regular health and safety meetings, as well as to SFRPD and BUILD.



The SSHSP will be submitted to the DPH SAM at least two weeks before beginning construction activities.

5.2 Dust Control

The primary anticipated exposure pathway for risks to human health at the Site is the inhalation or ingestion of dust particles generated during construction activities that disturb soil. The SFRPD and BUILD or their contractors will use standard dust-control practices to prevent the generation of dust during excavation and soil handling activities. Dust control measures may include, but are not limited to:

- Wetting of surface soil and soil stockpiles during excavation and soil handling operations, loading, and transport;
- Control of soil handling and loading techniques to minimize dust generation, such as minimizing drop distances;
- Loading of soil for off-Site disposal only into trucks equipped with tarpaulin covers;
- Covering of soil stockpiles when not in use, such as using plastic sheeting, clean fill, or other dust minimization systems, as appropriate; and,
- Additional dust mitigation measures as needed or appropriate.

If visible dust is observed in worker breathing zones or leaving the Site, additional dust suppression measures will be undertaken, such as increased wetting of loose soil and stockpiles.

A Dust Control Plan (DCP) will be submitted to the DPH SAM at least two weeks before beginning earthwork activities. The DCP will abide by the City of San Francisco Dust Control Ordinance, adopted by San Francisco in 2008 (San Francisco Building Code Section 106.3.2.6). A copy of the ordinance is attached as Appendix G.

5.3 Asbestos and Dust Mitigation at IBSP

For construction work performed at IBSP, SFRPD and its contractor will perform air monitoring and dust control BMPs in accordance with the ADMP and DCP. The management controls and practices will include, but not be limited to the following:

- Water, dust palliatives, water mists, and water sprays will be used to mitigate the potential to generate airborne NOA;
- Application of water to roadways;



- Truck speed and work modifications in high winds;
- A water misting system employed at the perimeter of the work areas; and
- Air monitoring according to CARB ATCM requirements (Appendix F).

5.4 Noise Control

Control of noise during construction activities will abide by the City of San Francisco Noise Control Ordinance, adopted by San Francisco in 2008 (Police Code Sections 2907 (b); 2907 (c); 2901.12; 2908). A copy of the ordinance is attached as Appendix H.

5.5 Storm Water Runoff Control

Measures will be implemented to minimize impacts from storm water runoff into the bay and storm drains. This will include the preparation and implementation of a SWPPP and associated best management practices (BMPs).

Temporary stockpiling of soil excavated from the Project will be avoided if possible. If temporary stockpiling is unavoidable, The SFRPD/BUILD or their contractors will implement BMPs as needed to protect against surface water inflow, storm water erosion, and internal drainage and runoff. BMPs may include, but are not limited to, covering the stockpile with visquine or other plastic sheeting and use of hay bales or straw wattles to control runoff.

5.6 Occurrence of Petroleum Hydrocarbons

Should nuisance conditions occur during construction related to the occurrence of petroleum hydrocarbons, the following mitigation measures will be implemented:

- Temporarily segregate soil and stockpile on tarps to avoid runoff of oily liquid to the adjacent ground surface;
- Mix oily soil with other on-Site soil that does not contain oily material to reduce the potential for nuisance conditions;
- Place combined material back into excavated areas as soon as possible to minimize the potential for nuisance conditions to arise;
- Cover temporary stockpiles with tarps or with soil that does not contain oily soil to reduce nuisance-level odors and the potential for runoff; and,
- Remove, contain and dispose of the materials according to applicable regulations.



5.7 Soil Transportation and Off-Site Disposal

Soil will be transported with trucks that are licensed and permitted to carry the appropriate waste classification, and disposed at appropriately licensed landfills. Trucking will be performed in accordance with California Department of Transportation (DOT) and any other applicable regulations. Soil classified as non-hazardous waste will be transported from the Project under a bill of lading. Soil classified as non-RCRA hazardous waste will be transported from the Project under hazardous waste manifest. The tracking of dirt by trucks leaving the Project will be minimized by cleaning the wheels upon exiting the Project and cleaning the loading zone and exit area as needed.

5.8 Site Security

To the extent feasible, soil stockpiles will be constructed in areas that are removed or protected from public access to limit potential exposures. Soil stockpiles and open excavations will be secured at the end of each working day to prevent unauthorized access to soil. Stockpile and open excavations will be managed in a way that limits fugitive dust emissions during non-working hours.

5.9 Institutional Controls

If soil exceeding HHSLs remain at the properties after redevelopment, an Activities and Use Limitation Deed Restriction will be prepared. The Deed Restriction will record:

- The presence of the visual indicator barrier placed over the soil;
- Prohibition of future uses of the parks and open spaces for sensitive uses, such as residential development, hospitals, and schools or day care centers for children;
- Maintenance requirements for the cover and surface materials placed over the soils; and,
- Soil management and health and safety plans that would be used during future activities that may disturb soil at depths below clean cover and surface materials.



6.0 PROJECT MANAGEMENT

This section describes the responsibilities of key personnel during mitigation and soil management activities.

Environmental Project Manager: A California-licensed Engineer will be assigned by the SFRPD and BUILD to serve as Environmental Project Manager during earthwork activities involving impacted soil. The Environmental Project Manager is responsible for ensuring compliance with the SMP. The Environmental Project Manager oversees the data management and quality assurance/quality control (QA/QC) program.

Environmental Field Observation Staff: A qualified Engineer will be assigned by the SFRPD and BUILD to provide field observation and sampling services to comply with this SMP. The Staff will provide field oversight and day to-day monitoring of project QA/QC activities to verify compliance with the project field requirements. Duties will include directing or performing confirmation sampling, and maintaining project status logs, including daily field logs recording regrading activities and confirmatory sample locations and sampling results.

Environmental Health and Safety Officer: A CIH will be assigned by the SFRPD and BUILD to serve as Health and Safety Officer for issues related to work with impacted soil. The Health and Safety Officer is responsible for implementing and monitoring conformance with procedures described in the SSHSP developed for the project.



7.0 SMP DOCUMENTATION AND FINAL COMPLETION REPORT

SFRPD and BUILD or their contractors will maintain daily logs during all construction and implementation activities documenting compliance with the provisions of this SMP. A Final Completion Report summarizing and certifying implementation of this SMP will be submitted to the DPH SAM. The Final Completion Report will present a chronology of the construction events and summarize any investigative and removal activities that were completed during redevelopment.

Separate Final Completion Reports may be prepared for each phase of Project construction. The Completion Report(s) will include:

- A map of the Project area;
- Drawings showing areas of excavation and fill;
- Drawings showing sample locations and depths;
- Tables summarizing analytical data;
- Copies of permits, manifests or bills of lading for removed soil;
- Copies of laboratory reports for soil disposal profiling; and,
- A summary of COPCs remaining after completion of redevelopment activities.



8.0 MODIFICATIONS TO SMP

There may be a need to modify the SMP if conditions and/or redevelopment plans change. Additionally, as implementation of the SMP proceeds, SFRPD, BUILD, and/or SFDPH may request revisions of the SMP. Such requests for modification will be included in amendments to the SMP.



9.0 LIMITATIONS

This SMP has been prepared on behalf of SFPRD and BUILD and is specific to the proposed India Basin Redevelopment Project. All interpretations and recommendations in this SMP are the professional opinions of Northgate personnel, and this SMP should not be considered a legal interpretation of existing environmental regulations. Opinions presented herein apply to Project conditions existing at the time of our assessment, and cannot necessarily be taken to apply to changes or conditions of which we are not aware and have not had the opportunity to evaluate. This SMP does not address hazardous materials that may be encountered in aboveground structures, such as asbestos-containing materials, lead-based paint, or universal wastes.



TABLE



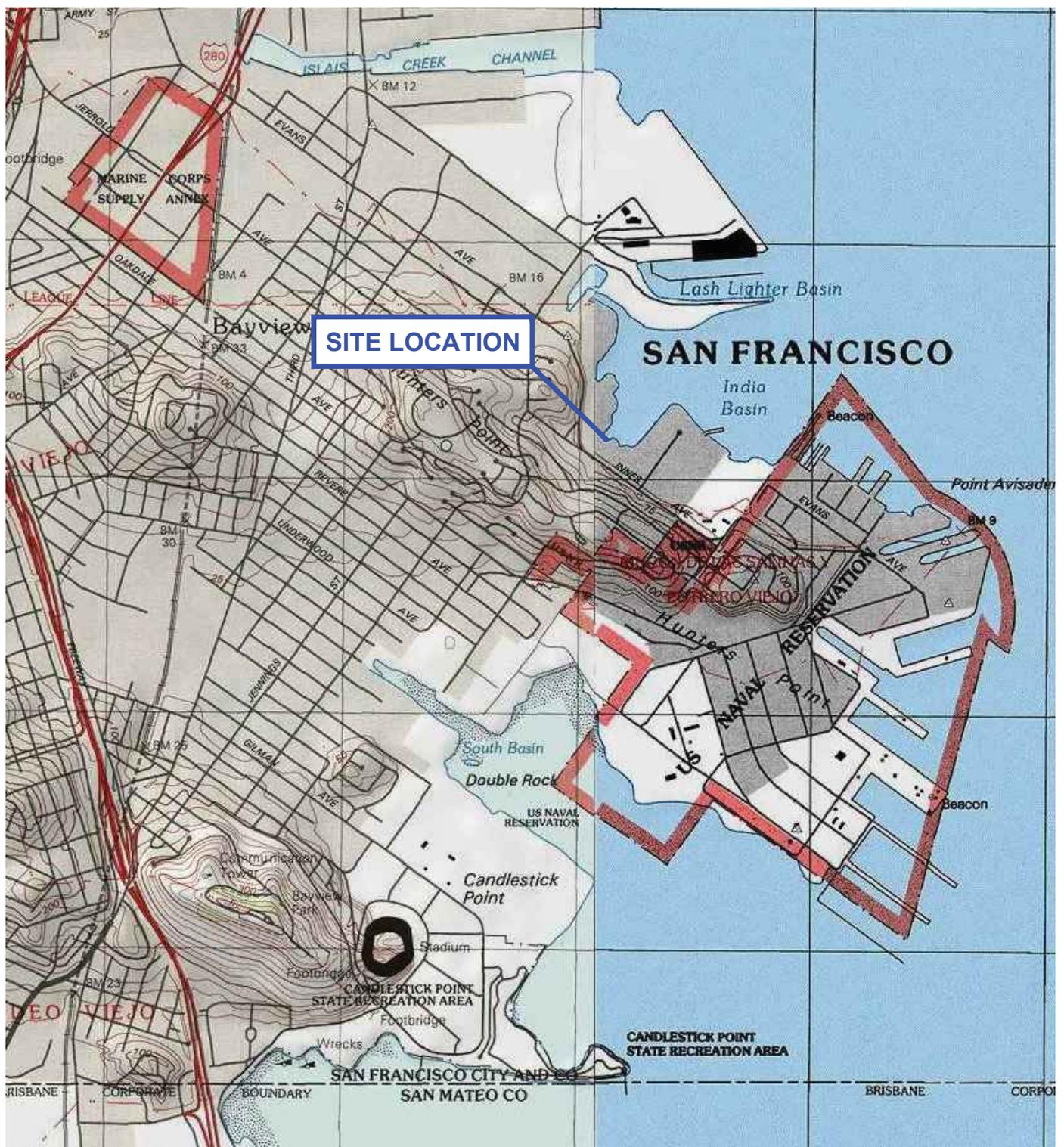
**TABLE 1
Soil Quality Summary and Human Health Screening Levels for Recreational Use**

Constituent of Potential Concern (COPC)	Statistical Summary of COPCs												California Hazardous Waste Disposal Criteria	Recommended Human Health-Based Screening Level for On-Soil Management	Source of HHSL	
	India Basin Shoreline Park				Post-Remediation 900 Innes Avenue				India Basin Open Space							
	Frequency of Detection (%)	Maximum	Average	95% UCL	Frequency of Detection (%)	Maximum	Average	95% UCL	Frequency of Detection (%)	Maximum	Average	95% UCL				TTLC
	Metals (mg/kg)															
Metals (mg/kg)													Metals (mg/kg)			
Arsenic	93	20	3.7	4.3	85	45	5.0	6.1	100	14	6	6	500	24	Regional Background Level ¹	
Cobalt	100	56	19	21	100	110	29	33	100	29	12	13	8,000	84	Local Background Level ²	
Copper	100	330	40	45	99	1,000	111	198	100	230	46	56	2,500	2,500	Published Action Goal for Reference Site ³	
Lead	100	460	90	110	100	1,100 (1,000)	117	187	100	500	88	106	1,000	160	SFRWQCB Construction Worker/Commercial ESL ⁴	
Mercury	92	1.2	0.16	0.18	97	8.6	0.61	1.1	97	1.9	0.33	0.44	20.0	19.0	SFRWQCB Construction Worker/Commercial ESL ⁴	
Nickel	100	1,000	221	332	100	2,200 (1,900)	426	621	100	510	85	148	2,000	1,582	Local Background Level ²	
PCBs (µg/kg)													PCBs (µg/kg)			
Total PCBs (sum of Aroclors)	74	500	48	91	54	560	83	121	86	750	81	235	50,000	1,000	SFRWQCB Construction Worker/Commercial ESL ⁴	
TPH (mg/kg)													TPH (mg/kg)			
TPH as diesel	98	1,300	146	28	98	1,300	151	225	100	150	3.5	48	nc	880	SFRWQCB Construction Worker/Commercial ESL ⁴	
PAHs (µg/kg)													PAHs (µg/kg)			
B(a)P Equivalent Value	75	1,945	183	282	59	1,022	131	219	100	1,605	3.63	574	nc	900	Action Goal at Reference Site/Regional Background ^{2,5}	
Other													Other			
Naturally Occurring Asbestos (%)	78	1.75	0.49	1	0	<0.25	--	--	nt	nt	nt	nt	1	0.25	California Asbestos ATCM Regulations ⁶	

Notes and Abbreviations:
 The statistical summary at 900 Innes represents anticipated conditions after a Remedial Action is implemented to remove soil exceeding Remedial Action Goals based on TTLC exceedances.
 Values listed in dry weight, except for TTLC values, which are listed as wet weight. Wet weight shown in parentheses if dry weight exceeds TTLC.
 Highlight indicates that the maximum, average or 95% UCL of the constituent exceeds the HHSL.
 mg/kg = milligrams per kilogram
 µg/kg = micrograms per kilogram
 PCB = Polychlorinated Biphenyls
 TPH = Total Petroleum Hydrocarbons
 PAHs = Polycyclic Aromatic Hydrocarbons
 B(a)P = benzo(a)pyrene equivalent value
 TTLC = Total Threshold Limit Concentration, California Title 22
 nc = not calculated due to low frequency of detections
 nt = not tested
 ne = not established
 Averages as calculated using EPA ProUCL statistical software, Version 5.1.
 95% UCL = 95% Upper Confidence Limit, calculated using EPA ProUCL statistical software, Version 5.1 using the most appropriate fit of statistical method, as determined by the ProUCL program.
 1. Lawrence Berkeley National Laboratory Analysis of Background Distributions of Metals in Bay Area Regional Soils, Upper Estimate Values, 2009.
 2. Final Remediation Investigation Report, Hunters Point Power Plant, San Francisco, CA, TRC, 2009.
 3. Yosemite Slough Restoration Project Upland Cover (upper 2 feet) (Table 1 - Proposed Action Goals for Soil Reuse Options), Northgate, 2009 Work Plan for WDRs, Yosemite Slough Wetland Restoration, San Francisco, California, September 21.
 4. San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (the lower of Commercial and Construction scenarios). Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1, February 2016.
 5. California Department of Toxic Substances Control (DTSC), Use of the Northern and Southern California PAH Studies in the MGP Site Cleanup Process, July 2009
 6. Bay Area Air Quality Management District requirements for compliance with California Air Resources Board Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying and Surface Mining Operations

FIGURES





Scale 1:24,000

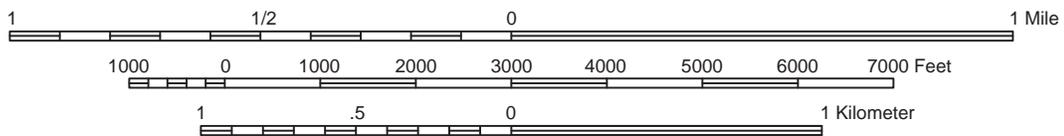


FIGURE 1
Site Location Map

Site Mitigation Plan
India Basin Redevelopment Project
San Francisco, California



Project No. 1370.01

Source: National Geographic USGS TOPO! 2000

Legend

- Property Boundaries
- Mean High Water - 5.84 ft NAVD88

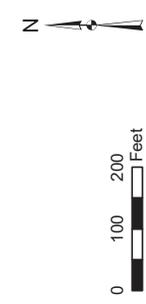


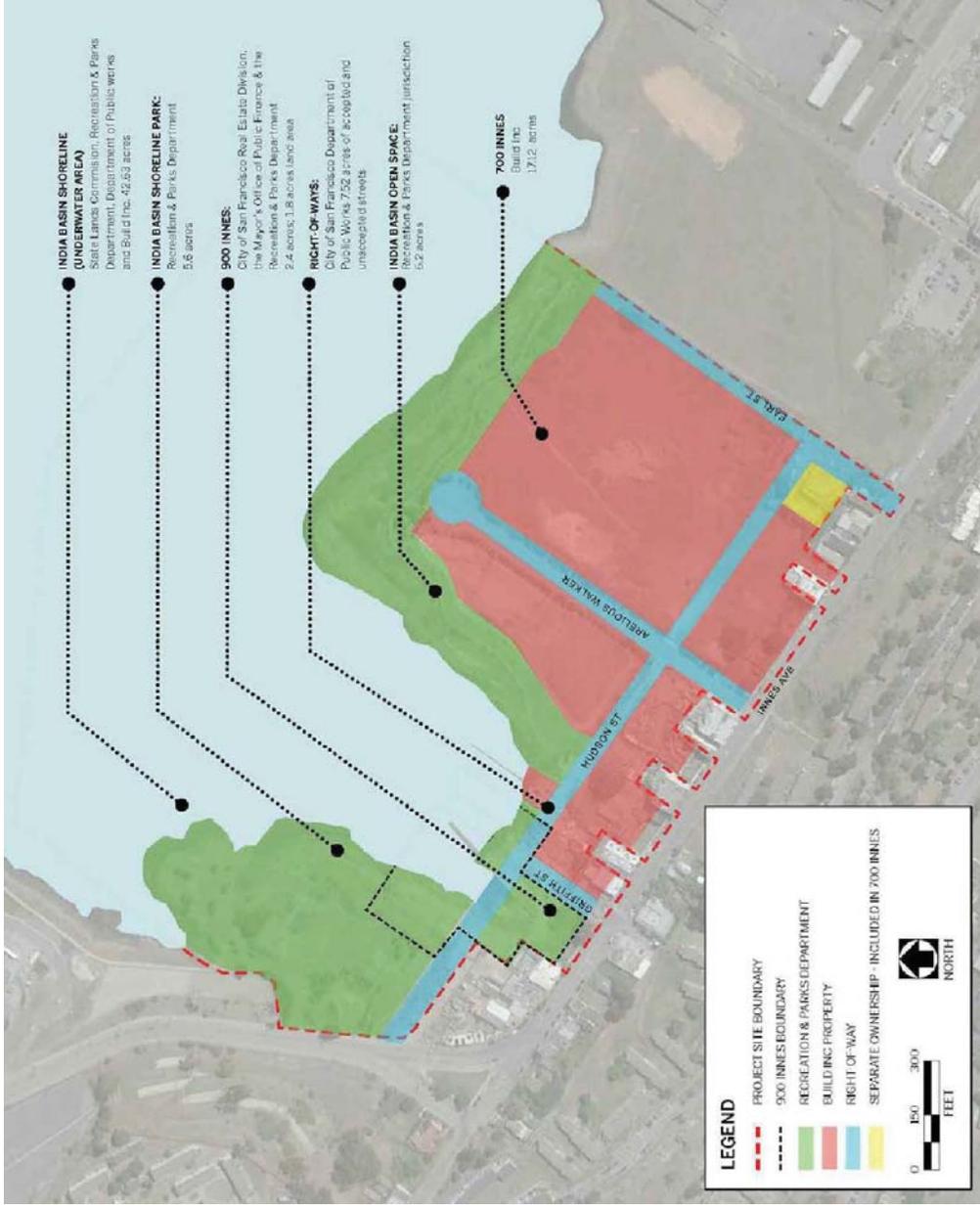
FIGURE 2
Site Vicinity

Site Mitigation Plan
India Basin Redevelopment Project
San Francisco, California
Project No. 1370.01



Image is a screenshot of U.S. Geological Survey's 2017 National Wetlands Inventory





SOURCE: Initial Study, SOM, 2016

FIGURE 3
Redevelopment Project Overview

Site Mitigation Plan
India Basin Redevelopment Project
San Francisco, California



Project No. 1370.01

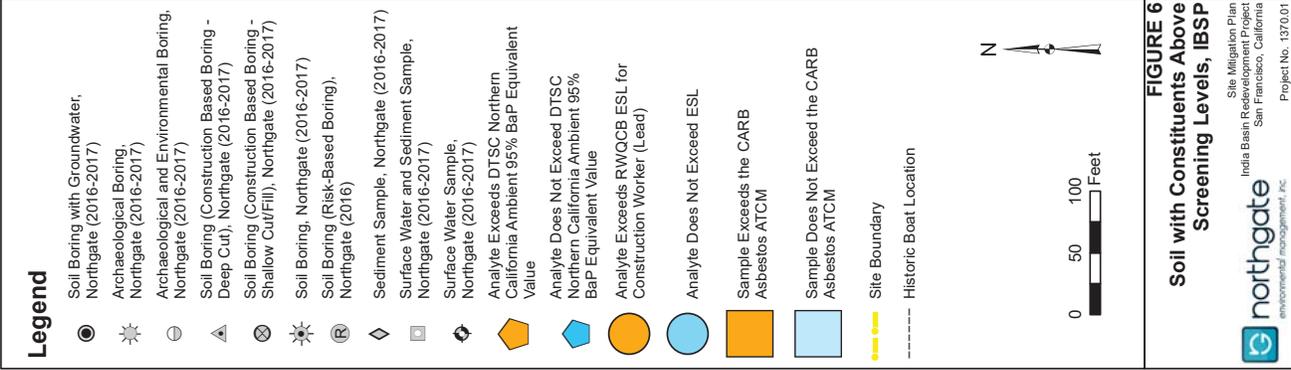


FIGURE 6
Soil with Constituents Above Screening Levels, IBSP

Site Mitigation Plan
 India Basin Redevelopment Project
 San Francisco, California
 Project No. 1370.01

northgate
 environmental management, inc.



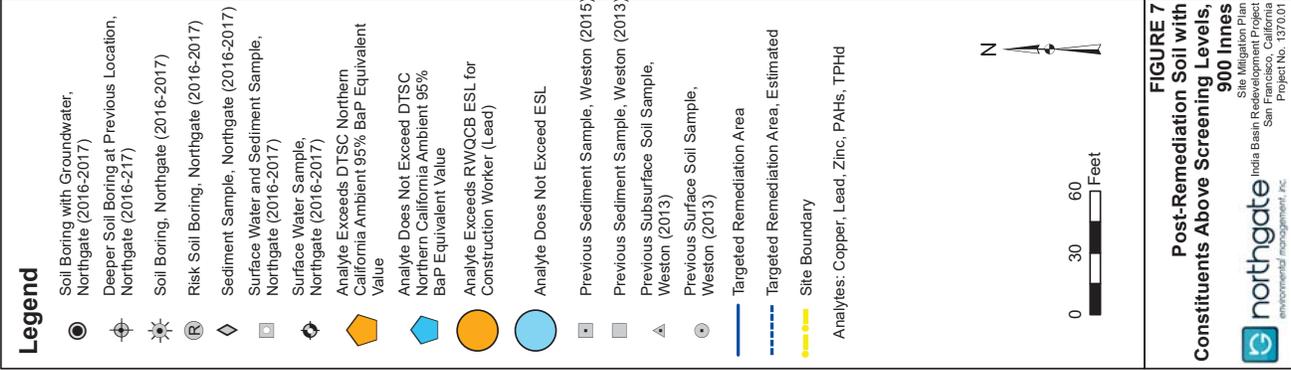
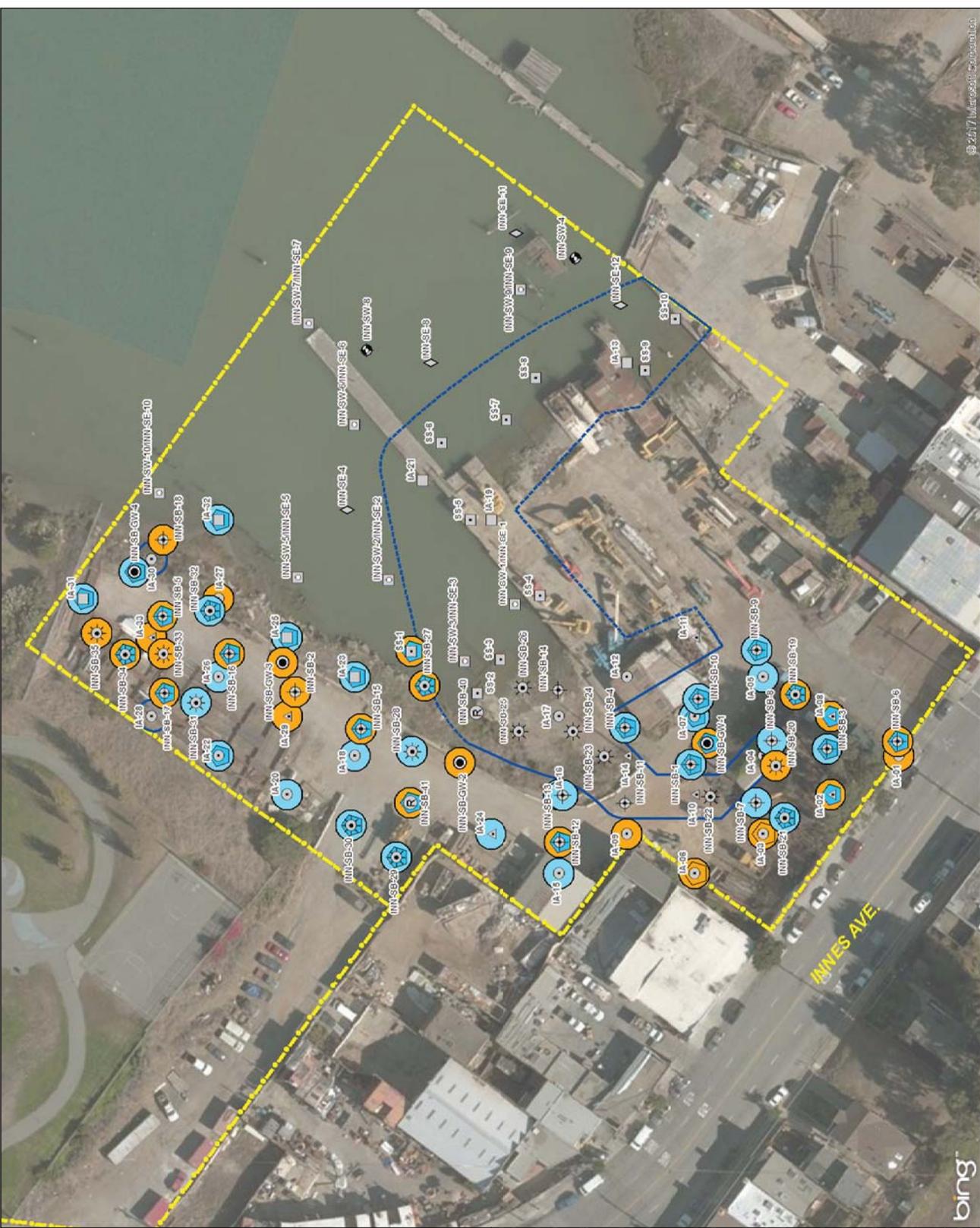


FIGURE 7
Post-Remediation Soil with Constituents Above Screening Levels, 900 Innes
 Site Mitigation Plan
 India Basin Remediation Project
 San Francisco, California
 Project No. 1370.01



Legend

- Boring Location
- Analyte Exceeds DTSC Northern California Ambient 95% BaP Equivalent Value
- Analyte Does Not Exceed DTSC Northern California Ambient 95% BaP Equivalent Value
- Analyte Exceeds RWQCB ESL for Construction Worker (Lead)
- Analyte Does Not Exceed ESL
- Mean High Water - 5.84 ft NAVD88
- Property Boundaries

Sample Types:
 WS-# = Wetland Surface (1 per Half Acre)
 TW-# = Terraced Wetland
 BH-# = Beach
 OS-# = Offshore
 GRAB-# = Surface Sample

Samples Collected at Boring Locations OS-1A through OS-1D OS-2A thru OS-2B and OS-3A through OS-3B were Combined into A 4-Point Composite and Two 2-Point Composites for Laboratory Analysis. Samples Collected at Boring Locations WS-3A through WS-3D, WS-5A through WS-5D, WS-7A through WS-7D, WS-11A through WS-11D were Combined into A 4-Point Composite in the Field.

FIGURE 8
Soil with Constituents Above Screening Levels, IBOS

Site Mitigation Plan
 India Basin Remediation Project
 San Francisco, California
 Project No. 1370.01

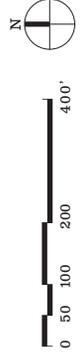
northgate
 environmental management, inc.



APPENDIX A

**CONCEPTUAL DESIGN PACKAGE,
INDIA BASIN SHORELINE PARK AND 900 INNES AVENUE**







NEIGHBORHOOD EDGE & HISTORIC SHOREWALK

- 1 Restored Shipwright's Cottage Welcome Center
- 2 Innes Ave Porch Swings
- 3 Overlook Porch Pavilion
- 4 Garden Path + Accessible Ramp
- 5 Griffith Street Steps
- 6 Heritage Garden
- 7 Parking
- 8 Shorewalk Promenade

SCOW SCHOONER BOATYARD

- 9 Historic Scow Schooner Boatyard Artifacts
- 10 Floating Piers
- 11 Shop Building
- 12 Gravel Beach Play Area

SAGE SLOPES

- 13 Adventure Play Area
- 14 1/4 Mile Recreation Loop
- 15 Adult Fitness Stations
- 16 Skate Bypass Wave Paths
- 17 Basketball Courts
- 18 Parking and Bus Drop-Off
- 19 Outfitter Pavilion

THE MARINEWAY

- 20 BBQ and Picnic Bosque
- 21 Play Lawn
- 22 Sloped Lawn
- 23 Gravel Beach
- 24 Floating Dock

- Restroom
- Bay Trail / Blue Greenway Route
- Class 1 Bikeway Route

0 50 100 200 400'



INDIA BASIN PARK: CUT FILL EXHIBIT

8/11/2016

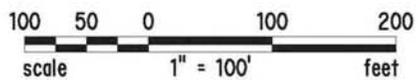


FIGURE 8

APPENDIX B

**CONCEPTUAL DESIGN PACKAGE,
INDIA BASIN OPEN SPACE AND 700 INNES AVENUE**



PROPOSED PROGRAM

- 1 BAY TRAIL CONNECTION TO 900 INNIES
- 2 OUTDOOR SEATING DECK
- 3 REMOVE EXISTING DOCK & PIERS
- 4 CREATE NEW TIDAL MARSH
- 5 BOARDWALK (AT TOE OF SLOPE)
- 6 REMOVE (EX) CONCRETE RUBBLE
- 7 (EX) WETLAND CELL TO REMAIN
- 8 SEATING TERRACES
- 9 (EX) BANK
- 10 STAIR ACCESS TO BOARDWALK
- 11 (EX) EEL GRASS BED (APPROXIMATE LOCATION*)
- 12 LOW TIDE LINE**
- 13 GLASS-1 BIKE LANE
- 14 ADA RAMP & STAIR TERRACES
- 15 LOWER COVE PLAZA
- 16 UPPER COVE RETAIL PLAZA
- 17 PERFORMANCE STAGE
- 18 LAWN
- 19 BOARDWALK PROMENADE
- 20 NEW HUDSON RETAIL STREET CORRIDOR
- 21 MARKET PLAZA
- 22 MARKET PAVILION
- 23 ANCHOR CAFE
- 24 ACTIVITY ZONE & COMMUNITY FACILITY
- 25 RESIDENT SHARED BACKYARD
- 26 WILDFLOWER MEADOW
- 27 MULTI-USE TRAIL (BAY TRAIL)
- 28 PICNIC AREA
- 29 LAWN / PICNIC AREA
- 30 OUTDOOR SCULPTURE
- 31 CROSS TRAINING / FITNESS CIRCUIT
- 32 OFF-LEASH DOG AREA
- 33 BLACKWATER MECHANICAL TREATMENT FACILITY
- 34 COMMUNITY BOAT STORAGE LOCKER
- 35 RECYCLED WATER / STORM WATER POND
- 36 STORM WATER POND
- 37 SEASONAL WETLANDS
- 38 OVERLOOK
- 39 TERRACED WETLANDS
- 40 RESIDENTIAL STREET
- 41 GREEN CONNECTOR
- 42 THE BARN - PRIVATE YARD
- 43 RPD BOAT STORAGE LOCKER
- 44 SUNDECK
- 45 CONCESSIONS / RESTROOM
- 46 LOWER DECK
- 47 SAND AREA
- 48 DOCK

* EEL GRASS BED APPROXIMATE LOCATION AS MAPPED BY INDIA SURVEY.

** LOW TIDE LINE AND BATHYMETRY AS SURVEYED BY MOFFATT & NICHOL FOR THE INDIA BASIN WATERFRONT STUDY.



FEBRUARY 26, 2016

INDIA BASIN



CONCEPT MASTER PLAN

B U I L D I N G | SOM | BIONIC | GEHL STUDIO | SHERWOOD | WRA | MOFFATT & NICHOL

PROPOSED PROGRAM

- 5 BOARDWALK (AT TOE OF SLOPE)
- 7 (EX) WETLAND CELL TO REMAIN
- 8 SEATING TERRACES
- 10 STAIR ACCESS TO BOARDWALK
- 11 (EX) EEL GRASS BED (APPROXIMATE LOCATION*)
- 12 LOW TIDE LINE**
- 27 MULTI-USE TRAIL (BAY TRAIL)
- 33 BLACKWATER MECHANICAL TREATMENT FACILITY
- 34 COMMUNITY BOAT STORAGE LOCKER
- 36 STORM WATER POND
- 40 RESIDENTIAL STREET
- 41 GREEN CONNECTOR
- 42 THE BARN - PRIVATE YARD
- 43 RPD BOAT STORAGE LOCKER
- 44 SUNDECK
- 45 CONCESSIONS / RESTROOM
- 46 LOWER DECK
- 47 SAND AREA
- 48 DOCK
- 49 BOAT LAUNCH / DOG BEACH
- 50 BUOY LINE & FENCE

* EEL GRASS BED APPROXIMATE LOCATION AS MAPPED BY NOAA SURVEY.

** LOW TIDE LINE AND BATHYMETRY AS SURVEYED

BY MOFFATT & NICHOL FOR THE INDIA BASIN WATERFRONT STUDY.



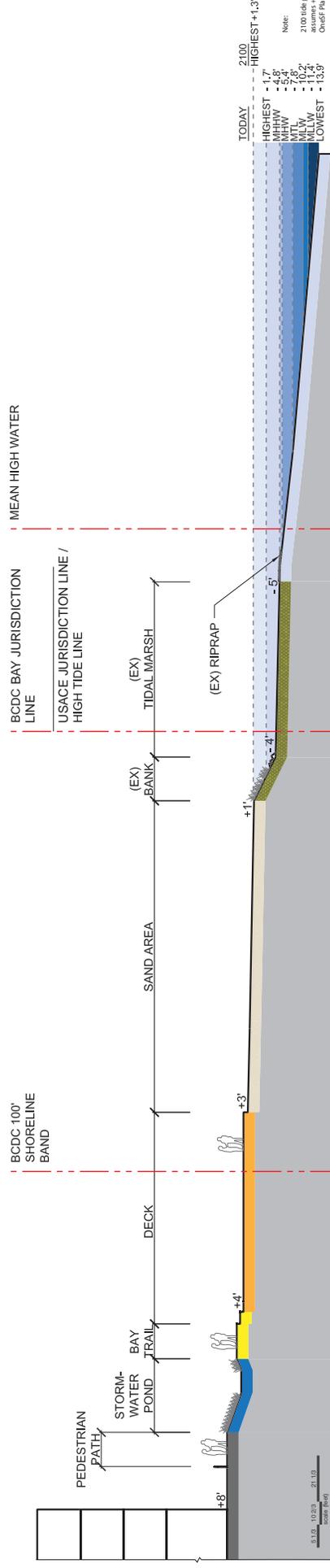
- BCDC 100' SHORELINE BAND
- BCDC BAY JURISDICTION LINE
- USACE JURISDICTION LINE (HIGH TIDE LINE)
- MEAN HIGH WATER



TERRACED SAND AREA



DOG / BOAT LAUNCH BEACH



FEBRUARY 26, 2016

INDIA BASIN

CONCEPT MASTER PLAN: BEACH VARIANT

B U I L D I N G | SOM | BIONIC | GEHL STUDIO | SHERWOOD | WRA | MOFFATT & NICHOL

CUT/FILL SUMMARY

TOTAL CUT	224,495 CU YD
TOTAL FILL	156,466 CU YD
NET CUT	68,029 CU YD

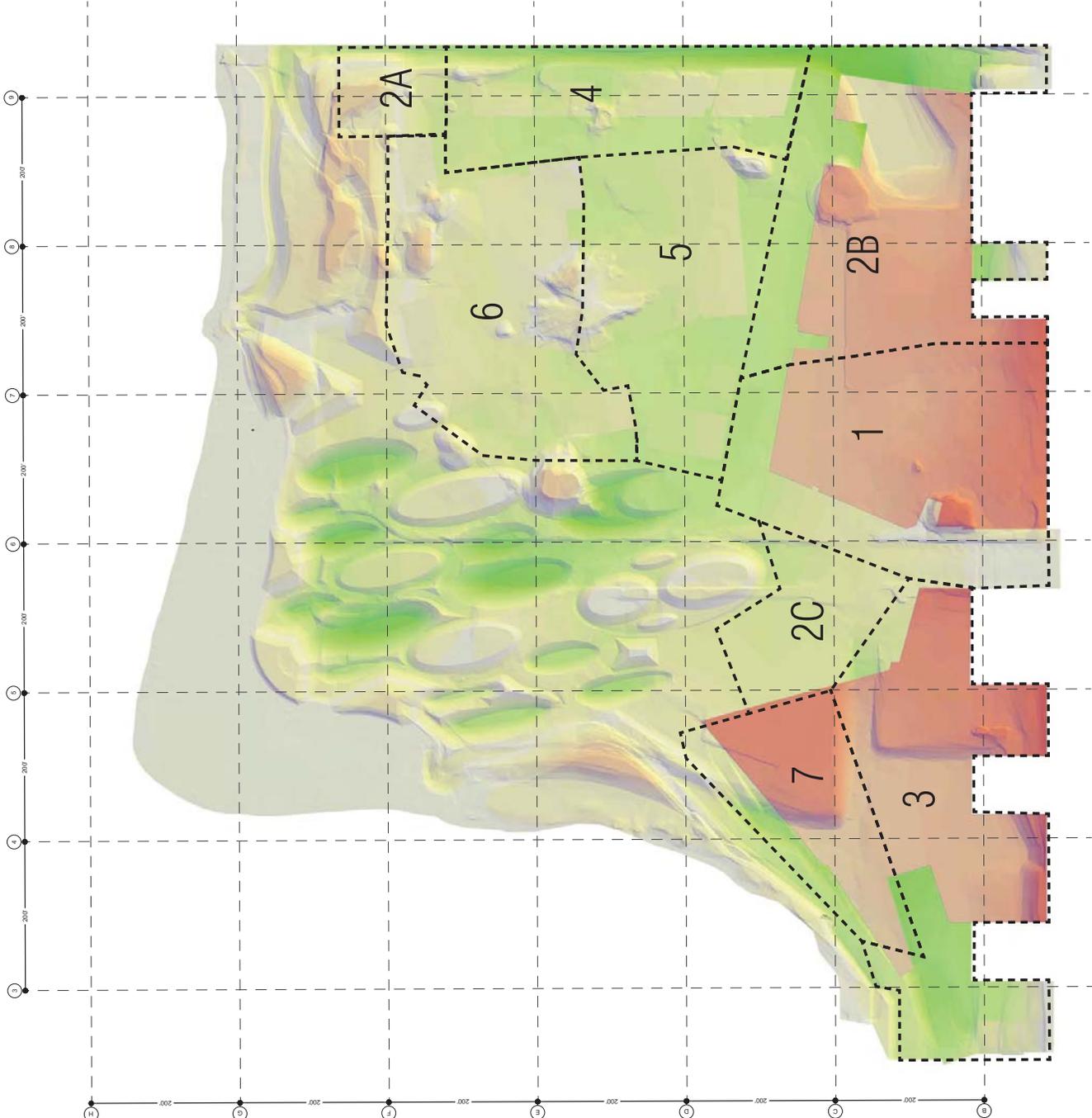
NOTES

- Owner provided ALTA/ACSM Land Survey dated 3.7.2014 to a degree of accuracy of +/- 6". Cut/fill calculations herein to a degree of accuracy of +/- 6".
- Areas in survey lacking complete data were extrapolated based on available information in survey.
- Analysis based on:
 - ALTA/ACSM Land Title Survey at East India Basin by Martin M. Ron Associates, 3.7.2014
 - SOM ASK 844-847, 4.19.2016
 - Sherwood Water Phasing Diagram, 3.4.2016
 - Bionic Preliminary Rough Grading Plan, 4.6.2016
- NOP Max Residential Phasing provided by SOM
- Cut quantity does not account for soil expansion, settlement, or excavation for utility trenches.
- Legend represents amount of cut/fill in feet below/above existing elevations.

India Basin Soil Management Plan
Grading Layer Draft Cut Fill Analysis
ISSUED 04.29.2016



LEGEND	
Minimum Elevation	Maximum Elevation
-38.00	-37.00
-37.00	-36.00
-36.00	-35.00
-35.00	-34.00
-34.00	-33.00
-33.00	-32.00
-32.00	-31.00
-31.00	-30.00
-30.00	-29.00
-29.00	-28.00
-28.00	-27.00
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-11.00	-10.00
-10.00	-9.00
-9.00	-8.00
-8.00	-7.00
-7.00	-6.00
-6.00	-5.00
-5.00	-4.00
-4.00	-3.00
-3.00	-2.00
-2.00	-1.00
-1.00	0.00
0.00	1.00
1.00	2.00
2.00	3.00
3.00	4.00
4.00	5.00
5.00	6.00
6.00	7.00
7.00	8.00
8.00	9.00
9.00	10.00
10.00	11.00
11.00	12.00
12.00	13.00
13.00	14.00
14.00	15.00
15.00	16.00
16.00	17.00
17.00	18.00
18.00	19.00
19.00	20.00
20.00	21.00
21.00	22.00



APPENDIX C

DATA PACKAGE, INDIA BASIN SHORELINE PARK



TABLE 5A
Soil Sample Analytical Results for Metals, Dry Weight

Sample ID	Depth From Existing Surface (ft bgs)	Sample Depth (ft bgs)	Analyte Units	Moisture Percent	Metals															
					Antimony mg/kg EPA 6010B	Arsenic mg/kg EPA 6010B	Barium mg/kg EPA 6010B	Beryllium mg/kg EPA 6010B	Cadmium mg/kg EPA 6010B	Chromium mg/kg EPA 6010B	Cobalt mg/kg EPA 6010B	Copper mg/kg EPA 6010B	Lead mg/kg EPA 6010B	Mercury mg/kg EPA 7471A	Molybdenum mg/kg EPA 6010B	Nickel mg/kg EPA 6010B	Selenium mg/kg EPA 6010B/6020	Silver mg/kg EPA 6010B	Thallium mg/kg EPA 6010B	Vanadium mg/kg EPA 6010B
Sample Date	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P	ASTM D2116/C11P		
BSP-SB-1-05	0 to 0.5	0.5	12/20/2016	43	< 0.27 ND	7.30	43.00	0.59 J	1.80	87.00	16.00	34.00	34.00	11	0.08	0.50 J	0.170 J	< 0.250 ND	76	86
BSP-SB-1-2.5	2 to 3	2.5	12/20/2016	36	< 0.23 ND	5.90	34.00	0.30 J	1.30	120.00	15.00	23.00	23.00	81	0.08	0.44 J	0.130 J	< 0.220 ND	65	71
BSP-SB-2-0.5	0 to 0.5	0.5	12/20/2016	16	< 0.22 ND	0.6	140.00	0.30 J	0.5	68.0	75.0	13.0	13.0	240	0.1	< 0.2 ND	< 0.052 ND	< 0.180 ND	40	87
BSP-SB-2-2.5	2 to 3	2.5	12/20/2016	24	< 0.22 ND	3.30	44.00	0.10 J	0.70	64.00	9.90	10.00	10.00	22	0.06	0.33 J	0.081 J	< 0.210 ND	51	54
BSP-SB-AR-3-0.5	0 to 0.5	0.5	12/20/2016	12	< 0.18 ND	1.10	62.00	0.06 J	0.51	71.00	9.80	10.00	10.00	22	0.05	0.19 ND	< 0.047 ND	< 0.170 ND	41	47
BSP-SB-AR-3-2.5	2 to 3	2.5	12/20/2016	22	< 0.2 ND	1.0	60.0	0.0 J	0.6	75.0	11.0	7.3	7.3	23	0.1	0.3	< 0.043 ND	< 0.150 ND	45	39
BSP-SB-4-0.5	0 to 0.5	0.5	12/12/2016	22	< 0.54 J	0.23 J	140.00	0.06 J	1.10	110.00	20.00	330.00	330.00	130	0.20	0.79	0.130 J	< 0.180 ND	58	250
BSP-SB-4-2.5	2 to 3	2.5	12/12/2016	25	< 2.70 ND	1.80	30.00	0.03 J	0.43	120.00	8.30	290.00	290.00	220	0.10	0.18	0.055 ND	< 0.200 ND	32	200
BSP-SB-AR-5-0.5	0 to 0.5	0.5	12/20/2016	7	< 0.2 ND	1.30	77.00	0.10 J	0.62	63.00	10.00	7.60	7.60	24	0.08	0.16 J	0.070 J	< 0.150 ND	53	44
BSP-SB-AR-5-2.5	2 to 3	2.5	12/20/2016	7	< 0.2 ND	< 0.1 ND	82.0	0.11 J	0.5	48.0	7.6	8.4	8.4	47	1.2	0.3	0.100 J	< 0.150 ND	48	47
BSP-SB-6-1.0	0 to 2	1.0	12/20/2016	13	< 0.16 ND	3.30	130.00	0.20 J	1.00	130.00	21.00	37.00	37.00	79	0.22	0.69	< 0.044 ND	< 0.960 ND	48	99
BSP-SB-6-3.0	2 to 4	3.0	12/20/2016	12	< 0.17 ND	1.80	140.00	0.17 J	1.20	180.00	30.00	39.00	39.00	110	0.18	2.30	< 0.045 ND	< 0.160 ND	44	130
BSP-SB-6-5.0	4 to 6	5.0	12/20/2016	7	< 0.18 ND	0.31	60.00	0.02 J	0.51	25.00	5.90	18.00	18.00	3.0	< 0.02 ND	0.50	< 0.047 ND	1.100	20	32
BSP-SB-6-7.0	6 to 8	7.0	12/20/2016	20	< 0.2 ND	3.0	84.0	0.1 J	0.8	36.0	7.0	37.0	37.0	15	0.0	1.3	< 0.054 ND	1.700	67	62
BSP-SB-6-9.0	8 to 10	9.0	12/20/2016	5	< 0.15 ND	0.12 J	56.00	0.02 J	1.70	25.00	5.40	12.00	12.00	100	0.05	0.34	< 0.039 ND	0.590	16	29
BSP-SB-7-1.0	0 to 2	1.0	12/20/2016	12	< 0.17 ND	2.40	140.00	0.07 J	1.50	550.00	44.00	50.00	50.00	100	0.23	0.41	< 0.048 ND	< 0.160 ND	39	230
BSP-SB-7-3.0	2 to 4	3.0	12/20/2016	10	< 0.2 ND	2.8	110.0	0.1 J	1.2	450.0	36.0	27.0	27.0	66	0.2	0.5	< 0.030 ND	< 0.170 ND	40	120
BSP-SB-7-5.0	4 to 6	5.0	12/20/2016	7	< 0.17 ND	4.00	260.00	0.24 J	1.30	150.00	19.00	74.00	74.00	420	0.10	0.71	< 0.046 ND	< 0.160 ND	50	240
BSP-SB-7-7.0	6 to 8	7.0	12/20/2016	6	< 0.16 ND	2.60	150.00	0.11 J	1.20	170.00	25.00	43.00	43.00	110	0.17	0.75	< 0.044 ND	< 0.150 ND	50	160
BSP-SB-7-9.0	8 to 10	9.0	12/20/2016	9	< 0.17 ND	3.60	150.00	0.12 J	1.20	140.00	24.00	71.00	71.00	91	0.23	9.50	< 0.045 ND	< 0.160 ND	46	150
BSP-SB-7-11.0	10 to 12	11.0	12/20/2016	11	< 0.17 ND	2.00	150.00	0.05 J	1.20	140.00	26.00	41.00	41.00	90	0.25	0.99	< 0.044 ND	< 0.180 ND	64	140
BSP-SB-8-1.0	0 to 2	1.0	12/20/2016	9	< 0.18 ND	2.10	100.00	0.23 J	0.81	46.00	13.00	33.00	33.00	14	0.03	0.58	< 0.048 ND	< 0.150 ND	33	53
BSP-SB-8-2.5	2 to 4	2.5	12/20/2016	9	< 0.16 ND	2.00	86.00	0.10 J	0.68	41.00	47.00	24.00	24.00	26	0.15	0.48	< 0.043 ND	< 0.150 ND	38	56
BSP-SB-8-5.0	4 to 6	5.0	12/20/2016	10	< 0.20 J	4.00 b	63.00	0.18 J	0.13 J	75.00	11.00	7.80	7.80	38	0.12	0.17	< 0.043 ND	< 0.150 ND	47	46
BSP-SB-8-9.0	8 to 10	9.0	12/20/2016	10	< 0.20 J	5.30	84.00	0.33 J	0.13 J	89.00	14.00	15.00	15.00	81	0.14	0.09	0.130 J	< 0.060 ND	60	54
BSP-SB-8-13.0	12 to 14	13.0	12/20/2016	16	< 0.16 ND	2.30	75.00	0.05 J	1.00	52.00	8.60	29.00	29.00	53	0.04	0.33	0.079 J	< 0.060 ND	45	160
BSP-SB-8-15.0	14 to 16	15.0	12/20/2016	17	< 0.18 ND	1.10	150.00	0.13 J	1.30	370.00	47.00	24.00	24.00	110	0.25	2.00	0.074 J	< 0.056 ND	36	70
BSP-SB-10-17.0	16 to 18	17.0	12/20/2016	16	< 0.16 ND	1.10	98.00	0.10 J	0.93	71.00	12.00	18.00	18.00	280	0.13	4.30	< 0.042 ND	< 0.150 ND	60	71
BSP-SB-AR-11-0	0 to 2	1.0	12/20/2016	10	< 0.15 ND	5.20	170.00	0.36 J	0.92	64.00	15.00	38.00	38.00	23	0.04	0.28 J	< 0.052 ND	< 0.140 ND	64	68
BSP-SB-AR-11-3.0	2 to 4	3.0	12/20/2016	17	< 0.18 ND	4.70	300.00	0.57 J	1.00	100.00	11.00	38	38	27	0.10	0.29 J	0.120 J	< 0.170 ND	110	60
BSP-SB-AR-11-5.0	4 to 6	5.0	12/20/2016	12	< 0.2 ND	1.5	170.0	0.09 J	0.7	45.0	7.7	29.0	29.0	62	0.0	0.7	0.110 J	< 0.150 ND	40	57
BSP-SB-12-1.0	0 to 2	1.0	12/20/2016	12	< 0.4 J	5.7 b	160.0	0.3 J	0.3	200.0	39.0	58.0	58.0	110	0.2	0.7	0.170 J	< 0.058 ND	48	160
BSP-SB-12-3.0	2 to 4	3.0	12/20/2016	7	< 0.28 J	3.80 b	150.00	0.25 J	0.27 J	200.00	43.00	34.00	34.00	58	0.18	0.65	0.160 J	< 0.056 ND	56	93
BSP-SB-12-5.0	4 to 6	5.0	12/20/2016	9	< 0.31 J	4.60 b	180.00	0.25 J	< 0.03 ND	240.00	48.00	35.00	35.00	47	0.25	1.30	0.140 J	< 0.055 ND	59	86
BSP-SB-12-7.0	6 to 8	7.0	12/20/2016	8	< 0.2 J	4.8 b	110.0	0.2 J	0.11 J	35.0	9.6	24.0	24.0	24	0.0	0.7	0.071 J	< 0.057 ND	31	51
BSP-SB-12-9.0	8 to 10	9.0	12/20/2016	16	< 0.1 ND	4.2 b	120.0	0.2 J	0.2 J	43.0	8.6	26.0	26.0	69	0.0	3.5	0.095 J	< 0.063 ND	26	110
BSP-SB-AR-13-0.5	0 to 0.5	0.5	12/20/2016	15	< 0.2 ND	1.9	120.0	0.4 J	0.8	110.0	14.0	23.0	23.0	43	0.3	0.2 J	0.120 J	< 0.170 ND	64	74
BSP-SB-AR-13-2.5	2 to 3	2.5	12/20/2016	12	< 0.2 ND	2.1	76.00	0.2 J	0.7	76.0	14.0	9.7	9.7	15	0.1	0.3	0.074 J	< 0.150 ND	59	38
BSP-SB-AR-13-4.5	4 to 5	4.5	12/20/2016	22	< 0.20 ND	2.30	86.00	0.36 J	0.80	69.00	14.00	11.00	11.00	6.6	0.08	0.41	0.063 J	< 0.160 ND	76	42
BSP-SB-AR-14-0.5	0 to 0.5	0.5	12/20/2016	11	< 0.17 ND	4.40	220.00	0.57 J	1.00	38.00	22.00	44.00	44.00	21	0.10	0.55	0.050 J	< 0.190 ND	38	100
BSP-SB-AR-14-2.5	2 to 3	2.5	12/20/2016	14	< 0.39 ND	0.19 J	160.00	0.26 J	0.79	66.00	14.00	29.00	29.00	360	0.10	0.99	0.120 J	< 0.360 ND	57	100
BSP-SB-AR-14-4.5	4 to 5	4.5	12/20/2016	6	< 0.2 ND	2.2	64.0	0.2 J	0.2	240.0	17.0	8.7	8.7	24	0.1	0.4	0.052 J	< 0.160 ND	46	37
BSP-SB-15-0.5	0 to 0.5	0.5	12/20/2016	9	0.43 J	4.90 b	68.00	0.24 J	0.15 J	70.00	12.00	17.00	17.00	46	0.11	0.61	0.120 J	< 0.057 ND	45	74
BSP-SB-15-2.5	2 to 3	2.5	12/20/2016	10	0.20 J	4.40 b	75.00	0.30 J	0.23 J	100.00	17.00	23.00	23.00	30	0.11	0.17 J	< 0.033 ND	< 0.059 ND	53	52
BSP-SB-15-4.5	4 to 5	4.5	12/20/2016	5	0.10 J	1.70 b	81.00	0.23 J	0.45	39.00	9.90	29.00	29.00	33	0.07	0.45	0.078 J	< 0.057 ND	50	50
BSP-SB-16-0.5	0 to 0.5	0.5	12/20/2016	17	0.2 J	3.5	67.00	0.2 J	0.1 J	75.0	14.0	16.0	16.0	40	0.1	< 0.1 ND	0.093 J	< 0.058 ND	35	95
BSP-SB-16-2.5	2 to 3	2.5	12/20/2016	11	0.1 J	< 0.1 ND	69.00	0.2 J	< 0.0 ND	79.0	14.0	8.4	8.4	23	0.09	< 0.08 ND	0.1 J	< 0.056 ND	40	40
BSP-SB-16-4.5	4 to 5	4.5	12/20/2016	8	0.2 J	5.4	77.0	0.3 J	0.2 J	39.0	13.0	26.0	26.0	150	0.2	0.2 J	0.094 J	< 0.064 J	74	110
BSP-SB-17-0.5	0 to 0.5	0.5	12/20/2016	20	0.44 J	4.40	140.00	0.31 J	0.13 J	59.00	13.00	53.00	53.00							

TABLE 5A
Soil Sample Analytical Results for Metals, Dry Weight

Sample ID	Depth From Existing Surface (ft/bgs)	Sample Depth (ft/bgs)	Analyte Units	Moisture Percent	Laboratory Method	Sample Date	Metals																	
							Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	
							mg/kg EPA 6010B																	
HSFP-SB-17-4.5	4 to 5	4.5	2.0	J	2.7	280.0	0.3	J	2.4	150.0	25.0	110.0	340	0.3	6.20	330.0	0.5	J	0.290	0.170	J	13	820	
HSFP-SB-18-0.5	0 to 0.5	0.5	0.4	Jb	8.8	97.0	0.3	J	0.3	80.0	12.0	19.0	88	0.1	0.2	99.0	<	0.1	ND	0.066	<	0.059	ND	43
HSFP-SB-18-2.5	0.5 to 2.5	2.5	0.4	Jb	4.3	140.0	0.3	J	0.3	61.0	11.0	37.0	88	0.2	0.1	81.0	<	0.1	0.110	<	0.059	ND	39	
HSFP-SB-19-0.5	0 to 0.5	0.5	0.23	Jb	4.30	670.0	0.25	J	0.14	74.0	11.00	13.00	140	0.15	0.12	87.00	<	0.08	ND	<	0.057	ND	44	
HSFP-SB-19-2.5	0.5 to 2.5	2.5	0.66	Jb	6.20	190.00	0.35	J	0.33	88.00	16.00	65.00	150	0.14	0.45	110.00	0.18	J	0.200	0.065	J	52	130	
HSFP-SB-20-0.5	0 to 0.5	0.5	0.4	Jb	5.3	110.0	0.3	J	0.4	97.0	16.0	16.0	89	0.14	0.26	130.0	0.2	J	0.120	<	0.062	ND	42	
HSFP-SB-20-2.5	0.5 to 2.5	2.5	0.2	Jb	4.8	57.0	0.2	J	0.0	82.0	20.0	36.0	40	0.1	<	0.1	ND	0.2	0.068	<	0.056	ND	30	
HSFP-SB-21-0.5	0 to 0.5	0.5	0.2	Jb	3.9	53.0	0.2	J	0.1	99.0	12.0	6.8	25	0.06	<	0.08	ND	0.1	0.034	<	0.053	ND	41	
HSFP-SB-21-2.5	0.5 to 2.5	2.5	0.28	Jb	3.20	76.00	0.20	J	0.28	220.00	38.00	21.00	89	0.18	<	0.09	ND	0.12	0.044	<	0.060	ND	40	
HSFP-SB-22-0.5	0 to 0.5	0.5	1.00	Jb	6.60	180.00	0.34	J	0.26	180.00	22.00	13.00	33	0.08	0.11	220.00	0.19	J	<	0.031	ND	76		
HSFP-SB-22-2.5	0.5 to 2.5	2.5	1.60	J	5.9	140.00	0.29	J	<	300.00	32.00	44.00	460	0.50	0.26	610.00	0.22	J	0.180	<	0.090	J	39	
HSFP-SB-23-0.5	3 to 6	5.0	<	0.2	ND	100.0	0.2	J	1.4	190.0	34.0	46.0	110	0.30	0.6	410.0	<	0.2	ND	<	0.160	ND	50	
HSFP-SB-23-8.5	6 to 9	8.5	<	0.18	ND	200.0	0.33	J	1.30	250.0	33.0	28.0	33	0.2	0.4	810.0	<	0.2	ND	<	0.150	ND	41	
HSFP-SB-24-12.0	9 to 12	12.0	<	0.17	ND	290.00	0.26	J	1.30	62.00	22.00	28.00	180	0.10	0.66	60.00	<	0.20	ND	<	0.170	ND	55	
HSFP-SB-24-4.5	3 to 6	4.5	<	0.2	ND	130.0	0.4	J	0.8	81.0	13.0	26.0	40	0.0	0.6	120.0	0.2	J	<	0.043	ND	39		
HSFP-SB-25-4.5	3 to 6	4.5	<	0.17	ND	93.00	0.17	J	1.10	130.00	33.00	26.00	46	0.16	0.65	480.00	<	0.18	ND	<	0.160	ND	41	
HSFP-SB-25-7.5	6 to 9	7.5	<	0.18	ND	520	0.35	J	1.80	110.00	40.00	58.00	120	0.33	1.10	360.00	0.63	J	<	0.047	ND	77		
HSFP-SB-26-4.5	3 to 6	4.5	<	0.2	ND	150.0	0.1	J	1.3	140.0	26.0	63.0	73	0.2	7.1	310.0	<	0.2	ND	<	0.170	ND	64	
HSFP-SB-26-7.5	6 to 9	7.5	<	0.2	ND	190.0	0.3	J	1.5	130.0	27.0	68.0	120	0.3	1.6	340.0	<	0.6	J	<	0.160	ND	61	
HSFP-SB-28-10.0	9 to 10	10.0	<	0.2	ND	150.0	0.2	J	0.7	20.0	2.3	79.0	091	<	0.0	10.0	<	0.2	ND	0.150	<	0.060	ND	36
HSFP-SB-29-9.5	9 to 10	9.5	<	0.2	ND	180.0	0.2	J	0.0	31.0	6.8	56.0	10	<	0.02	44.0	<	0.08	ND	0.053	<	0.060	ND	20
HSFP-SB-29-11.0	10 to 12	11.0	0.5	J	6.9	130.0	0.3	J	0.3	86.0	21.0	33.0	65	0.1	1.6	190.0	0.4	J	0.150	0.075	J	36		
HSFP-SB-29-13.0	12 to 14	13.0	0.68	J	10.00	100.00	0.26	J	0.12	48.00	11.0	30.00	30	<	0.02	75.00	0.13	J	0.082	<	0.055	ND	33	
HSFP-SB-29-15.0	14 to 16	15.0	0.61	J	6.00	170.00	0.31	J	0.51	130.00	33.00	44.00	150	0.23	0.72	420.00	0.22	J	0.079	0.077	J	47		
HSFP-SB-29-17.0	16 to 18	17.0	0.43	J	5.8	120.0	0.2	J	0.1	100.00	26.0	29.0	51	0.12	1.40	220.00	0.22	J	0.170	0.066	J	35		
HSFP-SB-AR-34-7.0	6 to 8	7.0	<	0.16	ND	2.5	0.12	J	1.2	260.0	49.0	100.0	380	0.26	0.2	1000.0	<	0.17	ND	<	0.150	ND	35	
HSFP-SB-AR-34-9.0	8 to 10	9.0	<	0.2	ND	240.0	0.2	J	0.7	60.0	6.5	44.0	420	0.1	0.4	29.0	<	0.2	ND	<	0.170	ND	45	
HSFP-SB-AR-34-11.0	10 to 12	11.0	<	0.18	ND	170.00	0.27	J	0.95	71.00	7.30	16.00	400	0.24	0.31	32.00	<	0.19	ND	<	0.170	ND	57	
HSFP-SB-AR-34-13.0	12 to 14	13.0	<	0.20	ND	570.00	0.05	J	0.89	45.00	7.70	33.00	5.9	0.47	0.75	35.00	<	0.22	ND	<	0.054	ND	75	
HSFP-SB-AR-34-17.0	16 to 18	17.0	<	0.17	ND	<	0.1	J	0.6	56.0	8.6	19.0	10	0.03	0.37	62.0	<	0.19	ND	<	0.160	ND	42	

Sample ID	Depth From Existing Surface (ft/bgs)	Sample Depth (ft/bgs)	Analyte Units	Moisture Percent	Laboratory Method	Sample Date	Metals																
							Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
HSFP-SB-AR-34-17.0	16 to 18	17.0	0.24	mean	3.7	200.0	0.20	J	0.71	114	19	40	90	0.16	0.97	221	<	0.19	ND	<	0.15	46	115

Human Health Comparative Values							Data Statistics																
Sample ID	Depth From Existing Surface (ft/bgs)	Sample Depth (ft/bgs)	Analyte Units	Moisture Percent	Laboratory Method	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
HSFP-SB-AR-34-17.0	16 to 18	17.0	0.24	mean	3.7	200.0	0.20	J	0.71	114	19	40	90	0.16	0.97	221	<	0.19	ND	<	0.15	46	115

Notes and Abbreviations:
 mg/kg = milligrams per kilogram
 bgs = Below ground surface
 % = Percent
 J = Estimated value
 ND = Not detected above the method detection limit (< MDL)
 ne = Not established
 Y = Laboratory analytical method calibration bias for this result OR sample was prepared outside of hold time
 * = San Francisco Regional Water Quality Control Board (SRWQCB) 2016 Direct Exposure ESLS = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios), San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, Table S-1, February 2016.
 † = United States Environmental Protection Agency (USEPA) Residential RSLs = Residential Exposure Scenario, May 2016.
 ‡ = Lawrence Berkeley National Laboratory (LBNL) Analysis of Background Distributions of Metals in Bay Area Residential Soils, Upper Estimate Values, 2009.
 § = Final Remediation Investigation Report, Hunters Point Power Plant, San Francisco, CA, TRC 2009
 ¶ = TLIC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TLIC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TLIC values are listed as wet weight.
Comparative Value Formatting Key for Individual Samples:
bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESLS, or background concentration, whichever is greater.
Highlighted indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESLS, or the 2016 Construction Worker Direct Exposure ESLS, whichever is lower.
Red Bolded indicates an individual sample location exceeds the TLIC where established.

**TABLE 5B
Soil Sample Analytical Results for Polychlorinated Biphenyls (PCBs)**

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte Units	Moisture, Percent % ASTM D2216/CLP	PCBs										Total PCBs (sum of Aroclors) µg/kg	
					Aroclor-1016 µg/kg	Aroclor-1221 µg/kg	Aroclor-1232 µg/kg	Aroclor-1242 µg/kg	Aroclor-1248 µg/kg	Aroclor-1254 µg/kg	Aroclor-1260 µg/kg	Sum				
					EPA 8082	EPA 8082	EPA 8082	EPA 8082								
Data Statistics				sample count	34	34	34	34	34	34	34	34	34	34	34	34
frequency of detection				max	< 2.1	11	< 2.7	< 2.5	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7	74%
				min	< 1.3	< 3.4	< 1.7	< 1.5	< 1.6	< 1.3	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 1.0
				mean	0.69	2.1	0.90	0.83	0.88	2.3	2.5	2.5	2.5	2.5	2.5	48
Human Health Comparative Values																
SFRWQCB 2016 Residential Direct Exposure ESLs				ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	250
SFRWQCB 2016 Commercial Direct Exposure ESLs				ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	1,000
SFRWQCB 2016 Construction Worker Direct Exposure ESLs				ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	5,600
USEPA Residential RSLs				41,000	20	170	230	230	230	240	240	240	240	240	240	ne
TTLC ³				nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	50,000

Notes and Abbreviations:

bgs = Below ground surface
µg/kg = micrograms per kilogram
% = Percent

Values are listed as dry weight unless otherwise noted.

ND = Not detected above the method detection limit (< MDL)

J = Estimated value

ne = Not established

¹ San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.

² United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.

³ TTLC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.

Comparative Value Formatting Key for Individual Samples:

Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL.

Highlighted indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESL.

Red Bolded indicates an individual sample location exceeds the TTLC where established.

TABLE 5C
Soil Sample Analytical Results for Total Petroleum Hydrocarbons (TPH)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte Units	Moisture, Percent	TPH			Motor Oil C24-C36 (SGCU)	Motor Oil C24-C36 mg/kg EPA 8015	Motor Oil C24-C36 mg/kg EPA 8015			
					Laboratory Method	Diesel C10-C24 mg/kg EPA 8015	Diesel C10-C24 (SGCU)						
											ASTM D2216/CLP	mg/kg	mg/kg
IBSP-SB-1-0.5	0 to 0.5	0.5	12/30/2016	43	11	Y	36	--	--				
IBSP-SB-2-0.5	0 to 0.5	0.5	12/30/2016	16	13	Y	53	--	--				
IBSP-SB-AR-3-0.5	0 to 0.5	0.5	1/4/2017	12	34	Y	140	--	--				
IBSP-SB-4-2.5	2 to 3	2.5	12/12/2016	25	10	Y	72	--	--				
IBSP-SB-AR-5-2.5	2 to 3	2.5	12/30/2016	7	3.6	Y	7.1	--	--				
IBSP-SB-6-1.0	0 to 2	1.0	12/8/2016	13	23	Y	170	--	--				
IBSP-SB-6-5.0	4 to 6	5.0	12/8/2016	7	0.0036	J	0.025	J	--				
IBSP-SB-6-9.0	8 to 10	9.0	12/8/2016	5	1.6	Y	2.8	J	--				
IBSP-SB-7-1.0	0 to 2	1.0	12/8/2016	12	85	Y	480	--	--				
IBSP-SB-7-5.0	4 to 6	5.0	12/8/2016	7	55	Y	350	--	--				
IBSP-SB-7-9.0	8 to 10	9.0	12/8/2016	9	20	Y	280	--	--				
IBSP-SB-9-1.0	0 to 2	1.0	12/7/2016	9	6.3	Y	32	--	--				
IBSP-SB-9-5.0	4 to 6	5.0	12/7/2016	7	28	Y	210	--	--				
IBSP-SB-9-9.0	8 to 10	9.0	12/7/2016	16	110	Y	2800	2000	--				
IBSP-SB-10-1.0	0 to 2	1.0	12/8/2016	12	32	Y	270	--	--				
IBSP-SB-10-5.0	4 to 6	5.0	12/8/2016	19	16	Y	260	--	--				
IBSP-SB-10-9.0	8 to 10	9.0	12/8/2016	8	6.7	Y	23	--	--				
IBSP-SB-10-13.0	12 to 14	13.0	12/8/2016	17	2.5	Y	2.0	J	--				
IBSP-SB-10-17.0	16 to 18	17.0	12/8/2016	16	45	Y	620	620	--				
IBSP-SB-AR-11-1.0	0 to 2	1.0	12/30/2016	10	10	Y	130	--	--				
IBSP-SB-AR-11-5.0	4 to 6	5.0	12/30/2016	12	4.9	Y	36	--	--				
IBSP-SB-12-1.0	0 to 2	1.0	12/7/2016	12	20	Y	180	--	--				
IBSP-SB-12-5.0	4 to 6	5.0	12/7/2016	9	24	Y	120	--	--				
IBSP-SB-12-9.0	8 to 10	9.0	12/7/2016	16	1.0	JY	< 1.8	ND	--				
IBSP-SB-AR-13-2.5	2 to 3	2.5	12/30/2016	12	9.7	Y	150	--	--				
IBSP-SB-AR-13-4.5	4 to 5	4.5	12/30/2016	22	5.2	Y	9.4	--	--				
IBSP-SB-AR-14-2.5	2 to 3	2.5	12/30/2016	14	1.3	JY	5.6	JY	--				
IBSP-SB-AR-14-4.5	4 to 5	4.5	12/30/2016	6	5.0	Y	22	--	--				
IBSP-SB-15-2.5	2 to 3	2.5	12/7/2016	10	19	Y	320	--	--				
IBSP-SB-16-2.5	2 to 3	2.5	12/7/2016	11	3.4	Y	18	--	--				
IBSP-SB-17-2.5	2 to 3	2.5	12/7/2016	11	6.2	Y	65	--	--				
IBSP-SB-17-4.5	4 to 5	4.5	12/7/2016	13	24	Y	160	--	--				

TABLE 5C
Soil Sample Analytical Results for Total Petroleum Hydrocarbons (TPH)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte Units	Moisture, Percent	TPH			Motor Oil C24-C36 (SGCU)			
					Laboratory Method	Diesel C10-C24 (SGCU)	Motor Oil C24-C36 (SGCU)				
									ASTM D2216/CLP	mg/kg EPA 8015	mg/kg EPA 8015
Sample Date											
IBSP-SB-18-0.5	0 to 0.5	0.5	12/5/2016	14	< 18	ND	--	340	--		
IBSP-SB-18-2.5	0.5 to 3	2.5	12/5/2016	14	120	Y	150	Y	770		
IBSP-SB-19-0.5	0 to 0.5	0.5	12/5/2016	10	37		--		130		
IBSP-SB-19-2.5	0.5 to 3	2.5	12/5/2016	7	< 33	ND	--	420	JY		
IBSP-SB-20-0.5	0 to 0.5	0.5	12/6/2016	23	30	JY	31	Y	710		
IBSP-SB-20-2.5	0.5 to 3	2.5	12/6/2016	10	8.0	JY	--		180		
IBSP-SB-21-0.5	0 to 0.5	0.5	12/6/2016	12	5.0	Y	--		45		
IBSP-SB-21-2.5	0.5 to 3	2.5	12/6/2016	16	27	Y	--		170		
IBSP-SB-22-0.5	0 to 0.5	0.5	12/6/2016	12	23	Y	--		92		
IBSP-SB-22-2.5	0.5 to 3	2.5	12/6/2016	12	15	Y	--		150		
IBSP-SB-23-5.0	3 to 6	5.0	12/8/2016	10	64	Y	--		360		
IBSP-SB-23-8.5	6 to 9	8.5	12/8/2016	9	33	Y	--		340		
IBSP-SB-23-12.0	9 to 12	12.0	12/8/2016	11	16	Y	--		120		
IBSP-SB-24-4.5	3 to 6	4.5	12/8/2016	7	29	Y	27	Y	550		
IBSP-SB-25-4.5	3 to 6	4.5	12/8/2016	17	8.4	Y	--		110		
IBSP-SB-25-7.5	6 to 9	7.5	12/8/2016	11	30	Y	--		180		
IBSP-SB-26-4.5	3 to 6	4.5	12/8/2016	9	16	Y	--		120		
IBSP-SB-26-7.5	6 to 9	7.5	12/8/2016	9	29	Y	--		190		
IBSP-SB-28-10.0	9 to 10	10.0	12/8/2016	18	1.1	JY	--		2.6		
IBSP-SB-29-9.5	9 to 10	9.5	12/7/2016	17	17	Y	--		50		
IBSP-SB-29-11.0	10 to 12	11.0	12/7/2016	8	34	Y	--		470		
IBSP-SB-29-13.0	12 to 14	13.0	12/7/2016	6	17	Y	--		55		
IBSP-SB-29-17.0	16 to 18	17.0	12/7/2016	7	22	Y	--		700		
IBSP-SB-AR-34-9.0	8 to 10	9.0	1/5/2017	13	3.4	Y	--		29		
IBSP-SB-AR-34-13.0	12 to 14	13.0	1/5/2017	32	13	Y	--		44		
IBSP-SB-AR-34-17.0	16 to 18	17.0	1/5/2017	22	8.3	Y	--		22		

TABLE 5C
Soil Sample Analytical Results for Total Petroleum Hydrocarbons (TPH)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Moisture, Percent	TPH			Motor OH C24-C36 (SGCU)	
				Analyte	Diesel C10-C24	Diesel C10-C24 (SGCU)		Motor OH C24-C36
					Units	mg/kg		mg/kg
Laboratory Method		ASTM D2216/CLP	EPA 8015	EPA 8015	EPA 8015	EPA 8015		
Sample Date								
Data Statistics								
			sample count	58		58		
			frequency of detection	97%		98%		
			max	120		2800		
			min	< 0.0036		< 0.025		
			mean	22		231		
Human Health Comparative Values								
SFRWQCB 2016 Residential Direct Exposure ESLs ¹			230		230	11,000		
SFRWQCB 2016 Commercial Direct Exposure ESLs ¹			1100		1,100	140,000		
SFRWQCB 2016 Construction Worker Direct Exposure ESLs ¹			880		880	32,000		
USEPA 2016 Residential RSLs ²			520		520	230,000		
TTLC ³			nc		nc	nc		

Notes and Abbreviations:

mg/kg = milligrams per kilogram
 bgs = Below ground surface
 % = Percent
 J = Estimated value
 b = Lab case narrative notes a calibration bias for this result OR sample was prepared outside of hold time
 Values are listed as dry weight unless otherwise noted.

¹ San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.
² United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
³ TTLC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.

Comparative Value Formatting Key for Individual Samples:

bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL.
Highlighted indicates an individual sample location result exceeds the 2016 Construction Worker Direct Exposure ESL.
Red Bolded indicates an individual sample location exceeds the TTLC where established.

TABLE 5E
Soil Sample Analytical Results for Pesticides

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte		Moisture, Percent	Pesticides										
			Laboratory Method	Units		4,4'-DDD µg/kg EPA 8081A	4,4'-DDE µg/kg EPA 8081A	4,4'-DDT µg/kg EPA 8081A	Total DDTs µg/kg Sum	alpha-Chlordane µg/kg EPA 8081A	gamma-Chlordane µg/kg EPA 8081A	Total Chlordanes µg/kg Sum	Endosulfan sulfate µg/kg EPA 8081A	Endrin aldehyde µg/kg EPA 8081A	Heptachlor epoxide µg/kg EPA 8081A	
																ASTM D2216/CLP
IBSP-SB-1-0.5	0 to 0.5	0.5	12/30/2016		43	< 4.0	< 2.9	< 3	< 4	< 1.6	< 1.5	< 1.6	< 2.9	< 4.0	< 1.9	ND
IBSP-SB-2-0.5	0 to 0.5	0.5	12/30/2016		16	< 5.4	< 3.9	< 3.8	< 5.4	< 7.0	< 2.1	< 9.1	< 29.0	< 5.4	< 2.6	ND
IBSP-SB-AR-5-2.5	2 to 3	2.5	12/30/2016		7	0.3	< 0.18	< 0.2	1	< 0.1	< 0.1	< 0.097	< 0.2	< 0.3	< 0.1	ND
IBSP-SB-6-5.0	4 to 6	5.0	12/8/2016		7	< 0.5	< 0.35	< 0.3	< 0.5	< 0.2	< 0.2	< 0.2	< 3.5	< 0.6	< 0.2	ND
IBSP-SB-7-5.0	4 to 6	5.0	12/8/2016		7	< 20	< 16	< 13.0	< 20	< 5.5	< 6.6	< 6.6	< 14.0	< 9.0	< 5.9	ND
IBSP-SB-8-1.0	0 to 2	1.0	12/8/2016		9	< 25	< 18	< 18.00	< 25.0	< 9.9	< 9.5	< 9.9	< 180.0	< 31.0	< 12.0	ND
IBSP-SB-9-5.0	4 to 6	5.0	12/7/2016		7	< 2.0	< 1.6	< 1.3	< 2.0	< 0.6	< 0.7	< 0.66	< 1.4	< 0.9	< 0.6	ND
IBSP-SB-9-9.0	8 to 10	9.0	12/7/2016		16	< 8.7	< 7.0	< 5.7	< 8.7	< 2.5	< 2.9	< 2.9	< 6.2	< 4.0	< 2.6	ND
IBSP-SB-10-5.0	4 to 6	5.0	12/8/2016		19	< 0.9	< 0.72	< 0.6	< 0.9	< 0.3	< 0.3	< 0.3	< 0.6	< 0.4	< 0.3	ND
IBSP-SB-10-9.0	8 to 10	9.0	12/8/2016		8	< 0.5	< 0.54	< 0.4	< 0.54	< 0.1	< 0.1	< 0.11	< 0.3	< 0.5	< 0.1	ND
IBSP-SB-AR-11-1.0	0 to 2	1.0	12/30/2016		10	< 5.1	< 3.7	< 3.6	< 5	< 2.0	< 1.9	< 2	< 3.7	< 5.1	< 2.4	ND
IBSP-SB-AR-11-5.0	4 to 6	5.0	12/30/2016		12	< 1.3	< 0.94	< 0.9	< 1	< 0.5	< 0.5	< 0.51	< 1.0	< 1.3	< 0.6	ND
IBSP-SB-12-5.0	4 to 6	5.0	12/7/2016		9	< 2.0	< 1.6	< 1.3	< 2	< 0.6	< 0.7	< 0.68	< 1.4	< 0.9	< 0.6	ND
IBSP-SB-12-9.0	8 to 10	9.0	12/7/2016		16	< 0.43	< 0.35	< 0.3	< 0.43	< 0.1	< 0.1	< 0.14	< 0.3	< 0.2	< 0.1	ND
IBSP-SB-AR-13-2.5	2 to 3	2.5	12/30/2016		12	< 1.3	< 0.93	< 0.9	< 1.3	< 0.5	< 0.5	< 0.51	< 0.9	< 1.3	< 0.6	ND
IBSP-SB-AR-14-2.5	2 to 3	2.5	12/30/2016		14	< 5.3	< 3.9	< 3.7	< 5.3	< 2.1	< 2.0	< 2.1	< 6.5	< 17.0	< 2.5	ND
IBSP-SB-16-2.5	2 to 3	2.5	12/7/2016		11	< 4.1	< 3.3	< 2.6	< 4.1	< 1.2	< 1.4	< 1.4	< 2.9	< 1.9	< 1.2	ND
IBSP-SB-17-2.5	2 to 3	2.5	12/7/2016		11	< 8.3	< 6.7	< 5.4	< 8.3	< 2.4	< 2.8	< 2.8	< 5.9	< 3.8	< 2.5	ND
IBSP-SB-18-0.5	0 to 0.5	0.5	12/5/2016		14	< 4.2	< 3.4	< 2.7	< 4.2	< 1.2	< 1.4	< 1.4	< 3.0	< 2.0	< 1.3	ND
IBSP-SB-18-2.5	0.5 to 3	2.5	12/5/2016		14	< 42	< 34	< 28.00	< 42.0	< 12.0	< 14.0	< 14	< 30.0	< 20.0	< 13.0	ND
IBSP-SB-19-0.5	0 to 0.5	0.5	12/5/2016		10	< 20	< 16	< 13.00	< 20.0	< 5.7	< 6.8	< 6.8	< 14.0	< 9.3	< 6.1	ND
IBSP-SB-19-2.5	0.5 to 3	2.5	12/5/2016		7	< 19	< 16	< 13.00	< 19.0	< 5.5	< 6.6	< 6.6	< 14.0	< 9.0	< 5.9	ND
IBSP-SB-20-0.5	0 to 0.5	0.5	12/6/2016		23	< 47	< 38	< 31.0	< 47	< 13.0	< 16.0	< 16	< 33.0	< 22.0	< 14.0	ND
IBSP-SB-21-0.5	0 to 0.5	0.5	12/6/2016		12	< 4.2	< 3.4	< 2.7	< 4	< 1.2	< 1.4	< 1.4	< 3.0	< 1.9	< 1.3	ND
IBSP-SB-22-0.5	0 to 0.5	0.5	12/6/2016		12	< 2.1	< 1.7	< 1.30	< 2	< 0.6	< 0.7	< 1	< 1.5	< 1.0	< 0.6	ND
IBSP-SB-23-5.0	3 to 6	5.0	12/8/2016		10	< 13	< 9.1	< 8.9	< 13.0	< 5.0	< 4.8	< 5	< 91.0	< 16.0	< 6.0	ND
IBSP-SB-23-8.5	6 to 9	8.5	12/8/2016		9	< 5.0	< 3.6	< 3.50	< 5.0	< 2.0	< 1.9	< 2	< 36.0	< 6.2	< 2.4	ND
IBSP-SB-23-12.0	9 to 12	12.0	12/8/2016		11	< 5.1	< 3.7	< 3.6	< 5.1	< 2.0	< 2.0	< 2	< 37.0	< 6.4	< 2.4	ND
IBSP-SB-24-4.5	3 to 6	4.5	12/8/2016		7	< 24	< 18	< 17.0	< 24	< 9.7	< 9.3	< 9.7	< 180.0	< 31.0	< 12.0	ND
IBSP-SB-25-4.5	3 to 6	4.5	12/8/2016		17	< 5.4	< 4.0	< 3.90	< 5.4	< 2.2	< 2.1	< 2.2	< 40.0	< 6.9	< 2.6	ND
IBSP-SB-25-7.5	6 to 9	7.5	12/8/2016		11	< 5.1	< 3.7	< 3.60	< 5.1	< 2.0	< 1.9	< 2	< 37.0	< 6.4	< 2.4	ND

TABLE 5E
Soil Sample Analytical Results for Pesticides

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte	Moisture, Percent	Pesticides																	
					Laboratory Method	ASTM D2216/CLP	4,4'-DDD µg/kg EPA 8081A	4,4'-DDE µg/kg EPA 8081A	4,4'-DDT µg/kg EPA 8081A	Total DDTs µg/kg Sum	alpha-Chlordane µg/kg EPA 8081A	gamma-Chlordane µg/kg EPA 8081A	Total Chlordanes µg/kg Sum	Endosulfan sulfate µg/kg EPA 8081A	Endrin aldehyde µg/kg EPA 8081A	Heptachlor epoxide µg/kg EPA 8081A						
																	Sample Date	Units	%	µg/kg	µg/kg	µg/kg
IBSP-SB-26-4.5	3 to 6	4.5	12/8/2016	9	< 5.0	ND	4.8	J	7.9	CJ	17.7	< 2.0	ND	< 1.9	ND	< 2.0	< 36.0	#ND	< 6.3	ND	< 2.4	ND
IBSP-SB-26-7.5	6 to 9	7.5	12/8/2016	9	< 5.2	ND	14	J	26.00	J	45.2	< 2.8	ND	< 4.0	ND	< 4	< 5.3	ND	< 4.4	ND	< 2.7	ND
IBSP-SB-28-10.0	9 to 10	10.0	12/8/2016	18	< 0.44	ND	< 0.4	ND	< 0.3	ND	< 0.4	< 0.1	ND	< 0.2	ND	< 0.15	< 0.3	ND	< 0.2	ND	< 0.1	ND
IBSP-SB-29-9.5	9 to 10	9.5	12/7/2016	17	< 0.44	ND	< 0.4	ND	< 0.3	ND	< 0.4	< 0.1	ND	< 0.5	CJ	0.64	< 0.3	ND	< 0.2	ND	< 0.1	ND
IBSP-SB-29-11.0	10 to 12	11.0	12/7/2016	8	< 7.8	ND	< 6.3	ND	< 5.1	ND	< 7.8	< 3.9	J	2.8	J	6.7	< 5.5	ND	< 3.6	ND	< 2.4	ND
IBSP-SB-AR-34-9.0	8 to 10	9.0	1/5/2017	13	< 1.1	ND	8.1	C	2.20	CJ	11.4	3.8		2.6	C	6.4	< 0.6	ND	< 1.0	ND	0.3	CJ

Data Statistics		sample count	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
frequency of detection		max	3%	8%	8%	11%	8%	8%	11%	8%	11%	8%	8%	11%	8%	11%	8%	8%	11%	8%	11%	3%
		min	< 0.27	< 0.18	< 0.17	< 0.43	< 0.10	< 0.079	< 0.10	< 0.18	< 0.10	< 0.10	< 0.18	< 0.10	< 0.18	< 0.10	< 0.18	< 0.10	< 0.18	< 0.10	< 0.20	< 0.10
		mean	4.2	3.9	3.7	6.1	1.7	1.6	2.1	1.2	1.6	2.1	1.2	1.6	2.1	1.2	1.6	2.1	1.2	1.6	3.5	1.6
Human Health Comparative Values																						
SFRWQCB 2016 Residential Direct Exposure ESLs ¹			2,700	1,900	1,900	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	67
SFRWQCB 2016 Commercial Direct Exposure ESLs ¹			12,000	8,500	8,500	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	300
SFRWQCB 2016 Construction Worker Direct Exposure ESLs ¹			81,000	57,000	57,000	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	1,900
USEPA 2016 Residential RSLs ²			2,300	2,000	1,900	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	70
TTLC ³			1,000	1,000	1,000	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne

Notes and Abbreviations:
 µg/kg = micrograms per Kilogram
 % = Percent
 bgs = Below ground surface
 # = Sample was diluted due to the color of the extract
 Only detected constituents shown.
 Values are listed as dry weight unless otherwise noted.
 J = Estimated value
 C = Presence confirmed, but relative percent difference between columns exceeds 40%
 ND = Not detected above the method detection limit (< MDL)
 ne = Not established

Comparative Value Formatting Key for Individual Samples:
Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL.
Highlighted indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESL, or the 2016 Construction Worker Direct Exposure ESL, whichever is lower.
Red Bolded indicates an individual sample location exceeds the TTLC where established.

¹ San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1, February 2016.
² United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
³ TTLC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.

TABLE 5F
Soil Sample Analytical Results for Volatile Organic Compounds (VOCs)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte	Moisture, Percent	VOCs				
			Units	%	Acetone		Tetrachloroethene		
			Laboratory Method	ASTM D2216/CLP	µg/kg		µg/kg		
			Sample Date		EPA 8260B		EPA 8260B		
IBSP-SB-AR-5-2.5	2 to 3	2.5	12/30/2016	7	7.9	J	<	0.40	ND
IBSP-SB-9-5.0	4 to 6	5.0	12/7/2016	7	<	3.5	ND	<	0.70 ND
IBSP-SB-10-5.0	4 to 6	5.0	12/8/2016	19	<	4.5	ND	0.70	J
IBSP-SB-AR-11-5.0	4 to 6	5.0	12/30/2016	12	<	4.1	ND	<	0.50 ND
IBSP-SB-12-5.0	4 to 6	5.0	12/7/2016	9	<	3.4	ND	1.3	J
IBSP-SB-AR-14-2.5	2 to 3	2.5	12/30/2016	14	5.2	J	<	0.50	ND

Data Statistics			
	sample count	6	6
	frequency of detection	33%	33%
	max	7.9	1.3
	min	< 3.4	< 0.40
	mean	3.5	0.51
Human Health Comparative Values			
	SFRWQCB 2016 Residential Direct Exposure ESLs ¹	59,000,000	600
	SFRWQCB 2016 Commercial Direct Exposure ESLs ¹	630,000,000	2,700
	SFRWQCB 2016 Construction Worker Direct Exposure ESLs ¹	260,000,000	31,000
	USEPA 2016 Residential RSLs ²	61,000,000	24,000
	TTLC ³	ne	ne

Notes and Abbreviations:

µg/kg = micrograms per kilogram

bgs = Below ground surface

% = Percent

Only detected constituents shown.

Values are listed as dry weight unless otherwise noted.

¹ San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.

² United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.

³ TTLC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.

Comparative Value Formatting Key for Individual Samples:

Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL.

Highlighted indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESL, or the 2016 Construction Worker Direct Exposure ESL, whichever is lower.

Red Bolded indicates an individual sample location exceeds the TTLC where established.

TABLE 5G
Soil Sample Analytical Results for Maher Ordinance Constituents
(Cyanide, Hexavalent Chromium, Fluoride, pH, and Asbestos)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte Units	Moisture, Percent	Maher Ordinance				Asbestos %			
					Cyanide mg/kg	Hexavalent Chromium mg/kg	Fluoride mg/kg	pH				
										SM4500CN-E	EPA 7196A	EPA 300.0
Laboratory Method	Sample Date	ASTM D2216/CLP	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date			
IBSP-SB-AR-5-2.5	2 to 3	2.5		7	0.11	J	< 0.14	ND	1.6	8.0	--	--
IBSP-SB-6-1.0	0 to 2	1.0		13	--	--	--	--	--	--	--	0.75
IBSP-SB-6-3.0	2 to 4	3.0		12	--	--	--	--	--	--	--	1.75
IBSP-SB-7-1.0	0 to 2	1.0		12	--	--	--	--	--	--	--	0.25
IBSP-SB-9-5.0	4 to 6	5.0		7	0.12	J	0.24	J	1.3	8.7	--	0.25
IBSP-SB-10-5.0	4 to 6	5.0		19	0.070	J	< 0.16	ND	0.43	7.7	--	0.5
IBSP-SB-10-13.0	12 to 14	13.0		17	--	--	--	--	--	--	--	0.5
IBSP-SB-AR-11-5.0	4 to 6	5.0		12	0.15	J	0.34	J	2.7	8.2	--	0.5
IBSP-SB-12-5.0	4 to 6	5.0		9	0.06	J	< 0.14	ND	1.40	8.20	--	1.25
IBSP-SB-AR-13-0.5	0 to 0.5	0.5		15	--	--	--	--	--	--	--	< 0.25
IBSP-SB-AR-14-2.5	2 to 3	2.5		14	0.20	J	0.23	J	4.5	8.4	--	< 0.25
IBSP-SB-AR-14-4.5	4 to 5	4.5		6	--	--	--	--	--	--	--	0.25
IBSP-SB-15-2.5	2 to 3	2.5		10	--	--	--	--	--	--	--	< 0
IBSP-SB-16-2.5	2 to 3	2.5		11	< 0.06	ND	< 0.14	ND	2.3	8.1	--	0.5
IBSP-SB-17-2.5	2 to 3	2.5		11	--	--	--	--	--	--	--	< 0
IBSP-SB-22-0.5	0 to 0.5	0.5		12	--	--	--	--	--	--	--	0.75
IBSP-SB-23-5.0	3 to 6	5.0		10	--	--	--	--	--	--	--	0.25
IBSP-SB-26-4.5	3 to 6	4.5		9	--	--	--	--	--	--	--	1.25
IBSP-SB-29-11.0	10 to 12	11.0		8	--	--	--	--	--	--	--	0.25

Data Statistics	sample count	frequency of detection	86%	43%	100%	100%	/	/	/	18
		min	< 0.06	< 0.14	0.43	0.43	7.7	7.7	7.7	1.75
		mean	0.11	0.16	2.03	2.03	8.2	8.2	8.2	0.50
Human Health Comparative Values										
SFRWQCB 2016 Residential Direct Exposure ESLs ¹	5.3		5.3	0.3	ne	ne	ne	ne	ne	ne
SFRWQCB 2016 Commercial Direct Exposure ESLs ¹	24		24	6.2	ne	ne	ne	ne	ne	ne
SFRWQCB 2016 Construction Worker Direct Exposure ESLs ¹	21		21	2.8	ne	ne	ne	ne	ne	ne
USEPA 2016 Residential RSLs ²	23		23	0.3	3,000	3,000	ne	ne	ne	ne
California Asbestos ATCM ³	ne		ne	ne	ne	ne	ne	ne	ne	0.25
TTLIC ⁴	ne		ne	500	18,000	18,000	ne	ne	ne	1

Notes and Abbreviations:
 mg/kg = milligrams per kilogram
 bgs = Below ground surface
 % = Percent
 Values are listed as dry weight unless otherwise noted.
 J = Estimated value
 ND = Not detected above the method detection limit (< MDL)
 ne = Not established

¹ San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.
² United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
³ Bay Area Air Quality Management District requirements for compliance with California Air Resources Board Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying and Surface Mining Operations
⁴ TTLIC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLIC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLIC values are listed as wet weight.

Comparative Value Formatting Key for Individual Samples:
Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL.
Highlighted indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESL.
Red Bolded indicates an individual sample location exceeds the TTLIC where established.

**TABLE 10A
Summary of Results - Recreational Use - Soil Quality**

Constituent of Potential Concern (COPC)	Statistical Summary of COPC				Regulatory Screening Value	Published Action Goals for Comparable San Francisco Bay Restoration Sites		Background/Ambient Regional Values	California Hazardous Waste Disposal Criteria			
	Data 2016/2017 (Northgate)					SFRWQCB ²	PG&E Hunters Point Site, Shoreline Area ³		Yosemite Slough Restoration Project Action Goals ⁴	Highest Value of Regional (LBNL ⁵) Local (PG&E HPS ⁶), and DTSC (BaP only ⁷)	DTSC	TTL C ⁸
	Frequency of Detection (%)	Minimum	Maximum	Average								
Metals (mg/kg)												
Arsenic	93	<0.078	20	3.7	4.3	0.31	13	15	24	500	24	
Cobalt	100	2.3	56	18.8	21.5	28	ne	ne	84	8,000	84	
Copper	100	4.4	330	39.6	45.3	14,000	ne	2,500 ²	63	2,500	2,500	
Lead	100	0.91	460	90.0	110.4	160	159	400	43	1,000	160	
Mercury	92	<0.02	1.2	0.2	0.18	19	ne	7.2	0.42	20.0	19.0	
Nickel	100	10	1,000	221	332	86	ne	1,600	1,582	2,000	1,582	
Polyhalogenated Biphenyls (µg/kg)												
Total PCBs (sum of Aroclors)	74	<0.97	500	47.5	90.96	1,000	ne	1,200	ne	50,000	1,000	
Total Petroleum Hydrocarbons (mg/kg)												
TPH as diesel	97	<0.0036	120	21.79	28.25	880	ne	580	ne	ne	880	
Polyaromatic Hydrocarbons (µg/kg)												
Benzo(a)anthracene	70	<1.1	1,500	101	171	2,900	ne	2,000	ne	ne	ne	
Benzo(a)pyrene	75	<1.1	1,500	139.4	214.9	290	ne	200	ne	ne	ne	
Benzo(k)fluoranthene	61	<1.1	410	45.5	68.7	29,000	ne	2,000	ne	ne	ne	
Dibenz(a,h)anthracene	51	<1.1	200	21.1	31.1	290	ne	330	ne	ne	ne	
Indeno(1,2,3-cd)pyrene	72	<1.1	750	89.0	131.5	2,900	ne	3,300	ne	ne	ne	
B(a)P Equivalent Value	75	<1.1	1,945	183.2	281.8	ne	900	ne	900	ne	900	
Other												
Naturally-Occurring Asbestos (%)	78	0	1.75	0.49	1	ne	0.25 ⁹	0.25 ⁹	ne	1	0.25	

Notes and Abbreviations:
 mg/kg = milligrams per kilogram
 µg/kg = micrograms per kilogram
 ne = not established

95% UCL = 95% Upper Confidence Limit, calculated using EPA ProUCL statistical software, Version 5.1 using the most appropriate fit of statistical method, as determined by the ProUCL program
 Averages calculated from ProUCL statistical software.
 B(a)P = benzo(a)pyrene equivalent value

¹ Values are listed as dry weight unless otherwise noted.

² San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.

³ Final Shoreline Area Feasibility Study and Remedial Action Plan, Jacobson James, March 16, 2016

⁴ Yosemite Slough Restoration Project Upland Cover (upper 2 feet) (Table 1: Proposed Action Goals for Soil Reuse Options). Northgate, 2009 Work Plan for WDRs, Yosemite Slough Wetland Restoration, San Francisco, September 21.

⁵ Lawrence Berkeley National Laboratory Analysis of Background Distributions of Metals in Bay Area Regional Soils, Upper Estimate Values, 2009.

⁶ Final Remediation Investigation Report, Hunters Point Power Plant, San Francisco, CA, TRC, 2009

⁷ California Department of Toxic Substances Control (DTSC). Use of the Northern and Southern California PAH Studies in the MGP Site Cleanup Process, July 2009

⁸ TTL C values are listed as wet weight

⁹ Bay Area Air Quality Management District requirements for compliance with California Air Resources Board Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying and Surface Mining Operations

Highlight indicates that the 95% UCL of the constituent exceeds value

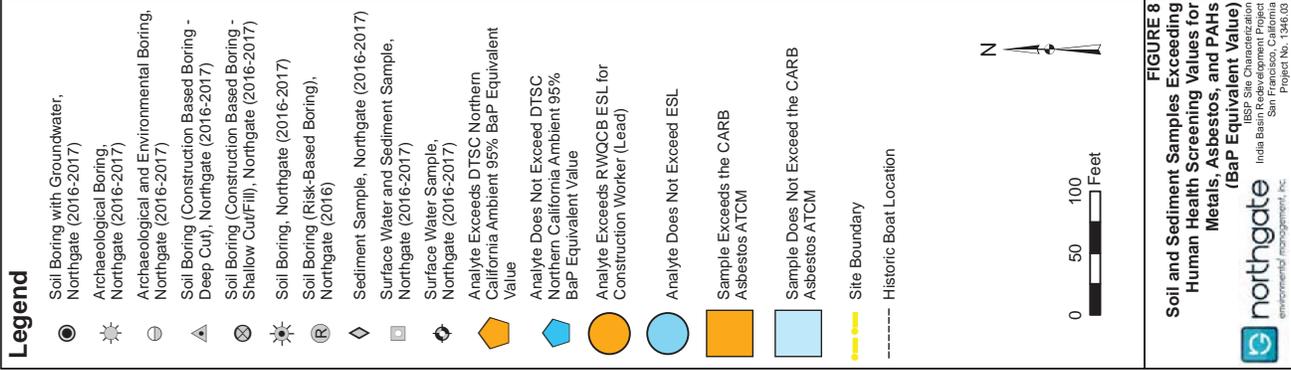


FIGURE 8
Soil and Sediment Samples Exceeding Human Health Screening Values for Metals, Asbestos, and PAHs (BaP Equivalent Value)

India Basin Redevelopment Project
 Soil Characterization
 Northgate
 Project No. 1346.03

nothgate
 environmental management, inc.



APPENDIX D
DATA PACKAGE, 900 INNES AVENUE



TABLE 5A
Soil Sample Analytical Results for Metals, Dry Weight

Sample ID	Depth From Existing Surface (feet-yes)	Sample Depth (ft log)	Analyte Units Laboratory Method Sample Date	Moisture, Percent	Metals																
					Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
					EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B								
NN-SB-1-4.5	4 to 5	4.5	12/14/2016	16	< 0.17 ND	< 0.08 ND	120.00	0.33	1.20	110.00	41.00	8.50	4.80	0.06	0.28 J	700.00	< 0.18 ND	< 0.046 ND	< 0.160 ND	58.00	52.00
NN-SB-1-6.5	6 to 7	6.5	12/14/2016	18	< 0.19 ND	< 0.09 ND	93.00	0.28	1.10	100.00	29.00	10.00	4.10	0.07	0.27 J	700.00	< 0.20 ND	< 0.050 ND	< 0.170 ND	54.00	47.00
NN-SB-2-4.5	4 to 5	4.5	12/14/2016	8	< 0.17 ND	5.50	130.00	0.35 J	1.70	82.00	16.00	38.00	82.00	0.07	0.63	99.00	< 0.18 ND	< 0.046 ND	< 0.160 ND	48.00	510.00
NN-SB-2-6.5	6 to 7	6.5	12/14/2016	20	< 0.16 ND	45.00	170.00	0.25 J	4.90	54.00	73.00	500.00	230.00	0.25	3.90	63.00	< 0.14 J	< 0.042 J	< 0.150 ND	46.00	1500.00
NN-SB-3-4.0	0.1 to 0.5	4.0	12/14/2016	8	1.00 J	6.00	130.00	0.33	1.20	130.00	73.00	14.00	16.00	0.05	0.28 J	780.00	0.17 J	0.046 J	< 0.064 ND	41.00	45.00
NN-SB-3-4.5	4 to 5	4.5	12/14/2016	16	0.92 J	1.00	75.00	0.17	1.10	100.00	33.00	8.40	3.50	0.02 J	0.22 J	660.00	< 0.08 ND	< 0.031 ND	< 0.055 ND	49.00	39.00
NN-SB-3-4.5	4 to 5	4.5	12/14/2016	17	0.64 J	2.10	83.00	0.16	1.00	100.00	41.00	9.40	3.40	0.03	0.22 J	740.00	< 0.18 J	< 0.037 ND	< 0.130 J	55.00	43.00
NN-SB-3-6.5	6 to 7	6.5	12/14/2016	10	< 0.16 ND	2.00	84.00	0.12	0.95	32.00	12.00	95.00	64.00	0.44	1.40	67.00	< 0.18 J	< 0.044 ND	< 0.150 ND	50.00	120.00
NN-SB-4-4.5	4 to 5	4.5	12/14/2016	19	< 0.18 ND	< 0.09 ND	83.00	0.21	1.30	180.00	60.00	9.30	4.70	0.05	0.14 J	1100.00	< 0.19 ND	< 0.048 ND	< 0.230 J	39.00	45.00
NN-SB-4-6.5	6 to 7	6.5	12/14/2016	21	< 0.19 ND	0.19 J	69.00	0.19	1.10	120.00	30.00	15.00	11.00	0.05	0.29 J	570.00	< 0.21 ND	< 0.051 ND	< 0.310 J	43.00	52.00
NN-SB-5-0.5	0.1 to 0.5	0.5	12/14/2016	11	< 0.18 ND	1.90	74.00	0.12 J	0.66	80.00	18.00	17.00	9.10	< 0.02 ND	0.56	250.00	< 0.19 ND	< 0.048 ND	< 0.400 J	35.00	39.00
NN-SB-5-4.5	4 to 5	4.5	12/14/2016	11	< 0.19 ND	1.80	290.00	0.21 J	0.85	56.00	11.00	16.00	330.00	0.03	0.64	26.00	< 0.20 ND	< 0.050 ND	< 0.180 ND	50.00	300.00
NN-SB-5-4.5	4 to 5	4.5	12/14/2016	9	< 0.15 ND	7.20	90.00	0.11 J	1.00	55.00	9.70	23.00	68.00	0.10	1.10	100.00	< 0.16 ND	< 0.041 ND	< 0.140 ND	35.00	110.00
NN-SB-5-6.5	6 to 7	6.5	12/14/2016	23	< 0.21 ND	0.70	71.00	0.24	1.60	200.00	66.00	7.80	7.20	0.19	1.10	100.00	< 0.23 ND	< 0.056 ND	< 0.160 ND	50.00	51.00
NN-SB-6-4.5	4 to 5	4.5	12/14/2016	22	< 0.20 ND	2.70	870.00	0.20	1.60	280.00	110.00	43.00	51.00	0.04	0.18 J	1600.00	< 0.21 ND	< 0.052 ND	< 0.180 ND	51.00	70.00
NN-SB-7-3.5	3 to 4	3.5	12/14/2016	16	< 0.18 ND	1.80	110.00	0.20	1.20	120.00	38.00	3.40	3.40	0.03	0.29 J	760.00	< 0.19 ND	< 0.047 ND	< 0.170 ND	60.00	50.00
NN-SB-7-4.5	4 to 5	4.5	12/14/2016	17	< 0.17 ND	1.50	93.00	0.20	1.10	110.00	29.00	8.50	3.90	0.03	0.21 J	640.00	< 0.18 ND	< 0.044 ND	< 0.160 ND	55.00	51.00
NN-SB-8-3.5	3 to 4	3.5	12/14/2016	14	< 0.18 ND	< 0.09 ND	77.00	0.18	1.00	120.00	31.00	5.50	3.30	0.03	0.22 J	560.00	< 0.20 ND	< 0.049 ND	< 0.170 ND	51.00	41.00
NN-SB-8-4.5	4 to 5	4.5	12/14/2016	15	< 0.17 ND	2.30	86.00	0.15	1.10	99.00	37.00	9.50	3.70	0.03	0.27 J	660.00	< 0.19 ND	< 0.046 ND	< 0.160 ND	55.00	44.00
NN-SB-9-3.5	3 to 4	3.5	12/14/2016	17	< 0.17 ND	1.90	95.00	0.38	1.10	120.00	36.00	7.90	7.80	0.10	0.15 J	540.00	< 0.18 ND	< 0.044 ND	< 0.160 ND	49.00	36.00
NN-SB-9-4.5	4 to 5	4.5	12/14/2016	18	< 0.20 ND	< 0.10 ND	91.00	0.27	1.20	120.00	31.00	31.00	3.90	0.03	0.27 J	800.00	< 0.21 ND	< 0.053 ND	< 0.190 ND	56.00	47.00
NN-SB-10-3.5	3 to 4	3.5	12/14/2016	18	< 0.20 ND	< 0.10 ND	140.00	0.43	1.20	130.00	67.00	7.00	5.20	0.05	0.18 J	640.00	< 0.21 ND	< 0.053 ND	< 0.190 ND	62.00	46.00
NN-SB-10-4.5	4 to 5	4.5	12/14/2016	19	< 0.17 ND	< 0.08 ND	110.00	0.29	1.10	110.00	40.00	9.00	4.40	0.06	0.21 J	720.00	< 0.18 ND	< 0.046 ND	< 0.160 ND	58.00	46.00
NN-SB-11-4.0	4 to 5	4.0	12/14/2016	19	< 0.19 ND	25.00	240.00	0.14	2.70	220.00	47.00	150.00	110.00	14.90	25.00	750.00	< 0.21 ND	< 0.041 ND	< 0.180 ND	43.00	860.00
NN-SB-12-3.5	3 to 4	3.5	12/14/2016	12	< 0.15 ND	< 0.08 ND	19.00	< 0.01 ND	1.60	430.00	92.00	4.60	0.68	0.03	0.10 J	3000.00	< 0.17 ND	< 0.041 ND	< 0.150 ND	56.00	32.00
NN-SB-12-4.5	4 to 5	4.5	12/14/2016	13	< 0.17 ND	2.40	11.00	< 0.01 ND	1.50	650.00	98.00	< 0.896 ND	1.00	0.04	< 0.06 ND	2200.00	< 0.15 ND	< 0.039 ND	< 0.140 ND	22.00	27.00
NN-SB-13-3.5	3 to 4	3.5	12/14/2016	5	< 0.14 ND	0.07 ND	33.00	< 0.01 ND	0.40	37.00	6.00	5.80	65.00	0.09	0.20 J	25.00	< 0.13 ND	< 0.059 ND	< 0.140 ND	36.00	59.00
NN-SB-13-4.5	4 to 5	4.5	12/14/2016	11	< 0.16 ND	< 0.08 ND	16.00	< 0.01 ND	0.40	46.00	6.60	0.88	7.40	0.05	0.14 J	27.00	< 0.21 ND	< 0.041 ND	< 0.150 ND	44.00	47.00
NN-SB-14-3.5	3 to 4	3.5	12/14/2016	16	< 0.19 ND	16.00	150.00	< 0.02 ND	1.60	190.00	15.00	60.00	590.00	3.24	0.68	360.00	< 0.17 ND	< 0.043 ND	< 0.150 ND	44.00	790.00
NN-SB-14-4.5	4 to 5	4.5	12/14/2016	13	< 0.16 ND	57.00	720.00	0.10 J	8.30	210.00	53.00	140.00	220.00	1.18	3.70	650.00	< 0.17 ND	< 0.079 J	< 0.260 J	41.00	3200.00
NN-SB-15-4.0	4 to 5	4.0	12/14/2016	11	< 0.16 ND	9.30	290.00	0.85 J	2.10	42.00	21.00	46.00	110.00	0.40	2.40	110.00	< 0.17 ND	< 0.043 ND	< 0.150 ND	54.00	340.00
NN-SB-16-3.5	3 to 4	3.5	12/14/2016	12	< 0.16 ND	11.00	180.00	0.23 J	1.80	81.00	13.00	110.00	440.00	0.39	0.60	100.00	< 0.17 ND	< 0.044 ND	< 0.160 J	42.00	660.00
NN-SB-16-4.5	4 to 5	4.5	12/14/2016	12	< 0.16 ND	4.10	210.00	0.49 J	0.89	42.00	17.00	54.00	58.00	0.40	0.62	35.00	< 0.17 ND	< 0.043 ND	< 0.150 ND	47.00	90.00
NN-SB-17-4.0	3 to 5	4.0	12/14/2016	12	< 0.18 ND	7.80	150.00	0.18 J	1.20	130.00	22.00	94.00	270.00	0.40	1.40	300.00	< 0.19 ND	< 0.047 ND	< 0.160 ND	42.00	320.00
NN-SB-18-3.5	3 to 4	3.5	12/14/2016	34	0.40 J	12.00	82.00	0.42	0.84	94.00	15.00	140	120.00	0.84	0.71	150.00	< 0.21 ND	< 0.051 ND	< 0.180 ND	51.00	190.00
NN-SB-18-4.5	4 to 5	4.5	12/14/2016	33	0.8 J	12.00	120.00	0.42 J	0.4	160.00	25.00	500.00	180.00	0.8	15.0	530.00	< 0.21 ND	< 0.052 ND	< 0.180 ND	61.00	57.00
NN-SB-19-4.5	0.1 to 0.5	0.5	12/14/2016	18	< 0.2 ND	3.2	250.00	0.3	1.3	100.00	69.00	100.00	720.00	6.4	0.2 J	50.00	< 0.2 ND	< 0.045 ND	< 0.160 ND	40.00	280.00
NN-SB-19-4.5	3 to 4	3.5	12/14/2016	18	< 0.2 ND	2.7	79.00	0.4	1.1	120.00	31.00	8.4	3.7	0.1	0.2 J	710.00	< 0.2 ND	< 0.047 ND	< 0.160 ND	46.00	35.00
NN-SB-20-4.5	0.1 to 0.5	0.5	12/14/2016	21	2.0 J	3.7	150.00	0.2	1.8	150.00	51.00	87.00	210.00	0.5	0.6	640.00	< 0.2 ND	< 0.053 ND	< 0.130 J	52.00	220.00
NN-SB-20-4.5	3 to 4	3.5	12/14/2016	16	0.9 J	2.1	110.00	0.3	1.2	120.00	46.00	7.6	4.0	0.0	0.2 J	760.00	< 0.1 ND	< 0.049 J	< 0.085 J	56.00	47.00
NN-SB-21-0.5	0.1 to 0.5	0.5	12/14/2016	21	< 0.2 ND	0.1 J	140.00	0.3	1.3	160.00	46.00	20.00	79.00	0.2	0.4	810.00	< 0.2 ND	< 0.051 ND	< 0.180 ND	41.00	79.00
NN-SB-21-1.5	3 to 4	3.5	12/14/2016	17	< 0.2 ND	1.4	92.00	0.2	1.2	120.00	36.00	7.8	3.7	0.03	0.2 J	740.00	< 0.2 ND	< 0.053 ND	< 0.190 ND	56.00	49.00
NN-SB-22-1.0	1 to 1	1.0	12/14/2016	12	< 0.2 ND	4.3	170.00	0.2	0.9	57.00	13.00	74.00	110.00	2.4	1.3	100.00	< 0.2 ND	< 0.049 ND	< 0.180 J	42.00	180.00
NN-SB-22-1.5	3 to 4	3.5	12/14/2016	18	< 0.18 ND	5.30	420.00	0.16	3.00	230.00	39.00	340.00	1600.00	1.45	6.10	810.00	< 0.20 ND	< 0.049 ND	< 0.170 ND	51.00	700.00
NN-SB-22-5.0	4 to 6	5.0	12/14/2016	19	< 0.18 ND	4.60	140.00	0.19 J	1.90	190.00	53.00	330.00	220.00	2.50</							

**TABLE 5B
Soil Sample Analytical Results for Metals, Wet Weight**

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte	Moisture, Percent		Metals (Wet Weight Basis)				
				%	ASTM D2216/CLP	Copper mg/kg EPA 6010B	Lead mg/kg EPA 6010B	Mercury mg/kg EPA 7471A	Nickel mg/kg EPA 6010B	
										Laboratory Method
INN-SB-1-4.5	4 to 5	4.5		16		7.2	4.1	0.042	J	590
INN-SB-1-6.5	6 to 7	6.5		18		8.2	3.4	0.04	J	570
INN-SB-2-4.5	4 to 5	4.5		9		34	75	0.07	J	90
INN-SB-2-6.5	6 to 7	6.5		8		460	210	0.25		58
INN-SB-3-0.5	0 to 0.5	0.5		20		11	13	0.042		630
INN-SB-3-4.5	4 to 5	4.5		16		7.1	3.0	0.013	J	550
INN-SB-3-6.5	6 to 7	6.5		17		7.8	2.8	0.023		610
INN-SB-4-0.5	0 to 0.5	0.5		10		86	57	0.40		60
INN-SB-4-4.5	4 to 5	4.5		21		7.4	3.7	0.04	J	830
INN-SB-4-6.5	6 to 7	6.5		19		12	8.9	0.041	J	460
INN-SB-5-0.5	0 to 0.5	0.5		11		15	8.1	< 0.02	ND	220
INN-SB-5-4.5	4 to 5	4.5		11		14	290	0.03	J	24
INN-SB-5-6.5	6 to 7	6.5		9		21	62	0.10	J	91
INN-SB-6-3.5	3 to 4	3.5		23		6.0	5.6	0.031	J	960
INN-SB-6-4.5	4 to 5	4.5		22		34	40	0.15		1,200
INN-SB-7-3.5	3 to 4	3.5		16		6.6	2.9	0.025	J	640
INN-SB-7-4.5	4 to 5	4.5		17		7.1	3.2	0.025	J	530
INN-SB-8-3.5	3 to 4	3.5		14		4.8	2.8	0.026	J	480
INN-SB-8-4.5	4 to 5	4.5		15		8.1	3.2	0.026	J	560
INN-SB-9-3.5	3 to 4	3.5		17		6.5	6.5	0.069	J	450
INN-SB-9-4.5	4 to 5	4.5		18		8.9	3.2	0.020	J	650
INN-SB-10-3.5	3 to 4	3.5		18		5.7	4.3	0.034	J	530
INN-SB-10-4.5	4 to 5	4.5		18		7.3	3.6	0.04	J	590
INN-SB-11-4.0	3 to 5	4.0		19		1,300	930	9.8		610
INN-SB-12-3.5	3 to 4	3.5		12		4.0	0.6	0.023	J	1,800
INN-SB-12-4.5	4 to 5	4.5		13		< 0.08	ND	0.030	J	1,900
INN-SB-13-3.5	3 to 4	3.5		5		5.5	62	0.081	J	24
INN-SB-13-4.5	4 to 5	4.5		11		0.78	b	0.040	J	24
INN-SB-14-3.5	3 to 4	3.5		16		510	500	2.7		300
INN-SB-14-4.5	4 to 5	4.5		13		1,200	1,900	1.0		570

**TABLE 5B
Soil Sample Analytical Results for Metals, Wet Weight**

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte	Moisture, Percent		Metals (Wet Weight Basis)					
				Laboratory Method Sample Date	%	Copper mg/kg EPA 6010B	Lead mg/kg EPA 6010B	Mercury mg/kg EPA 7471A	Nickel mg/kg EPA 6010B		
										ASTM D2216/CLP	
INN-SB-15-4.0	3 to 5	4.0	12/9/2016	11	41	1,000	0.14	96			
INN-SB-16-3.5	3 to 4	3.5	12/9/2016	12	98	390	<	0.02	ND	91	
INN-SB-16-4.5	4 to 5	4.5	12/9/2016	11	48	51	0.10	J	31		
INN-SB-17-4.0	3 to 5	4.0	12/9/2016	12	83	240	0.40	270			
INN-SB-18-3.5	3 to 4	3.5	12/21/2016	34	91	81	0.55	96			
INN-SB-18-4.5	4 to 5	4.5	12/21/2016	33	340	120	0.56	170			
INN-SB-19-0.5	0 to 0.5	0.5	12/14/2016	18	82	590	4.3	430			
INN-SB-19-3.5	3 to 4	3.5	12/14/2016	18	6.9	3.0	0.040	J	580		
INN-SB-20-0.5	0 to 0.5	0.5	12/30/2016	21	69	170	0.39	510			
INN-SB-20-3.5	3 to 4	3.5	12/30/2016	16	6.4	3.3	0.026	640			
INN-SB-21-0.5	0 to 0.5	0.5	12/16/2016	21	16	62	0.19	640			
INN-SB-21-3.5	3 to 4	3.5	12/16/2016	17	6.5	3.1	0.025	J	610		
INN-SB-22-1.0	0 to 1	1.0	12/16/2016	12	65	96	2.1	89			
INN-SB-22-3.5	3 to 4	3.5	12/16/2016	18	280	1,300	1.2	660			
INN-SB-22-5.0	4 to 6	5.0	12/16/2016	19	260	180	2.0	b	600		
INN-SB-23-0.5	0 to 0.5	0.5	12/16/2016	10	55	44	13	22			
INN-SB-23-3.5	3 to 4	3.5	12/16/2016	26	160	200	1.8	570			
INN-SB-23-9.0	8 to 10	9.0	12/16/2016	17	9.1	3.5	0.050	J	650		
INN-SB-24-1.0	0 to 1	1.0	12/16/2016	17	3,400	3,800	18	190			
INN-SB-24-3.5	3 to 4	3.5	12/16/2016	14	150	120	0.70	140			
INN-SB-24-5.0	4 to 6	5.0	12/16/2016	16	12	4.4	0.11	b	470		
INN-SB-25-1.0	0 to 1	1.0	12/16/2016	20	1,600	2,000	1.4	170			
INN-SB-25-3.5	3 to 4	3.5	12/16/2016	23	22	8.6	0.12	J	2,000		
INN-SB-25-7.0	6 to 8	7.0	12/16/2016	18	4.7	1.7	0.40	b	7.3		
INN-SB-26-0.5	0 to 0.5	0.5	12/16/2016	12	6,200	13,000	139	84			
INN-SB-26-3.5	3 to 4	3.5	12/16/2016	18	1,800	1,400	3.8	500			
INN-SB-26-5.0	4 to 6	5.0	12/16/2016	9	260	650	0.38	b	1,000		
INN-SB-27-0.5	0 to 0.5	0.5	12/21/2016	33	250	110	0.65	80			
INN-SB-28-0.5	0 to 0.5	0.5	12/9/2016	4	17	8.7	0.030	J	25		
INN-SB-28-3.5	3 to 4	3.5	12/9/2016	11	31	14	0.030	J	41		

**TABLE 5B
Soil Sample Analytical Results for Metals, Wet Weight**

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte	Moisture, Percent		Metals (Wet Weight Basis)					
				Laboratory Method	Units	Copper mg/kg EPA 6010B	Lead mg/kg EPA 6010B	Mercury mg/kg EPA 7471A	Nickel mg/kg EPA 6010B		
										ASTM D2216/CLP	
										%	
Sample Date											
INN-SB-29-0.5	0 to 0.5	0.5	12/9/2016		5	34	8.2	0.060	J	30	
INN-SB-29-3.5	3 to 4	3.5	12/9/2016		9	48	33	0.090	J	110	
INN-SB-30-0.5	0 to 0.5	0.5	12/9/2016		4	21	26	0.14		57	
INN-SB-30-3.5	3 to 4	3.5	12/9/2016		9	23	13	< 0.02	ND	38	
INN-SB-31-0.5	0 to 0.5	0.5	12/9/2016		9	13	5.0	0.04	J	57	
INN-SB-31-3.0	3 to 4	3.0	12/9/2016		12	32	120	0.15		32	
INN-SB-32-0.5	0 to 0.5	0.5	12/9/2016		11	24	13	0.20		990	
INN-SB-33-0.5	0 to 0.5	0.5	12/9/2016		19	20	8.2	0.070	J	1,800	
INN-SB-33-3.5	3 to 4	3.5	12/9/2016		10	17	220	0.070	J	94	
INN-SB-33-7.0	6 to 8	7.0	12/9/2016		10	67	130	0.11	b	51	
INN-SB-34-0.5	0 to 0.5	0.5	12/9/2016		12	21	11	0.050	J	510	
INN-SB-34-3.5	3 to 4	3.5	12/9/2016		13	76	360	1.6		43	
INN-SB-35-0.5	0 to 0.5	0.5	12/9/2016		9	14	2.3	0.030	J	23	
INN-SB-35-3.5	3 to 4	3.5	12/9/2016		18	12	2.6	0.070	J	1,700	
INN-SB-35-7.0	6 to 8	7.0	12/9/2016		8	24	110	0.099	b	140	
INN-SB-GW-1-0.5	0 to 0.5	0.5	12/16/2016		8	430	370	4.1		45	
INN-SB-GW-1-3.5	3 to 4	3.5	12/16/2016		20	5.6	3.3	0.048	J	560	
INN-SB-GW-2-0.5	0 to 0.5	0.5	12/16/2016		6	1.5	3.0	0.056	J	30	
INN-SB-GW-2-3.5	3 to 4	3.5	12/16/2016		12	630	210	7.6		69	
INN-SB-GW-3-0.5	0 to 0.5	0.5	12/14/2016		10	14	7.4	0.041	J	37	
INN-SB-GW-3-3.5	3 to 4	3.5	12/14/2016		10	66	150	0.21		55	
INN-SB-GW-4-0.5	0 to 0.5	0.5	12/14/2016		10	23	26	0.024	J	640	
INN-SB-GW-4-3.5	3 to 4	3.5	12/14/2016		15	16	5.3	0.065	J	440	
INN-SB-40-0.5	0 to 0.5	0.5	12/21/2016		21	590	170	13		86	
INN-SB-40-3.5	3 to 4	3.5	12/21/2016		36	330	980	1.6		320	
INN-SB-41-0.5	0 to 0.5	0.5	12/14/2016		7	36	6.0	0.069	J	34	
INN-SB-41-3.5	3 to 4	3.5	12/14/2016		15	26	210	0.13		170	

TABLE 5B
Soil Sample Analytical Results for Metals, Wet Weight

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte	Moisture, Percent	Metals (Wet Weight Basis)				
					Units	Copper mg/kg EPA 6010B	Lead mg/kg EPA 6010B	Mercury mg/kg EPA 7471A	Nickel mg/kg EPA 6010B
Data Statistics									
				count	87	87	87	87	
			frequency of detection	99%	100%	97%	100%	100%	
			max	6200	13000	139	2000	2000	
			min	< 0.083	0.60	< 0.01	7.3	7.3	
			mean	252	380	2.7	416	416	
Beneficial Reuse and Human Health Comparative Values									
			TTLIC ⁵	2,500	1,000	20	2,000	2,000	

Notes and Abbreviations:

mg/kg = milligrams per kilogram
 bgs = Below ground surface
 % = Percent

b = Copper was detected above the reporting limit in the method blank for this sample OR sample was prepared outside of hold time.
 Values are listed as dry weight unless otherwise noted.

- San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios).
 San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.
- United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
- Lawrence Berkeley National Laboratory (LBNL) Analysis of Background Distributions of Metals in Bay Area Regional Soils, Upper Estimate Values, 2009.
- Final Remediation Investigation Report, Hunters Point Power Plant, San Francisco, CA, TRC, 2009
- TTLIC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLIC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24.
 TTLIC values are listed as wet weight

Comparative Value Formatting Key for Individual Samples:

Red Bolded and highlighted indicates an individual sample location exceeds the TTLIC where established.

TABLE 5C
Soil Sample Analytical Results for Polychlorinated Biphenyls (PCBs)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte	Moisture, Percent	PCBs										Total PCBs (sum of Aroclors) µg/kg (sum of Aroclors)		
					Units	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	µg/kg	EPA 8082			
						µg/kg				µg/kg							
				sample count	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
				frequency of detection	3%	0%	0%	0%	15%	26%	44%	44%	44%	44%	44%	44%	44%
				max	13000.0	360.0	180.0	160.0	33000.0	26000.0	5900.0	5900.0	5900.0	5900.0	5900.0	5900.0	64900.0
				min	< 1.3	< 3.4	< 1.7	< 1.5	< 1.6	< 1.3	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 1.8	< 1.8
				mean	388.2	20.9	10.3	9.4	1204.7	939.8	231.9	231.9	231.9	231.9	231.9	231.9	2373.5
Human Health Comparative Values																	
			SFRWQCB 2016 Residential Direct Exposure ESLs ¹		ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	250
			SFRWQCB 2016 Commercial Direct Exposure ESLs ¹		ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	1,000
			SFRWQCB 2016 Construction Worker Direct Exposure ESLs ¹		ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	5,600
			USEPA 2016 Residential RSLs ²		41,000	20	170	230	230	240	240	240	240	240	240	240	ne
			TTLC ³		ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne	50,000

Notes and Abbreviations:
 bgs = Below ground surface
 µg/kg = micrograms per kilogram
 % = Percent

Values are listed as dry weight unless otherwise noted.

¹ San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1, February 2016.

² United States Environmental Protection Agency (USEPA) Residential RSLs = Residential Screening Levels (Residential Exposure Scenario). May 2016.

³ TTLC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.

Comparative Value Formatting Key for Individual Samples:

Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL.

Highlighted indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESL.

Red Bolded indicates an individual sample location exceeds the TTLC where established.

TABLE 5D
Soil Sample Analytical Results for Total Petroleum Hydrocarbons (TPH)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte Units	Moisture, Percent	TPH						
					Laboratory Method	Diesel C10-C24		Diesel C10-C24 (SGCU)		Motor Oil C24-C36	
						mg/kg		mg/kg		mg/kg	
						EPA 8015		EPA 8015		EPA 8015	
INN-SB-1-4.5	4 to 5	4.5	12/14/2016	16	2.8	Y	530	Y	7.1	Y	2200
INN-SB-2-4.5	4 to 5	4.5	12/9/2016	9	470	Y	530	Y	2300	Y	2200
INN-SB-3-0.5	0 to 0.5	0.5	12/30/2016	20	20	Y			50		
INN-SB-3-4.5	4 to 5	4.5	12/30/2016	16	6.9	Y			8.7		
INN-SB-4-0.5	0 to 0.5	0.5	12/16/2016	10	230	Y			890		
INN-SB-4-4.5	4 to 5	4.5	12/16/2016	21	2.0	Y			5.7	J	
INN-SB-5-4.5	4 to 5	4.5	12/9/2016	11	11	Y			53		
INN-SB-6-3.5	3 to 4	3.5	12/16/2016	23	3.9	Y			13		
INN-SB-6-4.5	4 to 5	4.5	12/16/2016	22	3.8	Y			12		
INN-SB-9-3.5	3 to 4	3.5	12/14/2016	17	0.73	JY			2.4	JY	
INN-SB-10-3.5	3 to 4	3.5	12/14/2016	18	7.0	Y			5.6	J	
INN-SB-11-4.0	3 to 5	4.0	12/14/2016	19	220.0	Y	200	Y	850		750
INN-SB-12-3.5	3 to 4	3.5	12/14/2016	12	2.3	Y			3.4	J	
INN-SB-14-3.5	3 to 4	3.5	12/16/2016	16	23000				4600		
INN-SB-14-4.5	4 to 5	4.5	12/16/2016	13	7100	Y			3200		
INN-SB-15-4.0	3 to 5	4.0	12/9/2016	11	28	Y			200		
INN-SB-16-3.5	3 to 4	3.5	12/9/2016	12	210	Y	160	Y	990		780
INN-SB-17-4.0	3 to 5	4.0	12/9/2016	12	160	Y			670		
INN-SB-19-0.5	0 to 0.5	0.5	12/14/2016	18	600	Y	470	Y	2800		2200
INN-SB-19-3.5	3 to 4	3.5	12/14/2016	18	0.99	JY			2.5	JY	
INN-SB-21-0.5	0 to 0.5	0.5	12/16/2016	21	8.7	Y			28		
INN-SB-21-3.5	3 to 4	3.5	12/16/2016	17	2.4	Y			4.7	J	
INN-SB-23-0.5	0 to 0.5	0.5	12/16/2016	10	630	Y			1800		
INN-SB-23-9.0	8 to 10	9.0	12/16/2016	17	320	Y			68		
INN-SB-26-0.5	0 to 0.5	0.5	12/16/2016	12	14000				5600		
INN-SB-26-3.5	3 to 4	3.5	12/16/2016	18	5800				5000		
INN-SB-26-5.0	4 to 6	5.0	12/16/2016	9	1500	Yb			1200	b	
INN-SB-27-0.5	0 to 0.5	0.5	12/21/2016	33	120	Y			510		
INN-SB-29-0.5	0 to 0.5	0.5	12/9/2016	5	20	JY			250	J	
INN-SB-29-3.5	3 to 4	3.5	12/9/2016	9	150	Y	120	Y	1800		1300
INN-SB-30-0.5	0 to 0.5	0.5	12/9/2016	4	36	JY			380		
INN-SB-30-3.5	3 to 4	3.5	12/9/2016	9	1.2	Y			7.5		
INN-SB-32-0.5	0 to 0.5	0.5	12/9/2016	11	<	34	ND		460	J	
INN-SB-34-0.5	0 to 0.5	0.5	12/9/2016	12	9.8	JY			84		
INN-SB-34-3.5	3 to 4	3.5	12/9/2016	13	47	Y			260		
INN-SB-GW-1-0.5	0 to 0.5	0.5	12/16/2016	8	1300	Y			4800		

**TABLE 5D
Soil Sample Analytical Results for Total Petroleum Hydrocarbons (TPH)**

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte Units	Moisture, Percent	TPH					
					Laboratory Method	Diesel C10-C24	Diesel C10-C24 (SGCU)	Motor Oil C24-C36	Motor Oil C24-C36 (SGCU)	Motor Oil C24-C36
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
						EPA 8015	EPA 8015	EPA 8015	EPA 8015	EPA 8015
INN-SB-GW-1-3.5	3 to 4	3.5	12/16/2016	20	2.8	Y	6.1	J		
INN-SB-GW-4-0.5	0 to 0.5	0.5	12/14/2016	10	25	Y	380			
INN-SB-GW-4-3.5	3 to 4	3.5	12/14/2016	15	14	Y	210			
INN-SB-40-0.5	0 to 0.5	0.5	12/21/2016	21	190	Y	600			
INN-SB-40-3.5	3 to 4	3.5	12/21/2016	36	1400	Y	2300			
INN-SB-41-0.5	0 to 0.5	0.5	12/14/2016	7	45	Y	210			
INN-SB-41-3.5	3 to 4	3.5	12/14/2016	15	27	Y	260			

Data Statistics	
Sample Count	43
Frequency of Detection	98%
Maximum	23000
Minimum	< 0.73
Mean	1342.91

Human Health Comparative Values	
SFRWQCB 2016 Residential Direct Exposure ESLs ¹	230
SFRWQCB 2016 Commercial Direct Exposure ESLs ¹	1,100
SFRWQCB 2016 Construction Worker Direct Exposure ESLs ¹	880
USEPA 2016 Residential RSLs ²	520
TTLIC ³	nc

Notes and Abbreviations:
 mg/kg = milligrams per kilogram
 bgs = Below ground surface
 % = Percent
 J = Estimated value
 b = Lab case narrative notes a calibration bias for this result OR sample was prepared outside of hold time
 Values are listed as dry weight unless otherwise noted.

¹ San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.

² United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.

³ TTLIC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLIC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLIC values are listed as wet weight.

Comparative Value Formatting Key for Individual Samples:

Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL.

Highlighted indicates an individual sample location result exceeds the 2016 Construction Worker Direct Exposure ESL.

Red Bolded indicates an individual sample location exceeds the TTLIC where established.

TABLE 5E
Soil Sample Analytical Results for Polycyclic Aromatic Hydrocarbons (PAHs)

Table with columns: Sample ID, Depth From Existing Surface, Analytic Method, Moisture, Accumulation, Accumulability, Adherence, Benz(a)anthracene, Benz(a)fluoranthene, Benz(b)fluoranthene, Benz(b)krythrene, Benz(a)krythrene, Fluoranthene, Pyrene, Total PAHs, and BiOP Equivalent Value. Rows include individual sample data and summary statistics.

Notes and Abbreviations: J = Estimated value, ND = Not detected above the method detection limit (< MDL), etc. Includes a list of abbreviations and a table of BiOP Equivalent Values for Human Health and Ecotoxicity.

TABLE 5F
Soil Sample Analytical Results for Pesticides

Sample ID	Depth From Existing Surface (feet-bgs)	Sample Depth (ft bgs)	Analyte	Moisture, Percent		4,4'-DDE µg/kg EPA 8081A	4,4'-DDT µg/kg EPA 8081A	Total DDT's µg/kg Sum	beta-BHC µg/kg EPA 8081A	Total BHCs µg/kg Sum ³	alpha-Chlordane µg/kg EPA 8081A	gamma-Chlordane µg/kg EPA 8081A	Total Chlordanes µg/kg Sum	Dieldrin µg/kg EPA 8081A	Endosulfan sulfate µg/kg EPA 8081A	Endrin µg/kg EPA 8081A	Heptachlor epoxide µg/kg EPA 8081A	Methoxychlor µg/kg EPA 8081A	Toxaphene µg/kg EPA 8081A				
				% ASTM D2216/CLP	% Laboratory Method																		
Sample Date																							
INN-SB-4-0.5	0 to 0.5	0.5	12/16/2016	10	< 5.3	ND	< 37	#ND	< 19.0	#ND	< 2.7	ND	< 3.4	ND	< 3.4	ND	< 3.0	ND	< 190.0	#ND	< 130.0	ND	
INN-SB-19-0.5	0 to 0.5	0.5	12/14/2016	18	< 24.0	ND	< 24	< 7.3	ND	< 5.1	ND	< 3.6	ND	< 7.3	ND	< 24.0	ND	< 4.7	ND	< 62.0	ND	< 240.0	ND
INN-SB-34-0.5	0 to 0.5	0.5	12/29/2016	12	< 11.0	ND	< 11	< 3.4	ND	< 2.4	ND	< 1.7	ND	< 3.4	ND	< 11.0	ND	< 2.2	ND	< 36.0	ND	< 110.0	ND
INN-SB-40-0.5	0 to 0.5	0.5	12/21/2016	21	11.0	J	6.40	CJ	23.1	< 4.7	ND	< 2.2	ND	< 4.7	ND	< 5.2	ND	< 2.7	ND	< 33.0	ND	< 170.0	ND
INN-SB-40-3.5	3 to 4	3.5	12/21/2016	36	< 5.2	ND	23.00	CJ	35.3	13.0	J	83.8	< 81.0	J	26.0	< 5.7	ND	< 7.3	CJ	< 41.0	ND	< 210.0	ND
INN-SB-41-0.5	0 to 0.5	0.5	12/14/2016	7	< 5.4	ND	< 3.80	ND	< 5.4	< 1.6	ND	< 0.8	ND	< 1.6	ND	< 3.1	ND	< 1.1	ND	< 14.0	ND	< 53.0	ND
INN-SB-41-3.5	3 to 4	3.5	12/14/2016	15	< 12.0	ND	< 8.3	ND	< 12	< 3.6	ND	< 1.7	ND	< 3.6	ND	< 7	CJ	< 6.3	ND	< 30.0	ND	< 120.0	ND
Data Statistics																							
sample count				7																			
frequency of detection				14%																			
max				29%																			
min				37.0																			
mean				3.8																			
				9.3																			
Human Health Comparative Values																							
SFRWQCB 2016 Residential Direct Exposure ESLs ¹				1,900																			
SFRWQCB 2016 Commercial Direct Exposure ESLs ¹				8,500																			
SFRWQCB 2016 Construction Worker Direct Exposure ESLs ¹				57,000																			
USEPA 2016 Residential RSLs ²				2,000																			
TTLC ³				1,000																			

Notes and Abbreviations:
µg/kg = micrograms per kilogram
% = Percent
= Below ground surface
= Sample was diluted due to the color of the extract
Only detected constituents shown.
Values are listed as dry weight unless otherwise noted.
¹ San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For
² United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
³ TTLC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.

Comparative Value Formatting Key for Individual Samples:
Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL.
Highlighted indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESL, or the 2016 Construction Worker Direct Exposure ESL, whichever is lower.
Red Bolded indicates an individual sample location exceeds the TTLC where established.

TABLE 5G
Soil Sample Analytical Results for Volatile Organic Compounds (VOCs)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte	Moisture, Percent		Acetone µg/kg EPA 8260B	2-Etanolone µg/kg EPA 8260B	n-Butylbenzene µg/kg EPA 8260B	tert-Butylbenzene µg/kg EPA 8260B	Carbon Disulfide µg/kg EPA 8260B	Ethylbenzene µg/kg EPA 8260B	Isopropylbenzene µg/kg EPA 8260B	Methylene Chloride µg/kg EPA 8260B	Naphthalene µg/kg EPA 8260B	para-Isopropyl Toluene µg/kg EPA 8260B	Propylbenzene µg/kg EPA 8260B	1,2,4-Trimethylbenzene µg/kg EPA 8260B	1,2,5-Trimethylbenzene µg/kg EPA 8260B	mp-Xylenes µg/kg EPA 8260B	o-Xylene µg/kg EPA 8260B				
				ASTM D2116/CLP	%																			
NN-SB-14-5	4.0x5	4.5	12/14/2016	16		63	J	< 0.6	ND	< 0.5	ND	< 0.5	ND	< 0.8	ND	< 0.4	ND	< 0.6	ND	< 1.2	ND	< 0.5	ND	
NN-SB-24-5	4.0x5	4.5	12/30/2016	16		34	ND	< 0.7	ND	< 1.1	ND	< 0.5	ND	< 0.7	ND	< 0.6	ND	< 0.5	ND	< 1.2	ND	< 0.5	ND	
NN-SB-33-5	3.0x4	3.5	12/14/2016	17		70	J	< 0.6	ND	< 0.5	ND	< 0.4	ND	< 0.8	ND	< 0.5	ND	< 0.5	ND	< 1.0	ND	< 0.5	ND	
NN-SB-14-3.5	3.0x4	3.5	12/16/2016	16		200	ND	< 46.0	ND	750.0	46.0	J	< 61.0	ND	3800.0	280.0	J	< 8.4	ND	< 56.0	ND	< 24.0	ND	< 30.0
NN-SB-24-9.0	8.0 to 10	9.0	12/16/2016	17		200	ND	< 47.0	ND	33.0	J	< 44.0	ND	< 62.0	ND	13.0	J	< 13.0	ND	< 8.5	ND	< 57.0	ND	< 16.0
NN-SB-26-3.5	3.0x4	3.5	12/16/2016	18		180.0	J	< 4.6	ND	< 4.9	ND	54.0	J	< 14.0	ND	790.0	16.0	J	< 99.0	400	J	< 21.0	J	< 16.0
NN-SB-29-3.5	3.0x4	3.5	12/29/2016	9		3.3	ND	< 1.3	ND	< 0.6	ND	< 0.7	ND	< 1.1	ND	< 0.6	ND	< 0.6	ND	< 0.6	ND	< 1.4	ND	< 0.6
NN-SB-31-3.5	3.0x4	3.5	12/29/2016	13		3.6	ND	< 1.4	ND	< 0.8	ND	< 0.7	ND	< 1.2	ND	< 0.7	ND	< 0.7	ND	< 0.7	ND	< 1.5	ND	< 0.6
NN-SB-40-3.5	3.0x4	3.5	12/14/2016	15		4.1	ND	< 1.1	ND	< 0.6	ND	< 0.4	ND	< 3.5	ND	< 0.4	ND	< 0.5	ND	< 0.5	ND	< 1.1	ND	< 0.5
NN-SB-40-3.5	3.0x4	3.5	12/21/2016	36		49.0	ND	< 8.2	J	< 0.9	ND	< 1.0	ND	< 13.0	ND	< 0.9	ND	< 0.9	ND	< 1.0	ND	< 2.0	ND	< 0.9
NN-SB-41-3.5	3.0x4	3.5	12/14/2016	15		4.3	ND	< 1.2	ND	< 0.6	ND	< 0.4	ND	< 3.7	ND	< 0.5	ND	< 0.5	ND	< 0.5	ND	< 1.1	ND	< 0.5
Data Statistics																								
sample count																								
Frequency of detection																								
max																								
min																								
mean																								
Human Health Comparative Values																								
SFRWQCB 2016 Residential Direct Exposure ESLs ¹																								
SFRWQCB 2016 Commercial Direct Exposure ESLs ¹																								
SFRWQCB 2016 Construction Worker Direct Exposure ESLs ¹																								
USEPA 2016 Residential RSLs ²																								
TTLCL ³																								

Notes and Abbreviations:
µg/kg = micrograms per kilogram
ftgs = feet below ground surface
ND = Not detected above the method detection limit (< MDL)
ne = Not established
Only detected constituents shown.
Values are listed as dry weight unless otherwise noted.
¹ San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.
² United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.
³ TTLCL = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLCL values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLCL values are listed as wet weight.
Commentary Value Formulation Key for Individual Samples:
Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL.
High indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESL, or the 2016 Construction Worker Direct Exposure ESL, whichever is lower.
Red Bolded indicates an individual sample location exceeds the TTLCL where established.

TABLE 5H
Soil Sample Analytical Results for Maher Ordinance Constituents
(Cyanide, Hexavalent Chromium, Fluoride, and pH)

Sample ID	Depth From Existing Surface (feet bgs)	Sample Depth (ft bgs)	Analyte	Moisture, Percent		Maher Ordinance						
				Units	ASTM D2216/CLP	Cyanide mg/kg	Hexavalent Chromium mg/kg	Fluoride mg/kg	pH			
										SM4500CN-E	EPA 7196A	EPA 300.0
INN-SB-1-4-5	4 to 5	4.5	12/14/2016	16	ND	< 0.06	ND	0.33	J	< 0.2	ND	7.3
INN-SB-4-0-5	0 to 0.5	0.5	12/16/2016	10	J	0.48	J	0.5	J	1.2	ND	7.3
INN-SB-6-3-5	3 to 4	3.5	12/16/2016	23	J	0.09	J	0.32	J	< 0.2	ND	6.8
INN-SB-9-3-5	3 to 4	3.5	12/14/2016	17	ND	< 0.06	ND	0.27	J	0.44	J	7
INN-SB-11-4-0	3 to 5	4.0	12/14/2016	19	J	0.13	J	2.1	J	1.6	J	7.4
INN-SB-19-0-5	0 to 0.5	0.5	12/14/2016	18	ND	< 0.06	ND	0.31	J	0.33	J	6.9
INN-SB-34-0-5	0 to 0.5	0.5	12/9/2016	12	J	0.17	J	0.23	J	2.20	J	8.10
INN-SB-34-3-5	3 to 4	3.5	12/9/2016	13	J	0.26	J	0.26	J	2.00	J	8.10
INN-SB-GW-4-0-5	0 to 0.5	0.5	12/14/2016	10	J	0.06	J	0.41	J	1.5	J	8.4
INN-SB-40-0-5	0 to 0.5	0.5	12/21/2016	21	J	0.11	J	< 0.16	ND	1.8	J	8.6
INN-SB-40-3-5	3 to 4	3.5	12/21/2016	36	J	1.80	J	< 0.2	ND	1.4	J	8.5
INN-SB-41-0-5	0 to 0.5	0.5	12/14/2016	7	ND	< 0.05	ND	0.31	J	3.7	J	8.6
INN-SB-41-3-5	3 to 4	3.5	12/14/2016	15	J	0.12	J	0.56	J	2.1	J	8

Data Statistics		sample count	13	13	13
frequency of detection		69%	85%	85%	100%
max		1.80	2.10	3.70	8.60
min		< 0.05	< 0.16	< 0.20	6.80
mean		0.26	0.44	1.42	7.77
Human Health Comparative Values					
SFRW/QCB 2016 Residential Direct Exposure ESLs ¹		5.3	0.3	ne	ne
SFRW/QCB 2016 Commercial Direct Exposure ESLs ¹		24	6.2	ne	ne
SFRW/QCB 2016 Construction Worker Direct Exposure ESLs ¹		21	2.8	ne	ne
USEPA 2016 Residential RSLs ²		23	0.3	3.000	ne
TTLC ³		ne	500	18,000	ne

Notes and Abbreviations:

mg/kg = milligrams per kilogram
 bgs = Below ground surface
 % = Percent

Values are listed as dry weight unless otherwise noted.

¹ San Francisco Regional Water Quality Control Board (SFRW/QCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1, February 2016.

² United States Environmental Protection Agency (USEPA) Residential RSLs = Regional Screening Levels (Residential Exposure Scenario). May 2016.

³ TTLC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24. TTLC values are listed as wet weight.

Comparative Value Formatting Key for Individual Samples:

Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL.

Highlighted indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESL.

Red Bolded indicates an individual sample location exceeds the TTLC where established.

TABLE 9A
Summary of Weston 2013/2015 Metals Data for Soil and Sediment

Sample ID	Metals																
	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Lead mg/kg	Mercury mg/kg	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg
IA-01	2.3	7.1	160	0.23	1.5	150	34	150	260	0.7	12	470	<0.52	<0.26	<0.52	47	460
IA-02A	<0.58	2.6	120	0.32	0.38	140	31	63	230	0.28	<0.29	560	<0.58	<0.29	<0.58	42	170
IA-02B	<0.51	2.3	69	0.34	<0.25	110	23	13	5.2	0.028	<0.25	710	<0.51	<0.25	<0.51	47	38
IA-03	1.5	7.5	170	0.27	0.53	74	13	200	300	1.4	1.3	120	<0.51	<0.25	<0.51	44	350
IA-04	1.6	7	940	0.28	3.9	220	40	290	4600	1.7	0.5	700	0.79	<0.26	<0.52	50	1,100
IA-05	2.7	4.8	170	0.24	1.1	79	11	190	150	0.55	4.9	110	<0.55	<0.28	<0.55	42	780
IA-06A	<0.56	3.9	170	0.28	0.87	120	34.0	140	400	0.72	0.87	480	0.99	<0.28	<0.56	43	320
IA-07	<0.51	3.7	310	0.71	0.35	39	24	170	85	0.20	2.6	45	<0.51	<0.25	<0.51	57	170
IA-08A	<0.57	3.7	110	0.28	0.34	48	15	140	180	0.37	<0.28	140	<0.57	<0.28	<0.57	47	180
IA-08B	<0.60	1.9	64	0.36	<0.30	110	26	16	4.9	0.15	<0.30	740	<0.60	<0.30	<0.60	41	36
IA-09	<0.51	3.8	150	0.28	0.81	160	39	130	320	0.77	0.63	640	<0.51	<0.26	<0.51	45	310
IA-10A ^b	2.0	9.0	740	0.29	5.7	190	40	310	1900	13.0	0.51	670	<0.54	<0.27	<0.54	48	1000
IA-10B	<0.63	1.4	100	0.36	<0.31	140	61	15	6.7	<0.020	<0.31	760	<0.63	<0.31	<0.63	47	43
IA-11A	<0.56	2	24	<0.11	0.38	830	93	20	24	0.11	<0.28	2300	<0.56	<0.28	<0.56	32	46
IA-11B	<0.68	3.5	110	0.38	<0.34	140	49	30	19	0.2	<0.34	540	<0.68	<0.34	<0.68	45	88
IA-12	<0.51	6	890	0.16	0.62	51	7.1	110	4200	0.18	11	56	<0.51	<0.26	<0.51	27	420
IA-13D	20	42	480	<0.21	2.4	110	21	3100	1700	29	1.3	110	<1	<0.52	<1	54	4000
IA-14A	1.6	16	990	0.34	1.6	65	23	1100	1000	5.1	0.59	70	0.94	<0.28	<0.56	57	810
IA-14B	11	21	1400	0.24	1.9	140	28	3300	3300	0.65	<0.28	390	<0.56	<0.28	<0.56	36	1100
IA-15	<0.52	3.9	76	0.44	<0.26	170	25	69	69	0.39	<0.26	400	1.8	<0.26	<0.52	50	120
IA-16	<0.52	3.4	88	0.22	<0.26	51	7.5	150	150	0.41	<0.26	37	<0.52	<0.26	<0.52	51	120
IA-17	6.9	52	350	0.27	1.4	110	20	800	800	19	9	160	<0.29	<0.29	<0.58	43	1400
IA-18	<0.57	6	98	0.52	<0.29	85	22	80	80	0.09	<0.29	240	1.4	<0.29	<0.57	40	150
IA-19D	4.5	33	410	0.33	2.6	470	46	2600	2600	1.4	<0.74	670	<1.5	<0.74	<0.54	97	2000
IA-20	<0.54	5.3	140	0.32	0.53	59	12	81	100	0.18	1.4	88	<0.54	<0.27	<0.54	47	210
IA-21D	<1.6	9.8	510	0.39	<0.82	1500	150	440	600	0.41	<0.82	3100	5.5	<0.82	<1.6	120	520
IA-22	1	13	140	0.37	1.1	160	31	870	140	0.19	46	300	2.9	<0.27	<0.55	50	430
IA-23D	<0.71	5.7	170	0.29	1.2	90	17	270	64	0.27	3.6	110	1	<0.35	<0.71	58	160
IA-24A	<0.51	7.1	66	0.74	<0.26	44	14	51	19	0.11	<0.26	64	<0.51	<0.26	<0.51	49	68
IA-24B	<0.58	3.8	130	0.47	<0.29	110	20	72	97	0.18	<0.29	250	<0.58	<0.29	<0.58	48	130
IA-25D	<1.2	10	70	0.67	<0.62	120	17	160	80	0.68	1.9	130	<1.2	<0.62	<1.2	78	200
IA-26	<0.59	3	150	0.51	<0.29	280	45	36	7.6	0.036	<0.29	860	0.73	<0.29	<0.59	83	56
IA-27	<0.51	13	200	0.4	0.89	170	29	350	230	0.28	11	340	2	<0.25	<0.51	57	470
IA-28	4.9	55	260	0.25	1.9	210	23	680	500	0.46	33	190	4.5	<0.25	<0.51	45	1100
IA-29A	<0.48	3.4	110	0.42	<0.24	180	35	32	11	0.026	<0.24	660	0.89	<0.24	<0.48	52	46
IA-29B	<0.53	2.8	130	0.23	0.51	41	8.1	31	200	1.3	<0.27	31	<0.53	<0.27	<0.53	51	290
IA-30	<0.51	2.8	82	0.17	0.28	76	10	58	100	0.16	2.8	92	<0.51	<0.26	<0.51	36	150
IA-31	<0.46	7.4	140	0.29	0.78	110	17	260	150	1	3.9	140	1.5	<0.23	<0.46	48	220
IA-32D	<1.1	11	69	0.62	<0.57	130	16	170	88	0.75	<0.57	150	<1.1	<0.57	<1.1	74	200
IA-33A	<0.54	1.4	81	0.22	<0.27	130	28	25	18	0.033	<0.27	460	1.3	<0.27	<0.54	60	42
IA-33B	2.9	3.3	190	0.31	1.8	70	13	96	500	2	<0.28	140	<0.56	<0.28	<0.56	48	520
SS-1-0.5'	<1.7	11	89	<0.33	<0.41	105	17	277	117	0.83	<1.7	138	<3.3	<0.83	<1.7	62	215
SS-1-1'	<1.4	13	106	<0.29	<0.36	98	18	569	185	4.92	3.88	135	<0.29	<0.72	<1.4	57	338
SS-2-0.5'	<1.6	8	118	<0.33	<0.41	57	13	185	215	0.75	2.92	91	<3.3	<0.82	<1.6	38	1,123
SS-2-1'	5	25	149	<0.37	3.54	200	28	1,000	631	2.77	26	354	<3.7	<0.92	<1.8	43	3,692
SS-3-0.5'	<0.41	7	43	<0.083	<0.010	63	10	123	43	0.75	<0.41	63	<0.83	<0.21	<0.41	45	123
SS-3-1'	<1.9	25	200	<0.38	0.75	126	29	1,692	231	7.08	31	125	<3.8	<0.94	<1.9	68	677

TABLE 9A
Summary of Weston 2013/2015 Metals Data for Soil and Sediment

Sample ID	Metals																
	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Lead mg/kg	Mercury mg/kg	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg
SS-4-0.5 ^a	5	31	277	<0.34	0.72	145	15	1,077	538	135.38	3.08	114	<3.4	<0.86	<1.7	45	1,015
SS-4-1 ^a	6	31	385	<0.34	51	154	40	1,308	2,462	14	15	145	<3.4	<0.85	<1.7	48	2,923
SS-5-0.5 ^a	<0.37	7	42	0.25	<0.0093	60	9	115	71	1.85	0.60	58	<0.75	<0.19	<0.37	40	123
SS-5-1 ^a	<0.42	11	75	0.28	0.15	74	11	308	83	2.15	5.85	86	<0.83	<0.21	<0.42	46	200
SS-6-0.5 ^a	<0.44	9	54	0.26	<0.11	71	10	185	57	1.52	1.34	62	<0.88	<0.22	<0.44	45	145
SS-6-1 ^a	<1.6	17	68	<0.33	<0.41	120	15	585	154	2.92	15	154	<3.3	<0.81	<1.6	60	277
SS-7-0.5 ^a	5	17	262	<0.28	<0.35	117	15	600	892	3.54	20	102	<0.2.8	<0.69	<1.4	43	3,077
SS-7-1 ^a	6	17	138	<0.38	<0.48	185	15	1,000	462	4.77	12	118	<3.8	<0.95	<1.9	43	692
SS-8-0.5 ^{a,c}	<1.5	15	185	<0.30	<0.37	126	17	831	338	7.85	4.92	91	<3.4	<0.84	<1.7	52	538
SS-8-1 ^a	<1.6	37	148	<0.32	0.66	131	15	1,846	923	15	5.23	95	<3.2	<0.80	<1.6	46	677
SS-9-0.5 ^a	<2.8	58	185	<0.22	2.15	169	22	41,538	738	15	15	143	<2.2	1.45	<2.8	37	6,154
SS-9-1 ^a	<1.1	115	169	<0.23	1.32	215	32	3,692	831	35	2.15	554	<2.3	<0.57	<1.1	40	831
SS-10-0.5 ^a	<0.45	13	55	<0.090	0.31	86	10	477	63	4	1.20	65	<0.90	<0.23	<0.45	49	262
SS-10-1 ^a	<1.3	18	54	<0.27	<0.33	95	10	1,292	97	7	2.46	82	<2.7	<0.67	<1.3	45	369

Data Statistics

Human Health Comparative Values	count	
	frequency of detection	maximum
SFRWQCB 2016 Residential Direct Exposure ESLs	61	61
SFRWQCB 2016 Commercial Direct Exposure ESLs	30	100%
USEPA 2016 Residential RSLs	1.8	1.6
Local Hunters Point Site Background (2009)	ne	ne

Human Health Comparative Values	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
SFRWQCB 2016 Residential Direct Exposure ESLs	31	0.067	15,000	150	39.0	120,000	23	3,100	80	6.3	390	820	390	390	0.78	140,000	23,000
SFRWQCB 2016 Commercial Direct Exposure ESLs	470	0.31	220,000	2200	580.0	1,800,000	350	47,000	320	82.0	5800	11,000	5800	5800	12	5,800	350,000
USEPA 2016 Residential RSLs	140	0.98	3,000	42	43	530,000	28	14,000	160	19.0	1,800	86	1,700	1,800	3.5	470	110,000
LBNL Background Values	31	0.68	15,000	160	71.0	120,000	23	3,100	400	11.0	390	820	390	390	0.78	390	23,000
Local Hunters Point Site Background (2009)	ne	ne	ne	ne	ne	464.24	84	ne	ne	ne	ne	ne	ne	ne	ne	ne	ne
TTLC	500	500	10,000	75	100	2,500	8,000	2,500	1,000	20.0	3,500	2,000	100	500	700	2,400	5,000

Notes

- ^a Values replaced by Field Duplicate values IA-34
- ^b Values replaced by Field Duplicate values IA-37
- ^c Replaced values with results from FD-1 (because higher for PCB)
- ^d 1/2 the detection limit used for non-detects

Comparative Value Formatting Key for Individual Samples:

Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL, or background concentration, whichever is greater.
Highlighted indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESL, or the 2016 Construction Worker Direct Exposure ESL, whichever is lower.
Red Bolded indicates an individual sample location exceeds the TTLC where established.

TABLE 9B

DRAFT

Summary of Weston 2013/2015 Selected Organics Data for Soil and Sediment

Sample ID	TPH		PCBs	PAHs
	Diesel Range Organics (C10-C24)	Motor Oil Range Organics (C24-C36)	Total PCBs (sum of Aroclors)	B(a)P Equivalent Value
	mg/kg	mg/kg	mg/kg	ug/kg
IA-01	130	410	NA	NU
IA-02A	5.9	17	NA	<73
IA-02B	<5.5	1.3	NA	<74
IA-03	100	380	270	951
IA-04	96	230	NA	2,406
IA-05	240	720	NA	NU
IA-06 ^A	110	450	<26	1,022
IA-07	41	160	22	<710
IA-08A	22	190	<87	NU
IA-08B	1.7	8.7	<27	<76
IA-09	67	350	NA	NU
IA-10A ^B	110	180	76	2,714
IA-10B	1.2	<5.8	<28	<77
IA-11A	25	99	<27	<74
IA-11B	5.9	8.8	<29	<80
IA-12	2,900	15,000	250	NU
IA-13D	470	980	2,700	1,886
IA-14A	410	510	167	4,175
IA-14B	570	610	<28	12,906
IA-15	1,000	510	26	NU
IA-16	14	150	<24	158.0
IA-17	240	390	6,060	2,370
IA-18	10	70	<27	NU
IA-19D	86	250	600	497.0
IA-20	93	650	12	NU
IA-21D	40	110	130	257.0
IA-22	46	260	159	<680
IA-23D	100	640	124	<890
IA-24A	120	310	18	NU
IA-24B	140	320	<26	NU
IA-25D	150	300	140	15
IA-26	83	570	<23	NU
IA-27	52	440	159	NU
IA-28	580	1,300	36	51,061
IA-29A	320	1,700	<20	NU
IA-29B	120	800	24	NU
IA-30	69	380	1,000	322
IA-31	28	240	135	<530
IA-32D	140	320	220	17
IA-33A	260	1,900	<20	NU
IA-33B	47	400	462	NU
SS-1-0.5'	277	646	114	NU
SS-1-1'	400	938	277	42
SS-2-0.5'	492	985	83	NU
SS-2-1'	554	1,231	277	NU
SS-3-0.5'	169	215	<49	813
SS-3-1'	523	877	1,508	2,077
SS-4-0.5'	569	954	1,415	2,043
SS-4-1'	8,462	4,462	1,692	NU
SS-5-0.5'	60	114	91	1,622
SS-5-1'	185	323	122	2,241
SS-6-0.5'	91	154	77	NU
SS-6-1'	231	246	323	713

TABLE 9B

DRAFT

Summary of Weston 2013/2015 Selected Organics Data for Soil and Sediment

Sample ID	TPH		PCBs	PAHs
	Diesel Range Organics (C10-C24)	Motor Oil Range Organics (C24-C36)	Total PCBs (sum of Aroclors)	B(a)P Equivalent Value
	mg/kg	mg/kg	mg/kg	ug/kg
SS-7-0.5'	369	862	631	NU
SS-7-1'	338	708	2,923	1,354
SS-8-0.5' ^C	323	600	12,000	1,530
SS-8-1'	462	969	2,462	3,258
SS-9-0.5'	923	1,692	3,846	137
SS-9-1'	1,200	2,769	13,692	1,402
SS-10-0.5'	60	120	554	125
SS-10-1'	185	354	2,308	279
Data Statistics				
count	61	61	55	61
frequency of detection	98%	98%	85%	84%
detected	8,462	15,000	13,692	51,061
minimum	1.2	1.3	12	1.3
mean ^D	409	845	1044	Not Calculated ^E

Human Health Comparative Values				
SFRWQCB 2016 Residential Direct Exposure ESLs	230	11,000	250	ne
SFRWQCB 2016 Commercial Direct Exposure ESLs	1100	140,000	1,000	ne
SFRWQCB 2016 Construction Worker Direct Exposure ESLs	880	32,000	5,600	ne
USEPA Residential RSLs	520	230,000	ne	ne
DTSC B(a)P Ambient Conditions for Northern California	ne	ne	ne	900
TTLIC	ne	ne	50,000	ne

Notes

- A Values replaced by Field Duplicate values IA-34
- B Values replaced by Field Duplicate values IA-37
- C Replaced values with results from FD-1 (because higher for PCB)
- D 1/2 the detection limit used for non-detects
- E Mean for BaP Equivalent not calculated due to elevated detection limits
- NU Result not used because of elevated detection limit

Comparative Value Formatting Key for Individual Samples:

Bold indicates an individual sample location result exceeds the 2016 Residential Direct Exposure ESL, or background concentration, whichever is greater.

Highlighted indicates an individual sample location result exceeds the 2016 Commercial Direct Exposure ESL, or the 2016 Construction Worker Direct Exposure ESL, whichever is lower. For B(a)P equivalent value, comparative value from DTSC Ambient Conditions for Northern California is used.

Red Bolded indicates an individual sample location exceeds the TTLIC where established.

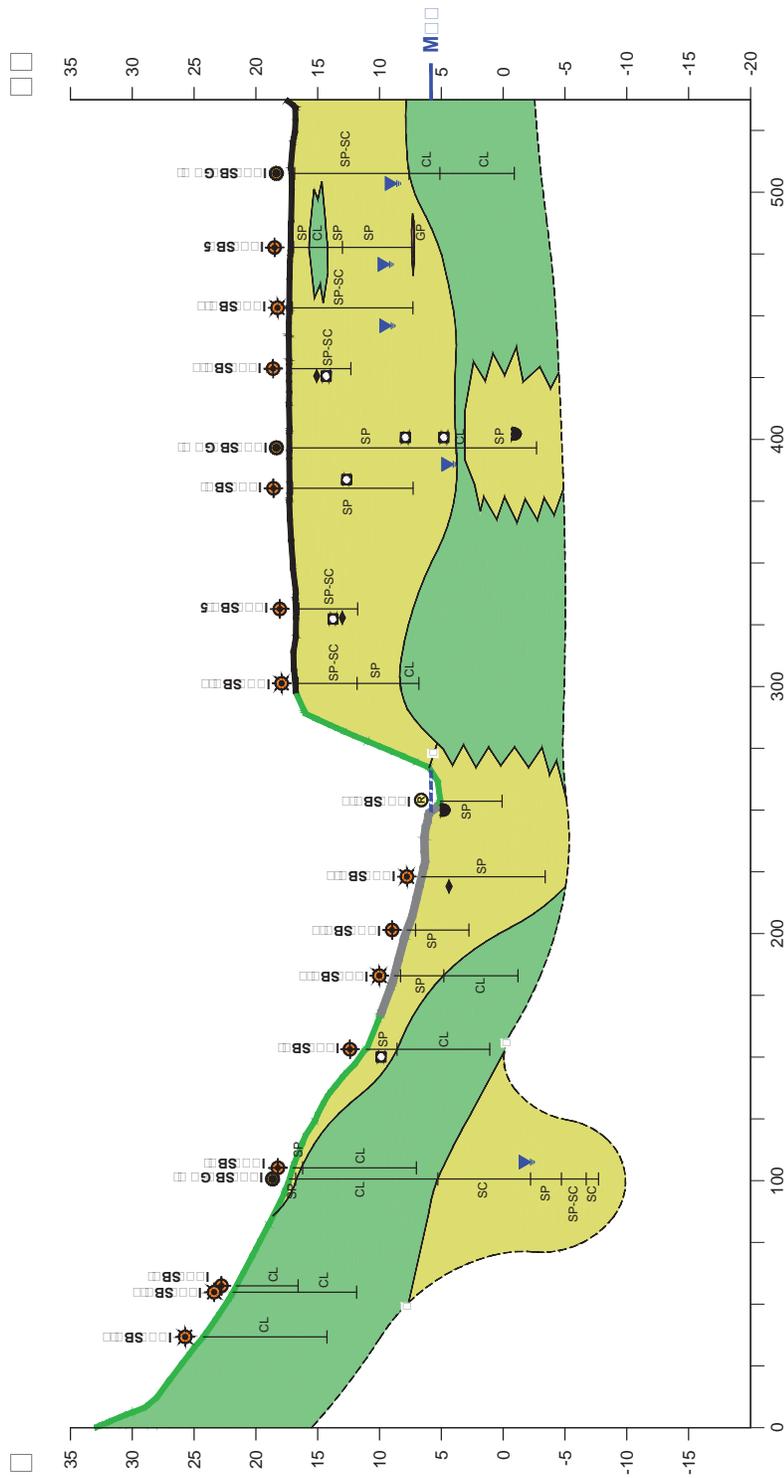
TABLE 11A
Summary of Results - Recreational Use - Soil Quality

Constituent of Potential Concern (COPC)	Statistical Summary of COPC				Regulatory Screening Value		Published Action Goals for Comparable San Francisco Bay Restoration Sites		Background/Ambient Regional Values	California Hazardous Waste Disposal Criteria	Recommended Human Health-Based Screening Level for On-Site Management
	Combined Data 2013/2015 (Weston) and 2016/2017 (Northgate)		SFRWQCB ²		Yosemite Slough Restoration Project Action Goals ⁴	Yosemite Slough Restoration Project Action Goals ⁴	Highest Value of Regional (LBNL ⁵) Local (PG&E HPS ⁶), and DTSC (BaP only ⁷)	DTSC			
	Frequency of Detection (%)	Minimum	Maximum	Average					95% UCL	2016 Commercial or Construction Worker HH Direct Exposure ESLs (Lowest Value Selected)	PG&E Hunters Point Site, Shoreline Area ³
Metals (mg/kg)											
Arsenic	89	<0.07	290	12.06	30.7	0.31	13	15	24	500	24
Cobalt	100	5.1	150	29.68	32.9	28	ne	ne	84	8,000	84
Copper	99	<0.1	41,538	687.5	1,054	14,000	ne	2,500	63	2,500	2,500
Lead	100	0.68	14,000	490.6	986.7	160	159	400	43	1,000	160
Mercury	98	<0.02	158	4.259	10.6	19	ne	7.2	0.42	20.0	19.0
Nickel	100	8.9	3,100	438.3	630.5	86	ne	1,600	1,582	2,000	1,582
Polychlorinated Biphenyls (µg/kg)											
Total PCBs (sum of Aroclors)	63	<1.8	64,900	1,548	9,583	1,000	ne	1,200	ne	50,000	1,000
Total Petroleum Hydrocarbons (mg/kg)											
TPH as diesel	99	<0.7	23,000	1,020	3,985	880	ne	580	ne	ne	880
Polyaromatic Hydrocarbons (µg/kg)											
Benzo(a)anthracene	66	<1.1	33,000	1,942	7,403	2,900	ne	2,000	ne	ne	ne
Benzo(a)pyrene	66	<1.1	29,000	1,972	7,372	290	ne	200	ne	ne	ne
Benzo(k)fluoranthene	55	<1.1	5,300	496.8	1,064	29,000	ne	2,000	ne	ne	ne
Dibenz(a,h)anthracene	52	<1.1	4,100	262.9	621.1	290	ne	330	ne	ne	ne
Indeno(1,2,3-cd)pyrene	61	<1.1	13,000	1,000	2,427	2,900	ne	3,300	ne	ne	ne
B(a)P Equivalent Value	73	<0.33	51,061	2,576	6,321	ne	900	ne	900	ne	900
Other											
Vanadium occurring as vanos	9	<0.25	0.5	0.05	--	ne	0.25 ⁹	0.25 ⁹	ne	1	0.25

Notes and Abbreviations:
 mg/kg = milligrams per kilogram
 µg/kg = micrograms per kilogram
 -- = not calculated due to low frequency of detections
 ne = not established
 95% UCL = 95% Upper Confidence Limit, calculated using EPA Pro UCL statistical software, Version 5.1 using the most appropriate fit of statistical method, as determined by the Pro UCL program
 Averages calculated from Pro UCL statistical software.
 B(a)P = benzo(a)pyrene equivalent value
 1 Values are listed as dry weight unless otherwise noted.
 2 San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential/Commercial/Construction Scenarios). Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.
 3 Final Shoreline Area Feasibility Study and Remedial Action Plan, Jacobson James, March 16, 2016
 4 Yosemite Slough Restoration Project Upland Cover (upper 2 feet) (Table 1: Proposed Action Goals for Soil Reuse Options), Northgate, 2009 Work Plan for WDRs, Yosemite Slough Wetland Restoration, San Francisco, September 21.
 5 Lawrence Berkeley National Laboratory Analysis of Background Distributions of Metals in Bay Area Regional Soils, Upper Estimate Values, 2009.
 6 Final Remediation Investigation Report, Hunters Point Power Plant, San Francisco, CA, TRC, 2009
 7 California Department of Toxic Substances Control (DTSC), Use of the Northern and Southern California PAH Studies in the MGP Site Cleanup Process, July 2009
 8 TTL⁸ values are listed as wet weight
 9 Bay Area Air Quality Management District requirements for compliance with California Air Resources Board Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying and Surface Mining Operations
 Highlight indicates that the 95% UCL of the constituent exceeds value

LEGEND:

- Sand (SP, SP-SC, SC)
- Clay (CL)
- Gravel (GP)
- Asphalt Surface
- Concrete Surface
- Soil Surface
- First encountered groundwater
- Shells/Shell fragments
- Concrete
- Debris (wood, brick)
- Mean High Water: 5.84 ft NAVD88



Horizontal Scale: 1"=50'
 Vertical Scale: 1"=10'
 Vertical Exaggeration: 5



FIGURE 1
Cross Section

900 Innes Site Characterization
 Innes Basin Redevelopment Project
 San Francisco, California



Project No. 1346.02

Legend

- Soil Boring with Groundwater, Northgate (2016-2017)
- ⊕ Deeper Soil Boring at Previous Location, Northgate (2016-2017)
- ⊙ Soil Boring, Northgate (2016-2017)
- ⊙ Risk Soil Boring, Northgate (2016-2017)
- ◇ Sediment Sample, Northgate (2016-2017)
- ⊙ Surface Water and Sediment Sample, Northgate (2016-2017)
- ⊙ Surface Water Sample, Northgate (2016-2017)
- ⊙ Previous Sediment Sample, Weston (2015)
- ⊙ Previous Sediment Sample, Weston (2013)
- ⊙ Previous Subsurface Soil Sample, Weston (2013)
- ⊙ Previous Surface Soil Sample, Weston (2013)
- Analyte Exceeds RWQCB ESL for Construction Worker
- Analyte Does Not Exceed ESL

- Site Boundary
- Historic Boat Location

Metals: Arsenic, Copper, Lead, Mercury

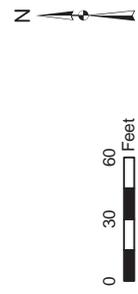
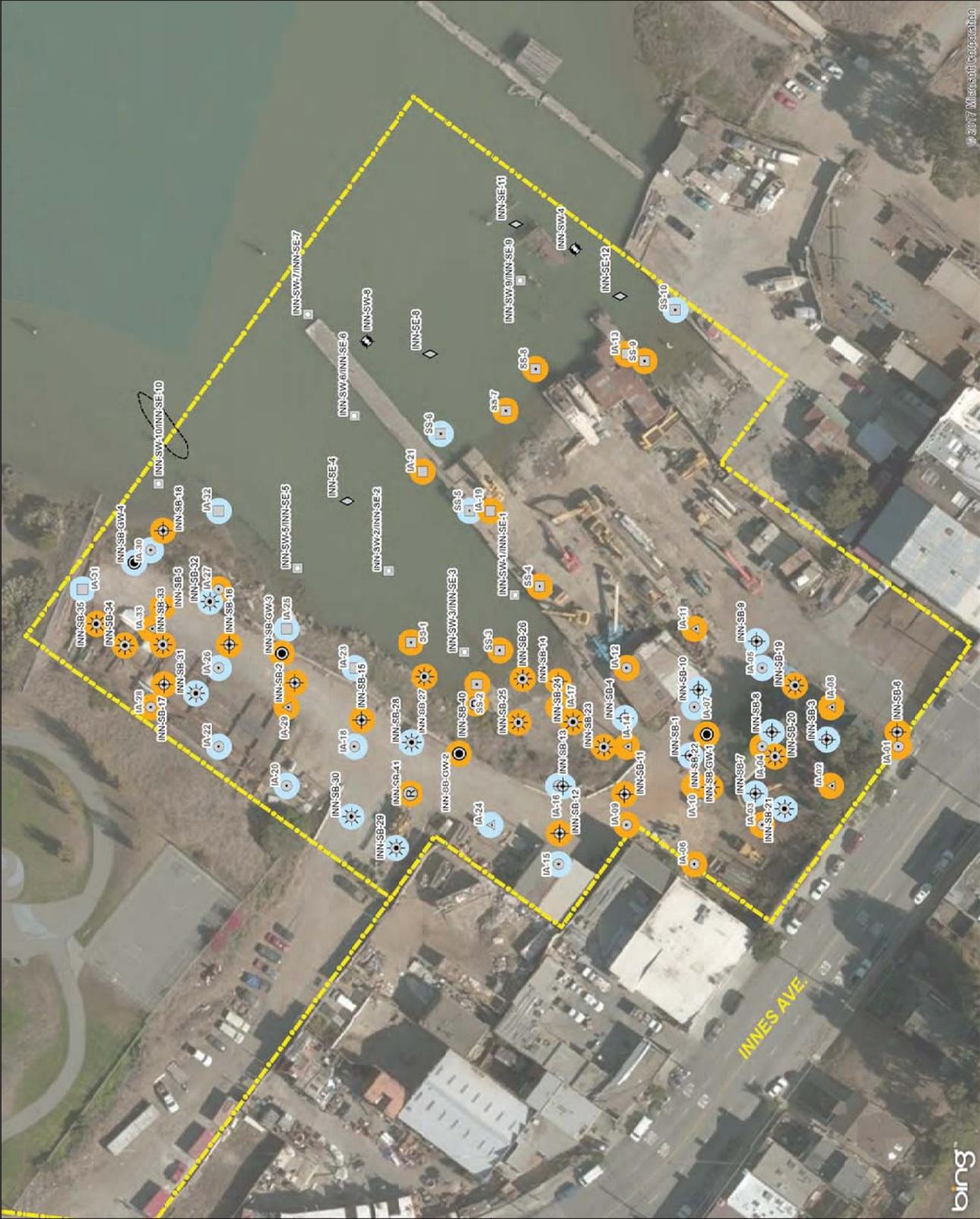
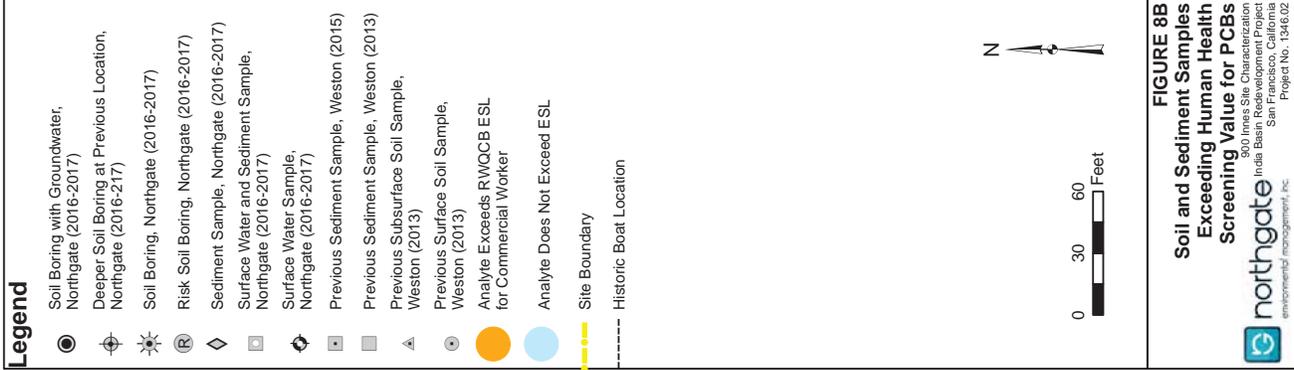


FIGURE 8A
Soil and Sediment Samples Exceeding Human Health Screening Values for Metals
 900 Innes Site Characterization
 Innes Basin
 San Francisco, California
 Project No. 1346.02



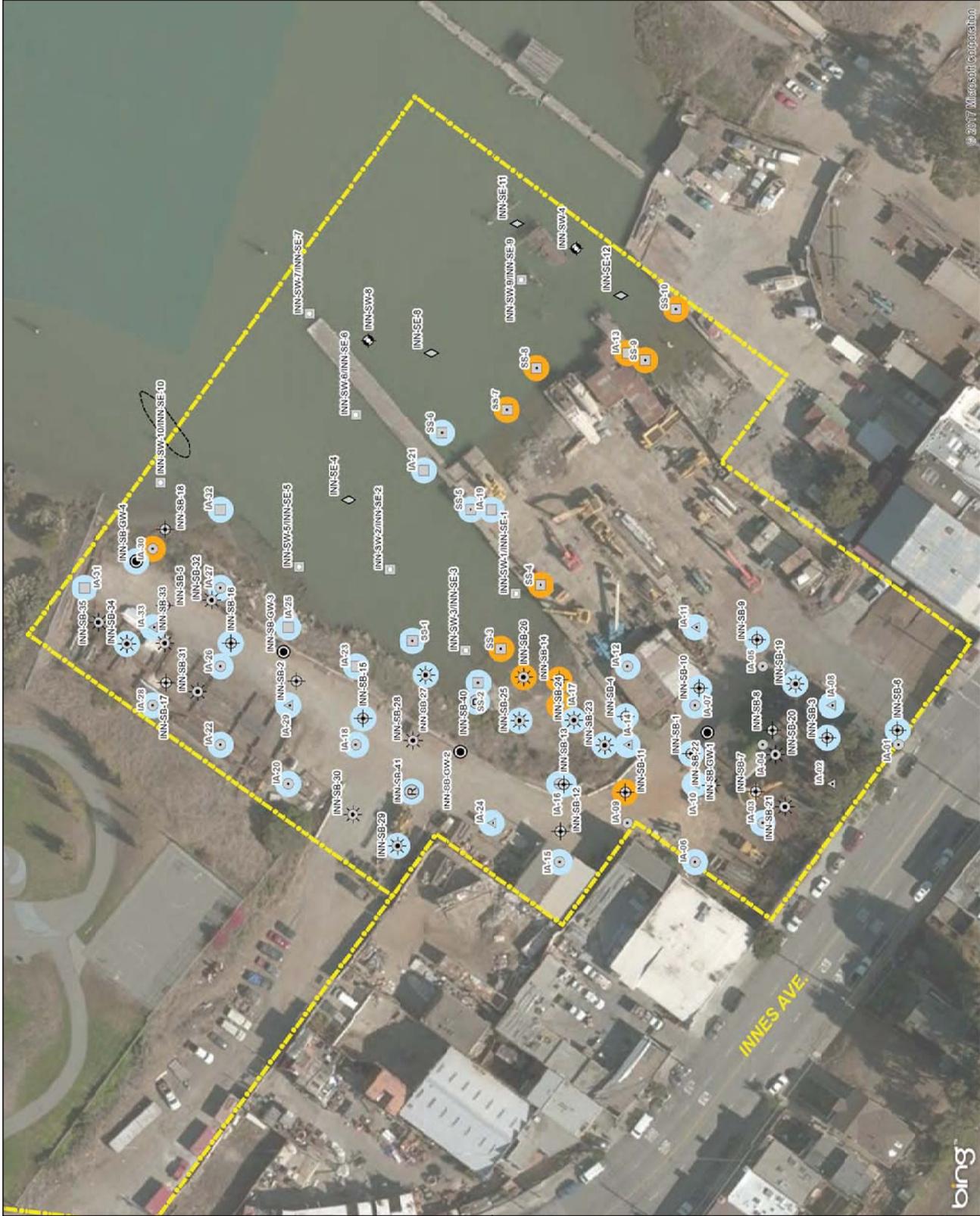
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Legend

- Soil Boring with Groundwater, Northgate (2016-2017)
- ⊕ Deeper Soil Boring at Previous Location, Northgate (2016-217)
- ⊗ Risk Boring, Northgate (2016-2017)
- ⊙ Risk Soil Boring, Northgate (2016-2017)
- ◇ Sediment Sample, Northgate (2016-2017)
- ▣ Surface Water and Sediment Sample, Northgate (2016-2017)
- ⊕ Surface Water Sample, Northgate (2016-2017)
- ▣ Previous Sediment Sample, Weston (2015)
- ▣ Previous Sediment Sample, Weston (2013)
- ▣ Previous Subsurface Soil Sample, Weston (2013)
- ⊙ Previous Surface Soil Sample, Weston (2013)
- Analyte Exceeds RWQCB ESL for Commercial Worker
- Analyte Does Not Exceed ESL
- Site Boundary
- - - Historic Boat Location

FIGURE 8B
Soil and Sediment Samples Exceeding Human Health Screening Value for PCBs
 900 Innes Site Characterization
 Innes Basin
 San Francisco, California
 environmental management, inc
 Project No. 1346.02



APPENDIX E
DATA PACKAGE, INDIA BASIN OPEN SPACE



TABLE 5
Soil Sample Analytical Results for Metals

Sample ID	Sample Elevation	Sample Type	Analyte	Moisture, Percent	Metals																
					Units	ASTM D2216/CLP	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium
			Laboratory Method	%	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B	EPA 6010B
WS-1(-6.4)	-5.4 to -6.5	HAB	6/13/2016	16	0.46	3.8	140	0.21	0.20	370	29	230	89	0.39	0.74	510	0.18	0.15	46	ND	94
WS-2(-4.5)	-4.3 to -2.5	OVB	6/13/2016	9	4.5	5.3	110	0.37	0.27	64	64	46	84	0.13	0.94	110	< 0.077	0.19	31	56	120
WS-3(-4.3)	-4.3 to -6.5	HAB	6/13/2016	15	0.57	6.8	250	0.39	0.72	55	10	65	150	0.45	0.85	60	< 0.08	0.14	53	53	150
WS-4(-4.5)-COMP	-4.3 to -6.5	HAB	6/9/2016	14	0.32	4.9	100	0.30	0.19	57	10	92	65	0.36	0.56	54	0.18	0.14	45	45	98
WS-5(-4.4)	-4.4 to -6.5	HAB	6/9/2016	12	0.49	4.9	62	0.26	0.12	45	11	45	53	0.53	0.42	76	< 0.09	0.16	40	40	81
WS-5(-4.3)-COMP	-4.3 to -6.5	HAB	6/13/2016	17	0.50	6.6	140	0.37	0.20	130	17	63	45	0.37	0.55	130	< 0.09	0.16	72	72	79
WS-6(-4.3)	-4.4 to -6.5	HAB	6/9/2016	13	0.27	9.2	160	0.46	0.11	89	14	29	140	0.34	0.58	80	< 0.077	0.08	68	68	69
WS-8(-4.3)	-4.4 to -6.5	HAB	10/19/00	11	0.84	3.9	79	0.27	0.25	71	97	48	16	0.27	1.70	53	< 0.079	0.13	50	50	110
WS-9(-4.3)	-4.3 to -6.5	HAB	6/8/2016	17	0.32	3.3	69	0.26	0.09	70	10	39	31	0.24	0.31	55	< 0.099	0.06	50	50	110
WS-10(-4.3)	-4.3 to -6.5	HAB	6/8/2016	17	0.32	3.3	41	0.24	0.17	58	8	39	31	0.03	0.42	49	< 0.099	0.06	50	50	110
WS-11(-4.3)-COMP	-4.3 to -6.5	HAB	6/8/2016	24	0.69	6.3	65	0.32	0.10	68	97	12	68	0.03	0.31	54	< 0.10	0.03	40	40	55
WS-12(-4.3)	-4.3 to -6.5	HAB	6/9/2016	21	0.62	3.6	160	0.38	0.12	300	19	39	68	0.15	0.53	310	0.21	0.12	60	60	98
WS-13(-4.3)	-4.3 to -6.5	HAB	6/9/2016	21	0.62	3.6	160	0.38	0.12	300	19	39	68	0.15	0.53	310	0.21	0.12	60	60	98
WS-14(-6.6)	6.0 to 1.6	OVB	6/13/2016	7	0.69	5.8	82	0.26	0.25	58	18	56	56	0.35	0.62	54	< 0.08	0.15	43	43	180
TW-1(-6.6)	-3.0 to -5	HAB	6/13/2016	10	0.74	5.8	85	0.29	0.63	60	93	40	100	0.05	0.75	50	< 0.08	0.13	41	41	140
TW-1(-6.3)	-3.0 to -5	HAB	6/13/2016	12	1.30	5.6	95	0.30	0.47	56	92	40	150	0.55	0.72	45	< 0.07	0.21	41	41	140
TW-2(-3)	0 to -2	OVB	6/13/2016	6	0.55	5.0	83	0.34	0.25	80	14	36	73	0.76	0.52	150	< 0.08	0.23	41	41	89
TW-2(-3)	0 to -2	HAB	6/13/2016	9	0.43	6.3	82	0.33	0.48	61	14	41	84	0.46	0.90	74	< 0.08	0.28	54	54	120
TW-3(-0)	-3 to -5	HAB	6/13/2016	9	0.87	11.0	82	0.29	0.20	65	11	110	79	0.55	1.70	65	< 0.08	0.24	42	42	110
TW-3(-0)	4 to 0	OVB	6/13/2016	6	0.91	7.1	110	0.38	0.32	56	13	39	110	0.39	0.96	75	< 0.07	0.30	42	42	110
TW-3(-0)	0 to -2	HAB	6/13/2016	10	0.63	14.0	320	0.75	0.16	45	20	56	30	0.32	0.96	77	< 0.08	0.23	37	37	140
TW-4(-8)	8.9 to 3.9	OVB	6/13/2016	4	0.27	3.5	56	0.24	0.15	51	9.4	18	25	0.12	0.43	55	< 0.08	0.18	37	37	48
TW-4(-8)	0 to -2	HAB	6/13/2016	12	0.37	5.1	67	0.24	0.22	67	11	42	100	0.55	0.64	72	< 0.07	0.22	46	46	110
TW-4(-3)	-3 to -5	HAB	6/13/2016	14	0.23	4.7	57	0.26	0.18	62	11	18	35	0.16	0.47	61	< 0.08	0.10	44	44	76
BH-1(-10.5)	1.5 to -0.5	OVB	6/13/2016	2	0.18	4.1	38	0.19	0.11	31	6.6	16	37	0.18	0.30	35	< 0.07	0.12	31	31	55
BH-1(-10.5)	1.5 to -0.5	BH	6/13/2016	11	0.75	6.0	78	0.27	0.28	53	8.9	70	100	1.90	0.62	42	< 0.08	0.35	42	42	120
BH-1(-4.3)	6.4 to 2.4	OVB	6/13/2016	7	0.80	7.0	83	0.33	0.30	98	11	33	72	0.40	0.33	61	< 0.08	0.13	61	61	41
BH-2(-4.3)	-0.4 to -2.4	BH	6/13/2016	10	1.30	7.0	190	0.36	0.49	93	15	48	200	0.29	0.99	64	< 0.08	0.17	54	54	120
BH-2(-4.3)	-0.4 to -2.4	HAB	6/13/2016	11	0.51	5.5	83	0.34	0.23	94	14	26	40	0.16	0.83	72	< 0.08	0.12	71	71	130
OSCCOMP1	Surface (upper 6 inches)	Aquatic Sediment	6/9/2016	25	0.16	4.8	40	0.18	0.14	48	7	51	490	0.22	0.38	47	< 0.16	0.11	76	76	65
OSCCOMP2	Surface (upper 6 inches)	Aquatic Sediment	6/9/2016	18	0.08	3.3	38	0.19	0.077	76	12	28	338	0.01	0.16	47	< 0.16	0.11	31	31	88
OSCCOMP3	Surface (upper 6 inches)	Aquatic Sediment	6/9/2016	19	0.21	4.0	51	0.28	0.14	62	11	34	140	0.01	0.38	56	0.26	0.12	59	59	35
GRAB-1	Surface	Aquatic Sediment	6/13/2016	13	0.13	2.8	13	0.15	0.07	75	77	84	140	< 0.01	0.17	52	< 0.064	0.03	53	53	100
GRAB-1	Surface	Aquatic Sediment	6/13/2016	13	0.13	2.8	13	0.15	0.07	75	77	84	140	< 0.01	0.17	52	< 0.064	0.03	53	53	100
GRAB-2	Surface	Aquatic Sediment	6/13/2016	15	0.34	5.2	72	0.38	0.21	66	16	39	55	0.42	0.48	70	< 0.08	0.11	44	44	38
GRAB-2	Surface	Aquatic Sediment	6/13/2016	20	0.34	5.2	89	0.38	0.21	110	16	39	55	0.42	0.48	70	< 0.08	0.11	44	44	38
ED-2	Surface	Aquatic Sediment	6/13/2016	14	0.85	6.9	84	0.26	0.31	66	11	42	66	0.29	1.2	53	< 0.08	0.16	50	50	100

Beneficial Reuse and Human Health Comparative Values

San Francisco Bay Ambient, 30% UTL
 San Francisco Bay Ambient, 30% UTL
 ER-M (1995, 1998)
 SFRWQCB 2016 Residential Direct Exposure ESLs
 USEPA Residential ESLs
 TLIC

mg/kg = milligrams per kilogram
 mg/L = milligrams per liter
 % = Percent
 MDL = method detection limit
 UTL = upper tolerance limit
 * = Analyte was not detected above the method detection limit
 ** = SF Ambient Average value was recalculated to omit statistical outliers
 TLIC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TLIC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24.
 SFRWQCB 2016 Ambient Average = San Francisco Bay Ambient Average
 SFRWQCB 2016 Residential Direct Exposure ESLs = San Francisco Bay Ambient Average
 ER-M = Effects Range-Median, Long, E. R., D. MacDonald, S. L. Smith, and F. D. Calder, 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97.
 ER-L = Effects Range-Low, Long, E. R., D. MacDonald, S. L. Smith, and F. D. Calder, 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97.
 SFRWQCB 2016 Residential Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential Scenario). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1, February 2016.
 USEPA Regional Screening Levels = Regional Screening Levels (Residential Exposure Scenario). United States Environmental Protection Agency, May 2016.

Comparative Value Formatting Key for Individual Summaries

ESL = San Francisco Bay Ambient Average when an ER-L or the San Francisco Bay Ambient Average when an ER-L has not been established
 MDL = method detection limit
 UTL = upper tolerance limit
 * = Analyte was not detected above the method detection limit
 ** = SF Ambient Average value was recalculated to omit statistical outliers

Red Bolded indicates an individual sample location result exceeds the Residential Direct Exposure ESL, or the Residential RSLs when an ESL is not established, or the San Francisco Bay Ambient Average if the ambient average is greater than the ESL.
Red Bolded indicates an individual sample location result exceeds the ER-M or San Francisco Bay Ambient Average if ambient average is greater than the ER-M.

ne = Estimated Value
 ND = Not Detected above the method detection limit (< MDL)
 ne = not established

TABLE 6
Soil Sample Analytical Results for Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbons (TPH), and Total Organic Carbon

Sample ID	Sample Elevation	Sample Type	Analyte Units	Moisture, Percent	PCBs				TPH		Total Organic Carbon %			
					Aroclor-1221 µg/kg EPA 8082	Aroclor-1254 µg/kg EPA 8082	Aroclor-1260 µg/kg EPA 8082	Total PCB µg/kg Sum ³	Diesel C10-C24 mg/kg EPA 8082	Motor Oil C24-C36 mg/kg EPA 8082				
												ASTM D2216/CLP	ASTM D2216/CLP	
			Laboratory Method	ASTM D2216/CLP	ASTM D2216/CLP	ASTM D2216/CLP	ASTM D2216/CLP	ASTM D2216/CLP	ASTM D2216/CLP	ASTM D2216/CLP				
			Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date				
WS-1(-5.4)	-5.4 to -6.5	HAB		16	< 38	ND	< 15	ND	22	J	73	Y	870	1.4
WS-2(-4.5)	4.5 to 2.5	OVB		9	--	--	--	--	--	--	59	Y	260	--
WS-2(-4.3)	-4.3 to -6.5	HAB		15	< 38	ND	640		750		100	Y	690	0.43
WS-3(-4.5)-COMP	-4.3 to -6.5	HAB		14	< 3.7	ND	< 1.4	ND	4.6	J	150	Y	280	0.73
WS-4(-4.4)	-4.4 to -6.5	HAB		12	< 18	ND	< 6.9	ND	20		65	Y	250	0.53
WS-5(-4.3)-COMP	-4.3 to -6.5	HAB		17	< 3.9	ND	< 1.5	ND	9.3		18	Y	110	1.2
WS-6(-4.3)	-4.3 to -6.5	HAB		13	< 3.7	ND	< 1.4	ND	3.5	J	32	Y	130	0.33
WS-7(-4.4)-COMP	-4.4 to -6.5	HAB		15	< 37	ND	< 14	ND	92		20	Y	130	0.64
WS-8(-4.3)	-4.3 to -6.5	HAB		11	< 18	ND	< 6.9	ND	< 18		8.3	Y	48	0.14
WS-9(-4.3)	-4.3 to -6.5	HAB		17	< 19	ND	< 7.4	ND	12	J	40	Y	200	0.58
WS-10(-4.3)	-4.3 to -6.5	HAB		17	< 19	ND	< 7.3	ND	< 19		24	Y	74	0.19
WS-11(-4.3)-COMP	-4.3 to -6.5	HAB		24	< 21	ND	< 8.1	ND	21	J	36	Y	140	0.93
WS-12(-4.3)	-4.3 to -6.5	HAB		21	< 20	ND	< 7.7	ND	10	J	15	Y	88	0.85
WS-13(-4.3)	-4.3 to -6.5	HAB		20	42	NDb	270		540		53	Y	400	0.75
TW-1(-6.6)	6.6 to 1.6	OVB		7	--	--	--	--	--	--	26	Y	210	--
TW-1(-0)	0 to -2	HAB		10	< 35	ND	< 14	ND	13	J	82	Y	180	0.73
TW-1(-3)	-3 to -5	HAB		12	< 37	ND	490		562		71	Y	200	0.99
TW-2(-3)	3 to 0	OVB		6	--	--	--	--	--	--	7.4	Y	100	--
TW-2(-0)	0 to -2	HAB		9	< 3.5	ND	< 1.4	ND	13		8.1	Y	65	0.5
TW-2(-3)	-3 to -5	HAB		9	< 3.5	ND	< 1.4	ND	9.7		14	Y	74	0.66
TW-3(-4)	4 to 0	OVB		6	--	--	--	--	--	--	11	Y	110	--
TW-3(-0)	0 to -2	HAB		10	< 3.6	ND	< 1.4	ND	4.1	J	2.1	Y	14	0.16
TW-3(-3)	-3 to -5	HAB		10	< 3.6	ND	< 1.4	ND	11		3.6	Y	24	0.38
TW-4(-8)	8.9 to 3.9	OVB		4	--	--	--	--	--	--	14	Y	170	--
TW-4(-0)	0 to -2	HAB		12	< 3.7	ND	< 1.4	ND	19		15	Y	68	0.49
TW-4(-3)	-3 to -5	HAB		14	< 3.8	ND	< 1.4	ND	38		36	Y	120	0.47
BH-1(-10.5)	10.5 to 5.5	OVB		2	--	--	--	--	--	--	11	Y	140	--
BH-1(-1.5)	1.5 to -0.5	BH		11	< 3.6	ND	< 1.4	ND	17		18	Y	99	--
BH-1(-4.3)	-4.3 to -6.5	HAB		12	< 3.7	ND	< 1.4	ND	8.9		15	Y	48	0.12
BH-2(-6.4)	6.4 to 2.4	OVB		7	--	--	--	--	--	--	18	Y	160	--
BH-2(-0.4)	-0.4 to -2.4	BH		10	< 36	ND	< 14	ND	88		59	Y	460	--
BH-2(-4.3)	-4.3 to -6.5	HAB		11	< 36	ND	< 14	ND	< 8.7	ND	80	Y	210	0.5

TABLE 6
Soil Sample Analytical Results for Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbons (TPH), and Total Organic Carbon

Sample ID	Sample Elevation	Sample Type	Analyte Units	Moisture, Percent	PCBs			TPH			Total Organic Carbon %	
					ASTM D2216/CLP	Aroclor-1221	Aroclor-1254	Aroclor-1260	Diesel C10-C24	Motor Oil C24-C36		Total Organic Carbon %
						µg/kg EPA 8082	µg/kg EPA 8082	µg/kg EPA 8082	mg/kg EPA 8082	mg/kg EPA 8082		
OS-COMP-1	Surface (upper 6-inches)	Aquatic Sediment	6/9/2016	25	< 21 ND	< 8.1 ND	30	27 Y	100	SM-5400		
OS-COMP-2			6/9/2016	18	< 3.9 ND	< 1.5 ND	< 0.95 ND	1.3 Y	11			
OS-COMP-3			6/9/2016	19	< 4 ND	< 1.5 ND	23	55 Y	210			
GRAB-1		HAB	6/13/2016	1	< 3.2 ND	< 1.2 ND	2.0 J	0.48 J	6.9	0.02		
FD-1			6/9/2016	12	< 18 ND	< 6.9 ND	1.5 J	38 Y	150	0.4		
FD-2			6/13/2016	20	< 4 ND	< 1.5 ND	7.0	7.7 Y	46	1.4		
FD-3			6/13/2016	14	< 38 ND	< 14 ND	75	21 Y	110	0.54		
Beneficial Reuse and Human Health Comparative Values												
	San Francisco Bay Ambient, 90% UTLL			ne	ne	ne	18.3	ne	ne	ne	ne	
	San Francisco Bay Ambient Average			ne	ne	ne	9.0	ne	ne	ne	ne	
	ER-L (1995, 1998)			ne	ne	ne	22.7	ne	ne	ne	ne	
	ER-M (1995, 1998)			ne	ne	ne	180	ne	ne	ne	ne	
	SFRWQCB 2016 Residential Direct Exposure ESLs			ne	ne	ne	250	230	11,000	ne	ne	
	USEPA Regional Screening Levels			20	240	240	ne	520	230,000	ne	ne	
	TTLC			ne	ne	ne	50,000	ne	ne	ne	ne	

Notes and Abbreviations:
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
% = Percent
MDL = method detection limit
UTL = upper tolerance limit
J = Estimated Value

TTLC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24.
San Francisco Bay Sediment Ambient, 90% UTLL = Ambient concentrations for San Francisco Bay sediments. San Francisco Estuary Institute (SFEI), Yee, D., Trovbridge, P., and J. Sun. 2015. Updated ambient concentrations of toxic chemicals in San Francisco Bay sediments. Unpublished values were calculated based on data published in the Regional Monitoring Program for Water Quality in San Francisco Bay (http://sfei.org/rmp).
ER-L = Effects Range Low. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder. 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97.
ER-M = Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder. 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97.
SFRWQCB 2016 Residential Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential Scenario). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.

USEPA Regional Screening Levels = Regional Screening Levels (Residential Exposure Scenario). United States Environmental Protection Agency, May 2016.

Comparative Value Formatting Key for Individual Samples:

Bold indicates an individual sample location result exceeds either the ER-L or the San Francisco Ambient Average when an ER-L has not been established.
Highlighted indicates an individual sample location result exceeds the Residential Direct Exposure ESL or the Residential RSLs when an ESL is not established.
Red Bolded indicates an individual sample location exceeds the ER-M; in absence of individual ER-M, individual Aroclors compared with Total PCB ER-M.

TABLE 9
Soil Sample Analytical Results for Organotin

Sample ID	Sample Elevation	Sample Type	Analyte Units Laboratory Method Sample Date	Moisture, Percent % ASTM D2216/CLP	Organotins					
					Dibutyltin µg/kg Krone et al.	Monobutyltin µg/kg Krone et al.	Tetrabutyltin µg/kg Krone et al.	Tributyltin µg/kg Krone et al.		
WS-1(-5.4)	-5.4 to -6.5	HAB	6/9/2016	16	< 0.72	ND	< 0.73	ND	< 1.5	ND
WS-2(4.5)	4.5 to 2.5	OVB	6/13/2016	9	--	--	--	--	--	--
WS-3(-4.3)	-4.3 to -6.5	HAB	6/13/2016	15	--	--	--	--	--	--
WS-3(+4.5)-COMP	-4.3 to -6.5	HAB	6/9/2016	14	< 0.72	ND	< 1.4	ND	< 0.73	ND
WS-4(-4.4)	-4.4 to -6.5	HAB	6/9/2016	12	< 0.72	ND	5.4	ND	< 0.74	ND
WS-5(-4.3)-COMP	-4.3 to -6.5	HAB	6/13/2016	17	< 0.72	ND	< 1.4	ND	< 0.73	ND
WS-6(-4.3)	-4.3 to -6.5	HAB	6/9/2016	13	< 0.72	ND	< 1.4	ND	< 0.74	ND
WS-7(-4.4)-COMP	-4.4 to -6.5	HAB	6/13/2016	15	< 0.72	ND	4.0	ND	< 0.74	ND
WS-8(-4.3)	-4.3 to -6.5	HAB	1/0/1900	11	< 0.72	ND	< 1.4	ND	91	73
WS-9(-4.3)	-4.3 to -6.5	HAB	6/8/2016	17	< 0.72	ND	< 1.4	ND	< 0.74	ND
WS-10(-4.3)	-4.3 to -6.5	HAB	6/8/2016	17	< 0.72	ND	< 1.4	ND	< 0.73	ND
WS-11(-4.3)-COMP	-4.3 to -6.5	HAB	6/8/2016	24	< 0.72	ND	< 1.4	ND	< 0.74	ND
WS-12(-4.3)	-4.3 to -6.5	HAB	6/9/2016	21	< 0.72	ND	< 1.4	ND	< 0.74	ND
WS-13(-4.3)	-4.3 to -6.5	HAB	6/9/2016	20	< 0.72	ND	3.0	ND	< 0.73	ND
TW-1(-6.6)	6.6 to 1.6	OVB	6/13/2016	7	--	--	--	--	--	--
TW-1(-0)	0 to -2	HAB	6/13/2016	10	< 0.72	ND	< 1.4	ND	< 0.74	ND
TW-1(-3)	-3 to -5	HAB	6/13/2016	12	< 0.72	ND	< 1.4	ND	< 0.75	ND
TW-2(-3)	3 to 0	OVB	6/13/2016	6	--	--	--	--	--	--
TW-2(-0)	0 to -2	HAB	6/13/2016	9	< 0.72	ND	< 1.4	ND	< 0.73	ND
TW-2(-3)	-3 to -5	HAB	6/13/2016	9	< 0.72	ND	< 1.4	ND	< 0.74	ND
TW-3(-4)	4 to 0	OVB	6/13/2016	6	--	--	--	--	--	--
TW-3(-0)	0 to -2	HAB	6/13/2016	10	< 0.72	ND	< 1.4	ND	< 0.74	ND
TW-3(-3)	-3 to -5	HAB	6/13/2016	10	< 0.72	ND	< 1.4	ND	< 0.74	ND
TW-4(-8)	8.9 to 3.9	OVB	6/13/2016	4	--	--	--	--	--	--
TW-4(-0)	0 to -2	HAB	6/13/2016	12	< 0.72	ND	< 1.4	ND	< 0.74	ND
TW-4(-3)	-3 to -5	HAB	6/13/2016	14	< 0.72	ND	< 1.4	ND	< 0.73	ND
BH-1(-10.5)	10.5 to 5.5	OVB	6/13/2016	2	--	--	--	--	--	--
BH-1(-1.5)	1.5 to -0.5	BH	6/13/2016	11	< 0.72	ND	< 1.4	ND	< 0.74	ND
BH-2(-6.4)	-6.4 to 2.4	OVB	6/13/2016	7	--	--	--	--	--	--
BH-2(-0.4)	-0.4 to -2.4	BH	6/13/2016	10	< 0.72	ND	< 1.4	ND	< 0.74	ND
BH-2(-4.3)	-4.3 to -6.5	HAB	6/13/2016	11	--	--	--	--	--	--
OS-COMP-1	Surface (upper 6 inches)	Aquatic Sediment	6/9/2016	25	13.0	ND	9.1	ND	< 1	ND
OS-COMP-2			6/9/2016	18	< 0.72	ND	< 1.4	ND	< 0.73	ND
OS-COMP-3			6/9/2016	19	< 0.72	ND	< 1.4	ND	< 0.74	ND
GRAB-1		HAB	6/13/2016	1	< 0.72	ND	< 1.4	ND	< 0.74	ND
FD-1			6/9/2016	12	< 0.72	ND	4.1	ND	< 0.74	ND
FD-2			6/13/2016	20	< 0.72	ND	< 1.4	ND	< 0.74	ND
FD-3			6/13/2016	14	< 0.72	ND	< 1.4	ND	< 0.73	ND

TABLE 9
Soil Sample Analytical Results for Organoflins

Sample ID	Sample Elevation	Sample Type	Analyte		Moisture, Percent %	Organoflins					
			Laboratory Method	Units		Dibutyltin µg/kg	Monobutyltin µg/kg	Tetrabutyltin µg/kg	Tributyltin µg/kg		
										ASTM D2216/CLP Krone et al.	
Sample Date											
Beneficial Reuse and Human Health Comparative Values											
San Francisco Bay Ambient, 90% UTL											
San Francisco Ambient Average											
ER-L (1995, 1998)											
ER-M (1995, 1998)											
Yosemite Slough Cleanup Levels for Recreational Use											
SFRWQCB 2016 Residential Direct Exposure ESLs											
USEPA Regional Screening Levels											
TTLC											
						ne	ne	ne	ne	ne	ne
						ne	ne	ne	ne	ne	ne
						ne	ne	ne	ne	ne	ne
						ne	ne	ne	ne	ne	ne
						ne	ne	ne	ne	ne	ne
						19,000	ne	ne	ne	ne	19,000
						ne	ne	ne	ne	ne	ne

Notes and Abbreviations:

µg/kg = micrograms per kilogram

% = Percent

MDL = method detection limit

J = Estimated Value

ND = Not detected above the method detection limit (< MDL)

TTLC = Total Threshold Limit Concentration for defining a waste as a California hazardous waste. TTLC values are from CCR, Title 22, Chapter 11, Article 3, Section 66261.24.

ne = not established

< = Analyte was not detected above the method detection limit

San Francisco Bay Sediment Ambient, 90% UTL = Ambient concentrations for San Francisco Bay sediments. San Francisco Estuary Institute (SFEI). Yee, D., Trowbridge, P., and J. Sun. 2015. Updated ambient concentrations of toxic chemicals in San Francisco Bay sediments. Unpublished values were calculated based on data published in the Regional Monitoring Program for Water Quality in San Francisco Bay (<http://sfci.org/rmp>).

San Francisco Bay Ambient Average = Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (<http://sfci.org/rmp>).

ER-L = Effects Range Low. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder. 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97.

ER-M = Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder. 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97.

SFRWQCB 2016 Residential Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential Scenario). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater. Table S-1, February 2016.

USEPA Regional Screening Levels = Regional Screening Levels (Residential Exposure Scenario). United States Environmental Protection Agency, May 2016.

TABLE 11a
Summary of Results - Habitat Beneficial Re-Use Potential

Constituent	Wetland/Tidal Marsh Surface			Terraced Wetland Surface			Offshore Material			San Francisco Estuary Institute ¹		National Oceanic and Atmospheric Association ¹		Comparative Sites ¹		
	Minimum	Maximum	Average	95% UCL	Minimum	Maximum	Average	Minimum	Maximum	Average	San Francisco Bay Ambient Average ²	Effects Range Low (ER-L) ³	Effects Range Median (ER-M) ⁴	YSRP Wetland Upper Cover (upper foot; 95% UCL) ⁵	Hamilton Action Goals (Coastal Marsh Surface; 3-foot cover; 95% UCL) ⁶	Hunters Point Sediment Remediation Goals, Parcel F ⁷
Metals (mg/kg)																
Barium	41	250	107	138	67	320	138	38	51	43	66.8	ne	ne	ne	188	ne
Chromium	55	370	113	236	45	62	57	48	76	62	98.0	81.0	370	112	149	ne
Cobalt	8.0	29	14	16.5	9.3	20	13	6.7	12	9.9	14.7	ne	ne	ne	26.7	ne
Copper	12	230	59	95	29	56	42	28	51	38	39.0	34	270	68.1	88.7	271
Lead	16	500	99	180	30	100	68	3.8	140	64	19.5	46.7	218	46.7	46.7	ne
Mercury	0.03	0.53	0.28	0.35	0.05	0.46	0.27	0.01	0.22	0.14	0.33	0.15	0.71	0.43	0.58	1.87
Molybdenum	0.31	1.70	0.64	0.83	0.46	0.96	0.77	0.16	0.38	0.31	0.50	ne	ne	ne	ne	ne
Nickel	49	510	119	285	50.00	77.00	65.50	47	56	52	78.5	20.9	51.6	112	132	ne
Selenium	0.08	0.23	0.14	0.16	ND	ND	ND	0.17	0.26	0.20	0.23	ne	ne	0.64(1.4)	ne	ne
Zinc	38	180	90	110	76	140	119	3.5	100	74	104	1.50	410	158	169	ne
Polychlorinated Biphenyls (µg/kg)																
Total PCBs (sum of Aroclors)	3.5	750	117	406	4.1	19	12	3.9	30	19	9.0	22.7	180	22.7	90	1,240
Polyaromatic Hydrocarbons (µg/kg)																
Total PAHs	520	39,530	6,915	16,373	216	11,706	4,319	12	2,430	846	ne	4,022	44,792	4,022	4,022	ne
Pesticides (µg/kg)																
Total DDTs	ND	92	24.3	--	ND	ND	ND	ND	ND	ND	3.0	1.6	46.1	7.0	30.0	ne
Total Chlordanes	ND	38	12.6	--	ND	11.7	7.6	ND	ND	ND	0.22	0.50	6.0	2.3	4.79	ne
Dieldrin	ND	20	8.1	--	ND	27	6	ND	ND	ND	0.08	0.02	8.0	0.72	ne	ne

Notes and Abbreviations:

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

-- = not calculated

ne = not established

UCL = Upper Confidence Limit of the mean

TPH = Total Petroleum Hydrocarbon

PCB = Polychlorinated Biphenyls

ND = Not Detected

BOLD indicates an exceedance of the ER-L or the SF Bay Ambient Average

Highlighted cell indicates an exceedance of the ER-M

Highlighted cell indicates that the wetland/tidal marsh surface 95% UCL or average exceeds the respective comparative value

¹ Values are listed as dry weight unless otherwise noted.

² SF Bay Sediment Ambient = Ambient concentrations for San Francisco Bay sediments. Regional Water Quality Control Board (RWQCB), 2000. Draft Staff Report: Beneficial Reuse of Dredged Materials: Sediment Screening and Testing Guidelines.

³ ER-L = Effects Range Low. Long, E. R., D.D. MacDonald, S. L. Smith, and F. D. Calder. 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97

⁴ ER-M = Effects Range-Median. Long, E. R., D. MacDonald, S. L. Smith, and F. D. Calder. 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97.

⁵ Yosemite Slough Restoration Project Wetland Upper Cover (upper foot) Average Values (Table 1). Proposed Action Goals for Soil Reuse Options. Northgate Environmental Management, Inc. (Northgate) 2009 Work Plan for WDRs, Yosemite Slough Wetland Restoration, San Francisco, California, September 21.

⁶ Hamilton Action Goals (Table 3: Environmental Action Goals). Site Cleanup Requirements in Order No. R2-2003-0076, 2003, California Regional Water Quality Control Board. Per Section 2.2 of the Hamilton ROD/RAP (RWQCB and DTSC, Record of Decision/Remedial Action Plan, August 2003).

⁷ the 95% UCL (or maximum if fewer than 5 samples) is compared to the Hamilton Action Goals.

⁸ Hunter's Point Sediment Remediation Goals, Feasibility Study Report for Parcel F, Hunters Point Shipyard, San Francisco, California, April 8, 2008

**TABLE 11b
Summary of Results - Recreational Use and Overburden Material**

Constituent	Beach Surface			Overburden Material			San Francisco Bay Regional Water Quality Control Board ¹	United States Environmental Protection Agency ¹	Comparative Sites ¹
	Minimum	Maximum	Average	Minimum	Maximum	Average			
Metals (mg/kg)									
Cobalt	8.9	15	12.2	8	29	13.6	23	23	ne
Lead	14.0	200	89	37	110	77	80	400	400
Polyaromatic Hydrocarbons (µg/kg)									
Benz(a)anthracene	180	820	518	--	--	--	160	160	2,000
Benz(a)pyrene	170	690	380	--	--	--	16	16	200
Benz(b)fluoranthene	180	990	528	--	--	--	160	160	2,000
Dibenz(a,h)anthracene	30	130	68	--	--	--	16	16	330
Indeno(1,2,3-cd)pyrene	70	330	165	--	--	--	160	160	3,300

Notes and Abbreviations:

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

-- = not analyzed

ne = not established

RWQCB = San Francisco Bay Regional Water Quality Control Board

BOLD indicates an exceedance of the RWQCB ESL

Highlighted cell indicates an exceedance of the Yosemite Slough Restoration Project Recreational Action Goal

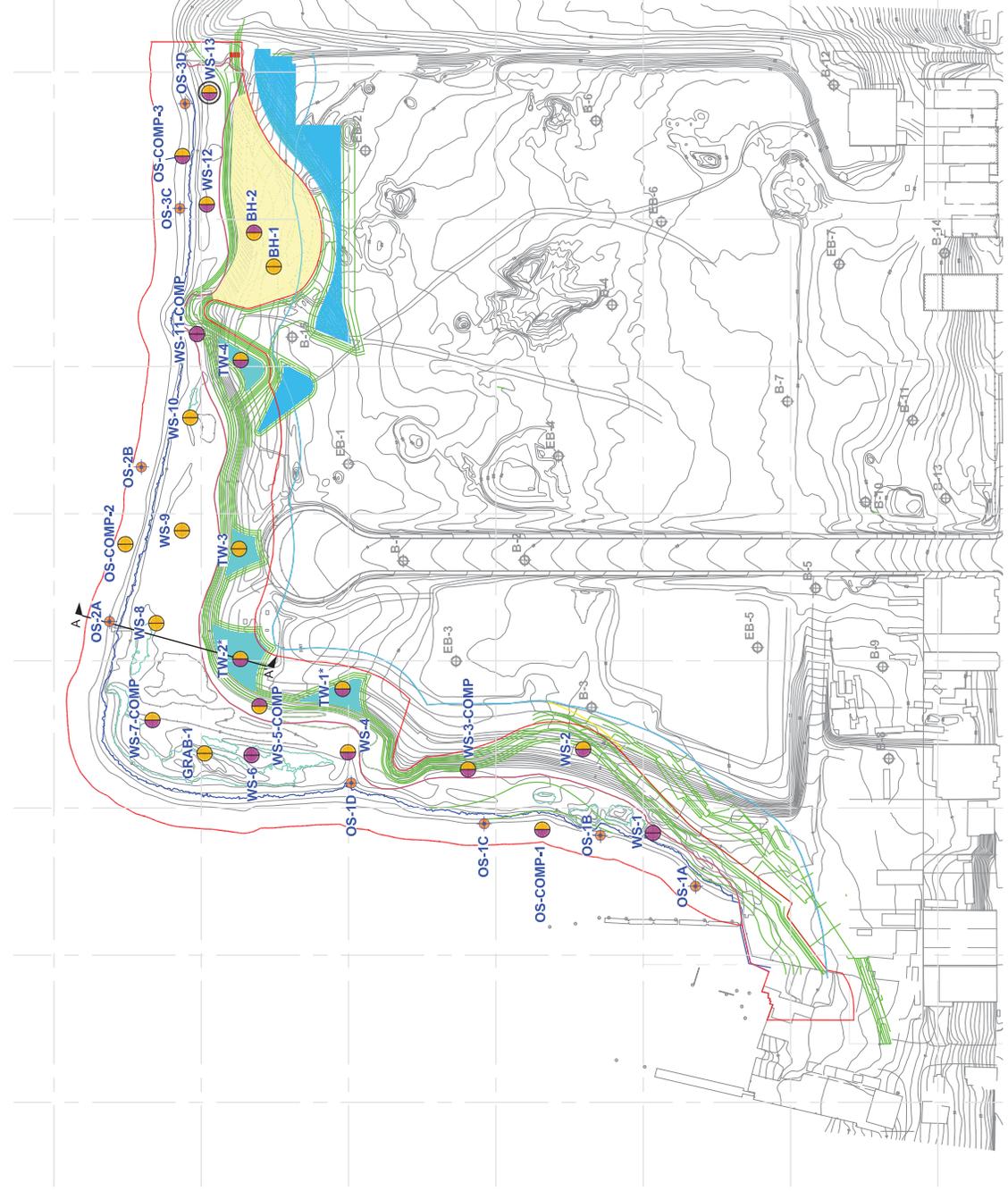
¹ Values are listed as dry weight unless otherwise noted.

² SFRWQCB 2016 Residential Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (Residential Scenario). San Francisco Regional Water Quality Control Board, Screening For Environmental Concerns at Sites with Contaminated Soil and Groundwater. Table S-1. February 2016.

³ USEPA Regional Screening Levels = Regional Screening Levels (Residential Exposure Scenario). United States Environmental Protection Agency, May 2016.

⁴ Yosemite Slough Restoration Project Recreational/Direct Exposure Site Specific Action Goals (Table 1: Proposed Action Goals for Soil Reuse Options). Northgate Environmental Management, Inc.(Northgate) 2009 Work Plan for WDRs, Yosemite Slough Wetland Restoration, San Francisco, California, September 21.

Boring Location Identification	Existing Ground Surface (Z) Elevation (feet)	Design Surface (Z) Elevation (feet)	Sample Depth Interval From Existing Ground Surface (feet bgs.)
WS-1	-5.4		0 to 1.1
WS-2	6.5		0 to 5
WS-3	6.5		11 to 13
WS-4	-4.0		0.3 to 2.5
WS-5	-4.0		0 to 2.1
WS-6	-4.0		0.3 to 2.5
WS-7	-4.4		0.2 to 2.4
WS-8	-4.1		0.2 to 2.4
WS-9	-4.1		0.2 to 2.4
WS-10	-4.0		0.3 to 2.5
WS-11	-4.1		0.2 to 2.4
WS-12	-4.0		0.3 to 2.5
WS-13	-4.1		0.2 to 2.4
TW-1	6.6	0.0	6.5 to 8.5
TW-2	3.3	-3.0	9.5 to 11.5
TW-3	4.1	0.0	0 to 3
TW-4	8.9	0.0	3 to 5
BH-1	10.5	0.0	6 to 8
BH-2	6.4	0.0	0 to 4
OS-1A	unk	unk	unk
OS-1B	unk	unk	unk
OS-1C	unk	unk	unk
OS-1D	unk	unk	unk
OS-2A	unk	unk	unk
OS-2B	unk	unk	unk
OS-2C	unk	unk	unk
OS-2D	unk	unk	unk
OS-3D	unk	unk	unk
GRAB-1	unk	unk	unk



LEGEND

- CONCEPT FEATURE TERRACED WETLAND
- CONCEPT FEATURE STORMWATER POND
- CONCEPT FEATURE BEACH AREA
- MEAN HIGH WATER
- USACE AND BDCD JURISDICTION LINE/ HIGH TIDE LINE
- BDCD 100 FT SHORELINE BAND
- MAJOR DESIGN ELEVATION CONTOUR
- MINOR DESIGN ELEVATION CONTOUR
- EXISTING GRADE ELEVATION CONTOUR
- APPROXIMATE LOW WATER SHORELINE SOIL & SEDIMENT SAMPLING AND WATER QUALITY TESTING (7.6 ACRES)
- APPROXIMATE LOCATION OF 2013-2015 LANGRAN TREADWELL ROLL
- EXPLORATORY GEOTECHNICAL AND ENVIRONMENTAL BORING LOCATION
- BORING LOCATION
- SAMPLE TYPES
 - WS - # = WETLAND SURFACE (1 PER HALF ACRE)
 - TW - # = TERRACED WETLAND
 - OS - # = OFFSHORE
 - GRAB - # = SURFACE SAMPLE
- SAMPLES COLLECTED AT BORINGS OS-2A THROUGH OS-2B AND OS-3C THROUGH OS-3D WERE COMBINED INTO ONE 4-POINT COMPOSITE BY THE LABORATORY BEFORE ANALYSIS. SAMPLES COLLECTED AT BORINGS WS-5A THROUGH WS-7A AND WS-7B THROUGH WS-7D AND WS-11A THROUGH WS-11D WERE COMBINED INTO 4-POINT COMPOSITES IN THE FIELD BEFORE ANALYSIS
- CROSS-SECTION A-A' (SEE FIGURE 3)
- LEAD EXCEEDS THE ERL
- NICKEL EXCEEDS THE SAN FRANCISCO BAY AMBIENT AVERAGE
- LEAD EXCEEDS ERL AND NICKEL EXCEEDS SAN FRANCISCO AMBIENT AVERAGE
- LEAD AND NICKEL DO NOT EXCEED COMPARATIVE VALUES
- DENOTES LEAD EXCEEDS ERM
- BOTH SHALLOW AND DEEP HABITAT SAMPLES EXCEED ERL
- SHALLOW HABITAT SAMPLE DOES NOT EXCEED ERL

Notes and Abbreviations:

- Sample depths are calculated by subtracting the design surface elevation from the existing ground surface elevation for each marsh sample location. All depths have been rounded to the nearest 0.5-foot for sample collection.
- Fig. = below ground surface
- Z = Elevation in feet (CCCR field datum)

LEGEND

- CONCEPT FEATURE TERRACED WETLAND
- CONCEPT FEATURE STORMWATER POND
- CONCEPT FEATURE BEACH AREA
- MEAN HIGH WATER
- USACE AND BCDC JURISDICTION LINE/ HIGH TIDE LINE
- BCDC 100 FT SHORELINE BAND
- MAJOR DESIGN ELEVATION CONTOUR
- MINOR DESIGN ELEVATION CONTOUR
- EXISTING GRADE ELEVATION CONTOUR
- APPROXIMATE LOW FLOOR SHORELINE SOIL & SEDIMENT SAMPLING AND WATER QUALITY TESTING (7.6 ACRES)
- APPROXIMATE LOCATION OF 2013-2015 LANGRAN TREADWELL ROLL OVER ENVIRONMENTAL BORING LOCATION
- BORING LOCATION
- SAMPLE TYPES
- WS-# = WETLAND SURFACE (1 PER HALF ACRE)
- TW-# = TERRACED WETLAND
- BH-# = BEACH
- OS-# = OFFSHORE
- GRAB-# = SURFACE SAMPLE
- SAMPLES COLLECTED AT BORING LOCATIONS OS-1A THROUGH OS-1D, OS-2A THROUGH OS-2B, AND OS-3C THROUGH OS-3D WERE COMBINED INTO 2-POINT COMPOSITES BY THE LABORATORY BEFORE ANALYSIS. SAMPLES COLLECTED AT BORING LOCATIONS WS-3A THROUGH WS-3D, WS-5A THROUGH WS-5D, WS-7A THROUGH 7D, AND WS-11A THROUGH WS-11D WERE COMBINED INTO COMPOSITES IN THE FIELD BEFORE ANALYSIS
- CROSS-SECTION A-A* (SEE FIGURE 3)
- ANALYTE EXCEEDS THE ERL
- ANALYTE DOES NOT EXCEED ERL
- DENOTES PCBs EXCEED ERM-I
- BOTH SHALLOW AND DEEP HABITAT SAMPLES EXCEED ERL
- SHALLOW HABITAT SAMPLE DOES NOT EXCEED ERL

Boring Location Identification	Existing Ground Surface Elevation (feet)	Design Surface Elevation (feet)	Sample Depth Interval From Existing Ground Surface (feet bgs)
WS-1	-5.4		0 to 1.1
WS-2	6.5		0 to 5
WS-3	-4.0		11 to 13
WS-4	-4.0		0.3 to 2.5
WS-5	-4.4		0.3 to 2.1
WS-6	-4.0		0.3 to 2.5
WS-7	-4.4		0.3 to 2.5
WS-8	-4.4		0.3 to 2.1
WS-9	-4.1		0.2 to 2.4
WS-10	-4.0		0.3 to 2.5
WS-11	-4.1		0.2 to 2.4
WS-12	-4.0		0.3 to 2.5
WS-13	-4.1		0.2 to 2.4
TW-1	6.6	0.0	0.5 to 0.8
		-3.0	9.5 to 11.5
TW-2	3.3	0.0	3 to 2
		-3.0	6 to 8
TW-3	4.1	0.0	4 to 6
		-3.0	6 to 8
TW-4	8.9	0.0	9 to 11
		-3.0	12 to 14
BH-1	10.5	3.6	0 to 5
		-4.3 to -6.5	15 to 17
BH-2	6.4	1.5	7 to 9
		-4.3 to -6.5	10.7 to 12.9
OS-1A	unk	Surface	Surface
OS-1B	unk	Surface	Surface
OS-1C	unk	Surface	Surface
OS-1D	unk	Surface	Surface
OS-2A	unk	Surface	Surface
OS-2B	unk	Surface	Surface
OS-2C	unk	Surface	Surface
OS-3D	unk	Surface	Surface
GRAB-1	unk	Surface	Surface

Notes and Abbreviations:
 1. Sample depths are calculated by subtracting the design surface elevation from the existing ground surface elevation for each marsh sample collection. All depths have been rounded to the nearest 0.5-foot for consistency.
 bgs = below ground surface
 Z = Elevation in feet (CCSF field datum)

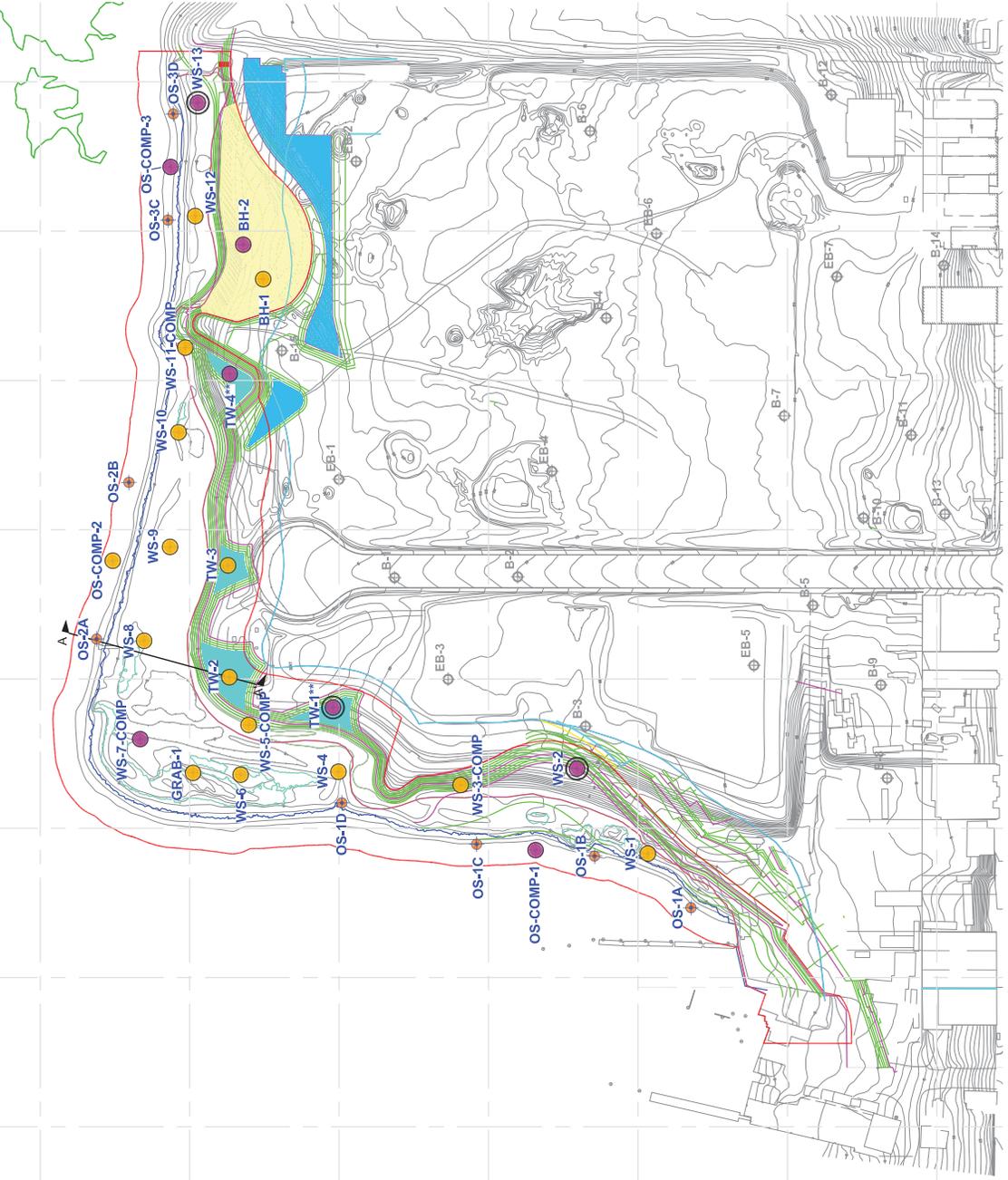


FIGURE 5
Results Summary of Habitat Surface Sampling Locations - Total PCBs

India Basin Redevelopment Project
 San Francisco, California



LEGEND

- CONCEPT FEATURE TERRACED WETLAND
- CONCEPT FEATURE STORMWATER POND
- CONCEPT FEATURE BEACH AREA
- MEAN HIGH WATER
- USACE AND BCDC JURISDICTION LINE/ HIGH TIDE LINE
- BCDC 100 FT SHORELINE BAND
- MAJOR DESIGN ELEVATION CONTOUR
- MINOR DESIGN ELEVATION CONTOUR
- EXISTING GRADE ELEVATION CONTOUR
- APPROXIMATE LOW WATER SHORELINE
- SOIL & SEDIMENT SAMPLING AND WATER QUALITY TESTING (7.6 ACRES)
- APPROXIMATE LOCATION OF 2013-2015 LANGAN TREADWELL ROLL EXPLORATORY GEOTECHNICAL AND ENVIRONMENTAL BORING LOCATION
- BORING LOCATION
- SAMPLE TYPES
- WS-1 WETLAND SURFACE (1 PER HALF ACRE)
- TW-# = TERRACED WETLAND
- BH-# = BEACH
- OS-# = OFFSHORE
- GRAB-# = SURFACE SAMPLE
- SAMPLES COLLECTED AT BORING LOCATIONS OS-1A THROUGH OS-1D, OS-2A THROUGH OS-2B, AND OS-3C THROUGH OS-3D WERE COMBINED INTO ONE 4-POINT COMPOSITE AND TWO 2-POINT COMPOSITES BY THE ANALYSIS
- SAMPLES COLLECTED AT BORING LOCATIONS WS-3A THROUGH WS-3D, WS-5A THROUGH WS-5D, WS-7A THROUGH 7D, AND WS-11A THROUGH WS-11D WERE COMBINED INTO 4-POINT COMPOSITES IN THE FIELD BEFORE ANALYSIS
- GROSS-SECTION A-A (SEE FIGURE 3)
- ANALYTE EXCEEDS THE ERL
- ANALYTE DOES NOT EXCEED ERL
- DENOTES PAHs EXCEED ERM
- BOTH SHALLOW AND DEEP HABITAT SAMPLES EXCEED ERL
- SHALLOW HABITAT SAMPLE DOES NOT EXCEED ERL

Boring Location Identification	Existing Ground Surface (Z) Elevation (feet)	Design Surface (Z) Elevation (feet)	Sample Depth Interval From Existing Ground Surface ¹ (feet logs)
WS-1	-5.4	0 to 1.1	0 to 1.1
WS-2	6.5	0 to 5	0 to 5
WS-3	6.5	11 to 13	11 to 13
WS-4	-4.0	0.3 to 2.5	0.3 to 2.5
WS-5	-4.0	0 to 2.1	0 to 2.1
WS-6	-4.0	0.3 to 2.5	0.3 to 2.5
WS-7	-4.4	0 to 2.1	0 to 2.1
WS-8	-4.1	0.2 to 2.4	0.2 to 2.4
WS-9	-4.1	0.2 to 2.4	0.2 to 2.4
WS-10	-4.0	0.3 to 2.5	0.3 to 2.5
WS-11	-4.1	0.2 to 2.4	0.2 to 2.4
WS-12	-4.0	0.3 to 2.5	0.3 to 2.5
WS-13	-4.1	0.2 to 2.4	0.2 to 2.4
TW-1	6.6	0.0	0 to 5
TW-2	3.3	0.0	6.5 to 8.5
TW-3	4.1	-3.0	9.5 to 11.5
TW-4	8.9	0.0	0 to 3
BH-1	10.5	0.0	3 to 5
BH-2	6.4	-3.0	6 to 8
OS-1A	unk	0.0	0 to 4
OS-1B	unk	3.6	0 to 4
OS-1C	unk	0.0	4 to 6
OS-1D	unk	-3.0	6 to 8
OS-2A	unk	0.0	0 to 5
OS-2B	unk	0.0	9 to 11
OS-3C	unk	-3.0	12 to 14
OS-3D	unk	0.0	0 to 5
GRAB-1	unk	0.0	0 to 5
OS-1A	unk	Surface	Surface
OS-1B	unk	Surface	Surface
OS-1C	unk	Surface	Surface
OS-1D	unk	Surface	Surface
OS-2A	unk	Surface	Surface
OS-2B	unk	Surface	Surface
OS-3C	unk	Surface	Surface
OS-3D	unk	Surface	Surface
GRAB-1	unk	Surface	Surface

Notes and Abbreviations:
 1. Sample depths are calculated by subtracting the design surface elevation from the existing ground surface elevation for each marsh sample location. All depths have been rounded to the nearest 0.5-foot for sample collection.
 unk = below ground surface
 Z = Elevation in feet (CCSF tidal datum)

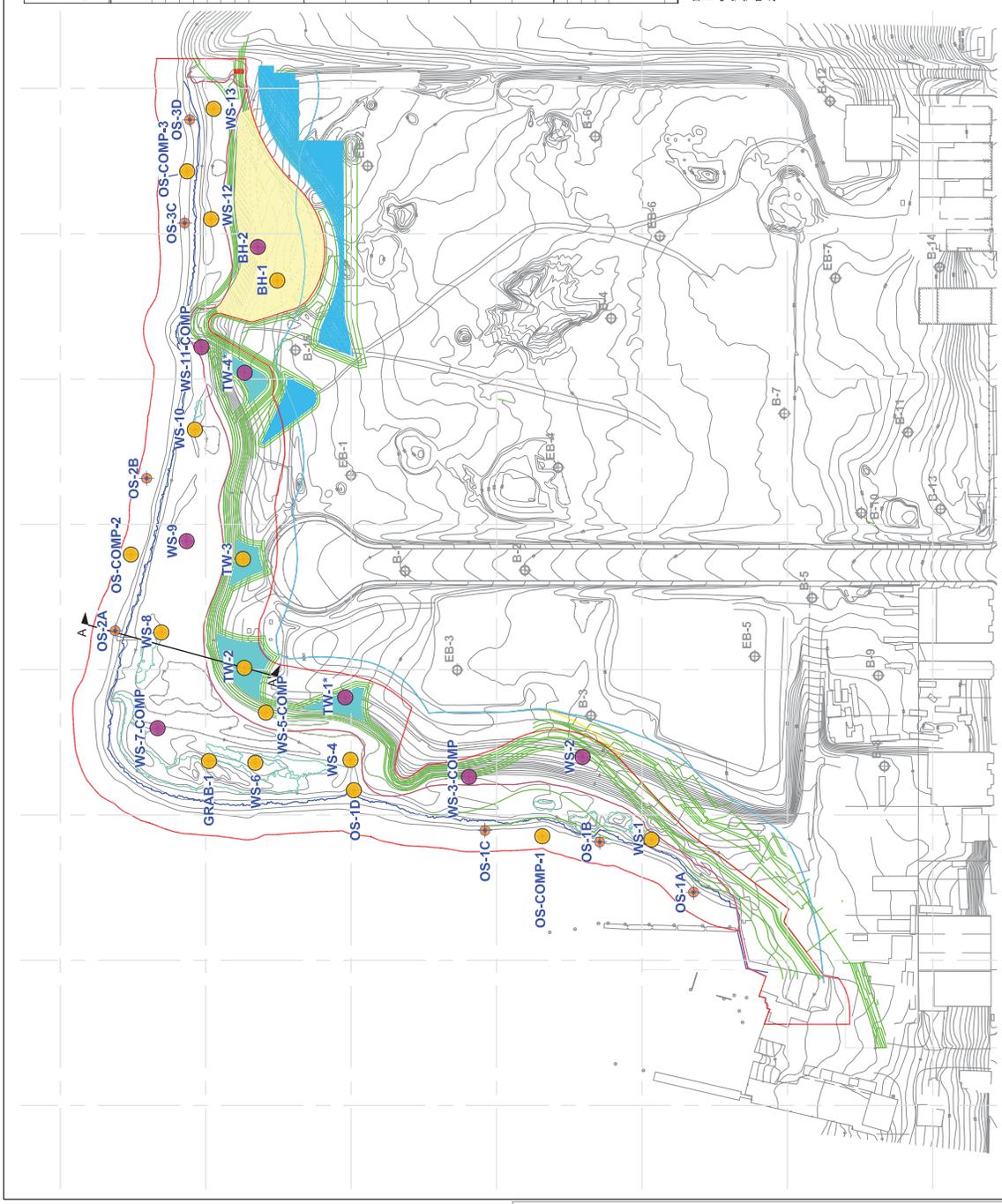


FIGURE 6
Results Summary of Habitat Surface Sampling Locations - PAHs

India Basin Redevelopment Project
 San Francisco, California



Project No. 1346.01

APPENDIX F

**APPLICABLE REGULATIONS FOR
NATURALLY OCCURRING ASBESTOS DURING CONSTRUCTION**



1.0 ASBESTOS REGULATIONS

Construction including Asbestos-Containing Materials is subject to California Air Resources Board (CARB) asbestos Airborne Toxic Control Measures (ATCM) (17 CCR 93105) and California Occupational Safety and Health Administration (Cal-OSHA) asbestos regulations for construction (8 CCR 1529). The CARB asbestos ATCM for the protection of air quality defines "Asbestos-Containing Material" as any material that contains asbestiforms of minerals including chrysotile of 0.25 percent or greater. The Cal-OSHA regulation for minimizing worker exposure to asbestos in construction defines "Asbestos-containing material (ACM)" as any material containing more than one percent asbestos minerals including chrysotile. The CARB and Cal-OSHA regulates construction with ACM including soil containing naturally occurring asbestos (NOA) such as serpentinite bedrock.

The fill materials located at the India Basin Shoreline Park (IBSP) contain variable amounts of serpentinite rock pieces at depths varying between 1 and 35 feet below the ground surface (bgs). Naturally-occurring chrysotile asbestos was detected in 14 out of 18 soil samples collected from depths of 0.5 to 14 feet bgs, at concentrations ranging from 0.25 to 1.75 percent. These values subject future construction at the Site to the CARB asbestos ATCM and Cal-OSHA asbestos regulations for construction.

1.1 California Air Resources Board (CARB)

Due to the presence of naturally-occurring asbestos in subsurface materials at IBSP, the India Basin Redevelopment Project is subject to the California Air Resources Board (CARB) asbestos ACTM for Construction, Grading, Quarrying, and Surface Mining Operations located in the California Code of Regulations, Title 17, Section 93105 (17 CCR 93105). The regulation requires the implementation of mitigation measures to minimize emissions of asbestos-laden dust.

Construction activities are subject to the dust mitigation measures listed in 17 CCR 93105 subsection (d)(1), which are reproduced below:

17 CCR 93105

(e) Requirements for Construction and Grading Operations.

- (2) *Areas greater than one acre meeting the criteria in subsections (b)(1) or (b)(2):*
No person shall engage in any construction or grading operation on property where the area to be disturbed is **greater than one (1.0) acre** unless:

- (A) An Asbestos Dust Mitigation Plan for the operation has been:
 1. Submitted to and approved by the Bay Area Air Quality Management District (BAAQMD) before the start of any construction or grading activity; and
 2. The provisions of that dust mitigation plan are implemented at the beginning and maintained throughout the duration of the construction or grading activity; and for a project started before the effective date of this section for which an asbestos dust mitigation plan was submitted at least sixty (60) days before the effective date, and for which the district has not yet approved the asbestos dust mitigation plan:
 3. The measures in subsection (e)(1) must be implemented and maintained until the district-approved asbestos dust mitigation plan is implemented; and
 4. The provisions of the district-approved asbestos dust mitigation plan must be implemented within fourteen (14) days of district approval of the plan and maintained throughout the remainder of the construction or grading activity.

- (3) *Property that meets the criteria in subsection (b)(3):* No person shall engage in any construction or grading operation unless the following requirements are met:
 - (A) The owner/operator notifies the district of the discovery of naturally-occurring asbestos, serpentine, or ultramafic rock no later than the next business day;
 - (B) The dust mitigation measures in subsection (e)(1) are implemented within twenty-four (24) hours after determining that the property meets the criteria in subsection (b)(3); and
 - (C) For operations in which the area to be disturbed is **greater than one (1.0) acre**, the owner/operator must:
 1. Submit an asbestos dust mitigation plan to the district within fourteen (14) days of the discovery of naturally-occurring asbestos, serpentine, or ultramafic rock;
 2. Maintain the dust mitigation measures in subsection (e)(1) until the provisions of the district-approved asbestos dust mitigation plan are implemented;
 3. Implement the provisions of the district-approved asbestos dust mitigation plan within fourteen (14) days of district approval of the plan; and
 4. Maintain the provisions of the district-approved asbestos dust mitigation plan throughout the remainder of the construction or grading activity.

- (4) *Asbestos Dust Mitigation Plans:* An Asbestos Dust Mitigation Plan must specify dust mitigation practices which are sufficient to ensure that no equipment or operation emits dust that is visible crossing the property line, and must include one or more provisions addressing **each** of the following topics.

- (A) Track-out prevention and control measures which shall include:
 1. Removal of any visible track-out from a paved public road at any location where vehicles exit the work site; this shall be accomplished using wet sweeping or a HEPA filter equipped vacuum device at the end of the work day or at least one time per day; and
 2. Installation of one or more of the following track-out prevention measures:
 - i. A gravel pad designed using good engineering practices to clean the tires of exiting vehicles;
 - ii. A tire shaker;
 - iii. A wheel wash system;
 - iv. Pavement extending for not less than fifty (50) consecutive feet from the intersection with the paved public road; or
 - v. Any other measure as effective as the measures listed above.
- (B) Keeping active storage piles adequately wetted or covered with tarps.
- (C) Control for disturbed surface areas and storage piles that will remain inactive for more than seven (7) days, which shall include one or more of the following:
 1. Keep the surface adequately wetted;
 2. Establishment and maintenance of surface crusting sufficient to satisfy the test in subsection (h)(6);
 3. Application of chemical dust suppressants or chemical stabilizers according to the manufacturers' recommendations;
 4. Covering with tarp(s) or vegetative cover;
 5. Installation of wind barriers of fifty (50) percent porosity around three (3) sides of a storage pile;
 6. Installation of wind barriers across open areas; or
 7. Any other measure as effective as the measures listed above.
- (D) Control for traffic on on-site unpaved roads, parking lots, and staging areas which shall include:
 1. A maximum vehicle speed limit of fifteen (15) miles per hour or less; and
 2. One or more of the following:
 - i. Watering every two hours of active operations or sufficiently often to keep the area adequately wetted;
 - ii. Applying chemical dust suppressants consistent with manufacturer's directions;
 - iii. Maintaining a gravel cover with a silt content that is less than five (5) percent and asbestos content that is less than 0.25 percent, as determined using an approved asbestos bulk test method, to a depth of three (3) inches on the surface being used for travel; or
 - iv. Any other measure as effective as the measures listed above.
- (E) Control for earthmoving activities which shall include one or more of the following:

1. Pre-wetting the ground to the depth of anticipated cuts;
 2. Suspending grading operations when wind speeds are high enough to result in dust emissions crossing the property line, despite the application of dust mitigation measures;
 3. Application of water prior to any land clearing; or
 4. Any other measure as effective as the measures listed above.
- (F) *Control for off-site transport.* The owner/operator shall ensure that no trucks are allowed to transport excavated material off-site unless:
1. Trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments; and
 2. Loads are adequately wetted and either:
 - i. Covered with tarps; or
 - ii. Loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.
- (G) *Post construction stabilization of disturbed areas.* Upon completion of the project, disturbed surfaces shall be stabilized using one or more of the following methods:
1. Establishment of a vegetative cover;
 2. Placement of at least three (3.0) inches of non-asbestos-containing material;
 3. Paving;
 4. Any other measure deemed sufficient to prevent wind speeds of ten (10) miles per hour or greater from causing visible dust emissions.
- (H) *Air monitoring for asbestos (if required by the APCO).*
1. If required by the district APCO, the plan must include an air-monitoring component.
 2. The air monitoring component shall specify the following:
 - i. Type of air sampling device(s);
 - ii. Siting of air sampling device(s);
 - iii. Sampling duration and frequency; and
 - iv. Analytical method.
- (I) *Frequency of reporting:* The plan shall state how often the items specified in subsection (e)(5)(B), and any other items identified in the plan, will be reported to the district.
- (5) *Recordkeeping and Reporting Requirements.*
- (A) *Recordkeeping Requirements:* The owner/operator shall maintain all of the following records for at least seven (7) years following the completion of the construction project:
1. The results of any air monitoring conducted at the request of the APCO;
 2. The documentation for any geologic evaluation conducted on the property for the purposes of obtaining an exemption, except the archive of collected samples which may be discarded at the expiration of the exemption or one (1) year after the exemption is granted whichever is less; and
 3. The results of any asbestos bulk sampling that meets any of the following conditions:

- i. The asbestos bulk sampling was conducted by the owner/operator to document the applicability of or compliance with this section, or
 - ii. The asbestos bulk sampling was done at the request of the district APCO.
- (B) *Reporting Requirements:* The owner/operator of any grading or construction operation subject to this section shall submit the following to the District:
 1. The results of any air monitoring conducted at the request of the APCO; and
 2. The results of any asbestos bulk sampling that meets any of the following conditions:
 - i. Asbestos bulk sampling conducted by the owner/operator to document applicability of or compliance with this section; or
 - ii. Asbestos bulk sampling done at the request of the APCO.

(f) Definitions. For the purposes of this section, the following definition shall apply:

(9) "Asbestos-Containing Material" means any material that has an asbestos content of 0.25 percent or greater.

1.2 California Occupational Health and Safety Administration (Cal-OSHA)

In accordance with Cal-OSHA asbestos regulations (8CCR 1529), employers performing work that disturbs asbestos-containing materials (ACM) with greater than 1% asbestos shall implement the following activities:

- Use wet methods to minimize airborne dust emissions whenever working with ACM.
- Implement an asbestos awareness training program for any employees required to work with ACM. This training program shall address the elements specified in 8CCR1529(k)(9). These include a discussion of the nature of asbestos, its uses, adverse effects of asbestos, and the required procedures to minimize asbestos exposures. Records of employee training shall be maintained on site.
- Conduct personal air monitoring to document that employee exposures do not exceed Cal-OSHA Permissible Exposure Limits (PELs). Air monitoring records shall be kept on site.
- Clean up promptly any ACM debris or releases into non-asbestos work areas.

- The use of dry methods (such as sweeping) or any other procedures that generate airborne dust emissions is not permitted unless in association with HEPA filtered equipment.
- Employees shall not eat, drink or smoke in areas where there is active disturbance of ACM. The employer shall provide adequate facilities and supplies for employees to wash hands and face when leaving active work areas.

Neither respiratory protection, protective clothing, regulated areas, decontamination stations (beyond the provision of adequate facilities and supplies for employees to wash hands and face when leaving active ACM work areas) nor medical surveillance are required based on the available information, because it is anticipated that adequate dust control measures will preclude exposures from exceeding the Cal-OSHA PELs for asbestos. However, the use of respiratory protection, protective clothing regulated areas, decontamination stations and medical surveillance shall be required if dust mitigation measures are insufficient to ensure that employee exposures remain below Cal-OSHA PELs.

APPENDIX G

CITY OF SAN FRANCISCO DUST CONTROL ORDINANCE



1 [Construction Dust Control.]
2

3 **Ordinance amending the San Francisco Building Code by adding Section 106.3.2.6 to**
4 **require that all site preparation work, demolition, or other construction activities within**
5 **the City and County of San Francisco that have the potential to create dust or will**
6 **expose or disturb more than 10 cubic yards or 500 square feet of soil must comply with**
7 **specified dust control measures whether or not the activity requires a permit from the**
8 **Department of Building Inspection, with provision for waiver by the Director for**
9 **activities on sites less than one half acre that are unlikely to result in any visible**
10 **windblown dust; amending the San Francisco Health Code by adding Article 22B to**
11 **require, for projects over one half acre, that the project sponsor obtain approval of a**
12 **dust control plan from the Director of Public Health unless the Director waives these**
13 **requirements or the project qualifies for an interior only tenant improvement project**
14 **exemption, and enacting fees to defray the costs of implementation; adopting**
15 **environmental and general findings.**

16
17 Note: Additions are single-underline italics Times New Roman;
18 deletions are ~~strikethrough italics Times New Roman~~.
19 Board amendment additions are double underlined.
20 Board amendment deletions are ~~strikethrough normal~~.

21 Be it ordained by the People of the City and County of San Francisco:

22 Section 1. Findings. The Board of Supervisors of the City and County of San Francisco
23 hereby finds and determines that:

24 (a) Environmental Findings. The Planning Department has determined that the
25 actions contemplated in this Ordinance are in compliance with the California Environmental
Quality Act (California Public Resources Code Sections 21000 et seq.). Said determination is

Supervisor Maxwell, Supervisor Peskin, Supervisor Ammiano, Supervisor Dufty
BOARD OF SUPERVISORS

1 on file with the Clerk of the Board of Supervisors in File No. _____ and is
2 incorporated herein by reference.

3 (b) General Findings.

4 (1) Even though there are Federal Standards for air pollutants and implementation
5 of State and Regional air quality control plans, air pollutants continue to have impacts on
6 human health throughout the country. California has found that particulate matter exposure
7 can cause health effects at lower levels than national standards. The current health burden of
8 particulate matter demands that, where possible, public agencies take feasible available
9 actions to reduce sources of particulate matter exposure.

10 (2) According to the California Air Resources Board, reducing ambient particulate
11 matter from 1998-2000 levels to natural background concentrations in San Francisco would
12 prevent over 200 premature deaths.

13 (3) Dust can be an irritant causing watering eyes or irritation to the lungs, nose and
14 throat.

15 (4) Demolition, excavation, grading, and other construction activities can cause
16 wind-blown dust to add to particulate matter in the local atmosphere. Depending on
17 exposure, adverse health effects can occur due to this particulate matter in general and also
18 due to specific contaminants such as lead or asbestos that may be constituents of dust.

19 (5) The intent of this ordinance is to reduce the quantity of dust generated during
20 site preparation, construction and demolition in order to protect the health of the general
21 public, protect the health of on-site workers, minimize public nuisance complaints, and avoid
22 orders to stop work by the Department of Building Inspection.

23 Section 2. The San Francisco Building Code is hereby amended by adding Section
24 106.3.2.6, to read as follows:
25

1 **(b)** For projects over one half acre in size, the project sponsor shall designate a person or
2 persons who will be responsible for monitoring compliance with dust control requirements. The
3 designated person or persons shall be on the site or available by telephone or other means during all
4 times that site preparation, demolition or construction activities may be in progress, including holidays
5 and weekends. The name and telephone number where such person or persons may be reached at all
6 times shall be provided to the Director and to the Director of Public Health prior to commencement of
7 work on the project.

8 **(c)** The project sponsor and the contractor responsible for construction activities at the
9 project site shall use the following practices to control construction dust on the site or other practices
10 that result in equivalent dust control that are acceptable to the Director.

11 **(1)** Water all active construction areas sufficiently to prevent dust from becoming airborne.
12 Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour.
13 Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the San Francisco
14 Public Works Code. If not required, reclaimed water should be used whenever possible.

15 **(2)** Provide as much water as necessary to control dust (without creating run-off) in any
16 area of land clearing, earth movement, excavation, drillings, and other dust-generating activity.

17 **(3)** During excavation and dirt-moving activities, wet sweep or vacuum the streets,
18 sidewalks, paths, and intersections where work is in progress at the end of the workday.

19 **(4)** Cover any inactive (no disturbance for more than seven days) stockpiles greater than ten
20 cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand,
21 road base, and soil with a 10 mil (0.01 inch) polyethylene plastic or equivalent tarp and brace it down
22 or use other equivalent soil stabilization techniques.

23 **(5)** Use dust enclosures, curtains, and dust collectors as necessary to control dust in the
24 excavation area.

1 106.3.2.6.4. Large projects. If the project is over one half acre in size and the project does not
2 qualify for an interior only tenant improvement project exemption or the Department of Public Health
3 has not issued a waiver for a site-specific dust control plan for the project; construction, demolition,
4 excavation, grading, foundation work, or other permitted activities may not commence until the owner
5 or the owner's agent has submitted to the Department a copy of the Director of Public Health's written
6 approval of the dust control plan. All site preparation and construction activities on the job site shall
7 comply with the general requirements for dust control and the site-specific dust control plan approved
8 by the Director of Public Health. The failure to comply with all provisions of the approved site-specific
9 dust control plan shall be considered a violation of this Code.

10 106.3.2.6.5. Waiver of requirements for compliance for small sites; rescission of waiver.

11 For sites less than a half acre in size:

12 (a) The Director may waive these requirements if the applicant demonstrates to the
13 Director's satisfaction that the proposed site preparation, demolition or construction activities are
14 unlikely to result in any visible windblown dust.

15 (b) If at any time, contrary to the applicant's assertions, the construction activities produce
16 visible windblown dust, the Director may issue a written order rescinding the waiver. A copy of the
17 rescission order shall be personally served on the owner of the property at the address on file with the
18 Department of Building Inspection and posted on the job site.

19 (c) If the Director orders rescission of the waiver, the owner of the property and the
20 contractor or other persons responsible for construction activities at the site shall comply immediately
21 with the above dust control requirements.

22 106.3.2.6.6. Permit notification. All building, demolition, excavation, grading, foundation, or
23 other permit subject to this section issued by the Central Permit Bureau shall bear notice of the above
24 requirements and of the owner's responsibility to control construction dust on the site.
25

1 (e) "Sensitive Receptor" means residence, school, childcare center, hospital or other
2 health-care facility or group living quarters.

3 SEC. 1241. APPLICABILITY OF ARTICLE.

4 This Article shall apply to any site preparation or construction activities taking place within the
5 City and County of San Francisco that has the potential to create dust or that will expose or disturb
6 soil.

7 SECTION 1242. SITE-SPECIFIC DUST CONTROL PLAN.

8 (a) Applicants for projects over a half acre in size shall submit a map showing the location
9 of the project and clearly identifying all surrounding sensitive receptors and particularly noting those
10 within 1000 feet of the project. The Director of Health shall review this map and any other information
11 available to the Director to verify compliance with this submittal requirement. If no sensitive receptors
12 are determined to be within 1000 feet of the project, then the Director of Health may issue a waiver to
13 the Applicant that specifies that the project is not required to have a site-specific dust control plan.

14 (b) For projects determined by the Director to be within 1000 feet of sensitive receptors, the
15 Applicant will submit a site-specific dust control plan to the Director for approval.

16 (c) The site-specific dust control plan shall contain all provisions of Section 106.3.2.6.3 of
17 the Building Code and enhanced site-specific dust monitoring and control measures that will apply to
18 the project. These site-specific measures may include the following or equivalent measures, which
19 accomplish the goal of minimizing visible dust:

20 (1) wetting down areas around soil improvement operations, visibly dry disturbed soil
21 surface areas, and visibly dry disturbed unpaved driveways at least three times per shift per day.

22 (2) analysis of the wind direction,

23 (3) placement of upwind and downwind particulate dust monitors,

24 (4) recordkeeping for particulate monitoring results,

1 (5) hiring of an independent third party to conduct inspections for visible dust and keeping
2 records of those inspections.

3 (6) requirements for when dust generating operations have to be shut down due to dust
4 crossing the property boundary or if dust is contained within the property boundary but not controlled
5 after a specified number of minutes.

6 (7) establishing a hotline for surrounding community members to call and report visible
7 dust problems so that the Applicant can promptly fix those problem; posting signs around the site with
8 the hotline number and making sure that the number is given to adjacent residents, schools and
9 businesses.

10 (8) limiting the area subject to excavation, grading, and other demolition or construction
11 activities at any one time.

12 (9) minimizing the amount of excavated material or waste materials stored at the site.

13 (10) installing dust curtains, plastic tarps or windbreaks, or planting tree windbreaks on the
14 property line on windward and down windward sides of construction areas, as necessary.

15 (11) paving, applying water three times daily, or applying non-toxic soil stabilizers on all
16 unpaved access roads, parking areas and staging areas at the construction site. Reclaimed water must
17 be used if required by Article 21, Section 1100 et seq. of the San Francisco Public Works Code, Article
18 22. If not required, reclaimed water should be used whenever possible.

19 (12) loading haul trucks carrying excavated material and other non-excavated material so
20 that the material does not extend above the walls or back of the truck bed. Tightly cover with
21 tarpsaulins or other effective covers all trucks hauling soil, sand, and other loose materials before the
22 trucks leave the loading area. Wet prior to covering if needed.

23 (13) establishing speed limits so that vehicles entering or exiting construction areas shall
24 travel at a speed that minimizes dust emissions. This speed shall be no more than 15 miles per hour.
25

1 (14) sweeping streets with water sweepers at the end of each day if visible soil material is
2 carried onto adjacent paved roads. Reclaimed water must be used if required by Article 21, Section
3 1100 et seq. of the San Francisco Public Works Code. If not required, reclaimed water should be used
4 whenever possible.

5 (15) installing wheel washers to clean all trucks and equipment leaving the construction site.
6 If wheel washers cannot be installed, tires or tracks and spoil trucks shall be brushed off before they re-
7 enter City streets to minimize deposition of dust-causing materials.

8 (16) terminating excavation, grading, and other construction activities when winds speeds
9 exceed 25 miles per hour.

10 (17) hydroseeding inactive construction areas, including previously graded areas inactive for
11 at least 10 calendar days, or applying non-toxic soil stabilizers.

12 (18) sweeping of surrounding streets during demolition, excavation and construction at least
13 once per day to reduce particulate emissions.

14 SEC. 1243. EXEMPTION FOR INTERIOR ONLY TENANT IMPROVEMENT PROJECTS

15 Interior Only Tenant Improvement Projects that are over one half acre in size and will not
16 produce any exterior visible dust are exempt from complying with these requirements. If the interior
17 only tenant improvement projects are changed during the course of construction and begin producing
18 exterior visible dust then they will be required to immediately comply with Section 1242 by submitting a
19 site-specific dust control plan for the Director's approval.

20 SEC. 1244. WAIVER OF REQUIREMENTS FOR COMPLIANCE; RESCISSION OF WAIVER.

21 (a) The Director may waive the requirements for a site-specific dust control plan as
22 described in Section 1242 (a) or if the Applicant demonstrates to the Director's satisfaction that a site-
23 specific dust control plan should not be required.

24 (b) The Director may rescind a waiver,

1 (1) if sensitive uses are placed within 1000 feet of the project;
2 (2) if requested by the Director of Building Inspection; or
3 (3) the Director is presented with information that contradicts the Applicant's
4 demonstration that a site-specific dust control plan should not be required.

5 The Director shall provide the Director of Building Inspection with a copy of the rescission
6 order. If the Director orders rescission of the waiver, the owner of the property and the contractor or
7 other persons responsible for construction activities at the site shall comply immediately with Section
8 1242 by submitting a site-specific dust control plan for the Director's approval.

9 SEC. 1245. DIRECTOR'S APPROVAL OF DUST CONTROL PLAN AND NOTIFICATION TO
10 THE DIRECTOR OF BUILDING INSPECTION.

11 After the Director has approved the Applicant's dust control plan, the Director shall provide the
12 Applicant and the Director of Building Inspection with written notification that the Applicant has
13 complied with the requirements of this Article.

14 SEC. 1246. RULES AND REGULATIONS.

15 The Director may adopt, and may thereafter amend, rules, regulations and guidelines that the
16 Director deems necessary to implement the provisions of this Article. A public hearing before the
17 Health Commission shall be held prior to the adoption or any amendment of the rules, regulations and
18 guidelines recommended for implementation. In addition to any notices required by law, the Director
19 shall send written notice, at least 15 days prior to the hearing, to any interested party who sends a
20 written request to the Director for notice of hearings related to the adoption of rules, regulations and
21 guidelines under this section.

22 SEC. 1247. CONSTRUCTION ON CITY PROPERTY.

23 All departments, boards, commissions, and agencies of the City and County of San Francisco
24 that authorize construction or improvements on land under their jurisdiction under circumstances
25

1 where no building, excavation, grading, foundation, or other permit needs to be obtained under the San
2 Francisco Building Code shall adopt rules and regulations to insure that the same dust control
3 requirements that are set forth in this Article are followed. The Directors of Public Health and
4 Building Inspection shall assist the departments, boards, commission and agencies to insure that these
5 requirements are met.

6 SEC. 1248. NO ASSUMPTION OF LIABILITY.

7 In undertaking the enforcement of this ordinance, the City is assuming an undertaking only to
8 promote the general welfare. It is not assuming, nor is it imposing on its officers and employees, an
9 obligation for breach of which it is liable in money damages to any person who claims that such breach
10 proximately caused injury.

11 SEC. 1249. FEES.

12 The Director is authorized to charge the following fees to defray the costs of document
13 processing and review, consultation with applicants, and administration of this Article: for fiscal year
14 2008-2009 (1) an initial fee of \$492, payable to the Department upon the filing of a Dust Control Plan
15 with the Department; and (2) an additional fee of \$164 per hour for time spent in document processing
16 and review and applicant consultation exceeding three hours or portion thereof, payable to the
17 Department. Beginning with fiscal year 2009-2010, no later than April 15 each year, the Controller
18 shall adjust the fees provided in this Article to reflect changes in the relevant Consumer Price Index,
19 without further action by the Board of Supervisors. In adjusting the fees, the Controller may round
20 these fees up or down to the nearest dollar. The Director shall perform an annual review of the fees
21 scheduled to be assessed for the following fiscal year and shall file a report with the Controller no later
22 than May 1st of each year, proposing, if necessary, an adjustment to the fees to ensure that costs are

1 fully recovered and that fees do not produce significantly more revenue than required to cover the costs
2 of operating the program. The Controller shall adjust fees when necessary in either case.

3
4 APPROVED AS TO FORM:
5 DENNIS J. HERRERA, City Attorney

6 By: 
7 JUDITH A. BOYAJIAN
8 Deputy City Attorney



City and County of San Francisco

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

Tails Ordinance

File Number: 071009

Date Passed:

Ordinance amending the San Francisco Building Code by adding Section 106.3.2.6 to require that all site preparation work, demolition, or other construction activities within the City and County of San Francisco that have the potential to create dust or will expose or disturb more than 10 cubic yards or 500 square feet of soil must comply with specified dust control measures whether or not the activity requires a permit from the Department of Building Inspection, with provision for waiver by the Director for activities on sites less than one half acre that are unlikely to result in any visible windblown dust; amending the San Francisco Health Code by adding Article 22B to require, for projects over one half acre, that the project sponsor obtain approval of a dust control plan from the Director of Public Health unless the Director waives these requirements or the project qualifies for an interior only tenant improvement project exemption, and enacting fees to defray the costs of implementation; adopting environmental and general findings.

~~August 7, 2007 Board of Supervisors — SUBSTITUTED~~

June 24, 2008 Board of Supervisors — SUBSTITUTED

July 16, 2008 Board of Supervisors — PASSED ON FIRST READING

Ayes: 10 - Alioto-Pier, Chu, Daly, Dufty, Elsbernd, Maxwell, McGoldrick,
Mirkarimi, Peskin, Sandoval
Absent: 1 - Ammiano

July 22, 2008 Board of Supervisors — FINALLY PASSED

Ayes: 11 - Alioto-Pier, Ammiano, Chu, Daly, Dufty, Elsbernd, Maxwell,
McGoldrick, Mirkarimi, Peskin, Sandoval

File No. 071009

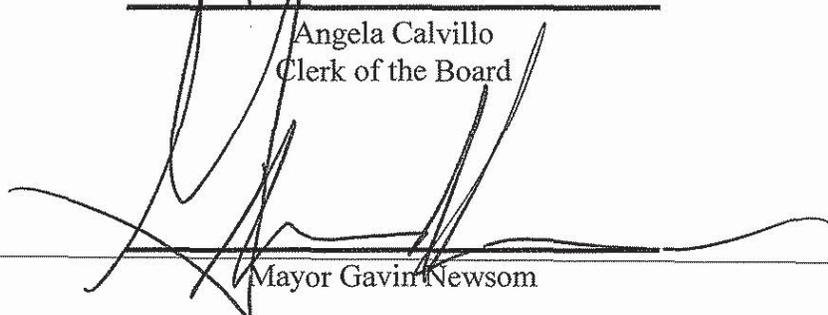
I hereby certify that the foregoing Ordinance
was FINALLY PASSED on July 22, 2008 by
the Board of Supervisors of the City and
County of San Francisco.



Angela Calvillo
Clerk of the Board

7-30-08

Date Approved



Mayor Gavin Newsom

APPENDIX H

CITY OF SAN FRANCISCO NOISE CONTROL ORDINANCE



NOISE CONTROL ORDINANCE

Police Code Section 2907(b) - It shall be unlawful for any person to operate any powered construction equipment, regardless of age or date of acquisition, if such equipment emits noise at a level in excess of 80 dBA when measured at a distance of one hundred feet from such equipment, or equivalent sound level at some other convenient distance;

Police Code Section 2907(c) - Requirements of Section 2907(b) need not be applied to impact tools and equipment, provided that such impact tools and equipment shall have intake and exhaust mufflers recommended by the manufacturers thereof and approved by the Director of Public Works as best accomplishing maximum noise attenuation, and that pavement breakers and jackhammers shall also be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof and approved by the Director of Public Works as best accomplishing maximum noise attenuation. In the absence of manufacturer's recommendation, the Director of Public Works may prescribe such means of accomplishing maximum noise attenuation as he deems to be in the public interest.

Police Code Section 2901.12 - Powered construction equipment includes any tools, machinery, or equipment used in connection with construction operations which can be driven by energy in any form other than manpower, including all types of motor vehicles when used in the construction process on any construction site, regardless of whether such construction site be located on-highway or off-highway, and further including all helicopters or other aircraft when used in the construction process except as may be pre-empted for regulation by State or Federal law.

Police Code Section 2908 - It shall be unlawful for any person, including employees and agents of the City and County of San Francisco, between the hours of 8:00 p.m. any day and 7:00 a.m. of the following day to erect, construct, demolish, excavate, alter or repair any building or structure, if the noise level created thereby is in excess of the ambient background noise level by 5 dBA at the nearest property line, unless a special permit therefor has been applied for and granted by the Director of Public Works. In granting such special permit the Director of Public Works shall consider if construction noise in the vicinity of the proposed work site would be less objectionable at night than during daytime because of different population levels or different neighboring activities, if obstruction and interferences with traffic particularly on streets of major importance, would be less objectionable at night than during daytime, if the kind of work to be performed emits noises at such a low level as to not cause significant disturbance in the vicinity of the work site, if the neighborhood of the proposed work site is primarily residential in character wherein sleep could be disturbed, if great economic hardship would occur if the work were spread over a longer time, if the work will abate or prevent hazard to life or property, if the proposed night work is in the general public interest; and he shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise emissions, as he deems to be required in the public interest.

END OF DOCUMENT

**REVISED
SITE MITIGATION PLAN
INDIA BASIN
700 Innes Avenue
San Francisco, California**

Prepared For:

**Build Inc.
315 Linden Street
San Francisco, California 94102**

Prepared By:

**Langan Engineering and Environmental Services, Inc.
555 Montgomery Street, Suite 1300
San Francisco, California 94111**

**Karianne Staehlin
Senior Staff Scientist**

**Peter J. Cusack
Senior Associate/VP**

**22 May 2017
Project No. 731626702**

LANGAN

22 May 2017

Ms. Courtney Pash
Build, Inc.
315 Linden Street
San Francisco, California 94102

**Subject: REVISED Site Mitigation Plan
India Basin
700 Innes Avenue
San Francisco, California
Langan Project: 731626702**

Dear Ms. Pash:

Langan Engineering and Environmental Services, Inc. (Langan) has prepared the attached Revised Site Mitigation Plan (SMP) for the India Basin (Site) property, located at 700 Innes Avenue in San Francisco, California. The Revised SMP has been prepared to address soil and groundwater management practices and procedures to be employed during the proposed Site development activities, based on the analytical results of previous investigations conducted at the Site and based on recent Site development plans.

As qualified persons, we judge that the mitigation measures identified, if completed, will mitigate significant environmental or health and safety risks, if any, which may be caused by the materials beneath the Site in question.

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) 955-5200.

Sincerely yours,
Langan Engineering and Environmental Services, Inc.

Karianne Staehlin
Senior Staff Scientist

Peter J. Cusack
Senior Associate/VP

\\Langan.com\data\SFO\data7\731626702\Office Data\Reports\Environmental\India Basin_SMP\731626702_DRAFT SMP Report.docx

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**REVISED
SITE MITIGATION PLAN
INDIA BASIN
700 Innes Avenue
San Francisco, California**

1.0 INTRODUCTION

On behalf of Build Inc. (Client and Owner), Langan Engineering and Environmental Services, Inc. (Langan) presents this Revised Site Mitigation Plan (SMP) for the proposed India Basin (Site) development, located at 700 Innes Avenue, in San Francisco, California (Figure 1). As shown on Figure 2, the approximately 17-acre Site is bound by the San Francisco Bay to the northwest, north, and northeast; Earl Street to the east and southeast; and Innes Avenue and Hudson Avenue to the southwest. Arelious Walker Drive transects the Site from Innes Avenue and terminates within the northern portion of the Site, near the current shoreline and San Francisco Bay. With the exception of the structures fronting Innes Avenue, the Site is comprised of undeveloped vacant land.

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).

This Revised SMP has been prepared to address soil and groundwater management practices and procedures to be employed during the construction activities associated with the proposed Site development, which will include earth-moving activities and groundwater dewatering. The purpose of this Revised SMP is to provide measures to mitigate the potential long-term environmental or health and safety risks to protect construction workers, nearby residents, workers, and/or pedestrians, caused by the presence of contaminated materials in the soil. This Revised SMP also contains contingency plans to be implemented during soil excavation if unanticipated hazardous materials are encountered.

This Revised SMP has been prepared to satisfy applicable federal, state, and local criteria. This Revised SMP will also provide guidelines for the contractor to prepare Site-specific documents

for health and safety measures to be employed during development activities to protect the public and the environment.

2.0 PROPOSED PROJECT DESCRIPTION

The proposed development will include residential and mixed-used development with open space at northeastern portion of Site. There will be a one- to three- level underground concrete garage with a mix of one- to 14-story wood, steel, and/or concrete buildings above grade. In order to balance the Site, the average elevation will rise by several feet. In general, the earthwork activities will consist of re-grading the project areas to meet design grades, followed by the construction of above-grade features.

3.0 BACKGROUND AND PREVIOUS INVESTIGATIONS

Langan Treadwell Rollo (currently Langan) previously conducted the following environmental investigations at the Site, details of which are included, as necessary, when summarizing the Site background:

- AEI Consultants, Phase I Environmental Site Assessment, 110 Undeveloped Parcels Bound by India Street, Innes Avenue, Earl Street, and Griffith Street, San Francisco, San Francisco County, California 94124, dated 14 January 2013;
- Langan Treadwell Rollo, *Draft Phase II Environmental Site Assessment, India Basin, San Francisco, California* dated 2 September 2014; and
- Langan Treadwell Rollo, *Updated Phase I Environmental Site Assessment, India Basin, San Francisco, California* dated 28 October 2014.

The approximately 17-acre Site is currently bound by the San Francisco Bay to the northwest, north, and northeast; Earl Street to the east and southeast; and Innes Avenue and Hudson Avenue to the southwest (Figure 2). Arelious Walker Drive transects the Site from Innes Avenue and terminates within the northern portion of the Site, near the current shoreline and San Francisco Bay. With the exception of the structures fronting Innes Avenue, the Site is comprised of undeveloped vacant land. Current elevations at the high end of the Site, fronting Innes Avenue, vary from 45 to 30 feet¹; 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

¹ Elevations are referenced to San Francisco City datum.

Bay. Land use in the immediate vicinity of the Site is primarily, residential, commercial and light industrial.

The primarily undeveloped Site has been vacant land since the 1950s and 1960s. Previously, the Site was submerged in the San Francisco Bay. The Site is primarily northeast of the edge of the historic San Francisco shoreline. Our research indicates that the Site portion of the historic San Francisco shoreline was filled between 1946 and 1968. As indicated in Figure 2, only a small portion of the Site is occupied by land west of the historic shoreline.

Because 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). A previous Phase I Environmental Site Assessment (ESA), conducted by AEI consultants in April 2013, and Langan's October 2014 Updated Phase I ESA, would meet the site history requirements of the Maher Ordinance. Langan conducted an environmental subsurface investigation at the Site in 2014, which would meet the subsurface soil quality requirements of the Maher Ordinance, presented in our September 2014 Draft Phase II ESA, and summarized below.

Our work included collecting soil samples from fifteen geotechnical borings (B-1 through B-15) and seven additional exploratory environmental borings (EB-1 through EB-7), that were drilled in areas to supplement the sampling and analytical data obtained from the previous geotechnical borings. We also collected a single grab-groundwater sample from environmental boring EB-2 (EB-2-GW), and four soil gas samples (EB-3-SG, EB-4-SG, EB-6-SG, and EB-7-SG) from step-out borings drilled at the respective exploratory environmental boring locations. Soil gas samples were collected in general accordance with the California Department of Toxic Substances Control's (DTSC) documents titled "*Advisory – Active Soil Gas Investigation*" dated July 2015 and "*Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*" dated October 2011.

Approximate locations of both geotechnical and environmental borings, previously drilled at the Site, are presented on Figure 2. Additionally, geotechnical boring logs are presented as 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 as Figures A-16 and A-17. Environmental boring logs from this investigation are presented as Figures B-1 through B-7 in Appendix B. The

material encountered was classified according to the soil classification system described on Figure B-8.

4.0 SUBSURFACE CONDITIONS

Subsurface information was obtained from both our geotechnical and environmental subsurface investigations at the Site. The Site is primarily northeast of the edge of the historic San Francisco shoreline, which was filled between 1946 and 1968. In general, the Site is blanketed by fill, underlain by Bay Mud, sand, Old Bay Clay and bedrock.

The Site is blanketed by approximately 16 to 41 feet of fill material and the fill thickness increases towards the San Francisco 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 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 approximately 5 to 33 feet thick. The top five to ten 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 San Francisco Bay. The Old Bay Clay is underlain by strong, relatively incompressible residual soil (completely weathered rock) consisting of very stiff to hard clay and very dense sand and gravel. The residual soil is approximately three 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 Innes 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. During our investigations, groundwater was encountered at various depths across the Site, ranging from approximately seven feet bgs (at the northeast area) to 33 feet bgs (southwest area across

Hudson Avenue). The groundwater level across the Site is anticipated to vary a few feet seasonally and with the fluctuations and tidal actions of the San Francisco Bay. Given the depth of the proposed excavation activities, groundwater will most likely be encountered during Site development activities.

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

4.1 Soil Sampling and Analytical Results

All soil 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.

Soil analytical results for parameters other than metals are summarized in Table 1 and were compared to the San Francisco Bay Regional Water Quality Control Board's (RWQCB) direct exposure human health risk environmental screening levels (ESLs) for residential, commercial/industrial, and construction workers (RWQCB, Table S-1, February 2016 [Rev. 3]). Total petroleum hydrocarbons (TPH) as gasoline (TPHg) were detected above the laboratory reporting limit (1.0 milligrams per kilogram (mg/kg)) in 18 of the 74 samples analyzed at concentrations ranging from 1.1 mg/kg to 13 mg/kg. TPH as diesel (TPHd) was detected above the laboratory reporting limits (1.0 and 2.0 mg/kg) in 69 of the 74 samples analyzed at concentrations ranging from 1.6 mg/kg to 210 mg/kg. TPH as motor oil (TPHmo) was detected above the laboratory reporting limit in 69 of the 74 samples analyzed at concentrations ranging from 7.1 mg/kg to 2,800 mg/kg. None of the low-level petroleum hydrocarbon concentrations detected in shallow soils exceeded the established ESLs.

Trace concentrations of volatile organic compounds (VOCs) were detected in five of the 30 samples analyzed, none of which exceeded the ESLs, where established. Low level concentrations of SVOCs were detected in two of the 29 samples analyzed, most of which did not exceed the established ESLs, with one exception. Benzo (a) anthracene was detected at a concentration of 2.2 mg/kg in sample EB-6 at a depth of ten feet bgs, which exceeded the residential direct exposure ESL of 0.16 mg/kg, but does not exceed the commercial/industrial and construction worker direct exposure ESLs of 2.9 mg/kg and 16 mg/kg, respectively.

Trace levels of organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs) were detected in two of the 22 samples analyzed, none of which exceeded the ESLs, where established.

Total cyanide was detected above the laboratory reporting limit (0.10 mg/kg) in 5 of the 11 samples analyzed at concentrations ranging from 0.13 mg/kg to 0.25 mg/kg. Soil pH at the Site ranges from 7.69 to 10.2, in the 11 soil samples analyzed. Acid soluble sulfide and asbestos were not detected at or above laboratory reporting limits in any of the samples analyzed.

The metal analytical results are summarized in Table 2 and were compared to the general background concentrations for Bay Area soils², RWQCB direct exposure human health risk ESLs for residential, commercial/industrial, and construction workers (RWQCB, Table S-1, February 2016 [Rev. 3]), and State of California total threshold limit concentrations (TTL). Some samples which detected elevated levels of metals were also analyzed for soluble metals using the California waste extraction test (WET) method. Any samples exceeding the soluble threshold limit concentration (STLC) value after analysis with the WET method were submitted for analysis by the Federal toxicity characteristic leaching potential (TCLP). These analyses were run to assess if metal concentrations in soil exceeded State and/or Federal hazardous waste criteria. The solubility analyses are a requirement of accepting landfill facilities for any material that will be excavated, transported, and/or disposed off-Site. Based on current Site development plans, most of the on-Site soil material is expected to remain on-Site, in an effort to minimize off-Site transport and disposal.

Total lead was detected in each of the 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 22 soil samples exceeded the residential direct exposure ESL; a total of four soil samples exceeded the commercial/industrial direct exposure ESL; and a total of six soil samples exceeded the construction worker direct exposure ESL. Additionally, 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 laboratory reporting limit (0.20 mg/L) in six of the 20 samples analyzed

² Background concentration ranges of metals in Bay Area soils, Appendix A, Table A-2 from Environmental Resources Management. Feasibility Study, Hookston Station, Pleasant Hill, California. July 2006.

at concentrations ranging from 0.28 mg/L to 1.2 mg/L, none of which exceeded the Federal hazardous waste criteria of 5.0 mg/L.

Total nickel was detected in each of the 59 samples analyzed at concentrations ranging from 20 mg/kg to 2,600 mg/kg. All of the concentrations detected were within background concentrations for Bay Area soils, with one exception. Sample EB-1-3 detected total nickel at a concentration of 2,600 mg/kg, which exceeded the State of California hazardous waste criteria of 2,000 mg/kg for total nickel. Additionally, a total of four soil samples exceeded the residential direct exposure ESL and a total of 18 soil samples exceeded the construction worker direct exposure ESL.

Total mercury was detected in 22 of the 26 samples analyzed at concentrations ranging from 0.058 mg/kg to 24 mg/kg. All of the concentrations detected were within background concentrations for Bay Area soils, with one exception. Sample EB-3-3 detected total mercury at a concentration of 24 mg/kg, which exceeded the State of California hazardous waste criteria and the residential direct exposure ESL for mercury, 20 mg/kg and 13 mg/kg, respectively.

Total cobalt was detected in each of the 26 samples analyzed at concentrations ranging from 4.3 mg/kg to 82 mg/kg. Most of the concentrations detected were within background concentrations for Bay Area soils. A single soil sample exceeds the residential direct exposure ESL and a total of three soil samples exceed the construction worker direct exposure ESL.

Chromium was detected in each of the 59 samples analyzed at concentrations ranging from 28 mg/kg to 1,300 mg/kg. None of the samples exceeded the State of California hazardous waste criteria of 2,500 mg/kg for total chromium. 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 laboratory reporting limits in each of the samples analyzed at concentrations of 0.067 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.

4.2 Groundwater Sampling and Analytical Results

One grab groundwater sample (EB-2-GW) was collected from the exploratory environmental boring EB-2. 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.

The groundwater analytical results for non-metals are presented in Table 3 and were compared to the RWQCB direct exposure human health risk ESLs for MCL priority and human health risk based only (RWQCB, Table GW-1, February 2016 [Rev. 3]). TPHg and VOCs were not detected above the laboratory reporting limits in the single groundwater sample analyzed. TPHd and TPHmo were detected above the laboratory reporting limits at concentrations of 510 micrograms per liter ($\mu\text{g/L}$) and 4,200 $\mu\text{g/L}$, respectively. The TPHd concentration detected in the groundwater sample analyzed exceeded both ESLs, 150 $\mu\text{g/L}$, respectively. The groundwater analytical results for metals are presented in Table 4. The metal concentrations were within background ranges found in the western United States.

4.3 Soil Gas Sampling and Analytical Results

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 July 2015 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.

Soil gas analytical results are summarized in Table 5 and were compared to the RWQCB human health risk ESLs for residential and commercial/industrial sub-slab/soil gas vapor intrusion (RWQCB, Table SG-1, February 2016 [Rev. 3]). Trace concentrations of several VOCs, including tetrachloroethylene (PCE), TCE, cis-1,2-DCE, benzene, toluene, ethylbenzene, and total xylenes (BTEX), tetrahydrofuran, and carbon disulfide were detected at or above laboratory reporting limits. Of the VOCs detected in the soil gas samples analyzed, only benzene was detected at concentrations which exceeded ESLs. Benzene was detected in each of the four samples analyzed at concentrations ranging from 26 micrograms per cubic meter ($\mu\text{g/m}^3$) to 67 $\mu\text{g/m}^3$. Two samples (EB-4-SG and EB-6-SG) detected benzene concentrations at 67 $\mu\text{g/m}^3$ and 50 $\mu\text{g/m}^3$, respectively, which exceeded the residential ESL for benzene, 48 $\mu\text{g/m}^3$, but did not exceed the commercial/industrial ESL for benzene, 420 $\mu\text{g/m}^3$. No other soil gas detections were reported at concentrations that exceeded their respective ESLs, where established.

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.

5.0 ANALYSIS OF FINDINGS

Based on the analytical results from our previous subsurface investigations, some of the fill material at the Site detected concentrations of petroleum hydrocarbons and heavy metals which exceeded residential, commercial/industrial, and/or construction worker direct exposure ESLs. Also, some of the fill material exceeded the State of California hazardous waste criteria, based on if the material will be transported and disposed off-Site. Overall, the fill material poses low to moderate potential health risks that will need to be addressed as part of development activities. 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.

6.0 NOTIFICATIONS

The General Contractor (GC) will notify Langan at least one week prior to conducting intrusive Site work, including any soil handling activities. The GC will notify Langan, and Langan will notify the San Francisco Department of Public Health (SFDPH) of dust or odor complaints from nearby businesses, residents, or passersby, if any. The GC will inform Langan if unexpected conditions or features are observed during Site work, that suggest the potential presence of petroleum or hazardous materials in soil or groundwater at the Site, in areas or quantities, or at concentrations that are likely to be inconsistent with the previous analytical results and impacts at the Site.

7.0 ENVIRONMENTAL MITIGATION MEASURES

The results of our previous environmental investigation at the Site indicate that low levels of petroleum hydrocarbons and VOCs were detected in the Site's soil and groundwater. Additionally, elevated total and soluble metals concentrations were detected in the Site's shallow soil and fill material. If the material planned for off-Site transport and disposal contains elevated total and soluble metal concentrations which exceed the State of California hazardous waste criteria, it will be treated as hazardous waste and transported to an accepting landfill

facility. The presence of these compounds poses soil and groundwater management and potential health and safety issues to be addressed as part of the Site development activities. The soil and groundwater management objectives for the Site are to minimize exposure to construction workers at the Site, nearby residents and/or pedestrians, and future users of the Site to constituents in the soil and groundwater.

The procedures outlined in this Revised SMP are designed to meet SFDPH requirements relating to the soil and groundwater impacts at the Site, and are required by the Maher Ordinance. In addition, the procedures in this Revised SMP are intended to facilitate compliance with applicable federal, state, and local laws and regulations, applicable to earth work activities at the Site as a result of the reported petroleum or hazardous substance concentrations in soil or groundwater. Before intrusive earthwork begins at the Site, an on-Site pre-field meeting will be conducted between Langan and the GC to review the locations of petroleum, and heavy metal-impacted soils. The meeting will also discuss the Site-specific health and safety plans and discuss the typical observations associated with contaminated soils.

7.1 Overview

The proposed construction activities will disturb soil during the mass excavation, Site grading, the construction of new foundations, and utility lines. At this time, the proposed foundation systems will consist of a combination of deep auger cast pile and/or driven piles and mat foundations. During all soil handling activities involving the foundation elements, dust control measures will be implemented to reduce potential exposure. The GC and contractors will be responsible for establishing and maintaining proper health and safety procedures to minimize worker and public exposure to Site contaminants during construction of the foundations.

Subsequent to the construction of the proposed Site structures, contaminant exposure risks to future workers and visitors will be limited to shallow subsurface materials. Future workers who could come in contact with contaminants will be protected by institutional controls that will be developed and implemented.

Mitigation measures will consist of handling soils safely during construction activities, and providing a clean layer of cover soil or other surfacing (hardscape, landscape, buildings, etc.) to prevent future exposure to contaminants once the redevelopment activity has been completed. Mitigation measures include the following:

- In areas where Site development plans include planting, trees, recreational access areas, and/or sandy/gravelly beaches, fill soil that exceeds direct exposure ESLs will be removed to a depth of two feet below final grade, and replaced with suitable materials.
- If soil is left in-place which exceeds direct exposure ESLs, it will be covered by a visual barrier (orange plastic fencing) prior to covering with clean fill.
- In areas where the Site development proposes surface hardscape, such as concrete, buildings, parking lots, and/or pathways, shallow fill material will not be removed as part of mitigation, as the hardscape will provide an adequate barrier to exposure of future Site users to the underlying soil.
- In Site areas where proposed structures are planned, localized volumes of the shallow fill material may need to be removed, as necessary, to allow for structural foundation elements to be built.

It is the intent of the Site development plans to maintain an overall cut-fill balance as a result of re-grading activities. It is not expected that excess materials will be generated and need to be exported and disposed of off-Site. However, in the event that soil export is necessary, waste materials will be properly profiled, classified and disposed of according to current laws and regulations.

7.2 Health and Safety Measures

Construction workers performing excavation and soil handling activities may encounter soil material which previously detected concentrations of petroleum hydrocarbons and heavy metals which exceeded residential, commercial/industrial, and/or construction worker direct exposure ESLs. Additionally, the potential presence of asbestos-containing serpentinite rock in the fill materials and Site bedrock material represents a possible source of airborne asbestos fibers and a potential inhalation risk for construction workers and other passive receptors downwind of the construction area.

Based on the previously identified Site contaminants, the primary exposure pathways of concern are inhalation of dust from the subsurface, ingestion of soil particles, and dermal contact during excavation and soil handling activities. Worker notification and other risk management procedures should be implemented by the GC and/or their contractors to reduce potential human exposures during construction activities. The GC will be responsible for

establishing and maintaining proper health and safety procedures to minimize worker and public exposure to Site contaminants during construction.

7.3 Health and Safety of Personnel

Potential health risk to on-Site construction workers and the public will be addressed by developing and implementing a health and safety program. The GC will be responsible for establishing and maintaining proper health and safety procedures to minimize worker and public exposure to Site contaminants during construction. It is the GC's responsibility to communicate the Site information, including this Revised SMP, to its subcontractors. As part of its health and safety program, the GC will prepare a Site-specific Health and Safety Plan (HASP) and identify a Health and Safety Officer (HASO), as outlined in the subsections, below.

7.4 Health and Safety Issues

On the basis of our experience on similar properties, there are potential health and safety risks associated with the heavy metals and petroleum hydrocarbons detected at the Site for construction workers, nearby residents and/or pedestrians, and future users of the Site. The routes of potential exposure to the petroleum hydrocarbons and metals could be through three pathways: 1) dermal (skin) contact with the soil; 2) inhalation of dusts; and 3) ingestion of the soil.

The most likely potential for human exposure to the petroleum hydrocarbons and metals in the soil will be during soil excavation operations. The GC will be responsible for establishing and maintaining proper health and safety procedures to minimize worker and public exposure to Site contaminants during construction.

7.4.1 Site-Specific Health and Safety Plan

The GC will be responsible for the preparation of a Site-specific HASP. The purpose of the HASP will be to establish procedures to address potential chemical and physical hazards to field personnel and off-Site receptors that may result from excavation of impacted soils at the Site. The HASP will describe the health and safety requirements, i.e. trained in accordance with Section 1910.120 of 29 Code of Federal Regulations (HazWoper training), specific personal hygiene, and monitoring equipment that will be used during construction to protect and verify the health and safety of construction workers and the general public from exposure to constituents in the soil. In addition, emergency response actions will be described in the HASP. The GC is responsible for verifying that on-Site project personnel have read and will adhere to

the procedures established in the HASP. A copy of the plan will be kept on-Site during field activities. The HASP will be reviewed and updated as necessary during implementation of the soil excavation.

7.4.2 Health and Safety Officer

The Site's HASO identified in the HASP will be on-Site at all times during excavation activities to oversee implementation of the HASP and to ensure that all health and safety measures are maintained. The HASO will have authority to direct and stop (if necessary) all construction activities in order to ensure compliance with the HASP.

The general public will be protected through the following measures:

- the Site will be fenced;
- exposed soil at the construction Site will be watered at least twice a day to prevent visible dust from migrating off-site;
- soil stockpiles will be covered;
- water will be misted or sprayed during the loading of soil onto trucks for off haul;
- trucks transporting contaminated soil will be covered with a tarpaulin or other cover;
- the wheels of the trucks exiting the Site will be cleaned prior to entering public streets;
- public streets will be swept daily if soil is visible; excavation and loading activities will be suspended if winds exceed 20 miles per hour; and
- the fence will be posted with requirements of the safe drinking water and toxic enforcement act (Proposition 65).

7.5 General Soil Handling Procedures

The soil handling procedures described in this section are intended to support compliance with federal, state, and local requirements, reduce the potential for off-Site migration, and reduce the potential for exposure by construction workers, nearby residents and workers, and pedestrians, to constituents in Site soil and groundwater.

7.6 Soil Management

The proposed construction activities will disturb soil during the development activities associated with shallow excavation, Site grading, and the construction of new foundations. During all soil handling activities, dust control measures will be implemented to reduce potential exposure. These measures may include moisture-conditioning the soil and covering

the exposed soil and stockpiles with weighed down plastic sheeting to prevent exposure of the soil.

The Site's HASP should contain additional dust monitoring, action levels, dust control measures, and work stoppage provisions that will be followed during construction activities in addition to those described in this Revised SMP.

7.6.1 On-Site Movement of Soils

Current Site development plans, specific to shallow excavation and grading activities, are to minimize the off-Site movement and disposal of Site material. Soil within the boundaries of the Site may be moved within or between various portions of the Site, managed and re-used without need for sampling, provided the soils are not from within 20 feet of discovered impacted soil and no unanticipated conditions are encountered. Prior to moving and reusing soil on the Site, Langan must be notified and approve of the proposed use. Langan-approved representatives must also visually inspect the soil proposed for reuse prior to reusing the soil.

Trucks used to transport soils, if any, will be loaded in a manner to minimize spillage and blowing of soil. Movement of soils on-Site will be managed in accordance with the Dust Monitoring Plan (DMP) (prepared by others), discussed in Section 7.7.

7.6.2 Soil Excavation, Grading, and Placement

Build Inc. and their contractors will obtain the necessary grading permits and comply with applicable rules and regulations for construction-related project activities, as necessary. A stormwater pollution prevention plan (SWPPP) will be prepared and implemented, including associated storm water best management practices (BMPs). All field activities will be conducted in accordance with federal, state, and local requirements for worker safety, such as Occupational Safety and Health Administration (OSHA) regulations for excavation safety, equipment operation, and exposure to dust and other constituents.

Soil excavation, grading, and placement will be performed by a licensed engineering contractor with a Class A license and Hazardous Substance Removal Certification, using heavy earth-moving equipment. Langan will provide field oversight on behalf of Build Inc. to document the origin and destination of all excavated soil. If necessary, excavated soil will be temporarily stockpiled and covered with plastic sheeting pending relocation, segregation, or off-haul. If

excess materials are off-hauled, waste profiling of the material will be completed and documented.

7.6.3 Petroleum Hydrocarbons in Fill Materials

Petroleum hydrocarbons may be encountered during proposed earthwork at levels considered to be a nuisance because of odor and appearance. The California Health and Safety Code (§ 41700 [1999] Public Nuisance) and the Bay Area Air Quality Management District (BAAQMD) (Regulation 1-301 Public Nuisance) have regulations prohibiting the emissions of air contaminants which cause nuisance or annoyance to the surrounding community. Though contact with the petroleum hydrocarbons is not considered a **major** health risk to construction workers, management of the materials during construction is recommended to comply with the California Health and Safety Code and BAAQMD regulations.

7.6.4 Clean Soil Acceptance Criteria

Soils to be reused on-Site from on-Site excavation activities and stockpiles will meet residential direct exposure ESLs; except for arsenic for which the RWQCB-approved background value of 10 mg/kg will be used. Sampling frequency and analytical requirements for on-Site and off-Site fill sources will follow the *DTSC Information Advisory Clean Imported Fill Materials*, dated October 2001.

7.6.5 Soil Import Criteria

Unless from a documented clean source such as a quarry, soil imported onto the Site will be tested in accordance with the "Clean Imported Fill Material" information advisory developed by the California Department of Toxic Substances Control (DTSC, 2001). In accordance with the DTSC information advisory, import fill will be analyzed for the following:

- TPHd and TPHmo by EPA Method 8015 modified with silica gel cleanup by EPA Method 3630;
- TPHg by EPA Method 8015 modified;
- HVOCs by EPA Method 8260;
- SVOCs by EPA Method 8270C;
- CAM 17 Metals by EPA Method 6020;
- OCPs by EPA Method 8081 (for fill source areas formerly used as agricultural land);

- Chlorinated herbicides by EPA Method 8151 (for fill source areas formerly used as agricultural land);
- PCBs by EPA Method 8082; and
- Asbestos by California Air Resources Board Method 435 (CARB).

For in-place import material, the following sampling frequency is required:

- Two acres or less – a minimum of four samples;
- Two to four acres – a minimum of one sample per 1/2 acre;
- Four to 10 acres - a minimum of eight samples; and
- Greater than 10 acres- a minimum of eight locations with four subsamples per location.

For excavated and stockpiled import material, the following sampling frequency is required:

- Up to 1,000 cubic yards (cy) – one sample per 250 cy;
- 1,000 to 5,000 cy – 4 samples for the first 1,000 cy plus one sample per each additional 500 cy; and
- Greater than 5,000 cy – 12 samples for the first 5,000 cy plus 1 sample per each additional 1,000 cy.

If the chemical properties of an import fill source are known (i.e. quarried material) sampling may not be required. Soil quality parameters for acceptable imported soil will be based on RWQCB direct exposure human health risk ESLs for residential use (RWQCB, Table S-1, February 2016 [Rev. 3]). For arsenic, one half of background level in the Bay Area of 10 mg/kg will be used in place of the ESL. Import soil with visual or olfactory evidence of petroleum hydrocarbons is prohibited.

7.6.6 Soil Stockpiling and Sampling

If soil stockpiling of suspected contaminated soil is to be performed, the excavation contractor shall establish appropriate soil stockpile locations on the Site to properly segregate, cover, control dust, profile, and manage the excavated soil. At a minimum, stockpiled soils will be placed on top of one layer of 10-mil polyethylene sheeting (or equivalent), such as Visqueen. When stockpiled soil is not actively being handled, top sheeting will be adequately secured so that all surface areas are covered.

If needed, chemical testing of the stockpiled soil will be performed to profile the soil for disposal. Soil profiling criteria depends on the proposed landfill location or off-Site receiving

facility. These procedures shall be established by the excavation contractor and coordinated with the proposed landfills prior to initiating soil excavation. Langan shall be provided documentation from the excavation contractor that the soils from the Site to the proposed acceptance/landfill facilities have been approved. Typical soil profiling requirements for landfills are one four-point composite sample per 250 cubic yards of material to be disposed. If soil samples are required for analysis, the samples shall be collected using a hand-driven sampler with an inside diameter of two inches, lined with a clean stainless steel tube, and driven into the soil. The ends of the sample tube shall be covered with Teflon and sealed with plastic end caps, and placed into an ice-chilled cooler until delivery under chain-of-custody protocol to a California-certified analytical laboratory. The soil samples collected from the stockpile shall be identified by using a progressive numbering sequence with the date of the sample collection and the location. All appropriate regulatory sampling methods, holding times, and detection limits shall be followed.

7.6.7 Soil Segregation

The result of Langan's previous subsurface investigation indicates that some of the shallow fill material (top ten feet bgs) underlying the Site contains low concentrations of petroleum hydrocarbons and elevated and hazardous concentrations of heavy metals.

Any excavated or exposed on-Site soils, exhibiting odors and/or other visual evidence of contamination exceeding soil cleanup goals, discovered during Site grading activities will be properly stockpiled on-Site to determine if it can be reused on-Site or will require off-Site disposal. The soil will be characterized by sampling and analyzing for petroleum hydrocarbons, metals, and VOCs and any other contaminated of concern (COCs), as deemed appropriate. All handling of excavated soils will be consistent with Regulation 8, Rule 40 of the BAAQMD in order to limit/control the potential emission of organic compounds and heavy metal dust particles to ambient air from the earth work activities and from the soil stockpiles.

If the analytical results indicate that concentrations of COCs in the sample(s) of excavated excess soil exceed their respective ESLs, the soil will be stockpiled separately and characterized appropriately for off-Site disposal. If COCs in the excavated excess soil are below their respective ESLs, and not required to be disposed off-Site, it may be reused on-Site, as discussed in Sections 7.6.2 and 7.6.3.

7.6.8 Soil Disposition

The contractor will establish direct truck loading scheduling and/or soil stockpile locations on the Site to properly segregate, cover, moisture control, and profile the excavated soil. Soil profiling criteria will ultimately depend on the acceptance criteria of the facilities receiving the soil. These procedures will be established by the excavation contractor and coordinated with the proposed facilities prior to initiating soil excavation. Langan shall be provided documentation from the excavation contractor that the soils from the Site development project to the proposed acceptance facilities have been approved. The contractor, on behalf of the owner, will be responsible for tracking final soil dispositions. Any excavated soil considered Federal RCRA or State of California non-RCRA hazardous waste will be tracked using the Uniform Hazardous Waste Manifest System (USEPA Form 8700-22), as applicable. Soil not considered hazardous waste will be tracked using non-hazardous bills of lading. These two systems will be used to comply with appropriate state and local requirements. All manifest and bills of lading will be provided to Langan during or subsequent to said excavation activities.

The contractor will arrange for transportation of all wastes off-Site to the appropriate disposal facility using a permitted, licensed, and insured transportation company. Transporters of hazardous waste must meet the requirements of 40 CFR 263 and 22 CCR 66263. All trucks transporting bulk hazardous waste will be properly lined and covered with compatible materials.

Soil is to be exported off-Site that is characterized as a hazardous waste, an appropriate USEPA Generator Identification Number will be recorded on the hazardous waste manifests used to document transport of hazardous waste off-site. The hazardous waste transporter, disposal facility, and U.S. Department of Transportation (DOT) waste description required for each manifest will be determined on a case-by-case basis. A description of the number of containers being shipped, the type of container, and the total quantity of waste being shipped will also be included on each manifest.

The excavation contractor will be responsible for accurate completion of the hazardous waste manifests and nonhazardous bills of lading. Records of all wastes shipped off-Site will be maintained by the owner and will be made available for inspection on request. The final destination of wastes transported off-Site will be documented in the Soil Management Completion Report (Section 8.0).

The following records will be kept by the owner for the indicated length of time:

1. Copies of uniform hazardous waste manifests signed by the designated waste disposal facility will be retained for at least five years from the date the waste was accepted by the initial transporter.
2. All records pertaining to the characterization of hazardous or nonhazardous waste will be retained for a minimum of three years.

7.7 Dust Monitoring Plan

Prior to initiating construction activities, a detailed Dust Monitoring Plan (DMP) should be prepared and will outline dust control and monitoring procedures to be implemented during potential dust generating activities. Dust control will be accomplished through implementation of best management practices, including engineering controls identified under Sections 7.4 through 7.6. Misting or spraying will be performed to sufficiently reduce fugitive dust emissions, but limited to prevent water runoff. Additionally, efforts will also be made to minimize the material drop height from an excavator's bucket onto stockpiles and/or into transport trucks.

The DMP will be submitted to the SFDPH for review and approval. Subsequent to approval, the DMP will be implemented to reduce potential exposure during excavation and loading operations to comply with Article 22B of the San Francisco Public Health Code. In accordance with Article 22B, projects that disturb more than 50 cubic yards of soil and are greater than one-half acre, must have "sensitive receptors" located within 1,000 feet of the Site boundary. This document will contain measures to protect construction workers and the public including: dust control measures and work stoppage provisions that will be followed during construction activities. The plan will, at a minimum, specify:

- Conditions when real-time dust monitoring is required.
- The dust monitoring equipment to be used, as well as the minimum detection limit and equipment calibration requirements.
- Monitoring frequency and locations.
- Reporting requirements.
- Dust threshold levels and proposed corrective action responses.
- A figure showing the approximate 1,000 foot sensitive receptor zone around the Site.

General dust control measures that may be used at the Site include, but are not limited to the following:

- Covering soil stockpiles with plastic sheeting;
- Watering uncovered ground surface at the Site; use of water will be limited to prevent runoff;
- Misting or spraying of soil during excavation and loading;
- Emplacement of gravel and/or rubble plates on-Site access roads as feasible;
- Trucks hauling soil from the Site will be covered;
- Visible dust will be monitored during excavation and subsurface demolition;
- The soil drop height from an excavator's bucket onto soil piles or into transport trucks will be minimized;
- Windbreaks will be deployed as necessary;
- If necessary, the area of excavation may be limited to reduce dust generation;
- Site vehicle speed limits;
- Street sweeping;
- Termination of excavation if winds exceed 25 mph; and
- Addition of soil stabilizers and other responses as needed.

Additionally, during excavation and subsurface activities, a Site-specific DMP will be implemented, which includes possible monitoring. Dust monitoring would include the following:

- Analysis of wind direction;
- Dust monitors at the work zone and Site perimeter and appropriate record keeping, including visible inspection; and
- Establishing a hotline for community response.

The dust monitors shall be capable of continuous, real-time monitoring, data-logging, and data transmission, measurement of air-borne particulates 10 micrometers in size (PM-10) or less, measurement of a 15-minute time-weighted average (TWA), a detection limit range of between

one microgram per cubic meter ($\mu\text{g}/\text{m}^3$) and 400,000 $\mu\text{g}/\text{m}^3$ and be able to trigger visual and/or remote alarms consisting of a flashing light, or similar, to alert on-Site monitoring and/or contractor personnel an action level has been exceeded. The remote alarm, if used, will consist of a text message, email, phone message, or similar, to alert off-Site monitoring personnel an action level has been exceeded. The public will be notified as necessary and the GC will take appropriate corrective actions.

Except in the case of heavy fog or precipitation events, the dust monitors will be set up on a daily basis, for the first week of each new, potential dust-generating activity conducted at the Site (e.g., one week of dust monitoring at the start of grading, one week of dust monitoring at the start of excavation, etc.). The dust monitors will be set up by dust monitoring personnel at the start of each work-day prior to the start of the dust generating activity, and taken down at the conclusion of each work-day. Additionally, dust monitoring personnel will be present on-Site to monitor field conditions and consult with contractor personnel on suitable dust suppression measures at:

- The start of each new dust-generating activity, and for one to two days thereafter depending on the observed Site conditions;
- The day after an exceedance of the daily average action level, if any;
- The day of and/or the day after an exceedance of the 15-minute TWA action level, if any;
- The day of and/or the day after visual observation of fugitive dust, if any; and
- The day of and/or the day after neighbor complaints of dust, if any.

Two dust monitors will be placed at the Site perimeter at an upwind location, and at a downwind location. Additional dust monitors will be placed at the northern and northeastern boundaries near the adjacent residential buildings during all excavation and soil handling activities, if needed. Wind direction will be evaluated based on a wind sock or flag located at the Site as well as a weather forecasting and reporting website. Dust monitor locations will be re-located in the case of significant changes in the wind direction. The locations of the dust monitors will be recorded in dedicated field logs.

Action levels for analytes in dust will be calculated for the Site and presented in the Site-specific DMP. The action levels will be defined as the concentration of total dust in the air at which the contaminant of concern would be at its established OSHA Permissible Exposure Limits (PEL of 0.05 mg/m^3 for lead) and the highest detected concentration of the analyte in soil

(lead in soil of 510 mg/kg). If the daily average from perimeter monitoring exceeds the California Air Resources Board (CARB) standard of 50 $\mu\text{g}/\text{m}^3$ or the 15-minute TWA, additional dust control measures will be implemented. The daily average will be calculated over a 24-hour period based on the continuous dust monitoring data collected over the course of the work day. Baseline dust conditions for the day may be either measurements collected from the upwind dust monitoring location prior to the start of the work day or as continuous monitoring data over an 8-hour period collected one to two days before the start of construction activities and extrapolated over the remainder of the 24-hour period.

If dust levels exceed the action levels listed above or if excessive visible dust is observed, additional engineering controls will be immediately implemented by the GC to minimize fugitive dust emissions. If necessary, work will cease until conditions can be controlled so three consecutive measurements are below the established action levels. Visible emissions shall not be allowed to migrate off-Site at any time.

7.8 Odor Control

If needed, odor suppression measures will be implemented by the GC to minimize odor during excavation activities. The means to be considered for minimization of odors during excavation activities includes, but are not limited to: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; (c) Limiting soil excavation or loading to times when meteorological conditions are conducive to conducting operations (e.g., the predominant wind direction does not direct vapors or odors toward a sensitive receptor); (d) use of foams to cover exposed odorous soil and rock material; (e) use of chemical odorants in spray or misting systems (i.e. Simple Green, ODEX, or Biosolve); and, (e) use of staff to monitor odors in surrounding area.

7.9 Noise Control

Control of noise during construction activities will abide by the City of San Francisco Noise Control Ordinance, adopted by San Francisco in 2008 (Police Code Sections 2907 (b); 2907 (c); 2901.12; 2908).

7.10 Groundwater Management

Construction dewatering is anticipated based on development plans. If contaminated groundwater is generated during construction activities, Langan will discuss appropriate

management and discharge of the extracted groundwater with the GC and the San Francisco Public Utilities Commission (SFPUC). Groundwater management activities will be documented in the construction completion report.

7.11 Storm Water Runoff Control

Measures will be implemented to minimize impacts from storm water runoff into the bay and storm drains. This will include the preparation and implementation of a SWPPP and associated BMPs. The GC and their contractors will implement BMPs as needed to protect against surface water inflow, storm water erosion, and internal drainage and runoff. BMPs may include, but are not limited to, covering the stockpile with visqueen or other plastic sheeting and use of hay bales or straw wattles to control runoff.

7.12 Contingency Procedures for Unknown/Unexpected Conditions

The following tasks should be implemented during soil excavation if unknown historical subsurface features and/or unanticipated hazardous materials are encountered. Such materials may include unaccounted for underground storage tanks (USTs) and associated product lines, sumps, and/or vaults, former monitoring wells, and soil with significant petroleum hydrocarbon odors and/or stains:

- Stop work in the area where the suspect material is encountered and cover with plastic sheets;
- Notify the GC's HSSO and Site superintendent. The GC will request that Langan conduct a Site inspection and will consult with the Langan regarding appropriate follow-up actions in the suspect area. Langan will notify the SFDPH (if needed) of Site conditions that indicate a material threat to human health or the environment; and
- Review the existing HASP for revisions, if necessary, and have appropriately trained personnel on-Site to work with the affected materials, once directed by the GC.

If necessary, notifications will be performed, permits will be in place prior to subsurface feature removals, and permit conditions will be followed.

If a UST, product line, sump, or vault is found, SFDPH and San Francisco Fire Department (SFFD) will be notified and a licensed tank removal contractor will properly remove and dispose of the UST. Proper permits and notifications should be in place prior to removal of the UST. If soil staining is observed, the affected soil will be placed in a stockpile on plastic sheets and covered with plastic sheets. Langan will complete soil sampling and analysis tasks for UST

closure in accordance with both SFDPH and SFFD. Langan will collect and analyze soil samples to determine disposal of the material, the extent of the unexpected area of apparent petroleum impacted soil, and that impacted material has been appropriately removed. Soil samples collected from beneath fuel pipelines, if any, will be collected beneath joints and elbows and at a frequency of one sample per 20 linear feet.

If a sump and/or vaults are located during excavation activities, Langan will be contacted for inspection and appropriate action, Langan will notify the SFDPH and SFFD (if needed) of Site conditions. If no liquid, obvious soil staining or odors are noted, the sump and/or vault will be destroyed and disposed of. Langan will collect and analyze soil samples from beneath the sump and/or vault to determine disposal of the material, the extent of the unexpected area of apparent impacted soil, if any, and that impacted material has been appropriately removed. If liquid is present within the sump and/or vault and/or obvious staining and odors are noted, Langan will collect samples for analyses to evaluate proper disposal of the material Langan will collect and analyze samples of the liquid material and soil samples from beneath the sump and/or vault to determine disposal of the material, and the extent of the unexpected area of apparent impacted soil, if any, and that impacted material has been appropriately removed.

If stained soil or odors are noted in association with an unknown subsurface feature, plastic sheeting will be placed over the affected area and Langan will be contacted for inspection and appropriate action. If the stained or odor-containing soil is excavated, the soil will be stockpiled onto plastic sheeting and covered with plastic sheeting. Langan will collect and analyze soil samples to determine disposal of the material, the extent of the unexpected area of apparent petroleum impacted soil, and that impacted material has been appropriately removed. Soil samples collected from beneath fuel pipelines, if any, will be collected beneath joints and elbows and at a frequency of one sample per 20 linear feet.

8.0 SOIL MANAGEMENT COMPLETION REPORT

A Soil Management Completion Report (SMCR) will be prepared that summarizes the soil and groundwater management activities and any subsequent investigative and removal activities that were completed during redevelopment and submitted to SFDPH.

This SMCR will present a chronology of the construction events, a summary of analytical data, a copy of all manifests from the Site, and a description of all soil and groundwater management activities at the Site. The report will also contain laboratory analytical results and figures, as

appropriate, to provide details regarding the amount and type of contamination encountered during various activities. The report will also summarize any residual contaminants remaining on-Site after the completion of redevelopment activities and document that soil handling procedures were implemented in accordance with this Revised SMP. We will discuss the report with SFDPH as appropriate and respond to questions, as needed.

9.0 MODIFICATIONS TO THE REVISED SMP

There may be a need to modify the Revised SMP as Site conditions and/or building plans change. Additionally, as implementation of the Revised SMP proceeds, Build Inc. and/or SFDPH may request revised provisions of the Revised SMP, including those related to the soil and/or groundwater at specified locations within the Site. Such requests for modification will be included in amendments to the Revised SMP.

10.0 LIMITATIONS

This Revised SMP has been prepared on behalf of Build Inc. (Client and Owner) and is specific to the proposed India Basin (Site) development located at 700 Innes Avenue in San Francisco, California. All conclusions and recommendations in this report concerning the Site are the professional opinions of the Langan personnel involved with the project, and this report should not be considered a legal interpretation of existing environmental regulations. Opinions presented herein apply to Site conditions existing at the time of our assessment, and cannot necessarily be taken to apply to Site changes or conditions of which we are not aware and have not had the opportunity to evaluate. This Revised SMP does not address hazardous materials that may be encountered in aboveground structures, such as asbestos-containing materials or lead-based paint.

TABLES

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

Sample ID	Depth (feet)	Sample Date	TPHg	TPHd	TPHmo	Total Cyanide	VOCs	SVOCs	OCPs and PCBs	Sulfide	pH	Asbestos
											@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	--	--	--
B-2-5	5.0	11/02/13	< 1.0	15	79	--	ND	ND	ND	--	--	--
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	--	--	--	--	--	--	ND
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 ¹	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 ²	--	--	--
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 ³	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	--	--	--	ND
B-10-10.5	10.5	03/24/14	1.7	16	230	--	--	--	--	--	--	--
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	--	--	--	--	--	--	ND
B-12-10.5	10.5	03/26/14	< 1.0	< 2.0	< 5.0	--	--	--	--	--	--	--
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 ⁴	--	--	--
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-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	--	--	ND
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 ⁵	--	< 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	--	--	--	--	--	--	--
EB-2-1.5	1.5	08/06/14	< 1.0	86	260	--	ND ⁶	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	--	--	--	--

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San Francisco, California

Sample ID	Depth (feet)	Sample Date	TPHg	TPHd	TPHmo	Total Cyanide	VOCs	SVOCs	OCPs and PCBs	Sulfide	pH	Asbestos
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 ⁷	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 ⁸	Benzo (a) anthracene = 2.2 Fluoranthene = 8.1 Phenanthrene = 2.4 Pyrene = 6.7	< 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	--	--	--	--	--	--	--	--	--	--
Residential Direct Exposure ESL			740	230	11,000	5.3	Various	Various	Various	NE	NE	NE
Commercial/Industrial Direct Exposure ESL			3,900	1,100	140,000	24	Various	Various	Various	NE	NE	NE
Construction Worker Direct Exposure ESL			2,800	880	32,000	21	Various	Various	Various	NE	NE	NE

Notes:

mg/kg - milligrams per kilogram

TPHg - Total Petroleum Hydrocarbons as Gasoline

TPHd - Total Petroleum Hydrocarbons as Diesel

TPHmo - Total Petroleum Hydrocarbons as Motor Oil

VOCs - Volatile Organic Compounds

SVOCs - Semi-Volatile Organic Compounds

OCPs - Organochlorine Pesticides

PCBs - Polychlorinated Biphenyls

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)

¹ - Naphthalene was detected at a concentration of 0.0090 mg/kg

² - g-chlordane and dieldrin were detected at concentrations of 0.0011 mg/kg and 0.0081 mg/kg, respectively

³ - cis-1,2-dichloroethene was detected at a concentration of 0.017 mg/kg

⁴ - Chlordane, a-chlordane, g-chlordane, and dieldrin were detected at a concentrations of 0.27 mg/kg, 0.023 mg/kg, 0.028 mg/kg, and 0.021 mg/kg, respectively

⁵ - Acenaphthene, dibenzofuran, fluoranthene, fluorene, phenanthrene, and pyrene were detected at concentrations of 1.0 mg/kg, 1.0 mg/kg, 1.3 mg/kg, 0.97 mg/kg, 3.7 mg/kg, and 0.85 mg/kg, respectively

⁶ - Trichloroethene (TCE) was detected at a concentration of 0.034 mg/kg

⁷ - Naphthalene was detected at a concentration of 0.060 mg/kg

⁸ - Naphthalene was detected at a concentration of 0.014 mg/kg

-- Sample not analyzed

Various - ESLs for the compounds analyzed and not detected at or above laboratory reporting limits vary, where established

NE - No established ESL

Bold - Detection exceeds residential direct exposure ESL for Benzo (a) anthracene, 0.16 mg/kg

Residential Direct Exposure ESL - San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels - Residential Direct Exposure Human Health Risk Levels in Shallow Soils (Table S-1). February 2016 [Rev. 3]

Commercial/Industrial Direct Exposure ESL - San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels - Com/Ind Direct Exposure Human Health Risk Levels in Shallow Soils (Table S-1). February 2016 [Rev. 3]

Construction Worker Direct Exposure ESL - San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels - Any Land Use/Any Depth Soil Exposure: Construction Worker Direct Exposure Human Health Risk Levels (Table S-1). February 2016 [Rev. 3]

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

Sample ID	Depth (feet)	Sample Date	Antimony	Arsenic	Barium	Beryllium (mg/kg)	Cadmium	Chromium	STLC Chromium (mg/L)	Cobalt	Copper (mg/kg)	Lead	STLC Lead (mg/L)	TCLP Lead	Mercury	Molybdenum	Nickel	(mg/kg)				
																		Selenium	Silver	Thallium	Vanadium	Zinc
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	0.84	61	< 0.50	< 0.50	< 0.50	53	110
B-5-5	5.0	11/02/13	--	--	--	--	0.38	32	--	--	38	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	0.33	--	--	--	--	--	--	--	--
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
Metals Analytical Results in Soil
India Basin
San Francisco, California

Sample ID	Depth (feet)	Sample Date	Antimony	Arsenic	Barium	Beryllium (mg/kg)			Chromium	STLC Chromium (mg/L)	Cobalt (mg/kg)			Copper	Lead	STLC Lead (mg/L)	TCLP Lead	Mercury	Molybdenum	Nickel	Selenium (mg/kg)			Silver	Thallium	Vanadium	Zinc
						Barium	Beryllium	Cadmium			Chromium	Cobalt	Copper								Lead	Selenium	Selenium				
B-11-3	3.0	03/26/14	--	--	--	--	--	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	120	7.0	< 0.20	0.37	0.51	71	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	49	120		
B-12-3	3.0	03/26/14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	270	--	--	--	--	41		
B-12-5.5	5.5	03/26/14	--	--	--	--	--	130	0.13	--	--	5.6	--	--	--	--	--	500	--	500	--	--	--	--	38		
B-12-8	8.0	03/26/14	--	--	--	--	--	180	0.091	--	--	4.9	--	--	--	--	--	450	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	43	28		
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	--	--	--	--	--	--	--	450	--	--	--	--	28		
B-13-3	3.0	03/25/14	--	--	--	--	--	--	--	--	--	42	--	--	--	--	--	--	--	450	--	--	--	--	--	--	
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	< 0.50	47	58			
B-13-8	8.0	03/25/14	--	--	--	--	--	39	--	--	13	--	--	--	--	--	--	37	--	--	--	--	--	--	54		
B-13-10.5	10.5	03/25/14	--	--	--	--	--	--	0.51	--	--	59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
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	1,300	< 0.50	< 0.50	< 0.50	32	64			
B-14-5.5	5.5	03/26/14	--	--	--	--	--	200	--	--	--	92	3.8	--	--	--	760	--	760	--	--	--	--	--	110		
B-14-7.5	7.5	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	53	< 0.50	< 0.50	< 0.50	66	180			
B-15-5.5	5.5	05/10/14	--	--	--	--	3.5	120	--	--	--	410	--	--	--	--	110	--	110	--	--	--	--	260			
B-15-8	8.0	05/10/14	--	--	--	--	< 0.25	76	--	--	--	110	--	--	--	--	63	--	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	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	63	< 0.50	< 0.50	< 0.50	55	56			
EB-1-3	3.0	08/06/14	--	--	--	--	< 0.25	1,300	--	--	--	0.65	--	--	--	--	2,600	--	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	86	< 0.50	< 0.50	1.4	50	220			
EB-2-5	5.0	08/06/14	--	--	--	--	< 0.25	69	0.38	--	97	--	5.5	< 0.20	--	--	67	--	67	--	--	--	--	140			
EB-2-15	15	08/06/14	--	--	--	--	< 0.25	85	0.50	--	6.3	--	--	--	--	--	56	--	56	--	--	--	--	60			
EB-3-1.5	1.5	08/05/14	--	--	--	--	< 0.25	62	0.58	--	25	--	--	--	--	--	180	--	180	--	--	--	--	53			
EB-3-3	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	1,400	< 0.50	< 0.50	< 0.50	42	190			
EB-3-5	5.0	08/05/14	--	--	--	--	< 0.25	49	--	--	--	19	--	--	--	--	180	--	180	--	--	--	--	81			
EB-4-1.5	1.5	08/05/14	--	--	--	--	0.37	82	0.29	--	--	120	4.1	< 0.20	--	--	110	--	110	--	--	--	--	130			
EB-4-3	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	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	0.58	--	--	110	--	110	--	--	--	--	270			
EB-5-1.5	1.5	08/05/14	--	--	--	--	--	--	--	--	--	63	2.0	< 0.20	--	--	--	--	--	--	--	--	--	--	--		
EB-5-5	5.0	08/05/14	--	--	--	--	< 0.25	51	0.067	--	--	26	--	--	--	--	66	--	66	--	--	--	--	83			
EB-5-10	10	08/05/14	--	--	--	--	< 0.25	78	0.34	--	--	150	4.0	< 0.20	--	--	67	--	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	54	< 0.50	< 0.50	< 0.50	48	93			

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

Sample ID	Depth (feet)	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	STLC Chromium (mg/L)	Cobalt	Copper	Lead	STLC Lead (mg/L)	TCLP Lead	Mercury	Molybdenum	Nickel	Selenium (mg/kg)	Silver	Thallium	Vanadium	Zinc
EB-6-3	3.0	08/05/14	--	--	--	--	0.28	97	0.75	--	--	14	--	--	--	--	150	--	--	--	--	48
EB-6-5	5.0	08/05/14	--	--	--	--	<0.25	96	0.37	--	--	18	--	--	--	--	71	--	--	--	--	52
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	0.30	0.65	0.56	74	<0.50	<0.50	<0.50	59	110
EB-7-3	3.0	08/05/14	2.7	5.4	110	<0.50	0.26	70	0.16	9.6	25	490	11	1.2	0.38	<0.50	35	<0.50	<0.50	<0.50	69	150
EB-7-5	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
Background [Metal] in Bay Area Soils *																						
Residential Direct Exposure ESL			1.5-7.1	1.2-31	41-411	0.29-1.1	0.27-3.3	10-142	NA	6.5-25.5	5.4-100	4.8-65	NA	NA	0.07-0.6	0.33-11.4	16-144	<0.25-7	0.2-2.2	<0.25-42.5	22-90	33-282
Commercial/Industrial Direct Exposure ESL			31	0.067	1.5E+04	150	39	NA	NA	23	3,100	80	NA	NA	13	390	820	390	390	0.78	390	23,000
Construction Worker Direct Exposure ESL			470	0.31	2.2E+05	2,200	580	NA	NA	350	47,000	320	NA	NA	190	5,800	11,000	5,800	5,800	12	5,800	3.5E+05
Hazardous Waste Criteria			140	0.98	3,000	42	43	NA	NA	28	14,000	160	NA	NA	44	1,800	86	1,700	1,800	3.5	470	1.1E+05
TTLC (mg/kg)			500	500	10,000	75	100	2,500	NA	8,000	2,500	1,000	NA	NA	20	3,500	2,000	100	500	700	2,400	5,000
STLC (mg/L)			15	5	100	0.75	1	NA	5	80	25	NA	5	NA	0.2	350	20	1	5	7	24	250
TCLP (mg/L)			NA	5	100	NA	1	NA	NA	NA	NA	NA	NA	5	0.2	NA	NA	1	5	NA	NA	NA

Notes:

- mg/kg - milligrams per kilogram
- mg/L - milligrams per liter
- < 0.5 - Analyte was not detected above the laboratory reporting limit (0.5 mg/kg)
- Sample not analyzed
- NA - Not applicable
- Bold** - Detection exceeds the State of California Class I non-RCRA hazardous waste criteria
- *Background concentration ranges of metals in Bay Area soils. Appendix A, Table A-2 from Environmental Resources Management. *Feasibility Study, Hookston Station, Pleasant Hill, California*. July 2006
- Detection exceeds residential direct exposure ESL
- Detection exceeds commercial/industrial direct exposure ESL
- Detection exceeds construction worker direct exposure ESL
- Residential Direct Exposure ESL - San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels - Residential Direct Exposure Human Health Risk Levels in Shallow Soils (Table S-1), February 2016 [Rev. 3]
- Commercial/Industrial Direct Exposure ESL - San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels - Commercial Direct Exposure Human Health Risk Levels in Shallow Soils (Table S-1), February 2016 [Rev. 3]
- Construction Worker Direct Exposure ESL - San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels - Any Land Use/Any Depth Soil Exposure: Construction Worker Direct Exposure Human Health Risk Levels (Table S-1), February 2016 [Rev. 3]
- TTLC - California Total Threshold Limit Concentration - State hazardous waste criterion
- STLC - California Soluble Threshold Limit Concentration
- TCLP - Federal Toxicity Characteristic Leaching Procedure

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

Sample ID	Sample Date	TPHg	TPHd	TPHmo	VOCs
		(µg/L)			
EB-2-GW	08/06/14	< 50	510	4,200	ND
MCL Priority Direct Exposure ESL		220	150	NE	Various
Human Health Risk Direct Exposure ESL		220	150	NE	Various

Notes:

µg/L - micrograms per liter

TPHg - Total Petroleum Hydrocarbons as Gasoline

TPHd - Total Petroleum Hydrocarbons as Diesel

TPHmo - Total Petroleum Hydrocarbons as Motor Oil

VOCs - Volatile Organics Compounds

Bold - Detection exceeds ESL

NE - No established ESL

Various - ESLs for the compounds analyzed and not detected at or above laboratory reporting limits vary, where established

MCL Priority Direct Exposure ESL - San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels - MCL Priority Direct Exposure Human Health Risk Levels (Table GW-1). February 2016 [Rev. 3]

Human Health Risk Direct Exposure ESL - San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels - Direct Exposure Human Health Risk Levels (Table GW-1). February 2016 [Rev. 3]

**Table 4
Metals Analytical Results in Groundwater
India Basin
San Francisco, California**

Sample ID	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	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	< 0.50	< 0.19	< 0.50	< 0.50	0.73	88

Notes:

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

Table 5
Volatile Organic Compounds in Soil Gas
 India Basin
 San Francisco, California

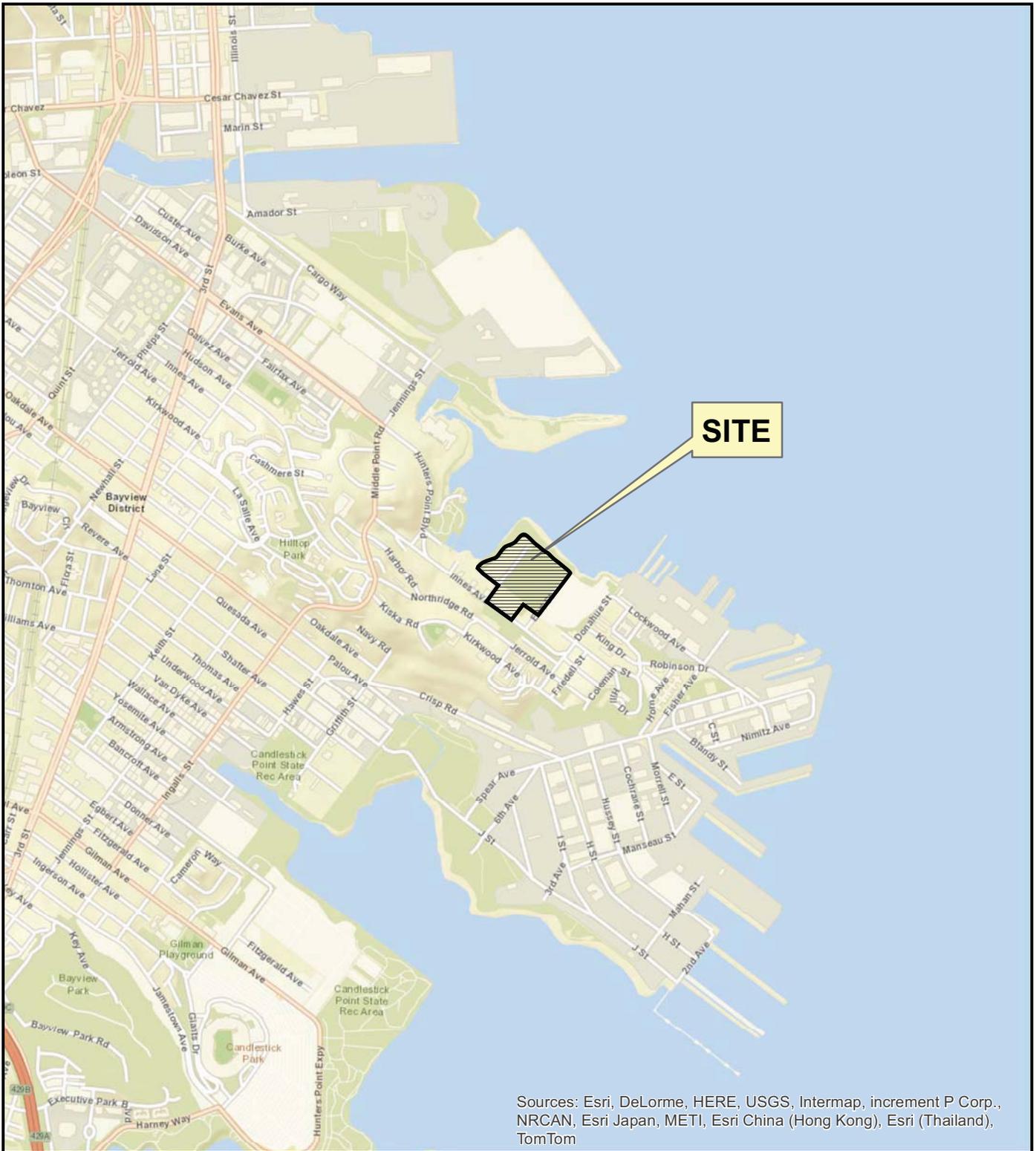
Sample ID	Sample Date	VOCs															Helium										
		Acetone	Benzene	Bromo-dichloro-methane	1,3-Butadiene	Carbon Disulfide	Chloroform	Chloro-methane	Cyclo-hexane	1,1-DCE	cis-1,2-DCE	Ethanol	Ethyl-benzene	Heptane	Hexane	2-Hexanone		MIBK	Methyl Methacrylate	PCE	Tetrahy-drofuran	Toluene	1,1,2-TCA	TCE	Trichloro-fluoro-methane	Xylenes	All Other VOCs
EB-3-SG	08/06/14	<84	26	<4.9	21	130	<3.4	<1.5	44	<2.8	<130	<3.1	33	48	<3.0	<3.0	<2.9	27	<2.1	49	<3.9	5.3	<4.0	10	ND	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	<4.2	18	<6.9	<3.0	26	9.3	34	<5.7	<13	ND	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	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	<2.1	8.5	28	430	<2.8	22	27	ND	ND	<0.0050	
Residential ESL		1.6E+07	48	38	NE	NE	61	4.7E+04	NE	3.7E+04	4,200	NE	560	NE	NE	1.6E+06	NE	240	NE	1.6E+05	88	240	NE	5.2E+04	Various	NE	NE
Commercial/Industrial ESL		1.4E+08	420	330	NE	NE	530	3.9E+05	NE	3.1E+05	35,000	NE	4,900	NE	NE	1.3E+07	NE	2,100	NE	1.3E+06	770	3,000	NE	4.4E+05	Various	NE	NE

Notes:

- µg/m³ - micrograms per cubic meter
- % - Percent by volume
- VOCs - Volatile Organic Compounds
- DCE - Dichloroethene
- MIBK - 4-Methyl-2-pentanone
- PCE - Tetrachloroethene
- 1,1,2-TCA - 1,1,2-Trichloroethane
- TCE - Trichloroethene
- < 84 - Analyte was not detected above the laboratory reporting limit (84 µg/m³)
- ND - Not detected at or above the laboratory reporting limit
- NE - No established ESL
- NE - No established ESL
- Various - Tier 1 ESLs for the remaining VOCs not detected at or above laboratory reporting limits vary, where established
- Residential ESL - San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels - Residential Subslab/Soil Gas Vapor Intrusion; Human Health Risk Levels (Table SG-1), February 2016 [Rev. 3]
- Commercial/Industrial ESL - San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels - Commercial/Industrial Subslab/Soil Gas Vapor Intrusion; Human Health Risk Levels (Table SG-1), February 2016 [Rev. 3]

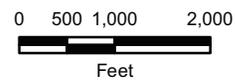
FIGURES

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

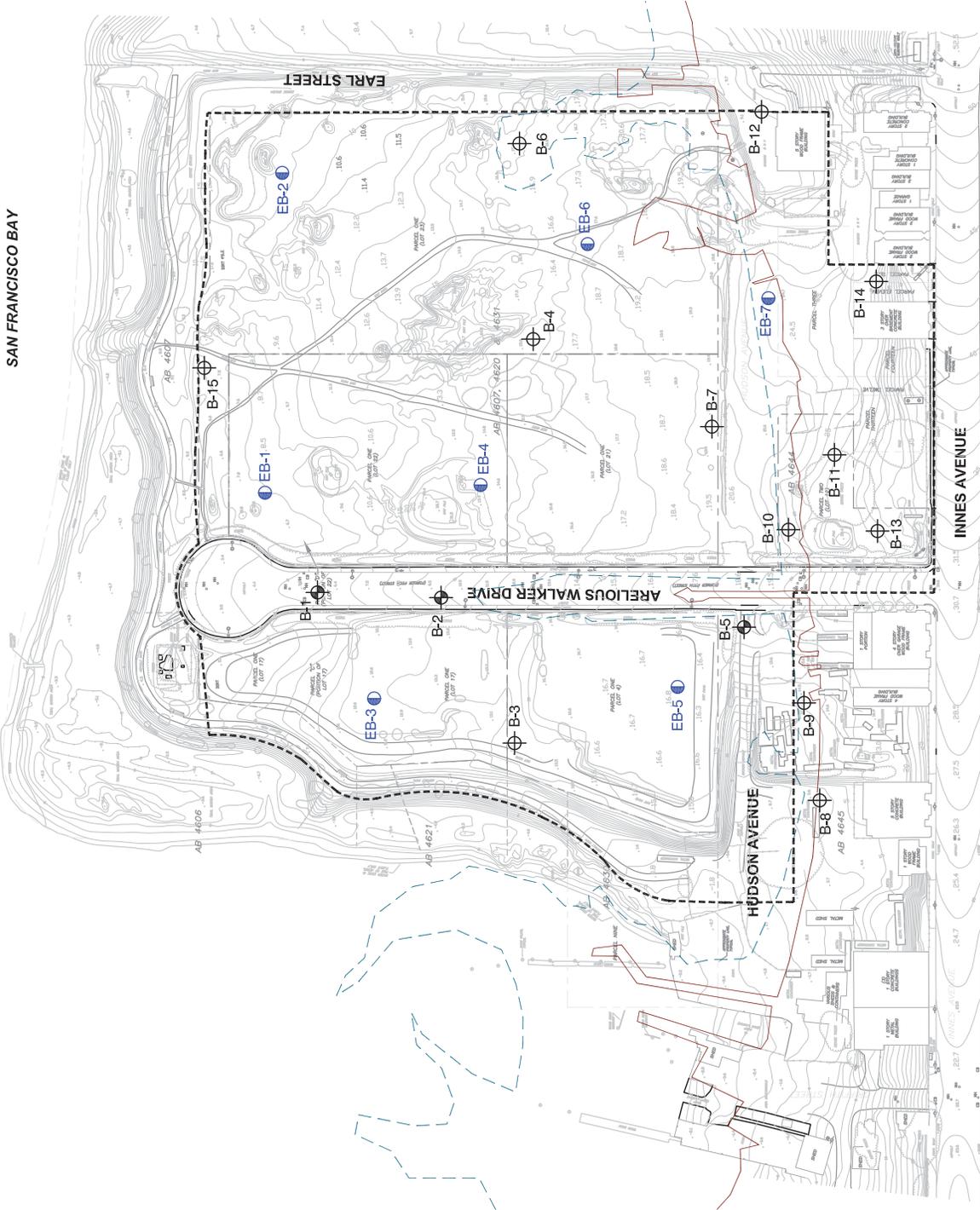
SITE LOCATION MAP

LANGAN

Date 02/15/17

Project No. 731626702

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, August 2014
- B-1 Approximate location of geotechnical boring by Langan Treadwell Rollo, 2013
- Approximate location of 1938 shoreline
- Approximate location of 1946 shoreline
- Approximate Site Boundary



0 140 Feet
Approximate scale

INDIA BASIN San Francisco, California	
SITE PLAN	
Date 02/15/17	Project No. 731626702 Figure 2

LANGAN

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

**APPENDIX A
GEOTECHNICAL 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

Samplers: Sprague & Herwood (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 ¹								
Ground Surface Elevation: 5.5 feet ²												
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		SC						
7			10									
8	SPT		4	14		brick debris						
9			6									
10	SPT		1	10		loose to medium dense						
11			2									
12			6									
13						CLAYEY SAND (SC) brown and red-brown, medium dense, moist, with fine, subangular gravel						
14												
15	S&H		8	15		SC			28.2	10.4		
16			11									
17			11									
18												
19												
20						CLAYEY SAND (SC) dark brown, loose, wet, trace coarse, subangular gravel				22.8	16.0	
21	SPT		1	7								
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	SPT		4	10		CLAY (CH) blue-gray, medium stiff, soft, wet Consolidation Test, see Figure C-31				21.4	16.8	
26			4									
27			4									
28	ST		0-								64.0	61.6
29			150								57.8	66
30			psi									

BAY MUD

LANGAN

Project No.: 731626701

Figure: A-1a

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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 ¹			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 (CH) (continued)								
32														
33														
34														
35														
36	S&H	●	3 4 5	6		no recovery, rock obstruction								
37														
38	S&H	■	0 0 1	1		soft, trace shell fragments						53.2	70	
39														
40														
41														
42														
43														
44														
45					CH									
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														

BAY MUD

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TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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 ¹			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	S&H	[Sample]	0	1										
66			0			LL = 52, PI = 24, see Figure C-1							48.3	72
67					CH									
68														
69														
70														
71														
72														
73														
74						increased sand content								
75	S&H	[Sample]	5	22		SANDY CLAY (CL) olive, very stiff, wet, very fine-grained sand	TxUU	6,200	3,000				18.7	114
76			13		CL									
77			19											
78						CLAYEY SILTY SAND (SC-SM) olive and blue-gray, medium dense, moist, fine-grained sand, trace organics								
79														
80	S&H	[Sample]	11	19		LL = 22, PI = 7, see Figure C-1							33.2	18.8
81			13		SC-SM									
82			14											
83														
84						CLAY with SAND (CL) gray, very stiff, wet, fine- to medium-grained sand								
85														
86	SPT	[Sample]	0	16										
87			6		CL									
88			7											
89														
90					SM	SILTY SAND (SM)								

BAY MUD

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TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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 ¹			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													
94					CL	CLAY with SAND (CL) gray-brown, very stiff, wet, fine- to coarse-grained sand							
95	SPT		7 7 12	23									
96													
97													
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													
108													
109													
110													
111													
112													
113													
114													
115	SPT		0 0 0	0		soft LL = 75, PI = 38, see Figure C-1					65.6		
116													
117													
118													
119													
120													

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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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 ¹			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						?						
144												
145												
146												
147												
148												
149						SHALE black, intensely fractured, hard						
150												

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

RESIDUAL SOIL

LANGAN

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

Samplers: Sprague & Herwood (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 ¹									
Ground Surface Elevation: 9 feet ²													
1						2 feet Asphalt Concrete (AC)							
2						SILTY SAND with GRAVEL (SM) brown, medium dense, dry, fine to coarse, angular to subangular gravel	↑						
3	GRAB												
4						SM brown and yellow-brown, moist							
5	S&H		10	21									
6			15			SM red-brown, and yellow-brown, trace brick debris							
7	S&H		14	21									
8			15			SILTY SAND (SM) dark brown, medium dense, moist, fine-grained sand							
9	S&H		14	21									
10			15			SM CLAYEY SAND (SC) brown and light brown, medium dense, moist, trace brick debris, trace fine subrounded to subangular gravel							
11	SPT		6	26									
12			10			FILL					31.5	13.7	
13			12										
14						SC							
15	SPT		3	19									
16			5			SC							
17	SPT		5	10									
18			4			no recovery, spoils observed as yellow-brown, with fine, angular gravel							
19	SPT		4	7									
20			4			large obstruction at 27.5 feet							
21	SPT		5	7									
22						50/4" 60/4"							
23	SPT		1	7									
24			2										
25	SPT		4	7									
26													
27	SPT		50/4"	60/4"									
28													
29													
30													

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Project No.: 731626701

Figure: A-2a

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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 ¹			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	FILL		25.8	14.0			
32			8										19
33													
34													
35	S&H	[Sample]	4	6	CH	CLAY (CH) blue-gray, medium stiff, wet, trace shell fragments	BAY MUUD	PP	500	19.5	113		
36			4										
37			4										
38													
39													
40	ST	[Sample]	150			stiff Consolidation Test, see Figure C-32		TxUU	4,000	1,400	54.7	68	
41			psi										
42													
43													
44													
45													
46													
47													
48													
49													
50	S&H	[Sample]	0	3				TxUU	4,800	1,110	53.3	68	
51			0										4
52													
53													
54													
55													
56													
57													
58													
59													
60													

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

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 ¹			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 gray and blue-gray, medium dense			7.2	21.5		
62	SPT		5 6 8	17								
63												
64					SC	CLAYEY SAND (SC) yellow-brown, medium dense, wet, very fine- to fine-grained sand LL = 28, PI = 13, see Figure C-1 medium dense to dense		32.8	17.8			
65	S&H		4 11 15	18								
66												
67					SC-SM	CLAYEY SILTY SAND (SC-SM) gray-brown, medium dense, wet, fine-grained sand CLAYEY SILTY SAND (SC-SM) increased clay content LL = 23, PI = 6, see Figure C-2		37.2	17.9			
68												
69												
70	SPT		6 9 16	30	CL	CLAY (CL) gray-brown with green-gray mottling, stiff, wet, trace very fine- to coarse-grained sand gray-brown with blue-gray mottling shells in cuttings		86.5	29.0			
71												
72												
73					CL							
74												
75	SPT		7 10 11	25								
76					CL							
77												
78												
79					CL							
80	SPT		4 5 5	12								
81												
82					CL							
83												
84												
85	SPT		0 4 5	11	CL							
86												
87												
88					CL							
89												
90												

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

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 ¹			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	CLAY (CL) (continued) gray, medium stiff, wet	PP		1,500				
92			3									
93			7									
94												
95	S&H		0	6	trace shells stiff	TxUU PP	7,400	1,380		59.6	65	
96			4									
97			5									
98												
99												
100												
101												
102												
103												
104												
105					Consolidation Test, see Figure C-33					59.0	65	
106	ST		0-			TxUU	10,500	1,500		58.4	65	
107			500									
108			psi									
109												
110												
111												
112												
113												
114												
115	S&H		0	4	medium stiff, trace organics	TxUU PP	8,550	1,700		60.9	65	
116			2									
117			4									
118												
119												
120												

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

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 ¹			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																				
124																				
125	S&H	[Sample]	15	34	CL	SANDY CLAY (CL) blue-gray, hard, wet, fine- to coarse-grained sand, fine gravel														
126			22																	26
127																				
128																				
129																				
130																				
131																				
132	SPT	[Sample]	8	35	CL	SERPENTINITE green, intensely fractured, deeply weathered, plastic														
133			14																	
134																				
135																				
136																				
137																				
138																				
139																				
140	SPT	[Sample]	50/4"	60/4"		hard, white seams														
141																				
142																				
143																				
144																				
145																				
146																				
147																				
148																				
149																				
150																				

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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.

¹ 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.
² Elevations based on San Francisco City datum.



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

Samplers: Sprague & Herwood (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: 13.5 feet ²												
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									
4		16										
5		17										
5	S&H	14	20			gray, fine-grained sand, increase in clay content			25.5	14.5		
6	S&H	14										
7		14										
8	S&H	10	20	SC								
9		12				trace brick debris, wood debris						
10		17										
11	SPT	10	29									
12		2										
13		17										
14					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 (04/07/14; 700 AM) trace shell							
15						CL ▽						
16	S&H	15	19									
17		12										
18		15										
19					less gravel, trace shells, wood debris							
20					CLAYEY SAND with GRAVEL (SC) brown, dense, wet, fine to coarse-grained sand, fine subrounded to subangular gravel							
21	S&H	5	35									
22		15										
23		35			SC							
24					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							
25						SP-SM				10.3	24.3	
26	SPT	2	26									
27		8										
28		14										



FILL

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.: 731626701

Figure: A-3a

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 ¹			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]	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	FILL		9.4	26.2		
32		[Sample]	17									
33		[Sample]	14		CH	CLAY (CH) gray, very soft, wet, trace shells, trace coarse gravel	BAY MUD					
34		[Sample]										
35	S&H	[Sample]	2	1	CH	Consolidation Test, see Figure C-34 blue-gray, stiff, trace shells		TxUU	4,000	1,350	55.5	67
36		[Sample]	0									
37		[Sample]	2		CH							
38		[Sample]										
39		[Sample]			CH							
40		[Sample]										
41	ST	[Sample]	0-85		CH						54.2	69
42		[Sample]	50									
43		[Sample]			CH							
44		[Sample]										
45		[Sample]			CH							
46		[Sample]										
47		[Sample]			CH						56.8	67
48		[Sample]										
49		[Sample]			CH							
50		[Sample]										
51	ST	[Sample]	25		CH	Consolidation Test, see Figure C-35		TxUU	5,000	1,570	55.1	68
52		[Sample]	75									
53		[Sample]	75		CH							
54		[Sample]	75									
55		[Sample]			CH							
56		[Sample]										
57		[Sample]			CH							
58		[Sample]										
59		[Sample]			CH							
60		[Sample]										

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17



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 ¹			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"	SP-SM	dense						
66			50/2"									
67	SPT		22	41	SC	CLAYEY SAND (SC) blue-gray, dense, wet, fine-grained sand						
68			22									
69					SC	CLAYEY SAND (SC) blue-gray, dense, wet, fine-grained sand						
70												
71	S&H		15	32	SC	CLAYEY SAND (SC) yellow-brown, increased sand content				42.6	20.9	
72			22									
73					SC	CLAYEY SAND (SC) yellow-brown, dense, wet, fine-grained sand						
74												
75					CL	SANDY CLAY (CL) yellow-brown with blue-gray mottling, hard, wet, fine-grained sand				30.3	22.2	
76	SPT		4	35								
77			14		CL	CLAY (CL) light-brown, medium stiff, wet, trace black inclusions Consolidation Test, see Figure C-37					77.2	53
78			15									
79					CL	CLAY (CL) light-brown, medium stiff, wet, trace black inclusions Consolidation Test, see Figure C-37						
80												
81	S&H		0	7	CL	CLAY (CL) light-brown, medium stiff, wet, trace black inclusions Consolidation Test, see Figure C-37						
82			5									
83					CL	CLAY (CL) light-brown, medium stiff, wet, trace black inclusions Consolidation Test, see Figure C-37						
84												
85					CL	CLAY (CL) light-brown, medium stiff, wet, trace black inclusions Consolidation Test, see Figure C-37						
86	S&H		14	28								
87			18		CL	gray-brown with yellow-brown and blue-gray mottling, very stiff, trace fine to coarse-grained sand						
88			22									
89					CL	CLAY (CL) blue-gray, very stiff, wet, with shells						
90												

BAY MUD

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.:
731626701

Figure:
A-3c

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 ¹			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							medium stiff							
101	S&H		2	7										
102			4											
103			6											
104														
105						Consolidation Test, see Figure C-38						59.6	64	
106	ST		0-25			very stiff	TxUU	10,500	2,880			57.0	66	
107			50-125											
108			psi											
109														
110														
111														
112														
113														
114														
115														
116	S&H		0	14		stiff								
117			8											
118			12											
119														
120														

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17



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 ¹			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	SANDY CLAY with GRAVEL (CL) blue-gray, hard, wet, fine to coarse, rock fragments								
128			40											
129					CL	RESIDUAL SOIL								
130														
131	SPT	[Sample]	11	41	CL	RESIDUAL SOIL								
132			14											
133					CL	RESIDUAL SOIL								
134														
135	SPT	[Sample]	27	37	CL	RESIDUAL SOIL								
136			14											
137					CL	RESIDUAL SOIL								
138														
139					CL	RESIDUAL SOIL								
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	RESIDUAL SOIL								
144														
145	SPT	[Sample]	20	60/6"	CL	RESIDUAL SOIL								
146			50/6"											
147					CL	RESIDUAL SOIL								
148														
149					CL	RESIDUAL SOIL								
150														

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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.

¹ 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.
² Elevations based on San Francisco City datum.



Project No.:
731626701

Figure:
A-3e

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-4

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

Samplers: Sprague & Herwood (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 ¹								
Ground Surface Elevation: 16 feet ²												
1	GRAB	•			SC	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												
3	S&H	█	12	22								
4			12		GP	GRAVEL (GP) dark brown, medium dense, moist, subangular to angular gravel						
5			10									
6	S&H	█	14	24								
7			20		SC	CLAYEY SAND with GRAVEL (SC) dark brown, medium dense, moist, subangular to angular gravel, trace asphalt						
8												
9												
10					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	
11	S&H	█	4	22								
12			15									
13			17		SP-SM	SAND with SILT (SP-SM) dark brown, medium dense, fine-grained sand, trace subangular gravel	FILL			6.5	15.5	
14												
15	S&H	█	2	29								
16			14		GC	concrete in cuttings from 18 to 23 feet bgs						
17			27									
18												
19					GC	CLAYEY GRAVEL (GC) dark brown, very dense, wet, subangular to angular gravel, trace concrete						
20												
21												
22	S&H	█	50/	35/	SC	CLAYEY SAND with GRAVEL (SC) yellow-brown, medium dense, wet, fine-grained sand, subangular to angular gravel				29.4	11.5	
23			0.5"	0.5"								
24												
25					SC							
26	S&H	█	5	20								
27			14									
28			15		SC							
29												
30												

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.: 731626701

Figure: A-4a

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-4

PAGE 2 OF 5

DEPTH (feet)	SAMPLES			SPT N-Value ¹	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/6"				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				13	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									
37			14									
38				15	CH	CLAY (CH) blue-gray, stiff, wet, trace shells, trace fine-grained sand						
39	S&H		8									
40			10									
41			12									
42				0- 25 50- 100 psi	CH	Consolidation Test, see Figure C-39	TxUU	4,500	1,700	37.5	82	
43	ST											
44												
45												
46												
47												
48												
49												
50												
51												
52												
53				11	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	
54	S&H		4									
55			4									
56			12									
57												
58												
59					SM	SILTY SAND (SM)						
60												

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

FILL
BAY MUD

LANGAN

Project No.:
731626701

Figure:
A-4b

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-4

PAGE 3 OF 5

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/6"	SPT N-Value ¹			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				20.4	16.1	
62												
63												
64												
65	SPT		20 24 30	65		very dense						
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					CL							
80	S&H		10 10 15	18		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					CL							
88												
89												
90												

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.:
731626701

Figure:
A-4c

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-4

PAGE 4 OF 5

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA						
	Sampler Type	Sample	Blows/6"	SPT N-Value ¹			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			14										
94													
95	S&H	[Sample]	0	11			trace black inclusions						
96			7										
97			9										
98													
99													
100			0-50				Consolidation Test, see Figure B-40					47.9	73
101	ST	[Sample]	50-150			very stiff	TxUU	10,000	2,630		47.2	74	
102			psi										
103													
104													
105													
106													
107													
108													
109													
110						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 FOR 02.GPJ TR.GDT 2/16/17

RESIDUAL SOIL

LANGAN

Project No.: 731626701 Figure: A-4d

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

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

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES			SPT N-value ¹	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: 18 feet ²												
1						2-inch Asphalt Concrete (AC) 22-inch Aggregate Base (AB)						
2						CLAYEY SAND with GRAVEL (SC) brown, dense, moist, fine sand, fine to coarse gravel, brick debris, trace silt						
3	BULK	☒										
4						coarse gravel, no brick						
5	SPT	▴	17	34								
6						dark brown, increased clay content, trace brick debris, wood debris						
7	BULK	☒										
8						medium dense, increased silt content				25.6	7.5	
9	BULK	☒										
10						increased clay content with concrete debris, wood						
11	SPT	▴	8	29								
12						SAND (SP-SM) gray-brown, medium dense, moist, very fine- to fine-grained sand, trace silt				13.1	11.1	
13	BULK	☒										
14						some blue gray clay mottling coarse sand and fine gravel						
15	SPT	▴	3	12								
16						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	
17	BULK	☒										
18						GRAVEL (GP) green, medium dense, wet, serpentinite fragments, with fine- to medium-grained sand				3.8	3.2	
19	SPT	▴	8	22								
20						Non-plastic						
21	S&H	▬	10	15								
22						Non-plastic						
23	BULK	☒										
24						Non-plastic						
25	SPT	▴	8	22								
26						Non-plastic						
27	BULK	☒										
28						Non-plastic						
29	SPT	▴	8	22								
30						Non-plastic						
	BULK	☒										

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17



Project No.: 731626701

Figure: A-5a

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 ¹			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	TxUU	3,500	1,020	30.5	19.5	113
32			5									
33			6									
34					CL	CLAY (CL) blue-gray, stiff, wet, some shells LL = 29, PI = 18, see Figure C-3				30.5	22.0	
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 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.: 731626701 Figure: A-5b

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-5

PAGE 3 OF 4

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

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.:
731626701

Figure:
A-5c

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

Samplers: Sprague & Herwood (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 ¹								
Ground Surface Elevation: 16.5 feet ²												
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		12	23	SC-SM	trace brick and glass debris, trace coarse gravel						
9			16									
10			17									
11	S&H		5	10								
12			2									
13			12									
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	S&H		4	8	CL	SANDY CLAY with GRAVEL (CL) brown, medium stiff, moist, fine-grained sand, rounded to subangular gravel						
21			5									
22			7									
23												
24												
25	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	
26			3									
27			7									
28												
29												
30												

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.: 731626701

Figure: A-6a

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-6

PAGE 2 OF 4

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

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

FILL
BAY MUD

LANGAN

Project No.: 731626701 Figure: A-6b

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 ¹			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 45 27	50	SC	CLAYEY SAND (SC) lightly brown, hard, wet, fine-grained sand				37.8	16.8	
62												
63												
64												
65												
66												
67												
68												
69						SANDY CLAY with GRAVEL (CL) brown, hard, wet, coarse gravel						
70	S&H		11 17 28	32	CL					51.2	21.9	
71												
72												
73												
74						gravel lens at 74 to 74.5 feet						
75	S&H		3 14 15	20	CL	CLAY with SAND (CL) light brown, very stiff, wet, fine-grained sand, trace coarse gravel						
76												
77												
78												
79												
80	S&H		10 20 20	28	CL	GRAVELLY CLAY (CL) light brown, very stiff, wet, grained sand, abundant shells						
81												
82												
83												
84												
85	S&H		13 13 16	20	CL	color change to blue-gray CLAY with GRAVEL (CL) gray, very stiff, wet, trace shells, coarse gravel						
86												
87												
88												
89												
90												

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.:
731626701

Figure:
A-6c

PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-6

PAGE 4 OF 4

DEPTH (feet)	SAMPLES				LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/6"	SPT N-Value ¹			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				25					
97					SHALE	black with green mottling, intensely fractured, hard, weak, deeply weathered						
98												
99					SHALE	black with green mottling, intensely fractured, hard, weak, deeply weathered						
100												
101	S&H		14	41								
102			34				25					
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 FOR 02.GPJ TR.GDT 2/16/17

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.

¹ 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.
² Elevations based on San Francisco City datum.



PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-7

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

Samplers: Sprague & Herwood (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 ¹								
Ground Surface Elevation: 19.5 feet ²												
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							
4												
5	S&H		10 26	39	SP	SAND (SP) yellow-brown, dense, moist, fine-grained, trace fine gravel						
6	S&H		29									
7												
8	S&H		19 19	29		SANDY CLAY with GRAVEL (CL) dark brown, hard, moist, fine to coarse-grained sand, fine gravel, trace brick debris, trace serpentinite						
9						very stiff, trace coarse gravel, trace wood debris						
10												
11	S&H		10 12	19	CL	angular gravel 3" in diameter						
12												
13												
14												
15												
16	S&H		4 5	8		trace glass debris						
17												
18												
19												
20												
21	S&H		5 10	18	SP	SAND (SP) gray, medium dense, wet trace gravel				2.4	20.8	
22	SPT		9 20	62								
23												
24												
25												
26	S&H		0 0	2								
27												
28												
29												
30												

FILL

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Project No.: 731626701

Figure: A-7a

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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 ¹			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					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
35	ST		0-50									
36			300-400									
37			psi		SC	CLAYEY SAND (SC) olive-gray, medium dense, fine-grained sand					29.1	94
38												
39					SP-SC	SAND with CLAY (SP-SC) yellow-brown, very dense, wet, fine-grained sand				6.2	22.4	
40	SPT		20									
41			21									
42			28		SC	CLAYEY SAND (SC) yellow-brown, very dense, wet, fine-grained sand						
43												
44												
45	SPT		19	74								
46			28									
47			34									
48												
49												
50												
51	SPT		17	52								
52			21									
53			22									
54												
55												
56	S&H		14	35								
57			20									
58			30									
59												
60												

FILL

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.: 731626701 Figure: A-7b

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 ¹			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	S&H		8 11 14	18	CL	CLAY with SAND (CL) brown with olive-gray mottling, very stiff, wet, fine-grained sand, trace coarse-grained sand						
76												
77												
78												
79												
80	S&H		8 12 13	18								
81						olive-gray						
82												
83												
84												
85	S&H		8 11 14	18	CL	CLAY (CL) olive-gray with yellow mottling, very stiff, wet, trace black inclusions, trace fine-grained sand						
86												
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 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.:
731626701

Figure:
A-7c

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 ¹			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 FOR 02.GPJ TR.GDT 2/16/17

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.

¹S&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.
²Elevations based on San Francisco City datum.



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

LABORATORY TEST DATA

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

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 ¹								
Ground Surface Elevation: 4 feet ²												
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	22	25	SC				10.8	10.8		
4			19									
5	S&H	25	50/5"	30/5"		increased clay content						
6						red-brown, with concrete debris						
7												
8	S&H	9	15	22		GRAVEL with SILT and SAND (GP-GP) red-brown, medium dense, wet, subrounded to angular, coarse gravel, with brick debris						
9			21									
10	S&H	7	13	17	GP-GM	dark brown (0819, 3/25/14) non-plastic				7.8	14.7	
11			16			light brown						
12												
13						SAND with CLAY (SP-SC) olive-brown, medium dense, wet, fine trace gravel, shells, trace clay						
14	SPT	9	11	25	SP-SC							
15			14			SAND (SP) yellow-brown, medium dense, wet, trace clay						
16												
17												
18												
19	SPT	21	36	78	SP	very dense						
20			42									
21												
22												
23												
24	SPT	25	27	53		trace dark brown fillings						
25			26									
26						CLAYEY SAND (SC) olive-brown with red lense, dense, wet						
27					SC							
28												
29	S&H	17	18	30								
30			32									

FILL

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17



Project No.: 731626701

Figure: A-8a

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 ¹			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 FOR 02.GPJ TR.GDT 2/16/17

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.

¹ 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.
² Elevations based on San Francisco City datum.



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

LABORATORY TEST DATA

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

DEPTH (feet)	SAMPLES			SPT N-Value ¹	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						Ground Surface Elevation: 14.5 feet ²						
2						Dirt Lot/Storage Yard						
3	S&H		16	27		SANDY CLAY with GRAVEL (CL) dark brown, very stiff, moist, fine-grained sand, fine to coarse gravel, some brick debris						
4			19									
5			26									
6	S&H		15	27		red-brown						
7			21									
8			24			dark-brown						
9	S&H		7	21	CL							
10			16			with cobbles						
11			19									
12	S&H		7	24						23.8	12.8	
13			11									
14			29									
15	SPT		16	39		brown						
16			18									
17			21									
18												
19	SPT		7	57	SC	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	GP-GM	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	SP-SC	SAND with CLAY (SP-SC) olive-brown, dense, wet						
30			17		SP	SAND (SP)						
			29									

FILL

LANGAN

Project No.: 731626701

Figure: A-9a

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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 ¹			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	89/10"		very dense										
35			39	50/4"												
36																
37					SP	olive-brown, mottled red-brown, dense, with clay										
38																
39	SPT		13													
40			17		38											
41			21													
42																
43																
44	SPT		7			medium dense										
45			11													
46			13			SANDY CLAY (CL) olive-brown with red fillings, very stiff, wet										
47																
48																
49	SPT		7													
50			11		CL											
51			13													
52																
53						CLAYEY SAND (SC) yellow-brown, dense, wet										
54	S&H		11													
55			26		SC											
56			31													
57																
58																
59	S&H		17			SANDY CLAY (CL) yellow-brown, hard, wet, trace fine, black gravel										
60			27		CL											
			34		CL											
			37													

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.:
731626701

Figure:
A-9b

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 ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft						
61						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		CL													
67																		
68																		
69	S&H	[Sample]	31	29														
70			27															
71			22															
72																		
73						SANDSTONE intensely fractured, moderately hard, moderately strong, deeply weathered												
74	S&H	[Sample]	50/2"	30/2"														
75	SPT	[Sample]	36	94														
76			44															
77	SPT	[Sample]	50/6"	50/2"														
78																		
79																		
80																		
81																		
82																		
83																		
84																		
85																		
86																		
87																		
88																		
89																		
90																		

RESIDUAL SOIL

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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.

¹ 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.
² Elevations based on San Francisco City datum.



PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-10

PAGE 1 OF 3

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

LABORATORY TEST DATA

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

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 ¹								
Ground Surface Elevation: 24 feet ²												
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	S&H	13		19	SC	medium dense, fine-gravel, trace brick						
6	S&H	15										
7												
8	S&H	11		16								
9												
10	S&H	22		48		CLAYEY SAND with GRAVEL (SC)						
11	S&H	47				dark brown, dense, moist, subangular to angular gravel, fine to coarse gravel, trace brick						
12												
13												
14	S&H	27		49	SC							
15												
16												
17												
18												
19	S&H	6		14		CLAYEY SILTY SAND (SC-SM)				19.8	12.4	
20		9				gray-brown, medium dense, moist, with blue-gray clay mottling, trace coarse gravel						
21		15			SC - SM	LL = 20, PI = 5, see Figure C-4						
22												
23												
24	SPT		50/1"	50/1"		concrete debris						
25												
26					SC	CLAYEY SAND (SC)						
27	SPT		50/4"	50/4"		concrete debris						
28												
29												
30					SP	▽ (9:00, 03/24/14)						

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

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 ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft		
31					SP	SAND (SP) dark brown, very dense, wet, fine to coarse-grained sand, 1 to 2 inch fine gravel lenses, trace silt								
32														
33														
34	SPT		22 26 33	59										
35														
36														
37														
38					SP-SM	SAND with SILT (SP-SM) yellow-brown, very dense, wet, fine-grained sand, trace dark brown, clay mottling and trace gravel								
39	SPT		19 32 34	66										
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					SC-SM	CLAYEY SILTY SAND (SC-SM) yellow-brown, medium dense, wet LL = 18, PI = 4, see Figure C-4								
53														
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 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

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 ¹			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 FOR 02.GPJ TR.GDT 2/16/17

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.

¹S&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.
²Elevations based on San Francisco City datum.



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

LABORATORY TEST DATA

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

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 ¹								
Ground Surface Elevation: 26 feet ²												
1						CLAYEY SAND (SC) brown, very dense, moist, trace brick debris, trace organics, rounded to subangular gravel						
2					SC							
3	S&H		8	44								
			33									
			41									
4						increased in sand content						
5	S&H		19	36		SANDY CLAY (CL) dark brown, hard, moist, trace fine to coarse gravel, trace brick debris						
6			29									
			31									
7	S&H		50/4*	30/4"		CLAYEY SAND (SC) dark brown, very dense, moist, trace subangular to angular gravel, trace concrete debris						
8												
9												
10	S&H		11	26		SANDY CLAY with GRAVEL (CL) dark brown, very stiff, moist, rounded to subangular gravel, increase in sand content						
11			19									
			25									
12												
13												
14	SPT		13	35		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		SANDY CLAY (CL) dark brown mottled blue-gray, medium stiff, moist, trace wood debris, trace coarse gravel						
20			4									
			5									
21												
22												
23						CLAY with SAND (CL) gray, stiff, moist, trace shells						
24	S&H		7	12								
			10									
			10									
25												
26												
27												
28												
29	SPT		4	21		CLAY with GRAVEL (CL) dark brown, very stiff, moist, subangular to angular gravel						
			7									
			14									
30												

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17



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 ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft			
31					CL	CLAY with GRAVEL (CL) (continued)									
32					CL										
33						▽ (03/26/14)									
34	SPT		7	11	26	wood from 33.5 to 34 feet bgs									
35			11	15		SAND with SILT (SP)									
36						yellow-brown, dense, wet, fine-grained sand							5.7	21.2	
37															
38					SP										
39	SPT		19	27	61	very dense, trace wood debris									
40			27	34											
41															
42						SANDY CLAY (CL)									
43						yellow-brown, very stiff, wet, trace fine gravel									
44	SPT		5	7	18										
45			7	11											
46					CL										
47															
48															
49	S&H		11	50/6"	30/6"	increase in fine and coarse gravel									
50															
51						SERPENTINITE									
52						intensely fractured, moderately hard, moderately strong, deeply weathered									
53															
54	SPT		39	50/5"	50/5"										
55															
56															
57															
58															
59	SPT		50/3"	50/3"											
60															

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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.

¹ 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.
² Elevations based on San Francisco City datum.



PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-12

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

LABORATORY TEST DATA

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

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 ¹								
Ground Surface Elevation: 10 feet ²												
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	[Sample]	4	5	CL							
4			4									
5			4									
6	S&H	[Sample]	5	7	CL	SANDY CLAY (CL) yellow-brown, medium stiff, moist fine-grained sand						
7			5									
8	S&H	[Sample]	9	22	CL	SANDY CLAY (CL) brown, very stiff, fine-grained sand, trace charcoal						
9			4									
10			20									
11	S&H	[Sample]	10	20	CL	increased sand content						
12			15									
13			17									
14	SPT	[Sample]	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	[Sample]	7	17	CL							
20			8									
21			9									
22												
23												
24	SPT	[Sample]	7	20	CL	brown with yellow-brown mottling, trace coarse gravel						
25			9									
26			11									
27												
28												
29	S&H	[Sample]	9	17	CL	trace angular gravel						
30			13									
			15									

FILL

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17



Project No.: 731626701

Figure: A-12a

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 ¹			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																				
33																				
34	SPT		17 31	81																
35			50/6"																	
36																				
37																				
38																				
39	SPT		15 23	54																
40			31																	
41																				
42																				
43																				
44	SPT		36 31	50/3"																
45			50/3"																	
46																				
47																				
48																				
49																				
50																				
51																				
52																				
53																				
54																				
55																				
56																				
57																				
58																				
59																				
60																				

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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.

¹ 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.
² Elevations based on San Francisco City datum.



Project No.: 731626701 Figure: A-12b

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 ¹			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						trace gravel, some black fillings								
36						∇ (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 FOR 02.GPJ TR.GDT 2/16/17

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.

¹ 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.
² Elevations based on San Francisco City datum.

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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

LABORATORY TEST DATA

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

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 ¹									
Ground Surface Elevation: 31 feet ²													
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	[Sample]	8 9 11	12									
4					CL	trace brick and organics color change to brown							
5													
6	S&H	[Sample]	4 11 14	15									
7					SC	CLAYEY SAND (SC) brown, medium dense, moist, brick debris							
8													
9	S&H	[Sample]	10 11 12	14									
10	GRAB S&H	[Sample]	50/3"	30/ 3"	SC	brick debris							
11													
12													
13					GP	GRAVEL with SAND (GP) gray-brown, very dense, moist							
14	SPT	[Sample]	50/2"	50/ 2"									
15													
16					GP	SERPENTINITE green-gray, intensely fractured, low hardness, friable, deeply weathered							
17													
18	SPT	[Sample]	50/4"	50/ 4"									
19					GP	SERPENTINITE green-gray, intensely fractured, low hardness, friable, deeply weathered							
20													
21													
22					GP	SERPENTINITE green-gray, intensely fractured, low hardness, friable, deeply weathered							
23													
24	SPT	[Sample]	50/6"	50/6"									
25					GP	SERPENTINITE green-gray, intensely fractured, low hardness, friable, deeply weathered							
26													
27													
28					GP	SERPENTINITE green-gray, intensely fractured, low hardness, friable, deeply weathered							
29	SPT	[Sample]	50/6"	50/6"									
30													

FILL

RESIDUAL SOIL

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17



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 ¹			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 FOR 02.GPJ TR.GDT 2/16/17

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

¹ 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.
² Elevations based on San Francisco City datum.



PROJECT:

INDIA BASIN
San Francisco, California

Log of Boring B-15

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

Samplers: Sprague & Herwood (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 ¹									
Ground Surface Elevation: 7 feet ²													
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			20			dark brown, increased clay content, trace brick debris							
6	S&H		20	31									
7			20										
8	S&H		15	34		∇ (04/11/14; 630 AM) trace shells and angular gravel							
9			18										
10			30										
11	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							
12			17										
13			19										
14					SM	SILTY SAND (SM) yellow-brown, medium dense, wet, fine-grained sand, trace fine gravel							
15													
16	S&H		15	20							14.5	18.2	
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			7										
21	S&H		8	12		LL = 18, PI = 5, see Figure C-5							
22			9										
23					SC-SM	CLAYEY SILTY SAND (SC-SM) red-brown, medium dense, wet, fine-grained sand				28.4	13.0		
24													
25													
26	S&H		1	1		loose							
27			1			LL = 17, PI = 5, see Figure C-5				24.9	16.6		
28			0										
29					CH	CLAY (CH) blue-gray, soft, wet, trace shells							
30													

TEST GEOTECH LOG 731626701 FOR 02-GPJ TR-GDT 2/16/17

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Project No.: 731626701

Figure: A-15a

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 ¹			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)	TxUU	3,500	820	46.2	73	
32			2									
33			2									
34												
35												
36	ST		25			blue-gray, medium stiff						
37			psi			Consolidation Test, see Figure C-45						
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	TxUU	5,500	1,300	43.0	75	
57			200			Consolidation Test, see Figure C-46						
58			psi									
59												
60												

BAY MUD

LANGAN

Project No.: 731626701

Figure: A-15b

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

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 ¹			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-	0-200 psi		stiff Consolidation Test, see Figure C-47	TxUU	7,500	1,640		45.7	72				
76			200													
77																
78																
79																
80																
81																
82																
83																
84																
85	S&H	[Sample]	14	56	CL	SANDY CLAY (CL) blue-gray, hard, wet, fine-grained sand					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 FOR 02.GPJ TR.GDT 2/16/17

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 ¹			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 yellow-brown and red-yellow increased sand content				49.7	19.5	
92												
93												
94												
95	S&H		7 17 41	41						21.5	22.4	
96												
97												
98					CL	SANDY CLAY (CL) blue-gray, very stiff, wet, fine-grained sand and trace orange inclusions sand lense				60.9	21.0	
99												
100												
101	S&H		8 15 19	24								
102												
103												
104												
105												
106												
107												
108												
109					CL	CLAY with SAND (CL) blue-gray, stiff, wet, fine-grained sand, some orange inclusions						
110	S&H		3 10 10	14								
111												
112												
113												
114												
115												
116												
117												
118												
119												
120												

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

LANGAN

Project No.:
731626701

Figure:
A-15d

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 ¹			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	[Sample]	279	11	CL	CLAY (CL) gray, stiff, wet									
122															
123															
124															
125															
126															
127															
128															
129															
130															
131	S&H	[Sample]	142424	34	CL	CLAY with SAND (CL) blue-gray, hard, wet, fine-grained sand									
132															
133															
134															
135															
136															
137															
138															
139															
140															
141	SPT	[Sample]	91012	26		very stiff, trace angular gravel									
142															
143															
144															
145	SPT	[Sample]	60/2"	72/2"		SHALE BEDROCK gray-black, intensely fractured, low hardness, weak, moderately weathered									
146															
147															
148															
149															
150						green-black									

TEST GEOTECH LOG 731626701 FOR 02.GPJ TR.GDT 2/16/17

RESIDUAL SOIL

LANGAN

Project No.:
731626701

Figure:
A-15e

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 ¹			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		50/6"	60/6"																
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 FOR 02.GPJ TR.GDT 2/16/17

Boring terminated at a depth of 150.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater encountered at 1 foot and 7 feet below ground surface during drilling.

¹ 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.
² Elevations based on San Francisco City datum.



UNIFIED SOIL CLASSIFICATION SYSTEM

	Major Divisions	Symbols	Typical Names
Coarse-Grained Soils <small>(more than half of soil > no. 200 sieve size)</small>	Gravels <small>(More than half of coarse fraction > no. 4 sieve size)</small>	GW	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sands <small>(More than half of coarse fraction < no. 4 sieve size)</small>	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
Fine-Grained Soils <small>(more than half of soil < no. 200 sieve size)</small>	Silts and Clays <small>LL = < 50</small>	ML	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	Silts and Clays <small>LL = > 50</small>	MH	Inorganic silts of high plasticity
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic silts and clays of high plasticity
Highly Organic Soils		PT	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 No. 40 to No. 200	2.00 to 0.420 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"> C Core barrel CA California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter D&M Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube O Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube | <ul style="list-style-type: none"> PT Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube S&H Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter SPT Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter ST Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure |
|---|--|

INDIA BASIN
San Francisco, California

CLASSIFICATION CHART

LANGAN

Date 02/15/17 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

Date 02/15/17 Project No. 731626701 Figure A-17

**APPENDIX B
ENVIRONMENTAL 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				PID (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							
10		•		32/48			
11						SM	SILTY SAND (SM) black, moist, slight hydrocarbon odor, brick and wood debris
12							
14				36/48			
15						CL	SANDY CLAY (CL) black, medium stiff to stiff, moist, weak hydrocarbon odor, brick, wood, and burn debris
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

FILL

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 2/16/17

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



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				PID (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							
10		•	30/48				
12						SC	CLAYEY SAND (SC) dark gray brown, moderately dense, moist, no odor
13							
14			42/48			SP	SAND (SP) dark gray, moderately dense, wet, no odor
15		•					
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 2/16/17

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.



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				PID (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						CL	
13							
14				36/36			
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 2/16/17

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



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				PID (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 2/16/17

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



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				PID (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		•					
6							
7				32/48			
8		•				SM	SILTY SAND (SM) black, moderately dense to dense, moist, slight hydrocarbon odor, brick and wood debris
9							
10		•					
11				48/48			
12							
13							
14							
15		•		36/36			
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

FILL

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 2/16/17

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



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				PID (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								weak hydrocarbon odor
10		•	48/48		SM			SILTY SAND (SM) brown, dense, moist, no odor, brick debris
11								
12								
13					CL			CLAY with GRAVEL (CL) brown to black, stiff, moist, no odor, gravel up to 1" diameter, brick debris
14			36/36					
15		•						
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

FILL

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 2/16/17

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



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				PID (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							

TEST ENVIRONMENTAL INCHES 731626702.GPJ T&R.GDT 2/16/17

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



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

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 DESIGNATIONS/SYMBOLS

-  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

- C** Core barrel
- CA** California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter
- D&M** Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube
- O** Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube
- PT** Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube
- S&H** Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter
- SPT** Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter
- ST** Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure

INDIA BASIN
San Francisco, California

CLASSIFICATION CHART



APPENDIX C
CERTIFIED ANALYTICAL AND CHAIN-OF-CUSTODY REPORTS

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?*

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Angela Rydelius,
Laboratory Manager

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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		
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:	
Decachlorobiphenyl	105	70-130	h4,a1	08/11/2014 14:37

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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

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

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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

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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Client: Treadwell & Rollo
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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
Surrogates	REC (%)	Limits		
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

(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-2-1.5	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	0.034	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
Surrogates	REC (%)	Limits		
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

(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-2-5.0	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
Surrogates	REC (%)	Limits		
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

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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-2-15	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

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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-2-15	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

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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
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

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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-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

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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-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

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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-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

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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-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	0.060	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
Surrogates	REC (%)	Limits		
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

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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
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	0.014	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
Surrogates	REC (%)	Limits		
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
Surrogates	REC (%)	Limits		
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

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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
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

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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
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

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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
<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

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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-2-5.0	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

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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-2-5.0	1408242-008A	Soil	08/06/2014 09:35	GC21	93771

Analytes	Result	RL	DF	Date Analyzed
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

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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
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

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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-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

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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-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	2.2	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

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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
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

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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
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
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
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

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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

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
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	98	70-130		08/09/2014 03:23

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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

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

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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

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

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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

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

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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

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	6.1	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	120	5.0	10	08/12/2014 00:48
Cobalt	82	0.50	1	08/09/2014 04:37
Copper	2.4	0.50	1	08/09/2014 04:37
Lead	2.0	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	1900	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	4.2	0.50	1	08/09/2014 04:37
Zinc	25	5.0	1	08/09/2014 04:37
Surrogates	REC (%)	Limits		
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⁻ E
Analytical Method: SM4500-CN⁻ 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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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

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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-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

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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-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

(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-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

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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-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
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
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	1300	50	100	08/14/2014 16:07
Lead	0.65	0.50	1	08/12/2014 21:22
Nickel	2600	50	100	08/14/2014 16:07
Zinc	87	5.0	1	08/12/2014 21:22
Surrogates	REC (%)	Limits		
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	69	0.50	1	08/12/2014 21:28
Lead	97	5.0	10	08/14/2014 16:20
Nickel	67	0.50	1	08/12/2014 21:28
Zinc	140	5.0	1	08/12/2014 21:28
Surrogates	REC (%)	Limits		
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	85	0.50	1	08/12/2014 21:34
Lead	6.3	0.50	1	08/12/2014 21:34
Nickel	56	0.50	1	08/12/2014 21:34
Zinc	60	5.0	1	08/12/2014 21:34
Surrogates	REC (%)	Limits		
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	62	0.50	1	08/09/2014 03:17
Lead	25	0.50	1	08/09/2014 03:17
Nickel	180	5.0	10	08/20/2014 17:42
Zinc	53	5.0	1	08/09/2014 03:17
Surrogates	REC (%)	Limits		
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	49	0.50	1	08/12/2014 21:41
Lead	19	0.50	1	08/12/2014 21:41
Nickel	180	5.0	10	08/14/2014 16:26
Zinc	81	5.0	1	08/12/2014 21:41
Surrogates	REC (%)	Limits		
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	0.37	0.25	1	08/12/2014 22:01
Chromium	82	0.50	1	08/12/2014 22:01
Lead	120	5.0	10	08/14/2014 16:32
Nickel	110	5.0	10	08/14/2014 16:32
Zinc	130	5.0	1	08/12/2014 22:01
Surrogates	REC (%)	Limits		
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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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
EB-6-5.0	1408242-030A	Soil	08/05/2014 08:50	GC11B	93767

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	17	2.0	2	08/08/2014 23:15
TPH-Motor Oil (C18-C36)	54	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
EB-6-10	1408242-032A	Soil	08/05/2014 09:00	GC11B	93767

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	120	5.0	5	08/09/2014 12:57
TPH-Motor Oil (C18-C36)	270	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
EB-7-3.0	1408242-035A	Soil	08/05/2014 10:00	GC9a	93767

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	15	10	10	08/10/2014 07:47
TPH-Motor Oil (C18-C36)	130	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
EB-7-5.0	1408242-036A	Soil	08/05/2014 10:05	GC11B	93767

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	48	20	20	08/10/2014 04:57
TPH-Motor Oil (C18-C36)	410	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
Surrogate Recovery									
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

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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	-	-	-	-

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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

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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
Surrogate Recovery									
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

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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	-	-	-	-

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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

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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
Surrogate Recovery									
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
Surrogate Recovery									
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	-	-	-	-

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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
Surrogate Recovery							
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
Surrogate Recovery									
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
Surrogate Recovery							
Tb 350.917	567	479		500	113	96	70-130



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
Surrogate Recovery									
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
Surrogate Recovery							
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
Surrogate Recovery									
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⁻ E
Analytical Method: SM4500-CN⁻ ABCE
Unit: mg/Kg
Sample ID: MB/LCS-93874
 1408242-002AMS/MSD

QC Summary Report for SM4500-CN⁻ 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

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
Surrogate Recovery							
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	
Surrogate Recovery									
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

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	1240	50	1000	-	125	70-130
Surrogate Recovery							
C9	621	764		625	99	122	70-130

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 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:** 08/21/2014
 (415) 955-5200 FAX: (415) 955-9041

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
 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: Accounts Payable
 Treadwell & Rollo
 555 Montgomery St., Suite 1300
 San Francisco, CA 94111
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								
1408242-029	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"

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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: #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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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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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).**

Bottle Legend:

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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

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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
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).**

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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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

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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
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).**

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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
1408242-028A	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"/>

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WORK ORDER SUMMARY

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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).**

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250mL HDPE w/ HNO3 = 250mL HDPE Bottle w/ HNO3
 Acetate Liner = Acetate Liner
 Short Stainless Tube =

VOA w/ HCl = 43mL VOA w/ HCl

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: 731606702
 Project Manager/Contact: PETER CUSACK
 Samplers: KSS & RNM
 Recorder (Signature Required): [Signature]

Turnaround Time
NO RUSH

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix			No. Containers & Preservative							Analysis Requested										Remarks			
				Soil	Water	Other	HCL	H ₂ SO ₄	HNO ₃	Ice	Other	TPH & id.m	VOCS	SVOCs	PCBS	CAM/IT	UAFTS	TOTAL Pb	ASBESTOS	PH	CYANIDE	TOTAL SULFIDES	Silica gel 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			
EB-3-10		1210		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			
EB-4-3.0		1050		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			
EB-4-7.5		1105		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			
EB-5-1.5		1325		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			
EB-5-5.0		1415		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			
EB-5-10		1435		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			
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			
Relinquished by: (Signature)																											
Relinquished by: (Signature)																											
Relinquished by: (Signature)																											
Date	8/7/14	Time	1900																								
Date	8/7/14	Time	1545																								
Date		Time																									
Received by: (Signature)																											
Received by: (Signature)																											
Received by Lab: (Signature)																											
Date	8/7/14	Time	1400																								
Date	8/7/14	Time	1545																								
Date		Time																									
Method of Shipment	<input type="checkbox"/> Hand Carried			<input type="checkbox"/> Private Courier (Co. Name)			<input checked="" type="checkbox"/> Lab courier			<input type="checkbox"/> Fed Ex			<input type="checkbox"/> Airborne			<input type="checkbox"/> UPS											

Sent to Laboratory (Name): MCCAMPBELL ANALYTICAL

Laboratory Comments/Notes:

White Copy - Original Yellow Copy - Laboratory Pink Copy - Field COC Number: **005752**



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.
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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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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**
 (415) 955-5244 FAX: (415) 955-9041

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		
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
6		7		8		9	
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.



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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 **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 =



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?*

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McC Campbell](#)

Angela Rydelius,
Laboratory Manager

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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-10-2.5	1404200-001A	Soil	03/24/2014	GC22	89021
<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)	0.27		0.25	10	04/08/2014 05:12
a-Chlordane	0.023		0.010	10	04/08/2014 05:12
g-Chlordane	0.028		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	0.021		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-8-3'	1404200-009A	Soil	03/25/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0010	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	0.0011		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	0.0081		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-14-3	1404200-012A	Soil	03/26/2014	GC22	89021
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0020	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-11-3	1404200-019A	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	04/08/2014 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	

(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-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	

(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-7-2.5	1404200-030A	Soil	04/02/2014	GC22	89021
<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>	Analytical Comments: 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-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>
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

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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-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-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>
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

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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-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-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>
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-9-5.5	1404200-016A	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 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	0.017		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-9-5.5	1404200-016A	Soil	03/25/2014	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 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

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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>
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

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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-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

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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-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-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>
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
<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,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

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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-10-8	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

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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-10-8	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

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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-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

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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-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

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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-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

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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-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:</u> a4	
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

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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-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

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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-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: a4</u>	
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

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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-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>
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

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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-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

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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-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

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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-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

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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-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-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>
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-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>
<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

(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>
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

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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-13-5.5	1404200-006A	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	0.50		0.50	1	04/08/2014 12:29
Arsenic	3.9		0.50	1	04/08/2014 12:29
Barium	86		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	40		0.50	1	04/08/2014 12:29
Cobalt	8.4		0.50	1	04/08/2014 12:29
Copper	16		0.50	1	04/08/2014 12:29
Lead	25		0.50	1	04/08/2014 12:29
Mercury	0.14		0.050	1	04/08/2014 12:29
Molybdenum	ND		0.50	1	04/08/2014 12:29
Nickel	35		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	47		0.50	1	04/08/2014 12:29
Zinc	58		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

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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-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

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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-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

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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-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

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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-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

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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-6-10	1404200-028A	Soil/TOTAL	03/31/2014	ICP-MS1	89023
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Antimony	1.6		0.50	1	04/08/2014 14:03
Arsenic	8.0		0.50	1	04/08/2014 14:03
Barium	170		5.0	1	04/08/2014 14:03
Beryllium	ND		0.50	1	04/08/2014 14:03
Cadmium	0.49		0.25	1	04/08/2014 14:03
Chromium	83		0.50	1	04/08/2014 14:03
Cobalt	16		0.50	1	04/08/2014 14:03
Copper	59		0.50	1	04/08/2014 14:03
Lead	92		5.0	10	04/09/2014 06:56
Mercury	0.38		0.050	1	04/08/2014 14:03
Molybdenum	0.52		0.50	1	04/08/2014 14:03
Nickel	75		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	66		0.50	1	04/08/2014 14:03
Zinc	230		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	3.3		0.50	1	04/08/2014 14:53
Barium	15		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	30		0.50	1	04/08/2014 14:53
Cobalt	4.3		0.50	1	04/08/2014 14:53
Copper	3.4		0.50	1	04/08/2014 14:53
Lead	5.0		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	20		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	27		0.50	1	04/08/2014 14:53
Zinc	15		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⁻ E
Analytical Method: SM4500-CN⁻ 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

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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⁻ E
Analytical Method: SM4500-CN⁻ 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-10-2.5	1404200-001A	Soil	03/24/2014	GC7	89004

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-10-5.5	1404200-002A	Soil	03/24/2014	GC7	89004
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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-10-8	1404200-003A	Soil	03/24/2014	GC7	89004
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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-10-10.5	1404200-004A	Soil	03/24/2014	GC7	89004
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	95	H	70-130		04/08/2014 16:03
B-13-3	1404200-005A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	89		70-130		04/08/2014 15:16
B-13-5.5	1404200-006A	Soil	03/25/2014	GC19	89004
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: d7	
2-Fluorotoluene	88		70-130		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: 4/4/14-4/11/14

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

B-13-10.5	1404200-008A	Soil	03/25/2014	GC19	89004
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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	

B-8-3'	1404200-009A	Soil	03/25/2014	GC19	89004
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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-8-5'	1404200-010A	Soil	03/25/2014	GC19	89004
<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 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-8-10.5	1404200-011A	Soil	03/25/2014	GC19	89154
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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>	Analytical Comments: d7	
2-Fluorotoluene	95	H	70-130		04/09/2014 19:13
B-14-3	1404200-012A	Soil	03/26/2014	GC19	89004
<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 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

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

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-14-5.5	1404200-013A	Soil	03/26/2014	GC19	89154

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	2.2	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

B-14-7.5	1404200-014A	Soil	03/26/2014	GC19	89004
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	1.9	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

B-9-3	1404200-015A	Soil	03/25/2014	GC19	89004
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	4.1	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

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

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-9-5.5	1404200-016A	Soil	03/25/2014	GC19	89004

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	2.0	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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-8	1404200-017A	Soil	03/25/2014	GC19	89004

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-9-10	1404200-018A	Soil	03/25/2014	GC19	89004

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH(g)	7.0	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

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

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-12-5.5	1404200-022A	Soil	03/26/2014	GC7	89020

Analytes	Result	RL	DF	Date Analyzed
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
Surrogates	REC (%)	Limits		
2-Fluorotoluene	103	70-130		04/08/2014 09:20

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-8	1404200-023A	Soil	03/26/2014	GC7	89020

Analytes	Result	RL	DF	Date Analyzed
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
Surrogates	REC (%)	Limits		
2-Fluorotoluene	97	70-130		04/08/2014 09:50

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-10.5	1404200-024A	Soil	03/26/2014	GC7	89020

Analytes	Result	RL	DF	Date Analyzed
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
Surrogates	REC (%)	Limits		
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-6-3	1404200-025A	Soil	03/31/2014	GC19	89104

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-6-5.5	1404200-026A	Soil	03/31/2014	GC19	89020
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	3.5	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>	Analytical Comments: d7	
2-Fluorotoluene	89	70-130		04/09/2014 13:33

B-6-10	1404200-028A	Soil	03/31/2014	GC19	89246
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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-6-15.5	1404200-029A	Soil	03/31/2014	GC19	89104

<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-7-2.5	1404200-030A	Soil	04/02/2014	GC19	89020
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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-7-5	1404200-031A	Soil	04/02/2014	GC19	89020
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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

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Analytical Report

Client: Treadwell & Rollo
Project: #731626701; India Basin
Date Received: 4/4/14 20:38
Date Prepared: 4/4/14-4/11/14

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-10-5.5	1404200-002A	Soil/TOTAL	03/24/2014	ICP-MS1	89005

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 10:04
Chromium	42	0.50	1	04/08/2014 10:04
Lead	16	0.50	1	04/08/2014 10:04
Nickel	35	0.50	1	04/08/2014 10:04
Zinc	66	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-10-10.5	1404200-004A	Soil/TOTAL	03/24/2014	ICP-MS1	89005

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 10:23
Chromium	57	0.50	1	04/08/2014 10:23
Lead	21	0.50	1	04/08/2014 10:23
Nickel	54	0.50	1	04/08/2014 10:23
Zinc	44	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-13-8	1404200-007A	Soil/TOTAL	03/25/2014	ICP-MS1	89005

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 12:10
Chromium	39	0.50	1	04/08/2014 12:10
Lead	13	0.50	1	04/08/2014 12:10
Nickel	37	0.50	1	04/08/2014 12:10
Zinc	54	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-8-10.5	1404200-011A	Soil/TOTAL	03/25/2014	ICP-MS1	89005

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.39	0.25	1	04/08/2014 12:35
Chromium	53	0.50	1	04/08/2014 12:35
Lead	840	10	20	04/09/2014 05:47
Nickel	55	0.50	1	04/08/2014 12:35
Zinc	250	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-14-5.5	1404200-013A	Soil/TOTAL	03/26/2014	ICP-MS1	89005

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 12:47
Chromium	200	5.0	10	04/09/2014 05:59
Lead	92	5.0	10	04/09/2014 05:59
Nickel	760	5.0	10	04/09/2014 05:59
Zinc	110	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-9-5.5	1404200-016A	Soil/TOTAL	03/25/2014	ICP-MS1	89005

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 13:00
Chromium	43	0.50	1	04/08/2014 13:00
Lead	40	0.50	1	04/08/2014 13:00
Nickel	46	0.50	1	04/08/2014 13:00
Zinc	65	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-9-10	1404200-018A	Soil/TOTAL	03/25/2014	ICP-MS1	89005

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 13:06
Chromium	50	0.50	1	04/08/2014 13:06
Lead	120	5.0	10	04/09/2014 06:12
Nickel	43	0.50	1	04/08/2014 13:06
Zinc	96	5.0	1	04/08/2014 13:06
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	103	70-130		04/08/2014 13:06

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-11-3	1404200-019A	Soil/TOTAL	03/26/2014	ICP-MS1	89005

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 13:25
Chromium	68	0.50	1	04/08/2014 13:25
Lead	21	0.50	1	04/08/2014 13:25
Nickel	49	0.50	1	04/08/2014 13:25
Zinc	68	5.0	1	04/08/2014 13:25
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	105	70-130		04/08/2014 13:25

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-12-5.5	1404200-022A	Soil/TOTAL	03/26/2014	ICP-MS1	89023

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 13:38
Chromium	130	5.0	10	04/09/2014 06:18
Lead	5.6	0.50	1	04/08/2014 13:38
Nickel	270	5.0	10	04/09/2014 06:18
Zinc	41	5.0	1	04/08/2014 13:38
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
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-12-8	1404200-023A	Soil/TOTAL	03/26/2014	ICP-MS1	89023

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 13:44
Chromium	180	5.0	10	04/09/2014 06:24
Lead	4.9	0.50	1	04/08/2014 13:44
Nickel	500	5.0	10	04/09/2014 06:24
Zinc	38	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-6-5.5	1404200-026A	Soil/TOTAL	03/31/2014	ICP-MS1	89023

Analytes	Result	RL	DF	Date Analyzed
Cadmium	1.7	0.25	1	04/08/2014 13:56
Chromium	70	0.50	1	04/08/2014 13:56
Lead	120	5.0	10	04/09/2014 06:37
Nickel	73	0.50	1	04/08/2014 13:56
Zinc	120	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-6-15.5	1404200-029A	Soil/TOTAL	03/31/2014	ICP-MS1	89023

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	04/08/2014 14:09
Chromium	59	0.50	1	04/08/2014 14:09
Lead	48	0.50	1	04/08/2014 14:09
Nickel	28	0.50	1	04/08/2014 14:09
Zinc	55	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-10-8	1404200-003A	Soil/TOTAL	03/24/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	16		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-13-3	1404200-005A	Soil/TOTAL	03/25/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	42		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-13-10.5	1404200-008A	Soil/TOTAL	03/25/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	59		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-8-5'	1404200-010A	Soil/TOTAL	03/25/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	240		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-14-7.5	1404200-014A	Soil/TOTAL	03/26/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	49		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-9-8	1404200-017A	Soil/TOTAL	03/25/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	57		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-12-3	1404200-021A	Soil/TOTAL	03/26/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	120		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-6-3	1404200-025A	Soil/TOTAL	03/31/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	140		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-7-8	1404200-032A	Soil/TOTAL	04/02/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	200		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-7-15.5	1404200-034A	Soil/TOTAL	04/02/2014	ICP-MS1	89091
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	75		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

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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

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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-10-2.5	1404200-001A	Soil	03/24/2014	GC11B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	48		20	20	04/09/2014 21:47
TPH-Motor Oil (C18-C36)	730		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-10-5.5	1404200-002A	Soil	03/24/2014	GC2B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	40		2.0	2	04/10/2014 23:15
TPH-Motor Oil (C18-C36)	140		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-10-8	1404200-003A	Soil	03/24/2014	GC6B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	26		2.0	1	04/10/2014 00:40
TPH-Motor Oil (C18-C36)	120		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-10-10.5	1404200-004A	Soil	03/24/2014	GC11A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	16		5.0	5	04/12/2014 12:04
TPH-Motor Oil (C18-C36)	230		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-13-3	1404200-005A	Soil	03/25/2014	GC11B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	20		5.0	5	04/12/2014 14:21
TPH-Motor Oil (C18-C36)	170		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-13-5.5	1404200-006A	Soil	03/25/2014	GC9a	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	38		5.0	5	04/12/2014 11:40
TPH-Motor Oil (C18-C36)	360		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-13-8	1404200-007A	Soil	03/25/2014	GC11A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	12		2.0	1	04/11/2014 08:56
TPH-Motor Oil (C18-C36)	130		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-13-10.5	1404200-008A	Soil	03/25/2014	GC11A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	36		10	10	04/12/2014 17:46
TPH-Motor Oil (C18-C36)	610		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-8-3'	1404200-009A	Soil	03/25/2014	GC9a	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	9.3		2.0	1	04/08/2014 21:05
TPH-Motor Oil (C18-C36)	22		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-8-5'	1404200-010A	Soil	03/25/2014	GC9a	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	5.6		2.0	1	04/10/2014 18:31
TPH-Motor Oil (C18-C36)	34		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-8-10.5	1404200-011A	Soil	03/25/2014	GC2B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	37		2.0	1	04/10/2014 19:27
TPH-Motor Oil (C18-C36)	130		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-14-3	1404200-012A	Soil	03/26/2014	GC11B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	9.0		2.0	2	04/11/2014 20:04
TPH-Motor Oil (C18-C36)	46		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

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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/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-14-5.5	1404200-013A	Soil	03/26/2014	GC9a	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	12		2.0	1	04/10/2014 21:52
TPH-Motor Oil (C18-C36)	57		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-14-7.5	1404200-014A	Soil	03/26/2014	GC6B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	10		2.0	1	04/10/2014 01:52
TPH-Motor Oil (C18-C36)	53		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-9-3	1404200-015A	Soil	03/25/2014	GC11B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	22		10	10	04/11/2014 23:30
TPH-Motor Oil (C18-C36)	230		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-9-5.5	1404200-016A	Soil	03/25/2014	GC9a	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	140		50	50	04/12/2014 17:15
TPH-Motor Oil (C18-C36)	2800		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

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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/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-9-8	1404200-017A	Soil	03/25/2014	GC11B	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	17		2.0	1	04/12/2014 04:04
TPH-Motor Oil (C18-C36)	100		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-9-10	1404200-018A	Soil	03/25/2014	GC11A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	210		50	50	04/09/2014 10:37
TPH-Motor Oil (C18-C36)	330		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-11-3	1404200-019A	Soil	03/26/2014	GC2A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	34		10	10	04/10/2014 18:11
TPH-Motor Oil (C18-C36)	330		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-11-5	1404200-020A	Soil	03/26/2014	GC11A	89018
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	25		2.0	1	04/09/2014 07:11
TPH-Motor Oil (C18-C36)	62		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

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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/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-12-3	1404200-021A	Soil	03/26/2014	GC6B	89024
<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-12-5.5	1404200-022A	Soil	03/26/2014	GC6B	89024
<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-12-8	1404200-023A	Soil	03/26/2014	GC6B	89024
<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-12-10.5	1404200-024A	Soil	03/26/2014	GC6B	89024
<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-6-3	1404200-025A	Soil	03/31/2014	GC2A	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	36		2.0	1	04/11/2014 04:17
TPH-Motor Oil (C18-C36)	150		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-6-5.5	1404200-026A	Soil	03/31/2014	GC11B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	110		20	20	04/12/2014 09:47
TPH-Motor Oil (C18-C36)	740		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-6-10	1404200-028A	Soil	03/31/2014	GC2B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	45		10	10	04/09/2014 07:41
TPH-Motor Oil (C18-C36)	370		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-6-15.5	1404200-029A	Soil	03/31/2014	GC6B	89024
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	4.2		2.0	1	04/10/2014 07:49
TPH-Motor Oil (C18-C36)	9.1		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-7-2.5	1404200-030A	Soil	04/02/2014	GC9a	89024

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	130	50	50	04/14/2014 12:20
TPH-Motor Oil (C18-C36)	2600	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-7-5	1404200-031A	Soil	04/02/2014	GC6B	89024
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<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-7-8	1404200-032A	Soil	04/02/2014	GC2B	89024
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	68	2.0	2	04/11/2014 04:17
TPH-Motor Oil (C18-C36)	230	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-7-15.5	1404200-034A	Soil	04/02/2014	GC9a	89024
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	9.5	2.0	1	04/09/2014 00:26
TPH-Motor Oil (C18-C36)	38	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	-	-	-	-
Surrogate Recovery							
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	
Surrogate Recovery									
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	-	-	-	-

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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
Surrogate Recovery									
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

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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
Surrogate Recovery							
Tb 350.917	549.2	495.5		500	110	99	70-130

(Cont.)



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
Surrogate Recovery									
Tb 350.917	496.7	576.6	500		99	115	70-130	14.9	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: 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
Surrogate Recovery							
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
Surrogate Recovery									
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⁻ E
Analytical Method: SM4500-CN⁻ ABCE
Unit: mg/Kg
Sample ID: MB/LCS-89157
 1404200-008AMS/MSD

QC Summary Report for SM4500-CN⁻ 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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(Cont.)



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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(Cont.)



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

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

(Cont.)



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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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1404200 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) 955-5244 FAX: (415) 955-9041
 Email: pcusack@langan.com
 cc/3rd Party: Treadwell & Rollo
 PO: 555 Montgomery St., Suite 1300
 ProjectNo: #731626701; India Basin
 San Francisco, CA 94111

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	
1404200-001	B-10-2.5	Soil	3/24/2014	<input type="checkbox"/>	A	A	A			A	A				A	A	A
1404200-002	B-10-5.5	Soil	3/24/2014	<input type="checkbox"/>							A						A
1404200-003	B-10-8	Soil	3/24/2014	<input type="checkbox"/>		A	A								A		A
1404200-004	B-10-10.5	Soil	3/24/2014	<input type="checkbox"/>											A		A
1404200-005	B-13-3	Soil	3/25/2014	<input type="checkbox"/>											A		A
1404200-006	B-13-5.5	Soil	3/25/2014	<input type="checkbox"/>	A	A	A										A
1404200-007	B-13-8	Soil	3/25/2014	<input type="checkbox"/>											A		A
1404200-008	B-13-10.5	Soil	3/25/2014	<input type="checkbox"/>						A					A	A	A
1404200-009	B-8-3'	Soil	3/25/2014	<input type="checkbox"/>	A					A							A
1404200-010	B-8-5'	Soil	3/25/2014	<input type="checkbox"/>											A		A
1404200-011	B-8-10.5	Soil	3/25/2014	<input type="checkbox"/>											A		A
1404200-012	B-14-3	Soil	3/26/2014	<input type="checkbox"/>	A	A	A				A					A	A
1404200-013	B-14-5.5	Soil	3/26/2014	<input type="checkbox"/>													A
1404200-014	B-14-7.5	Soil	3/26/2014	<input type="checkbox"/>												A	A
1404200-015	B-9-3	Soil	3/25/2014	<input type="checkbox"/>											A		A
1404200-016	B-9-5.5	Soil	3/25/2014	<input type="checkbox"/>		A	A										A

Test Legend:

1	8081PCB_S	3	8270D_S	4	ASBEST400 (435 CARB)_S	5	CAM17MS_S
6	CN_TOTAL_S	8	PB_S	9	PH_S	10	SULFIDE_S
11	TPH(DMO)WSG_S	2	8260B_S	7	LUFTMS_S	12	

The following SampleIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A, 028A, 029A, 030A, 031A, 032A, 034A 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.
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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

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:

Big Stainless Tube =
 Big Stainless Tube =



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1534 Willow Pass Road, Pittsburg, CA 94565-1701
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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: 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"/>	

*** 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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 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
1404200-008A	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"/>	

*** 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
1404200-012A	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) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW8270C (SVOCs) SW8260B (VOCs)	1	Big Stainless Tube	<input type="checkbox"/>	3/26/2014	5 days		<input type="checkbox"/>	
1404200-014A	B-14-7.5	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"/>	
1404200-015A	B-9-3	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW6020 (CAM 17)	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days		<input type="checkbox"/>	
1404200-016A	B-9-5.5	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW8270C (SVOCs) SW8260B (VOCs)	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	5 days		<input type="checkbox"/>	
1404200-017A	B-9-8	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up SW6010B (Lead)	1	Big Stainless Tube	<input type="checkbox"/>	3/25/2014	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).**

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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
1404200-018A	B-9-10	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			
1404200-019A	B-11-3	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			
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days			
1404200-020A	B-11-5	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"/>		
			SW9030A/E376.2 (Sulfide)			<input type="checkbox"/>		5 days			
			SW9045D (pH)			<input type="checkbox"/>		5 days			
			Cyanide, Total			<input type="checkbox"/>		5 days			
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days			
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days			
1404200-021A	B-12-3	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			

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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
1404200-022A	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		<input type="checkbox"/>	
			SW8270C (SVOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
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		<input type="checkbox"/>	
			Asbestos, 435 CARB 400			<input type="checkbox"/>		5 days		<input type="checkbox"/>	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		<input type="checkbox"/>	
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		<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"/>	
1404200-026A	B-6-5.5	Soil	SW6020 (LUFT)	1	Big Stainless Tube	<input type="checkbox"/>	3/31/2014	5 days		<input type="checkbox"/>	

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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

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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
1404200-026A	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"/>		

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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"/>	

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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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.33	0.050	1	05/02/2014 21:41
Lead	7.5	0.20	1	05/02/2014 21:41

B-9-3	1404200-015A	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>
Chromium	0.36	0.050	1	05/02/2014 21:53
Lead	10	0.20	1	05/02/2014 21:53

B-9-10	1404200-018A	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>
Chromium	0.59	0.050	1	05/05/2014 14:44
Lead	10	0.20	1	05/05/2014 14:44

B-11-5	1404200-020A	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>
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

Analytes	Result	RL	DF	Date Analyzed
Lead	0.51	0.20	1	05/05/2014 14:22

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-3'	1404200-009A	Soil/WET	03/25/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
Lead	0.49	0.20	1	05/05/2014 14:31

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-5'	1404200-010A	Soil/WET	03/25/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
Lead	3.7	0.20	1	05/05/2014 14:33

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-8-10.5	1404200-011A	Soil/WET	03/25/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
Lead	9.0	0.20	1	05/05/2014 14:36

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-14-5.5	1404200-013A	Soil/WET	03/26/2014	ICP-JY	89902

Analytes	Result	RL	DF	Date Analyzed
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

Analytes	Result	RL	DF	Date Analyzed
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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Analytes	Result	RL	DF	Date Analyzed
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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Analytes	Result	RL	DF	Date Analyzed
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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Analytes	Result	RL	DF	Date Analyzed
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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Analytes	Result	RL	DF	Date Analyzed
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

CHAIN-OF-CUSTODY RECORD

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

Email: pcusack@langan.com
 cc/3rd Party:
PO: ProjectNo: #731626701; India Basin
 San Francisco, CA 94111 FAX: (415) 955-9041

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"/>																		
1404200-004	B-10-10.5	Soil	3/24/2014	<input type="checkbox"/>	A																	
1404200-008	B-13-10.5	Soil	3/25/2014	<input type="checkbox"/>		A																
1404200-009	B-8-3'	Soil	3/25/2014	<input type="checkbox"/>		A																
1404200-010	B-8-5'	Soil	3/25/2014	<input type="checkbox"/>		A																
1404200-011	B-8-10.5	Soil	3/25/2014	<input type="checkbox"/>		A																
1404200-012	B-14-3	Soil	3/26/2014	<input type="checkbox"/>	A																	
1404200-013	B-14-5.5	Soil	3/26/2014	<input type="checkbox"/>																		
1404200-015	B-9-3	Soil	3/25/2014	<input type="checkbox"/>						A												
1404200-017	B-9-8	Soil	3/25/2014	<input type="checkbox"/>						A												
1404200-018	B-9-10	Soil	3/25/2014	<input type="checkbox"/>						A												
1404200-019	B-11-3	Soil	3/26/2014	<input type="checkbox"/>	A																	
1404200-020	B-11-5	Soil	3/26/2014	<input type="checkbox"/>						A												
1404200-021	B-12-3	Soil	3/26/2014	<input type="checkbox"/>						A												
1404200-022	B-12-5.5	Soil	3/26/2014	<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.

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1404200 A ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 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:

Email: pcusack@langan.com
 cc/3rd Party:
 PO: ProjectNo: #731626701; 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			
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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 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.

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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?*

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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

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	05/23/2014 20:41

B-8-10.5	1404200-011A	Soil/TCLP	03/25/2014	ICP-JY	90694
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	05/23/2014 20:43

B-9-3	1404200-015A	Soil/TCLP	03/25/2014	ICP-JY	90694
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	0.28	0.20	1	05/23/2014 20:46

B-9-10	1404200-018A	Soil/TCLP	03/25/2014	ICP-JY	90694
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	ND	0.20	1	05/23/2014 20:48

B-12-3	1404200-021A	Soil/TCLP	03/26/2014	ICP-JY	90694
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<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
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

WorkOrder: 1404200 B ClientCode: TWRF

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 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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 "When Quality Counts"

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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. TCLP's **Contact's Email:** pcusack@langan.com **Date Add-On:** 5/22/2014
 added 5/22/14 1Day TAT

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 =



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?*

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McC Campbell](#)

Angela Rydelius,
Laboratory Manager

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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-3-3'	1405A73-001A	Soil	05/03/2014	GC22	90885
<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>	Analytical Comments: 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-4-3'	1405A73-004A	Soil	05/08/2014	GC22	90885
<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	

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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-15-5.5'	1405A73-007A	Soil	05/10/2014	GC22	90885
<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>	Analytical Comments: 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

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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-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

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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-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

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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-15-10.5'	1405A73-009A	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 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

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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-15-10.5'	1405A73-009A	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 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

(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>
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

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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>
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	<u>Analytical Comments: a3</u>	
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

(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>
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

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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>
<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

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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>
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>	<u>Analytical Comments: a3</u>	
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-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>
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

(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>
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	1.3	H	0.50	2	05/30/2014 21:04
Fluorene	0.97	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	3.7	H	0.50	2	05/30/2014 21:04
Phenol	ND	H	0.50	2	05/30/2014 21:04
Pyrene	0.85	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

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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-15-10.5'	1405A73-009A	Soil	05/10/2014	GC21	90969

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
<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

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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-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

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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-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⁻ E
Analytical Method: SM4500-CN⁻ 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-3-3'	1405A73-001A	Soil	05/03/2014	GC19	90904
<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-3-5.5'	1405A73-002A	Soil	05/03/2014	GC19	90904
<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-3-8'	1405A73-003A	Soil	05/03/2014	GC19	90904
<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-4-3'	1405A73-004A	Soil	05/08/2014	GC19	90904
<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-4-6	1405A73-005A	Soil	05/08/2014	GC7	90987
<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-15-3'	1405A73-006A	Soil	05/10/2014	GC7	90987
<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-15-5.5'	1405A73-007A	Soil	05/10/2014	GC7	90987
<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 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
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	108	H	70-130		05/31/2014 09:46
B-15-8'	1405A73-008A	Soil	05/10/2014	GC19	90987
<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 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
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
2-Fluorotoluene	97	H	70-130		05/31/2014 01:31
B-15-10.5'	1405A73-009A	Soil	05/10/2014	GC19	90987
<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 22:33
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
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
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

B-15-10.5'	1405A73-009A	Soil	05/10/2014	WetChem	90941
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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-3-3'	1405A73-001A	Soil	05/03/2014	GC6A	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	170	H	5.0	5	06/03/2014 09:48
TPH-Motor Oil (C18-C36)	220	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-3-5.5'	1405A73-002A	Soil	05/03/2014	GC11A	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	23	H	5.0	5	06/03/2014 10:51
TPH-Motor Oil (C18-C36)	100	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-3-8'	1405A73-003A	Soil	05/03/2014	GC2B	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	8.8	H	1.0	1	06/04/2014 01:25
TPH-Motor Oil (C18-C36)	28	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-4-3'	1405A73-004A	Soil	05/08/2014	GC2B	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	55	H	5.0	5	06/03/2014 00:25
TPH-Motor Oil (C18-C36)	190	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

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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: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4-6	1405A73-005A	Soil	05/08/2014	GC2B	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	57	H	10	10	06/03/2014 20:19
TPH-Motor Oil (C18-C36)	230	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-15-3'	1405A73-006A	Soil	05/10/2014	GC11A	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	7.5	H	1.0	1	06/03/2014 00:33
TPH-Motor Oil (C18-C36)	56	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-15-5.5'	1405A73-007A	Soil	05/10/2014	GC2B	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	63	H	20	20	06/03/2014 07:57
TPH-Motor Oil (C18-C36)	510	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-15-8'	1405A73-008A	Soil	05/10/2014	GC11A	90905
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	39	H	10	10	06/02/2014 22:16
TPH-Motor Oil (C18-C36)	230	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	-	-	-	-
Surrogate Recovery							
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	
Surrogate Recovery									
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
Surrogate Recovery									
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

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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
Surrogate Recovery							
Tb 350.917	599	572		500	120	114	70-130



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
Surrogate Recovery									
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⁻ E
Analytical Method: SM4500-CN⁻ ABCE
Unit: mg/Kg
Sample ID: MB/LCS-91103
 1405A73-004AMS/MSD

QC Summary Report for SM4500-CN⁻ 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
----	------	------	--	----	----	----	--------

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
----	------	------	----	--	----	----	--------	---	----

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1405A73 **ClientCode: TWRF**

WaterTrax WriteOn EDF Excel Email HardCopy ThirdParty J-flag

Report to: Peter Cusack Accounts Payable
 Treadwell & Rollo cc/3rd Party: Treadwell & Rollo
 555 Montgomery St., Suite 1300 PO: 555 Montgomery St., Suite 1300 **Date Received: 05/28/2014**
 San Francisco, CA 94111 ProjectNo: #731626701; India Basin San Francisco, CA 94111 **Date Printed: 06/04/2014**
 (415) 955-5244 FAX: (415) 955-9041

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				
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 Content	Hold	SubOut
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"/>		SubOut
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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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
1405A73-004A	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) Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	<input type="checkbox"/>	5/8/2014	5 days	<input type="checkbox"/>
1405A73-006A	B-15-3'	Soil	Multi-Range TPH(g,d,mo) SW6020 (CAM 17)	1	Big Stainless Tube	<input type="checkbox"/>	5/10/2014	5 days	<input type="checkbox"/>
1405A73-007A	B-15-5.5'	Soil	Multi-Range TPH(g,d,mo) SW6020 (LUFT) Asbestos, 435 CARB 400 SW8270C (SVOCs) SW8260B (VOCs) SW8081A/8082 (OC Pesticides+PCBs)	1	Big Stainless Tube	<input type="checkbox"/>	5/10/2014	5 days	<input type="checkbox"/>
1405A73-008A	B-15-8'	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo)	1	Big Stainless Tube	<input type="checkbox"/>	5/10/2014	5 days	<input type="checkbox"/>
1405A73-009A	B-15-10.5'	Soil	SW9030A/E376.2 (Sulfide) SW9045D (pH) Multi-Range TPH(g,d,mo) Cyanide, Total	1	Big Stainless Tube	<input type="checkbox"/>	5/10/2014	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

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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
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.



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</u> <u>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

<u>Analytical</u> <u>Qualifier</u>	
---------------------------------------	--

e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
h4	sulfuric acid permanganate (EPA 3665) cleanup

<u>Quality Control</u> <u>Qualifier</u>	
--	--

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

(Cont.)



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>
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

(Cont.)



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-1-2.5	1311112-001A	Soil/TOTAL	11/01/2013 08:00	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 15:03
Arsenic	11		0.50	1	11/06/2013 15:03
Barium	290		5.0	1	11/06/2013 15:03
Beryllium	0.70		0.50	1	11/06/2013 15:03
Cadmium	ND		0.25	1	11/06/2013 15:03
Chromium	28		0.50	1	11/06/2013 15:03
Cobalt	15		0.50	1	11/06/2013 15:03
Copper	36		0.50	1	11/06/2013 15:03
Lead	15		0.50	1	11/06/2013 15:03
Mercury	0.058		0.050	1	11/06/2013 15:03
Molybdenum	0.72		0.50	1	11/06/2013 15:03
Nickel	43		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	34		0.50	1	11/06/2013 15:03
Zinc	83		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

(Cont.)



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-1-2.5	1311112-001A	Soil	11/01/2013 08:00	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 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-1-5	1311112-002A	Soil	11/01/2013 08:08	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 02:51
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-1-7.5	1311112-003A	Soil	11/01/2013 08:30	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 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-1-2.5	1311112-001A	Soil	11/01/2013 08:00	GC11A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	2.3		1.0	1	11/06/2013 16:50
TPH-Motor Oil (C18-C36)	10		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-1-5	1311112-002A	Soil	11/01/2013 08:08	GC11A	83700
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	21		1.0	1	11/07/2013 05:24
TPH-Motor Oil (C18-C36)	76		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-1-7.5	1311112-003A	Soil	11/01/2013 08:30	GC2A	83700
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	18		2.0	2	11/06/2013 21:45
TPH-Motor Oil (C18-C36)	75		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-1-10	1311112-004A	Soil	11/01/2013 08:40	GC2A	83700
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	11		1.0	1	11/07/2013 09:05
TPH-Motor Oil (C18-C36)	38		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	-	-	-	-
Surrogate Recovery							
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
Surrogate Recovery									
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	-	-	-	-

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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
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

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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	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
Surrogate Recovery									
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
Surrogate Recovery							
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
Surrogate Recovery									
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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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
Surrogate Recovery							
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
Surrogate Recovery									
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
Surrogate Recovery							
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

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	41.3	1.0	40	-	103	70-130
Surrogate Recovery							
C9	25.52	24.89		25	102	100	70-130

CHAIN-OF-CUSTODY RECORD

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

Email: mgflessas@treadwellrollo.com
 cc:
 PO:
 ProjectNo: India Basin

Date Received: 11/05/2013
 Date Printed: 11/05/2013

Requested TAT: 3 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			
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					

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: 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

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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

(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
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-2-2.5	1311110-001A	Soil	11/02/2013 07:30	GC19	83650

Analytes	Result	RL	DF	Date Analyzed
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-2-5	1311110-002A	Soil	11/02/2013 07:40	GC19	83650
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Analytes	Result	RL	DF	Date Analyzed
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-2-7.5	1311110-003A	Soil	11/02/2013 07:55	GC19	83650
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Analytes	Result	RL	DF	Date Analyzed
TPH(g)	13	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>	<u>Analytical Comments:</u> 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-2-2.5	1311110-001A	Soil	11/02/2013 07:30	GC2A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	52		5.0	5	11/07/2013 05:18
TPH-Motor Oil (C18-C36)	160		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-2-5	1311110-002A	Soil	11/02/2013 07:40	GC11A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	15		2.0	2	11/06/2013 19:07
TPH-Motor Oil (C18-C36)	79		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-2-7.5	1311110-003A	Soil	11/02/2013 07:55	GC11A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	23		2.0	2	11/06/2013 22:33
TPH-Motor Oil (C18-C36)	36		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-2-10	1311110-004A	Soil	11/02/2013 08:06	GC6B	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	1.6		1.0	1	11/07/2013 01:46
TPH-Motor Oil (C18-C36)	7.7		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
Surrogate Recovery									
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	-	-	-	-

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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
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

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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	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
Surrogate Recovery									
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
Surrogate Recovery							
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
Surrogate Recovery									
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
Surrogate Recovery							
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
Surrogate Recovery							
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
Surrogate Recovery									
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
Surrogate Recovery							
C9	20.6	20.63		25	82	83	70-130

CHAIN-OF-CUSTODY RECORD

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: 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

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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

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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

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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	0.0090		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

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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-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC19	83695

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-5-5	1311111-002A	Soil	11/02/2013 08:25	GC19	83764
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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-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC19	83764
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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

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-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-5-2.5	1311111-001A	Soil	11/02/2013 07:59	GC2A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	24		2.0	2	11/06/2013 17:58
TPH-Motor Oil (C18-C36)	95		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-5-5	1311111-002A	Soil	11/02/2013 08:25	GC11A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	84		10	10	11/07/2013 07:41
TPH-Motor Oil (C18-C36)	390		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-5-7.5	1311111-003A	Soil	11/02/2013 08:40	GC2A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	26		5.0	5	11/07/2013 01:32
TPH-Motor Oil (C18-C36)	120		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-5-10	1311111-004A	Soil	11/02/2013 08:50	GC11A	83651
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	12		2.0	2	11/07/2013 00:50
TPH-Motor Oil (C18-C36)	60		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	-	-	-	-
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: 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
Surrogate Recovery									
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	-	-	-	-

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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: 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

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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: 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
Surrogate Recovery									
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

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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
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	-	-	-	-

(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	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
Surrogate Recovery									
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	-	-	-	-

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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
Surrogate Recovery							
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
Surrogate Recovery									
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
Surrogate Recovery							
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
Surrogate Recovery									
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
Surrogate Recovery							
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: 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.
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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
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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
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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/m³

Volatile Organic Compounds in µg/m³

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	26	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	21	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	130	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	44	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/m³

Volatile Organic Compounds in µg/m³

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	33	30	1	08/08/2014 23:09
Hexachlorobutadiene	ND	7.6	1	08/08/2014 23:09
Hexane	48	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	27	4.9	1	08/08/2014 23:09
Tetrahydrofuran	ND	2.1	1	08/08/2014 23:09
Toluene	49	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	5.3	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/m³

Volatile Organic Compounds in µg/m³

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	Date Analyzed
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/m³

Volatile Organic Compounds in µg/m³

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

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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/m³

Volatile Organic Compounds in µg/m³

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	5.4	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	280	42	2	08/08/2014 23:56
Hexachlorobutadiene	ND	11	2	08/08/2014 23:56
Hexane	850	36	2	08/08/2014 23:56
2-Hexanone	9.9	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	18	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
1,1,2,2-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	26	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	9.3	5.5	2	08/08/2014 23:56
Trichloroethene	34	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

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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/m³

Volatile Organic Compounds in µg/m³

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

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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/m³

Volatile Organic Compounds in µg/m³

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/m³

Volatile Organic Compounds in µg/m³

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	320	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	4.9	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	100	42	2	08/09/2014 00:35
Hexachlorobutadiene	ND	11	2	08/09/2014 00:35
Hexane	250	36	2	08/09/2014 00:35
2-Hexanone	ND	4.2	2	08/09/2014 00:35
4-Methyl-2-pentanone (MIBK)	7.3	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	32	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	18	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

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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/m³

Volatile Organic Compounds in µg/m³

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	Date Analyzed
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/m³

Volatile Organic Compounds in µg/m³

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

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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/m³

Volatile Organic Compounds in µg/m³

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	8.3	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	27	21	1	08/09/2014 01:20
Hexachlorobutadiene	ND	5.4	1	08/09/2014 01:20
Hexane	30	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	8.5	3.4	1	08/09/2014 01:20
Tetrahydrofuran	28	1.5	1	08/09/2014 01:20
Toluene	430	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	22	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/m³

Volatile Organic Compounds in µg/m³

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
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
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

WorkOrder: 1408250 ClientCode: TWRF

WaterTrax WriteOn EDF Excel Email HardCopy ThirdParty J-flag

Report to: Peter Cusack Accounts Payable
 Treadwell & Rollo
 555 Montgomery St., Suite 1300 **Date Received:** 08/07/2014
 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: Treadwell & Rollo
 PO: 555 Montgomery St., Suite 1300
 ProjectNo: #731626702; India Basin 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		
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																	
2	PRUNUSEDSUMMA																	
3	015_Scan-SIM_SOIL(UG/M)																	
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
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:



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-3-8'	11519353	Grey 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.

B-15-5.5'	11519354	Grey 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.

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.



Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

McCampbell 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-10-8	11501620	Grey 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.

B-12-8	11501621	Grey 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.

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.

DRAFT



CONCEPTUAL REMEDIAL ACTION PLAN
INDIA BASIN REDEVELOPMENT PROJECT
900 Innes Avenue
San Francisco, California

Prepared For:

San Francisco Recreation and Park Department
City and County of San Francisco
30 Van Ness Avenue, 3rd Floor
San Francisco, California 94102

Prepared By:

Northgate Environmental Management, Inc.
428 13th Street, 4th Floor
Oakland, California 94612

April 6, 2017

Project No. 1370.01

428 13th Street, 4th Floor
Oakland, California 94612
tel 510.839.0688

24411 Ridge Route Drive, Suite 130
Laguna Hills, California 92653
tel 949.716.0050

20251 Century Boulevard, Suite 315
Germantown, Maryland 20874
tel 301.528.1500

www.ngem.com

DRAFT

Conceptual Remedial Action Plan

**India Basin Redevelopment Project
900 Innes Avenue
San Francisco, California**

April 6, 2017

Prepared For:

San Francisco Recreation and Park Department
City and County of San Francisco
30 Van Ness Avenue, 3rd Floor
San Francisco, California 94102

Prepared By:

Northgate Environmental Management, Inc.
428 13th Street, 4th Floor
Oakland, California 94612

Elizabeth Nixon, P.E.
Principal Engineer



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2. Proposed Remediation Goals for Ecological Habitat – Sediment Quality



FIGURES

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5. Site Layout, Historical Uses
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- 9A. Cross Section A-A', Schematic Depth of Inland Soil Remediation Areas
- 9B. Cross Section A-A'', Schematic Depth of Sediment Remediation Areas

APPENDICES

- A Conceptual Design Package, India Basin Shoreline Park and 900 Innes Avenue
- B Data Characterization Package, 900 Innes Avenue
- C City of San Francisco Dust Control Ordinance
- D City of San Francisco Noise Control Ordinance



1.0 INTRODUCTION

On behalf of the San Francisco Recreation and Park Department (SFRPD), Northgate Environmental Management, Inc. (Northgate) has prepared this Conceptual Remedial Action Plan (RAP) to address contamination at 900 Innes Avenue (900 Innes, the Site). The Site is part of the India Basin Redevelopment Project (the Project) and is owned by SFRPD. Figure 1 shows the Site location.

The Site is located in San Francisco, California. India Basin Shoreline Park (IBSP) is adjacent and to the north, Innes Avenue bounds the Site to the southwest, and India Basin Open Space (IBOS) is located to the east. India Basin, an extension of the San Francisco Bay, borders the northeastern shoreline of the Site. The Site vicinity includes commercial and residential properties of the Bayview-Hunters Point neighborhood. The Site Vicinity is shown on Figure 2.

The SFRPD intends to redevelop the Site to be part of the San Francisco Blue Greenway public open space, and to use the Site as a public park (Park) with recreational access to the waterfront. Figure 3 provides a Redevelopment Project Site Overview (from the *Initial Study, India Basin Mixed-Use Project (Planning Department Case No. 014-002541ENV, June 1, 2016)*). The concept-level Park configuration is shown on Figure 4 for IBSP and 900 Innes. Redevelopment of the Site as a public park is currently planned to occur in 2019 and 2020.

This Conceptual RAP is being prepared to address environmental conditions requiring remediation before the Site is redeveloped as a public park. The Conceptual RAP will require review and approval by the San Francisco Bay Regional Water Quality Control Board (RWQCB). The purpose of the remediation is to address environmental impacts that have resulted from historical industrial uses at the property in accordance with regulatory guidelines. Figure 5 shows a Site layout of historical industrial uses, primarily associated with boat building and repair. Figure 6 shows existing historical features, some of which SFRPD desires to retain for the Park as part of the cultural and historical landscape.

The property will be remediated to the degree necessary to protect construction workers who redevelop the Park and future Park users. Potential chemical hazards will be mitigated. In addition, sediment quality in the intertidal areas of the Site will be improved to the degree necessary to support tidal marsh habitat that is currently proposed as part of the future Park redevelopment.



A Final RAP will be prepared once the Park design is finalized, and the Project has received conditional approval by the RWQCB to move forward. The Final RAP will include supplemental remediation documents addressing technical engineering design and regulatory agency permit and approval requirements for performing the remediation. Supplemental remediation documents will address worker health and safety, temporary facilities and controls, environmental controls, confirmation sampling and analysis, waste management and disposal, earthwork, soil and sediment stockpile management, excavation support and protection, and Site restoration.

Once the remediation has been completed, land-based redevelopment of the Site will be subject to provisions of the City and County of San Francisco's Maher Ordinance Program (Article 22A of the San Francisco Health Code), administered by the Department of Public Health (DPH). Under the Maher Ordinance Program, a Site Mitigation Plan (SMP) is required to establish environmental mitigation measures that will be followed during redevelopment activities. The Maher Ordinance applies to land at elevations above the mean high water line (MHW) that are bayward of the historic 1852 high tide line (HTL). A draft SMP has been prepared for the Site to address post-remediation Site conditions (Northgate, 2017a).

Post-remediation redevelopment completed in the San Francisco Bay (defined here as bay-side of current MHW) will be governed by resource agency permits issued by the San Francisco Bay RWQCB, U.S. Army Corps of Engineers (USACE) and the San Francisco Bay Conservation and Development Commission (BCDC).

This Conceptual RAP has been prepared to satisfy applicable federal, state, and local laws and regulations. This RAP provides guidelines for the remediation contractor, who will be retained by SFRPD, to prepare Site-specific control plans (i.e., health and safety, traffic control, dust and noise control) that will govern activities to protect the public and the environment during remedial action implementation.



2.0 BACKGROUND

2.1 Site Description

The Site is located on the eastern shore of the San Francisco Peninsula, in the Bayview – Hunters Point neighborhood of San Francisco, within San Francisco County. Surface elevations range from approximately mean sea level (msl) at the shoreline to as high as 35 feet relative to North American Vertical Datum 1988 (NAVD88) at Innes Avenue. The general surface topography slopes to the east and northeast towards India Basin.

900 Innes consists of 11 land parcels, totaling approximately 2.4 acres, located adjacent to IBSP. The Site area also includes approximately 1.5 acres of tidal and submerged lands. 900 Innes currently consists of paved areas, with multiple docks and boat launches. There are six historic buildings on the property, and several historic structures that remain from industrial activities spanning more than a century (Figure 6). Current planning and design development include creating a park that helps connect the San Francisco Bay Trail and create recreational access. Two of the historic buildings (the Shipwright’s Cottage and the nearby former Boatyard Office), and portions of the existing docks will be retained and restored. Tidal marsh will be created along the shoreline, and there will be areas of garden and terrestrial planting. There may be a gravel beach to allow for public access to the waterfront. Imported material will be used to construct final Park surfaces, such as stone or concrete pavers, asphalt and concrete pavement, and wood timbers and decking. Creosote-treated wood piles historically used to support a water fence will be removed. A preliminary Park design package is included as Appendix A.

2.2 Previous Investigations

Weston Solutions, Inc. (Weston) prepared a Phase I/II Investigation, Targeted Brownfields Assessment report for the Site in September 2013 (*Phase I/II Investigation, Targeted Brownfields Assessment, Final Report 900 Innes Avenue Site, San Francisco, San Francisco County, California*).

Weston also prepared an Analysis of Brownfield Cleanup Alternatives (ABCA) in September, 2013 (*Analysis of Brownfield Cleanup Alternatives 900 Innes Avenue Site, San Francisco, San Francisco County, California*).

URS performed additional sampling and analysis of foreshore sediments in September 2015 (*Technical Memorandum, Foreshore Sediment Sampling, 900 Innes Avenue, San Francisco, California, prepared for San Francisco Department of the Environment, Contract No. 4061-12/13*).



AECOM prepared a *Final Technical Memorandum, Data Gaps for 900 Innes*, on October 11, 2016.

Northgate prepared a Site Characterization Report for 900 Innes Avenue in April, 2017 (*Site Characterization Report, India Basin Shoreline Redevelopment Project, 900 Innes Avenue, San Francisco, California, April 21, 2017*). The Site characterization of soil, groundwater, sediment and surface water quality was used to assess the distribution and quantity of impacted materials that will require remediation.



3.0 SUMMARY OF SUBSURFACE CONDITIONS

In general, the Site is comprised of fill materials that were placed east of the historic San Francisco Bay shoreline during the 1940s through 1960s. Fill thickness varies, but can be as thick as 35 feet at the higher current grade elevations at Innes Avenue, thinning to a few feet in the lower elevation areas nearest the shoreline. Native marine sediments underlie the artificial fill. The original shoreline is discernible along a small section of the 900 Innes property.

Fill materials generally contain artificial debris, such as rock, concrete, brick and glass in variable amounts. Fill soils consist of a heterogeneous mixture of clays, sands and gravels. Native marine sediments underlying the fill materials consist of interbedded clays and sands, with lesser gravels. Offshore sediments generally consisted of very soft and saturated silt and clay, with some gravel and shell fragments at shallow depths below the sediment surface.

The Project lies within the Islais Valley groundwater basin of the San Francisco Hydrologic Region. Shallow groundwater is present in the fill materials near the interface with underlying native marine sediments, at approximately the elevation of the San Francisco Bay MHW. The groundwater flow direction beneath the Site is expected to be northerly towards India Basin; flow gradient is expected to be relatively flat, given the Site's proximity to the shoreline and tidal influences. Groundwater has been measured at depths ranging from approximately 4 to 19 feet below the ground surface (bgs). The groundwater level is anticipated to vary due to seasonal and annual fluctuations associated with precipitation and tidal cycles affecting the water level of India Basin/San Francisco Bay. Groundwater beneath the Project is not considered suitable for drinking water because of low yield and general mineral water quality.

The subsurface investigations performed to-date indicate the presence of the following environmental concerns for which remediation is recommended prior to Park redevelopment activities.

3.1 Environmental Conditions

Soil, sediment, groundwater and surface water samples collected during the 2013 through 2017 investigations were variously analyzed for:

- CAM-17 metals;
- polynuclear aromatic hydrocarbons (PAHs);
- polychlorinated biphenyls (PCBs);
- organochlorine pesticides;
- total petroleum hydrocarbons as diesel (TPH-d) and quantified as motor oil (TPH-mo);



- volatile organic compounds (VOCs);
- total organic carbon (TOC);
- organotins;
- asbestos; and,
- hexavalent chromium, cyanide, fluoride and pH.

Data sets from the April 2017 Site Characterization Report (Northgate, 2017b) for soil, sediment, groundwater and surface water quality is included as Appendix B. As part of the characterization, a list of Chemicals of Potential Concern (COPC) was developed, based on a high frequency of exceedances compared to published human health and ecological habitat-based screening levels.

For each COPC, a human health screening level (HHSL) and/or ecological habitat screening level (EHSL) was developed (Tables 1 and 2, respectively). Remediating the Site to meet the HHSLs and EHSLs prior to Site redevelopment will protect the health and safety of redevelopment construction workers, future Park and Open Space workers and visitors, and ecological receptors of tidal marsh habitats.

Table 1 lists the COPCs that have been identified in the fill materials and sediments and compares their concentrations to the HHSLs. The COPCs include the heavy metals arsenic, copper, lead, mercury and nickel; total PCBs; TPH-d; and, PAHs quantified as a benzo(a)pyrene equivalent value (B[a]P).

Table 2 lists the COPCs that have been identified in near-shore sediments and compares their concentrations to the EHSLs. The COPCs include the heavy metals arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium and zinc; total PCBs; TPH-d, TPH-mo; and, total PAHs.

Based on the Site characterization and comparison to HHSLs and EHSLs, the primary targets of remediation are:

- Contaminated fill materials that are present in the subsurface inland of the MHW elevation; and,
- Sediment that is present bayward of the MHW elevation.

Figure 7 illustrates individual soil and sediment sample locations where one or more HHSL or EHSL is exceeded. Neither groundwater nor surface water quality data collected as part of characterization efforts suggest that groundwater remediation will be necessary or that surface water is significantly impacted by the soil and sediment contamination.



4.0 REMEDIATION OBJECTIVES

The remediation objectives are to: remove contaminated materials that are considered hazardous waste according to California's Total Threshold Limit Concentration (TTLC) values; remove contaminated materials or provide a physical barrier to the degree necessary to facilitate redevelopment per the mitigation measures prescribed in the redevelopment's SMP, Northgate, draft-February 28, 2017a); and, restore off-shore sediments to a quality that will support ecological habitat in areas designated for tidal marsh.

Proposed Remedial Action Goals (RAGs) for the fill materials and sediments to remove hazardous waste and meet HHSLs are listed in Table 1. They are:

- The RAGs for heavy metals are their TTLC values – no single data point shall exceed its TTLC.
- For metals, the 95% Upper Confidence Limit (UCL) of the mean shall be no greater than the HHSLs.
- For PCBs, the RAG for both the single point value and the 95% UCL is the HHSL.
- For TPH-d and B(a)P, the RAG is two times the HHSL for single point values, and the HHSL for the 95% UCL.

Table 1 summarizes the frequency of detection, the maximum, average and 95% UCLs for the soil and sediment data available for the Site. The "Pre-Remediation" data statistics include two previous phases of investigation conducted by Weston Solutions in 2013 and URS in 2015, and the recently collected data set from Northgate. "The Post-Remediation" data statistics listed in Table 1 represent a scenario where all of the data points that exceed RAGs are removed, and therefore the scenario estimates expected soil and sediment quality after the remediation is completed. The Final RAP will include a plan for post-remediation confirmation sampling and analyses to document that RAGs are met. Actual post-remediation soil quality may differ from the scenario represented on Table 1.

A different set of RAGs will apply to the remediation of off-shore sediments in areas designated for tidal marsh habitat restoration. In general, chemical criteria that are protective of ecological receptors are more stringent than those for human receptors. Table 2 lists typical criteria used by the resource agencies that permit tidal restoration projects. A set of proposed RAGs for 900 Innes is presented in Table 2. The proposed RAGs are based on a review of COPCs identified at the Site, comparative ecological screening values, and published action goals that have been adopted at other nearby tidal restoration projects.



Once the remediation is complete, Site conditions will be of similar quality to the two adjacent properties –IBSP to the north, and IBOS to the northeast. Therefore, redevelopment can proceed per provisions of the SMP for inland redevelopment, and per resource agency permitting requirements for in-water work.

Figure 8 shows the estimated area that will be targeted for remedial actions. All of the COPCs have been detected at elevated concentrations within the targeted remediation area, many of which exceed TTLC values. At sample points outside of the targeted remediation areas, chemical concentrations are significantly less, and therefore these areas will not be remediated as part of the RAP.



5.0 REMEDIATION COMPONENTS

The remediation will include a combination of removal, capping and institutional control components, as listed below. An estimate of the soil volume targeted for removal is roughly 2,500 cubic yards (cy). An estimate of the sediment volume targeted for removal is roughly 3,500 cy. These estimates are based on the assumption that the Park design elevations are approximately the same as the current ground surface elevations. If final Park design elevations are raised or lowered, then the depth of remediation relative to the current grade could change.

- **Excavation and off-Site disposal of soil exceeding TTLCs.** This removal action will be limited to a maximum depth of approximately 5 feet below the existing ground surface or the future Park design grade, whichever is less, inland (west) of MHW. The soil will be disposed of as a non-RCRA California Hazardous Waste.
- **Excavation and off-Site disposal of sediment exceeding TTLCs.** This removal action will be limited to a maximum depth of approximately 2 feet below the existing sediment surface or the future design grade, whichever is less, on sediment east of MHW. The sediment will be disposed of as a non-RCRA California Hazardous Waste.
- **Excavation and off-Site disposal of soil that contains COPCs above RAGs based on HHSLs.** This removal action will be limited to a maximum depth of approximately 2 feet below the existing ground surface or the future design grade, whichever is less, inland (west) of MHW. The soil will be disposed of as a non-hazardous waste (unless soil fails the California Soluble Threshold Limit Concentration [STLC] for leachable metals, in which case it will be disposed of as a non-RCRA California hazardous waste).
- **Excavation and inland reuse or off-Site disposal of sediment that contains COPCs above RAGs based on ecological habitat considerations.** This removal action will be limited to a maximum depth of approximately 2 feet below the existing sediment surface or the future design grade, whichever is less, for sediment east of MHW. If sediment quality meets inland HHSLs, it may be relocated and used as construction fill. If the removed sediment does not meet inland HHSLs or other construction criteria for fill material, then it will be disposed of as a non-hazardous waste (unless the sediment fails the STLC for leachable metals, in which case it will be disposed of as a non-RCRA California hazardous waste).
- **Cultural landscape features.** Soil excavation will not extend beneath buildings that will remain and be restored as part of the cultural landscape, such as the Shipwright's Cottage and the nearby former Boatyard Office. Portions of the concrete dock and bulkhead that will be retained and repaired will preclude excavation of underlying materials. In these cases, the remaining structures will serve as a physical barrier to underlying materials.



There are several historical features that will not be retained as part of the cultural landscape and will be removed to access contaminated materials targeted for remediation. These features include the west and east marine ways, portions of the concrete boat ramps, several of the existing buildings, and the water fence (see Figure 6 for locations of remaining historical features).

- **Construction of a two-foot thick soil cover in areas where inland soil exceeding HHSLs remain.** The surface elevations of the soil cover will align with the redevelopment design subgrade elevations. The cover will be constructed using imported clean soil, and will be underlain by a visible barrier material, such as orange plastic fencing, to differentiate it from underlying materials. In areas where the redevelopment consists of buildings, paved surfaces or other hardscape, these features could serve as a barrier to underlying soil, and therefore no soil cover would be needed.
- **Construction of a two-foot thick sediment cover in habitat restoration areas where sediment exceeding ecological RAGs remain.** The surface elevation of the sediment cover will align with the habitat restoration design surface. The cover will be constructed using imported clean sediment, and will be underlain by a visible barrier material compatible with habitat restoration, to differentiate it from underlying materials. The barrier material also will act as a filter to prevent underlying sediment from mixing with overlying clean cover material.
- **Institutional Controls.** If soil or sediment exceeding RAGs, HHSLs or EHSLs remain at the property after remediation is complete, an Activities and Use Limitation Deed Restriction will be prepared to prevent future exposure to COPCs, consistent with provisions outlined in the draft SMP. The Deed Restriction will record:
 - ✓ The presence of the visual indicator barrier placed over the soil/sediment;
 - ✓ Prohibition of future uses of the parks and open spaces for sensitive uses, such as residential development, hospitals, and schools or day care centers for children;
 - ✓ Maintenance requirements for the cover and surface materials placed over the soil/sediment; and,
 - ✓ Soil management and health and safety plans that would be used during future activities that may disturb soil/sediment at depths below clean cover and surface materials.

5.1 Engineering Design

A design package will be prepared consisting of a set of engineering drawings and accompanying specifications. The engineering drawings will show in plan and section the



excavation dimensions, a grading design, and surface restoration. The specifications will include both general requirements and technical specifications for performance of the work. The specifications will address worker health and safety, temporary facilities and controls, environmental controls, confirmation soil sampling and analysis, waste management and disposal, earthwork, soil stockpile management, excavation support and protection, and Site restoration.

5.2 Permits

Permits that are required to conduct the soil and sediment excavation and grading work will be identified and obtained. These may include, but are not limited to, a construction general permit, a hazardous soil excavation permit per Bay Area Air Quality Management District (BAAQMD) requirements, and a grading permit through the City of San Francisco. Because portions of the work will be completed within the jurisdictional areas of the USACE and the BCDC, additional permits or concurrence from these agencies will be required.

5.3 Remedial Technologies and Methods

The removal of contaminated soil will be completed using standard excavation and backfilling equipment. For near-shore and off-shore sediment removal, long-reach excavators, dragline or clamshell equipment will be required. It may be necessary to employ a barge to facilitate removal of sediment that cannot be reached from land-based equipment. A temporary tidal barrier will be needed during earthwork within the tidal zone, and may consist of constructing a perimeter levee from fill materials, installing temporary sheet piles, or other methods. Silt fencing may be utilized to prevent disturbed sediment from migrating away from the remediation area and impacting the water quality of the Bay.

Excavated sediment and soil may require on-Site stabilization prior to off-haul and disposal. If waste characterization shows that some materials fail the federal Toxicity Characteristic (TC) criteria when tested using the Toxic Characteristic Leaching Procedure (TCLP) for leachable metals, it will be stabilized using treatment reagents to reduce leachability. Once treated, the soil or sediment will be retested and re-profiled as non-RCRA California hazardous waste.

It may be necessary to dewater excavation areas. Standard dewatering methods will be employed. Sumps, sedimentation tanks and other flow-control devices will be used to manage water. Water removed by dewatering will be disposed of according to applicable laws and regulations and in a manner that avoids endangering public health and the environment.



5.4 Estimated Remediation Quantities

Based on results of Site characterization activities, approximately 2,500 cy of fill soil located inland of MHW is targeted for excavation and removal from the Site. Additionally, approximately 3,500 cy of sediment located east of MHW in the current intertidal zone is targeted for excavation and removal from the Site. Figure 8 shows a plan view of the remediation areas. Figures 9A and 9B show schematic cross-sections depicting the depths to which soil and sediment will be remediated. Approximately one-third of the removed sediment may be reuseable as inland fill, provided it meets the RAGs and other construction-related criteria for reuse. To access the soil remediation areas, approximately 22,000 square feet (sf) of current ground surface materials (i.e., asphalt, concrete, structures) will require demolition, removal and disposal. To access sediment removal areas, surface features including the historic marine ways, portions of the concrete marine ramps, and portions of other marine structures will need to be removed. Approximately the same quantity of clean fill as is removed (6,000 cy) will be imported and placed to provide a cover and bring excavated areas to Park design subgrade elevations. A visual barrier placed at the bottom of the remediated areas will cover approximately the 22,600 sf on inland remediation areas, and 41,600 sf in sediment removal areas.

5.5 Grading Activities

SFRPD and its remediation contractors will obtain the necessary grading permits and comply with applicable rules and regulations for construction-related project activities, as necessary. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented, including associated storm water Best Management Practices (BMPs). All field activities will be conducted in accordance with federal, state, and local requirements for worker safety, such as Occupational Safety and Health Administration (OSHA) regulations for excavation safety, equipment operation, and exposure to dust and other constituents.

Soil and sediment excavation, grading and placement will be performed by a licensed engineering contractor with a Class A License and Hazardous Substance Removal Certification, using heavy earthmoving equipment. A California licensed Engineer will provide field oversight on behalf of SFRPD to document the origin and destination of all excavated soil and sediment. If necessary, excavated soil and sediment will be temporarily stockpiled and covered with plastic sheeting pending relocation, treatment, segregation, or off-haul. Waste profiling of material designated for off-haul will be completed and documented.



5.6 Sub-Grade Testing

Remediated areas will be tested to confirm post-remediation conditions. Representative soil and sediment samples will be collected from the subgrade surface and will be analyzed for COPCs to confirm RAGs have been met. Testing results will be used to evaluate if a visual barrier needs to be placed over the area prior to backfilling with clean materials. A confirmation sample and analysis plan will be developed as part of the remediation technical drawings and specifications.

5.7 Waste Profile Testing

Excavated materials that will require off-haul will be tested to fulfill waste profiling requirements. Samples of the excavated material will be analyzed for TPH using United States Environmental Protection Agency (EPA) Method 8015, VOCs using EPA Methods 8260, 17 metals using EPA Method 6010/7471, semi-volatile organic compounds (SVOCs) using EPA Method 8270, organochlorine pesticides using EPA Method 8081, and PCBs using EPA Method 8082. If total concentrations exceed ten times the California STLC, the samples will be additionally analyzed for soluble metals using the California WET specified in 22 California Code of Regulations (CCR), Division 4.5, Chapter 11, Appendix II, and the TCLP, EPA Method 1311, specified in 22 CCR, Division 4.5, Chapter 18, Appendix XIII and 40 Code of Federal Regulations (CFR) 261.24(a).

5.8 Post-Construction Mitigation Measures

If subgrade testing shows that COPCs exceed HHSLs, the surfaces will be covered with a visual indicator barrier before importing clean fill materials to meet final grade elevation requirements. The visual indicator barrier will be a material such as orange vinyl construction fencing or snow fencing to mark the boundary between the imported clean fill and the underlying soil that exceeds HHSLs. The areas where the visual indicator barrier is placed will be documented in the Final Remediation Completion Report. If remaining soil exceeds the HHSLs, an Activities and Use Limitation Deed Restriction will be prepared, and the presence of the visual indicator barrier will be cited.

If subgrade samples show COPCs to be present at concentrations above California TTLCs, additional excavation and removal of the soil will be performed, to a maximum depth of 5 feet bgs. New subgrade samples will be collected at the bottom the excavation, and if COPC concentrations still exceed the HHSLs, then the visual indicator barrier material will be placed at the bottom of the deeper excavation area.



If subgrade testing in future tidal marsh areas shows that COPCs exceed EHSLs, the sediment cover will be underlain by a visible barrier material compatible with habitat restoration, to differentiate it from underlying materials. The barrier material also will act as a filter to prevent underlying sediment from mixing with overlying clean cover material. The areas where the barrier is placed will be documented in the Final Remediation Completion Report.

5.9 Imported Fill Criteria

Imported fill soil will meet RWQCB Tier 1 Environmental Screening Levels (ESLs) for chemical constituents. If soil is from a supplier where representative chemical screening data are available demonstrating that it meets the RWQCB Tier 1 ESL criteria, it can be accepted without further testing. Imported soil from a source where data are not available will be sampled and screened against the RWQCB Tier 1 ESL criteria before it is transported to the Project. The imported fill will be placed over the visual indicator barrier or directly onto the excavation bottom in areas where the visual indicator barrier is absent. The imported fill soil will be brought up to the Park design subgrade. Additional criteria may apply to imported sediments used for tidal habitat creation.

5.10 Contingency Plan for Unexpected Conditions

Should unanticipated subsurface structures or suspected hazardous materials be encountered, work will be suspended and SFRPD will be notified, and the area secured. Such materials may include underground storage tanks (USTs) and associated product lines, sumps, and/or vaults, soil with significant odors and/or stains, or other suspect materials. The SFRPD or its representative will notify the RWQCB of the situation and of the proposed response actions. Any USTs will be removed under permit with the DPH-Hazardous Materials and Waste Program (HMWP) and the San Francisco Fire Department. DPH Site Assessment & Mitigation (DPH SAM) will be provided with a copy of permits and tank closure reports prepared for the HMWP or the Fire Department.



6.0 REMEDIAL ACTION IMPLEMENTATION PROCEDURES

This section presents the proposed steps to implement the remedy. A summary of the remediation scope is provided, and overview descriptions of construction activities are presented, including: Health and Safety; Site Preparation and Security; Dust, Noise and Storm Water Controls; Import and Export of Project Materials and Traffic Plan; Soil Removal; Surface Materials; and, Administration of Institutional Controls.

Based on the remedial components described above, we anticipate that SFRPD, or their contractors, will undertake the following tasks during remedial construction:

- Demolition and removal of existing asphalt and concrete sections in the areas of remediation;
- Excavation of fill materials to depths of the targeted remediation, up to 5 feet bgs;
- Excavation of sediments to depths of the targeted remediation, up to 2 feet bgs;
- Stockpiling of excavated sediment for on-Site reuse as fill or off-Site disposal;
- Stockpiling of excavated soil for off-Site disposal;
- Potential dewatering and moisture control of excavated sediments;
- Potential on-Site stabilization of soil or sediments to reduce leachable metals;
- Loading and transporting sediment for potential on-Site reuse as fill;
- Loading and transporting of contaminated materials for off-Site disposal;
- Importing clean replacement fill to design subgrades of future Park; and,
- Preparing subgrade per Park design.

The following procedures are recommended prior to and during construction activities.

6.1 Health and Safety

Based on the specific COPCs identified, the primary exposure pathways of concern are inhalation of dust from the subsurface, ingestion of soil particles, and dermal contact with contaminants during excavation and soil handling operations. Construction workers performing excavation activities and soil handling operations are likely to encounter heavy metals, PAHs, and PCBs at concentrations that exceed HHSLs. Therefore, worker notification and other risk management procedures should be implemented by SFRPD and/or their contractors to reduce potential human exposures during construction activities.

A Site-specific health and safety plan (SSHSP) will be prepared and implemented to notify and protect workers during construction activities. The SSHSP will be prepared in accordance with state and federal OSHA regulations (29 CFR 1910.120) and approved by a Certified Industrial



Hygienist (CIH). Copies of the SSHSP will be made available for review to construction workers during their orientation and/or regular health and safety meetings, as well as to SFRPD.

The SSHSP will be submitted to the RWQCB at least two weeks before beginning construction activities.

6.2 Dust Control

The primary anticipated exposure pathway for risks to human health at the Site is the inhalation or ingestion of dust particles generated during construction activities that disturb soil. SFRPD or their contractors will use standard dust-control practices to prevent the generation of dust during excavation and soil handling activities. Dust control measures may include, but are not limited to:

- Wetting of surface soil and soil stockpiles during excavation and soil handling operations, loading, and transport;
- Control of soil handling and loading techniques to minimize dust generation, such as minimizing drop distances;
- Loading of soil for off-Site disposal only into trucks equipped with tarpaulin covers;
- Covering of soil stockpiles when not in use, such as using plastic sheeting, clean fill, or other dust minimization systems, as appropriate; and,
- Additional dust mitigation measures as needed or appropriate.

If visible dust is observed in worker breathing zones or leaving the Site, additional dust suppression measures will be undertaken, such as increased wetting of loose soil and stockpiles.

A Dust Control Plan (DCP) will be prepared as part of remediation documents. The DCP will abide by the City of San Francisco Dust Control Ordinance, adopted by San Francisco in 2008 (San Francisco Building Code Section 106.3.2.6). A copy of the ordinance is attached as Appendix C.

6.3 Noise Control

Control of noise during construction activities will abide by the City of San Francisco Noise Control Ordinance, adopted by San Francisco in 2008 (Police Code Sections 2907 (b); 2907 (c); 2901.12; 2908). A copy of the ordinance is attached as Appendix D.



6.4 Storm Water Runoff Control

Measures will be implemented to minimize impacts from storm water runoff into the bay and storm drains. This will include the preparation and implementation of a Site SWPPP and associated BMPs.

Temporary stockpiling of soil and sediment excavated from the Project will be protected against surface water inflow, storm water erosion, and internal drainage and runoff using BMPs. BMPs may include, but are not limited to, covering the stockpiles with visquine or other plastic sheeting and use of hay bales or straw wattles to control runoff.

6.5 Occurrence of Petroleum Hydrocarbons

Should nuisance conditions occur during construction related to the occurrence of petroleum hydrocarbons, the following mitigation measures will be implemented:

- Temporarily segregate soil and stockpile on tarps to avoid runoff of oily liquid to the adjacent ground surface;
- Mix oily soil with other on-Site soil that does not contain oily material to reduce the potential for nuisance conditions;
- Place combined material back into excavated areas as soon as possible to minimize the potential for nuisance conditions to arise;
- Cover temporary stockpiles with tarps or with soil that does not contain oily soil to reduce nuisance-level odors and the potential for runoff; and,
- Remove, contain and dispose of the materials according to applicable regulations.

6.6 Import and Export of Project Materials and Traffic Plan

Remediation activities will require the import and export of project materials to the Site. Imported materials will include clean backfill and construction materials, and other items and equipment associated with remediation activities. Exported materials will include excavated soil, sediment and other project related wastes. Based on a total estimated excavation volume of 6,000 cy, approximately 450 truckloads will be required to transport excavated soil and sediment off-site; an approximately equal number of truckloads will be required to deliver clean backfill. The soil/sediment and backfill transfer process is estimated to occur over a minimum 4-month period. Excavated soil likely will be classified as non-RCRA hazardous waste. It is anticipated that soil classified as non-RCRA hazardous waste will be sent by rail to the ECDC facility located in Utah. Other hazardous waste facilities that may be used include the Clean Harbors



landfill in Buttonwillow, California and the US Ecology landfill in Beatty, Nevada. If these options are necessary, then the materials will be transported by truck from the Site to one of these facilities. If the off-site disposal of non-hazardous soil or sediment is necessary, then either the Hay Road Landfill in Vacaville, California, or the Altamont Landfill in Livermore, California, may be used.

Soil and sediment will be transported with trucks that are licensed and permitted to carry the appropriate waste classification, and disposed at appropriately licensed landfills. Trucking will be performed in accordance with California Department of Transportation (DOT) and any other applicable regulations. Soil classified as non-hazardous waste will be transported from the Project under a bill of lading. Soil classified as non-RCRA California hazardous waste will be transported from the Project under hazardous waste manifest.

The trucks will enter and exit the Site at identified entrance and exit points, and materials will be stored at a designated lay-down area. Materials deliveries and exports may occur Monday through Friday from 7:00am to 6:00pm, and Saturday and Sunday from 9:00am to 5:00pm. The tracking of dirt by trucks leaving the Site will be minimized by cleaning the wheels upon exiting the Site and cleaning the loading zone and exit area as needed.

6.7 Site Preparation and Security

During the remediation construction activities, public access will be prevented. The Site currently is fenced, with locked gates providing the only street access. Signage will be placed along existing fences, and additional temporary fencing will be placed at unprotected locations along the shoreline, if necessary. Public notification will be provided in advance of the work in the form of both meetings and flyers, with identification of the periods over which the Site will be undergoing remediation.

The Site entrance and exit points will be established to minimize impacts on local traffic, be considerate of safety, and provide for optimum flow. The project laydown areas and soil/sediment stockpile management area will be designated inside of the existing fence line, within a paved surface area, and at least 20 feet from the shoreline.

Soil and sediment stockpiles will be constructed and managed in accordance with applicable laws, regulations, and BMPs for contaminated soil to be protective of human health and the environment, including prevention of runoff or erosion. Soil stockpiles and open excavations will be secured at the end of each working day to prevent unauthorized access to soil. Stockpile



and open excavations will be managed in a way that limits fugitive dust emissions during non-working hours.

6.8 Institutional Controls

If soil exceeding HHSLs remain at the properties after redevelopment, an Activities and Use Limitation Deed Restriction will be prepared. The Deed Restriction will record:

- The presence of the visual indicator barrier placed over the soil;
- Prohibition of future uses of the parks and open spaces for sensitive uses, such as residential development, hospitals, and schools or day care centers for children;
- Maintenance requirements for the cover and surface materials placed over the soils; and,
- Soil management and health and safety plans that would be used during future activities that may disturb soil at depths below clean cover and surface materials.



7.0 ANTICIPATED SCHEDULE

The total duration of remediation is estimated to be a minimum of four months. Work is proposed to be conducted in April through October of 2018. All work will be implemented to ensure protection and avoidance of damage to natural resources and listed species within the general area. The limited operating periods (LOPs), if any, are to be confirmed with the appropriate resource agencies during the permitting and/or consultation process.



8.0 CONSTRUCTION MANAGEMENT AND OVERSIGHT

The SFRPD will administer a remediation contract and provide construction management services. SFRPD will retain a qualified engineering firm to provide technical support during implementation of the work including oversight during remediation and preparation of a remedial construction report documenting completion. Construction Management will include the following activities:

- Administer contract, including documenting and approving Contractor submittals, invoices, and change order requests;
- Oversee and document Contractor's work to confirm adherence to the engineering drawings and specifications;
- Oversee segregation and containment of excavated soil and sediment, and coordinate waste manifesting procedures for soil and sediment off-haul; and
- Oversee monitoring and Site controls for compliance with Site SWPPP.

The responsibilities of key personnel during remedial activities will be as follows:

Environmental Project Manager: A California-licensed Engineer will be assigned by the SFRPD to serve as Environmental Project Manager during remediation activities. The Environmental Project Manager is responsible for ensuring compliance with the Final RAP. The Environmental Project Manager oversees the data management and quality assurance/quality control (QA/QC) program.

Environmental Field Observation Staff: A qualified Engineer will be assigned by the SFRPD to provide field observation and sampling services to comply with the Final RAP. The Staff will provide field oversight and day to-day monitoring of project QA/QC activities to verify compliance with the project field requirements. Duties will include directing or performing confirmation sampling, and maintaining project status logs, including daily field logs recording regrading activities and confirmatory sample locations and sampling results.

Environmental Health and Safety Officer: A CIH will be assigned by the SFRPD to serve as Health and Safety Officer for issues related to work with contaminated soil and sediment. The Health and Safety Officer is responsible for implementing and monitoring conformance with procedures described in the SSHSP developed for the project.



9.0 REMEDIATION DOCUMENTATION AND COMPLETION REPORT

SFRPD or their contractors will maintain daily logs during all construction and implementation activities documenting compliance with the provisions of the Final RAP. A Final Completion Report summarizing and certifying implementation of the RAP will be submitted to the RWQCB. The Final Completion Report will present a chronology of the construction events and summarize the remedial action activities.

The Final Completion Report will include:

- A map of the Project area;
- Drawings showing areas of excavation and fill;
- Drawings showing sample locations and depths;
- Tables summarizing analytical data;
- Copies of permits, manifests or bills of lading for removed soil;
- Copies of laboratory reports for soil disposal profiling; and,
- A summary of COPCs remaining after completion of remediation activities.



10.0 MODIFICATIONS TO RAP

There may be a need to modify the Conceptual RAP and Final RAP if conditions and/or redevelopment plans change. Additionally, as design and implementation of the RAP proceeds, SFRPD, RWQCB, and other agencies may request revisions. Such requests for modification will be included as amendments to the RAP.



11.0 LIMITATIONS

This Conceptual RAP has been prepared on behalf of SFPRD and is specific to the proposed remediation of 900 Innes Avenue. All interpretations and recommendations in this RAP are the professional opinions of Northgate personnel, and this RAP should not be considered a legal interpretation of existing environmental regulations. Opinions presented herein apply to Site conditions existing at the time of our assessment, and cannot necessarily be taken to apply to changes or conditions of which we are not aware and have not had the opportunity to evaluate. This Conceptual RAP does not address hazardous materials that may be encountered in aboveground structures, such as asbestos-containing materials, lead-based paint, or universal wastes.



12.0 REFERENCES

- AECOM, 2016. Final Technical Memorandum, Data Gaps for 900 Innes, October 11.
- Northgate Environmental Management, Inc. (Northgate), 2017a. Draft Site Mitigation Plan, India Basin Redevelopment Project, India Basin Shoreline Park, 900 Innes Avenue, India Basin Open Space, San Francisco, California. February 28.
- Northgate, 2017b. Site Characterization Report, India Basin Shoreline Redevelopment Project, 900 Innes Avenue, San Francisco, California, April 21.
- URS Corporation/Weston, 2015. Technical Memorandum: Foreshore Sediment, 900 Innes Avenue, San Francisco, California. September.
- San Francisco Planning Department, 2016. Initial Study, India Basin Mixed-Use Project, Case No. 014-002541ENV, June 1.
- Weston, 2013a. Final Report: Phase I/II Investigation, Targeted Brownfields Assessment, 900 Innes Avenue Site, San Francisco, San Francisco County, California. September.
- Weston, 2013b. Analysis of Brownfield Cleanup Alternatives, 900 Innes Avenue Site, San Francisco, San Francisco County, California. September.



TABLES



TABLE 1
Pre- and Post Remediation Soil and Sediment Quality Compared to RAGs and HHSLs

Constituent of Potential Concern (COPC)	Statistical Summary of COPCs							Proposed Remedial Action Goals	Recommended Human Health-Based Screening Level for On-Site Management	Source of RAG/HHSL
	Pre-Remediation 900 Innes Avenue				Post-Remediation 900 Innes Avenue					
	Frequency of Detection (%)	Maximum	Average	95% UCL	Frequency of Detection (%)	Maximum	Average			
Metals (mg/kg)								Metals (mg/kg)		
Arsenic	90	290	12	28	83	45	4.3	5.4	24	TTLC/Regional Background Level ¹
Copper	99	41,538	660	999	99	870	89	153	2,500	TTLC/Published Action Goal for Reference Site ³
Lead	100	14,000	454	900	100	720	99	157	160	TTLC/SFRWQCB Construction Worker-Commercial ESL ⁴
Mercury	96	158	4.1	10	98	8.6	0.48	1.0	19.0	TTLC/SFRWQCB Construction Worker-Commercial ESL ⁴
Nickel	100	3,100	409	584	100	(1,900)	431	639	1,582	TTLC/Local Background Level ²
PCBs (µg/kg)									PCBs (µg/kg)	
Total PCBs (sum of Aroclors)	68	64,900	1,558	11,664	49	560	77	108	1,000	SFRWQCB Construction Worker-Commercial ESL ⁴
TPH (mg/kg)									TPH (mg/kg)	
TPH as diesel	99	23,000	878	2,374	98	1,300	114	202	880	2xHHSL/SFRWQCB Construction Worker-Commercial ESL ⁴
PAHs (µg/kg)									PAHs (µg/kg)	
B(a)P Equivalent Value	74	51,061	2,546	6,248	58	1,022	130	230	900	2xHHSL/Action Goal at Reference Site/Regional Background ^{2,5}

Notes and Abbreviations:

The statistical summary at 900 Innes represents anticipated conditions after a Remedial Action is implemented to remove soil exceeding Remedial Action Goals

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

PCB = Polychlorinated Biphenyls

TPH = Total Petroleum Hydrocarbons

PAHs = Polycyclic Aromatic Hydrocarbons

B(a)P = benzo(a)pyrene equivalent value

TTLC = Total Threshold Limit Concentration

Values listed in dry weight, except for TTLC values, which are listed as wet weight. Wet weight of analyte shown in parentheses if dry weight exceeds TTLC.

Averages as calculated using EPA ProUCL statistical software, Version 5.1

95% UCL = 95% Upper Confidence Limit, calculated using EPA ProUCL statistical software, Version 5.1 using the most appropriate fit of statistical method, as determined by the ProUCL program.

¹ Lawrence Berkeley National Laboratory Analysis of Background Distributions of Metals in Bay Area Regional Soils, Upper Estimate Values, 2009.

² Final Remediation Investigation Report, Hunters Point Power Plant, San Francisco, CA, TRC, 2009

³ Yosemite Slough Restoration Project Upland Cover (upper 2 feet) (Table 1: Proposed Action Goals for Soil Reuse Options). Northgate, 2009 Work Plan for WDRs, Yosemite Slough Wetland Restoration, San Francisco, California, September 21

⁴ San Francisco Regional Water Quality Control Board (SFRWQCB) 2016 Direct Exposure ESLs = Environmental Screening Level for Direct Exposure (the lower of Commercial and Construction scenarios). Screening For Environmental

Concerns At Sites With Contaminated Soil and Groundwater. Table S-1. February 2016.

⁵ California Department of Toxic Substances Control (DTSC). Use of the Northern and Southern California PAH Studies in the MGP Site Cleanup Process, July 2009

Highlight indicates that the 95% UCL of the constituent exceeds the HHSL.

Highlight indicates that the maximum, average or 95% UCL of the constituent exceeds the RAG.

**TABLE 2
Proposed Remediation Action Goals for Ecological Habitat - Sediment Quality**

Constituent of Potential Concern (COPC)	Statistical Summary of COPC				Selected Ecological Comparative Screening Values ¹				Published Action Goals for San Francisco Bay Restoration Sites ¹				Proposed Remedial Action Goals, Upper 2 Feet			
	Sediment, Combined Data 2013-2015 (Weston/URS) and 2016-2017 (Northgate)				San Francisco Estuary Institute				National Oceanic and Atmospheric Association		Hunter's Point Shipyard Restoration Project, Parcel F6		Yosemite Slough Restoration Project Action Goals ⁸		Hamilton Army Air Field Action Goals ⁷	
	Frequency of Detection (%)	Maximum	Average	95% UCL	San Francisco Bay Ambient 90% UTL ²	San Francisco Bay Ambient 90% Maximum ³	Effects Range - Low (ER-L) ⁴	Effects Range - Median (ER-M) ⁵	Sediment Remediation Goals	Coastal Marsh Surface, 3-foot cover	Wetland Upper Cover (upper foot) Average Values	Wetland Lower Cover (lower 1 to 2.5 ft) Not to Exceed Values	RAG, Not to Exceed Single Value	RAG, 95% UCL		
Metals (mg/kg)														Metals (mg/kg)		
Arsenic	98	115	19.4	29.0	13.9	33.3	8.2	70	ne	23	15.3	70	33.3	23		
Cadmium	62	51.0	1.9	13.0	0.33	0.73	1.2	9.6	ne	1.8	1.2	9.6	9.6	1.8		
Chromium	100	1,500	155	305	141 ^b	238 ^c	81.0	370	ne	149	112	370	370	149		
Cobalt	100	150	20.6	35.3	20.1 ^a	27.8	ne	ne	ne	26.7	ne	ne	84	26.7		
Copper	100	41,538	1,721	1,884	53.9	2,970	34	270	271	88.7	68.1	270	270	89		
Lead	100	2,600	388	609	25.1	87.1	46.7	218	ne	46.7	46.7	218	218	46.7		
Mercury	93	135	8.0	46.8	0.33	13.2	0.15	0.71	1.87	0.58	0.43	0.71	1.87	0.58		
Nickel	100	3,100	216	535	98.3	301	20.9	51.6	ne	132	112	112.0	301	132		
Selenium	21	5.5	1.0	1.4	0.36	1.7	ne	ne	ne	ne	0.64 (1.4) ^e	ne	1.7	1.4		
Zinc	100	6,154	815	1,663	136	233	150	410	ne	169	158	410	410	169		
Polychlorinated Biphenyls (µg/kg)														Total PCBs (µg/kg)		
Total PCBs (sum of Aroclors)	95	16,000	1,791	5,348	18.3	29.8	22.7	180	1,240	90	22.7	180.0	180	90		
Total Petroleum Hydrocarbons (mg/kg)														TPH (mg/kg)		
TPH as diesel	100	8,462	505	653	ne	ne	ne	ne	ne	144	144	500	500	144		
TPH as motor oil	100	4,462	755	983	ne	ne	ne	ne	ne	144	144	500	500	144		
Polyaromatic Hydrocarbons (µg/kg)														Total PAHs (µg/kg)		
Total PAHs	90	31,400	6,948	9,913	ne	ne	4,022	44,792	ne	4,022	4,022	44,792	44,792	4,022		

Notes and Abbreviations:

- mg/kg = milligrams per kilogram
- µg/kg = micrograms per kilogram
- µg = to be determined
- ne = not established
- UTL = Upper Tolerance Limit
- ¹ Values are listed as dry weight unless otherwise noted.
- ² SF Bay Sediment Ambient = Ambient concentrations for San Francisco Bay, sediments. Regional Water Quality Control Board (RWQCB) 2000. Draft Staff Report. Beneficial Reuse of Dredged Materials. Sediment Screening and Testing Guidelines.
- ³ A 90% UTL calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (<http://sfci.org/rmp>).
- ⁴ Average ambient concentrations for San Francisco Bay Sediments 2007-2012. Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (<http://sfci.org/rmp>).
- ⁵ ER-L = Effects Range Low. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder. 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97.
- ⁶ ER-M = Effects Range-Median. Long, E. R., D. D. MacDonald, S. L. Smith, and F. D. Calder. 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97.
- ⁷ Hunter's Point Sediment Remediation Goals, Feasibility Study Report for Parcel F, Hunter's Point Shipyard, San Francisco, California. April 8, 2008.
- ⁸ Hunter's Point Sediment Remediation Goals, Feasibility Study Report for Parcel F, Hunter's Point Shipyard, San Francisco, California. April 8, 2008.
- ⁹ Hamilton Action Goals (Table 3: Environmental Action Goals). Site Cleanup Requirements in Order No. R2-2003-0076, 2003, California Regional Water Quality Control Board. Per Section 2.2 of the Hamilton ROD/RAP (RWQCB and DTSC. Record of Decision Remedial Action Plan, August 2003).
- ¹⁰ Yosemite Slough Restoration Project Wetland Upper Cover (upper foot) Average Values (Table 1: Proposed Action Goals for Soil Reuse Options). Northgate, 2009 Work Plan for WDRs, Yosemite Slough Wetland Restoration, San Francisco, September 21.
- ¹¹ A 90% UTL was calculated in ProUCL v5.0 using the 2003-2012 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (<http://sfci.org/rmp>) as a San Francisco Bay 90% UTL has not been published.
- ¹² A 90% UTL was calculated in ProUCL v5.0 using the 1993-2002 data provided in the Regional Monitoring Program (RMP) for Water Quality in San Francisco Bay (<http://sfci.org/rmp>) as a San Francisco Bay 90% UTL has not been published.
- ¹³ Average, maximum, and minimum based on data ranging from years 1993-2002 due to lack of data collected in years 2003-2012.
- ¹⁴ SF Ambient Average value was recalculated to omit statistical outliers.
- ¹⁵ Selenium action value was modified to be 1.4 mg/kg per May 4, 2012 "Request for Retrospective Approval of Imported Bay Mud" letter from Northgate to RWQCB.
- ¹⁶ Selenium action value was modified to be 1.4 mg/kg per May 4, 2012 "Request for Retrospective Approval of Imported Bay Mud" letter from Northgate to RWQCB.

Highlight indicates that the maximum, average or 95% UCL of the constituent exceeds the RAG, Not to Exceed Single Value.

FIGURES



G:\Projects\Temp\1370 SFDPV 2015 Sediment\1370.01 SFPPD India Basin\RAP_900 InnesConcept RAP\Figures\Figure 1 - Site Location.dwg Layout: 8.5x11-P User: cleg Apr 05, 2017 - 10:03am



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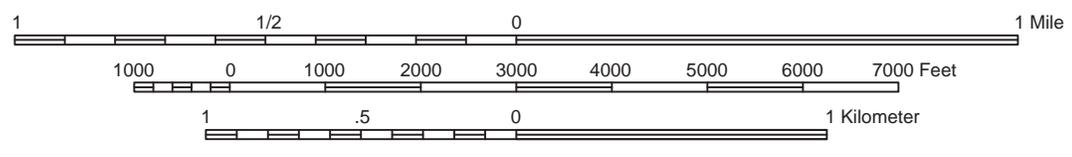


FIGURE 1
Site Location Map

900 Innes RAP
 India Basin Redevelopment Project
 San Francisco, California



Project No. 1370.01

Source: National Geographic USGS TOPO! 2000

Legend

- Property Boundaries
- Mean High Water - 5.84 ft NAVD88

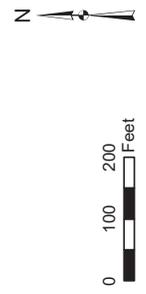
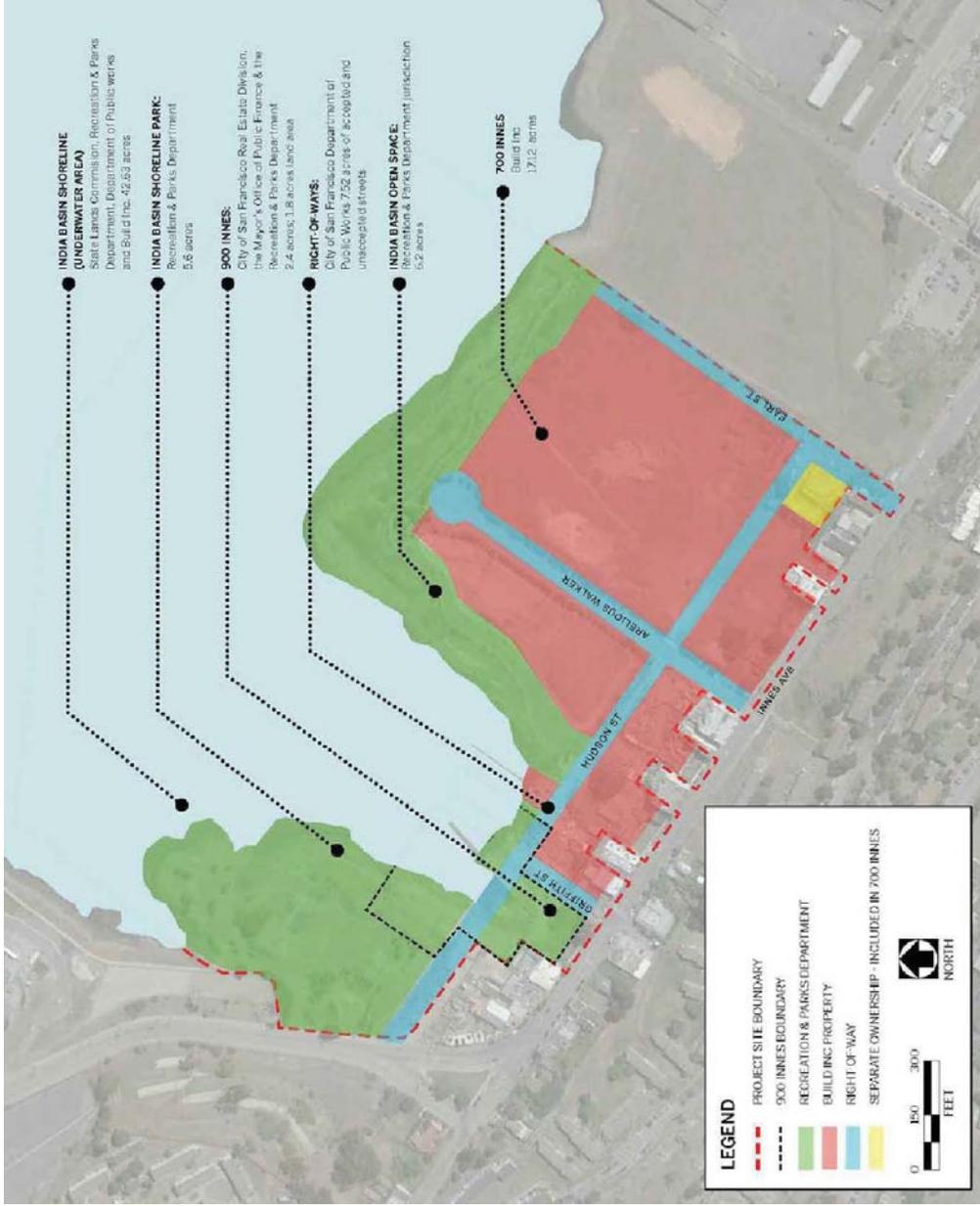


FIGURE 2
Site Vicinity

900 Innes RAP
India Basin Redevelopment Project
San Francisco, California
Project No. 1370.01



Image is a screenshot of USTERS 2017 11/19/2017 10:00:00 AM



SOURCE: Initial Study, SOM, 2016

FIGURE 3
Redevelopment Project Overview

900 Innes RAP
India Basin Redevelopment Project
San Francisco, California



Project No. 1370.01



FIGURE 5
Site Layout, Historical Uses

900 Innes RAP
 India Basin Redevelopment Project
 San Francisco, California



Project No. 1370.01

Source: Weston Solutions ABCA Report, September 2013

Legend

--- Site Boundary

--- Historical Boat Location

Building and Historical Structures Description:

- 1 Shipwright's Cottage
- 2 Office
- 3 Tool Shed & Water Tank Building
- 4 Paint Shop & Compressor House
- 5 Blacksmith & Machine Shop
- 6 Storage Building
- 7 West Marine Way Track
- 8 Central Construction Way Ramp
- 9 East Marine Way Track
- 10 Water Fence Posts
- 11 Modern Dock
- 12 East Outfitting Dock



FIGURE 6
Existing Historical Features
900 Innes RAP
India Basin Redevelopment Project
San Francisco, California
Project No. 1370.01



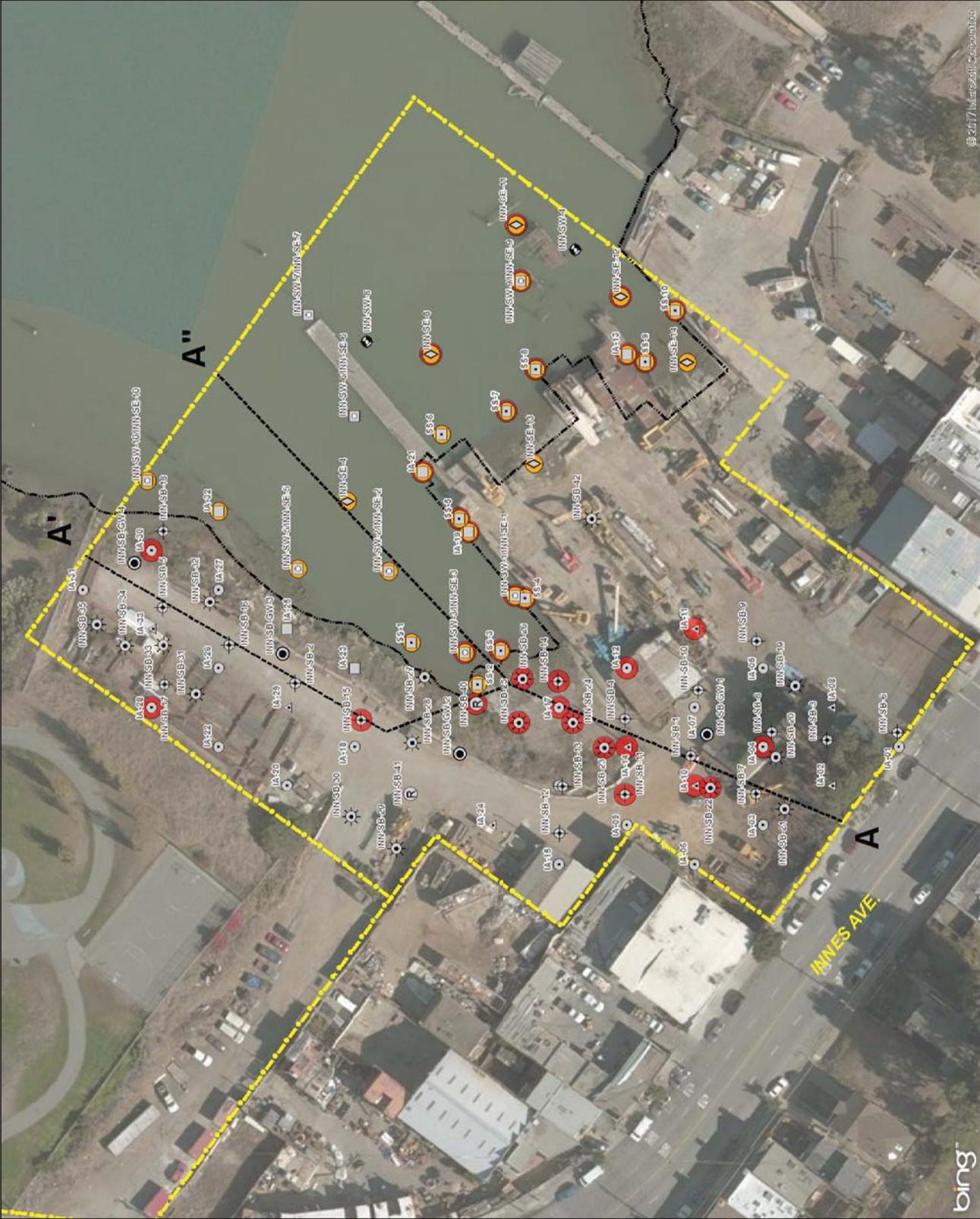


FIGURE 7
Summary of Soil and Sediment
Locations Exceeding Remediation Goals

900 lines RAP
 India Basin Redevelopment Project
 San Francisco, California
 Project No. 1370.01

© 2017 Northgate Environmental Management, Inc.

environmental management inc.

900 lines RAP
 India Basin Redevelopment Project
 San Francisco, California
 Project No. 1370.01

environmental management inc.

0 30 60 Feet

N

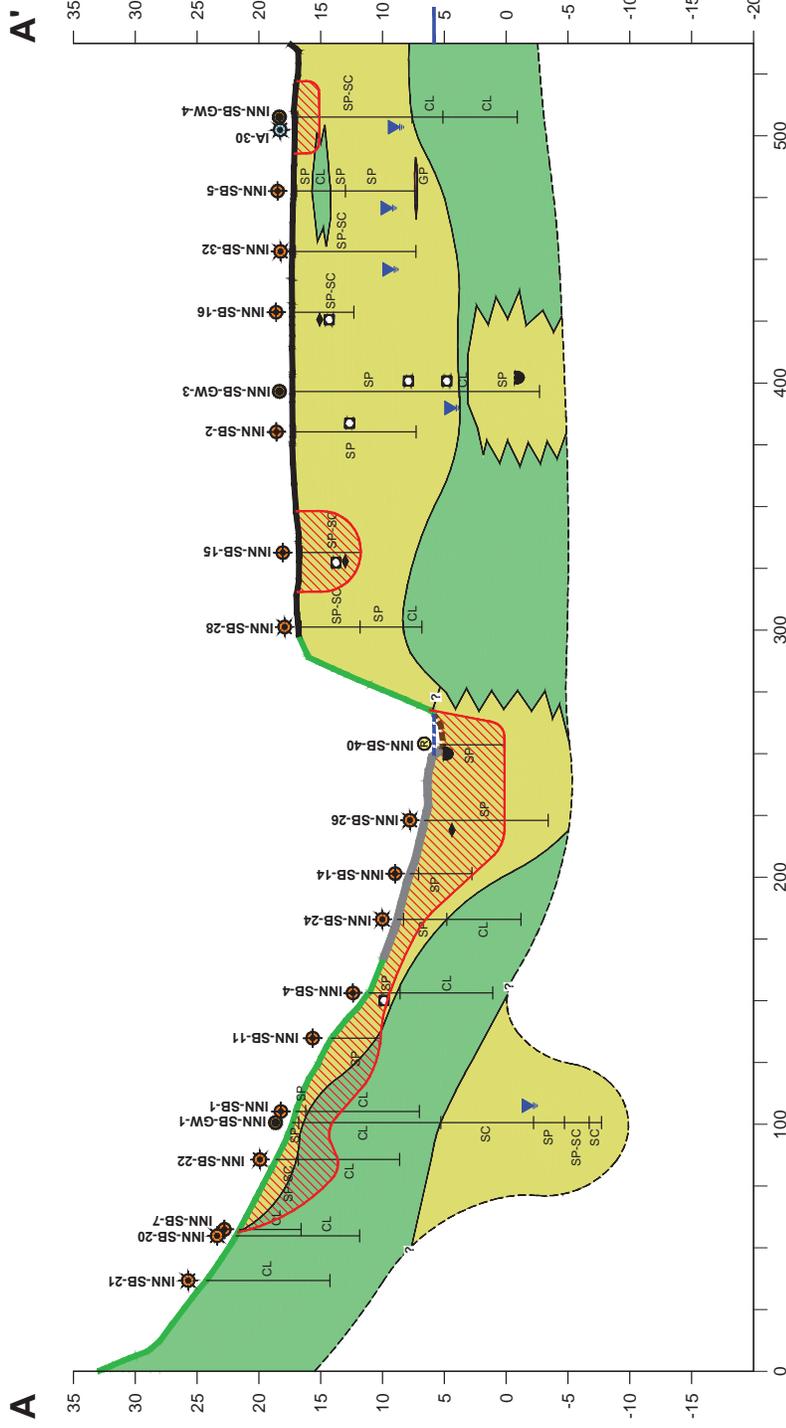
Legend

- Soil Boring with Groundwater, Northgate (2016-2017)
- Deeper Soil Boring at Previous Location, Northgate (2016-2017)
- Soil Boring, Northgate (2016-2017)
- Risk Soil Boring, Northgate (2016-2017)
- Sediment Sample, Northgate (2016-2017)
- Surface Water and Sediment Sample, Northgate (2016-2017)
- Surface Water Sample, Northgate (2016-2017)
- Previous Sediment Sample, Weston (2015)
- Previous Sediment Sample, Weston (2013)
- Previous Subsurface Soil Sample, Weston (2013)
- Previous Surface Soil Sample, Weston (2013)
- Exceeds EHSL Not to Exceed Single Value Remedial Action Goal
- Exceeds HHSL Not to Exceed Single Value Remedial Action Goal
- Mean High Water Line (Approximate)
- Cross Section A-A' and A-A''
- Site Boundary

- Analytes: Heavy Metals, PCBs, PAHs, TPH

LEGEND:

- Sand (SP, SP-SC, SC)
- Clay (CL)
- Gravel (GP)
- Asphalt surface
- Concrete surface
- Soil surface
- Sediment surface
- First encountered groundwater
- Shells/Shell fragments
- Concrete
- Debris (wood, brick)
- Mean High Water: 5.84 ft NAVD88
- Approximate excavation depth; excavated areas to be backfilled with clean soil



Horizontal Scale: 1"=50'
 Vertical Scale: 1"=10'
 Vertical Exaggeration: 5



FIGURE 9A
Cross Section A-A',
Schematic Depth of Inland Soil
Remediation Areas

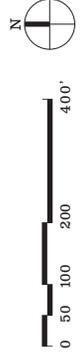
India Basin Redevelopment Project
 900 Innes RAMP
 San Francisco, California
 Project No. 1370.01

northgate
 environmental management, inc.

APPENDIX A

**CONCEPTUAL DESIGN PACKAGE,
INDIA BASIN SHORELINE PARK AND 900 INNES AVENUE**







NEIGHBORHOOD EDGE & HISTORIC SHOREWALK

- 1 Restored Shipwright's Cottage Welcome Center
- 2 Innes Ave Porch Swings
- 3 Overlook Porch Pavilion
- 4 Garden Path + Accessible Ramp
- 5 Griffith Street Steps
- 6 Heritage Garden
- 7 Parking
- 8 Shorewalk Promenade

SCOW SCHOONER BOATYARD

- 9 Historic Scow Schooner Boatyard Artifacts
- 10 Floating Piers
- 11 Shop Building
- 12 Gravel Beach Play Area

SAGE SLOPES

- 13 Adventure Play Area
- 14 1/4 Mile Recreation Loop
- 15 Adult Fitness Stations
- 16 Skate Bypass Wave Paths
- 17 Basketball Courts
- 18 Parking and Bus Drop-Off
- 19 Outfitter Pavilion

THE MARINEWAY

- 20 BBQ and Picnic Bosque
- 21 Play Lawn
- 22 Sloped Lawn
- 23 Gravel Beach
- 24 Floating Dock

- Restroom
- Bay Trail / Blue Greenway Route
- Class 1 Bikeway Route



APPENDIX B

DATA CHARACTERIZATION PACKAGE, 900 INNES AVENUE



APPENDIX C

CITY OF SAN FRANCISCO DUST CONTROL ORDINANCE



1 [Construction Dust Control.]
2

3 **Ordinance amending the San Francisco Building Code by adding Section 106.3.2.6 to**
4 **require that all site preparation work, demolition, or other construction activities within**
5 **the City and County of San Francisco that have the potential to create dust or will**
6 **expose or disturb more than 10 cubic yards or 500 square feet of soil must comply with**
7 **specified dust control measures whether or not the activity requires a permit from the**
8 **Department of Building Inspection, with provision for waiver by the Director for**
9 **activities on sites less than one half acre that are unlikely to result in any visible**
10 **windblown dust; amending the San Francisco Health Code by adding Article 22B to**
11 **require, for projects over one half acre, that the project sponsor obtain approval of a**
12 **dust control plan from the Director of Public Health unless the Director waives these**
13 **requirements or the project qualifies for an interior only tenant improvement project**
14 **exemption, and enacting fees to defray the costs of implementation; adopting**
15 **environmental and general findings.**

16
17 Note: Additions are single-underline italics Times New Roman;
18 deletions are ~~strikethrough italics Times New Roman~~.
19 Board amendment additions are double underlined.
20 Board amendment deletions are ~~strikethrough normal~~.

21 Be it ordained by the People of the City and County of San Francisco:

22 Section 1. Findings. The Board of Supervisors of the City and County of San Francisco
23 hereby finds and determines that:

24 (a) Environmental Findings. The Planning Department has determined that the
25 actions contemplated in this Ordinance are in compliance with the California Environmental
Quality Act (California Public Resources Code Sections 21000 et seq.). Said determination is

Supervisor Maxwell, Supervisor Peskin, Supervisor Ammiano, Supervisor Dufty
BOARD OF SUPERVISORS

1 on file with the Clerk of the Board of Supervisors in File No. _____ and is
2 incorporated herein by reference.

3 (b) General Findings.

4 (1) Even though there are Federal Standards for air pollutants and implementation
5 of State and Regional air quality control plans, air pollutants continue to have impacts on
6 human health throughout the country. California has found that particulate matter exposure
7 can cause health effects at lower levels than national standards. The current health burden of
8 particulate matter demands that, where possible, public agencies take feasible available
9 actions to reduce sources of particulate matter exposure.

10 (2) According to the California Air Resources Board, reducing ambient particulate
11 matter from 1998-2000 levels to natural background concentrations in San Francisco would
12 prevent over 200 premature deaths.

13 (3) Dust can be an irritant causing watering eyes or irritation to the lungs, nose and
14 throat.

15 (4) Demolition, excavation, grading, and other construction activities can cause
16 wind-blown dust to add to particulate matter in the local atmosphere. Depending on
17 exposure, adverse health effects can occur due to this particulate matter in general and also
18 due to specific contaminants such as lead or asbestos that may be constituents of dust.

19 (5) The intent of this ordinance is to reduce the quantity of dust generated during
20 site preparation, construction and demolition in order to protect the health of the general
21 public, protect the health of on-site workers, minimize public nuisance complaints, and avoid
22 orders to stop work by the Department of Building Inspection.

23 Section 2. The San Francisco Building Code is hereby amended by adding Section
24 106.3.2.6, to read as follows:
25

1 **(b)** For projects over one half acre in size, the project sponsor shall designate a person or
2 persons who will be responsible for monitoring compliance with dust control requirements. The
3 designated person or persons shall be on the site or available by telephone or other means during all
4 times that site preparation, demolition or construction activities may be in progress, including holidays
5 and weekends. The name and telephone number where such person or persons may be reached at all
6 times shall be provided to the Director and to the Director of Public Health prior to commencement of
7 work on the project.

8 **(c)** The project sponsor and the contractor responsible for construction activities at the
9 project site shall use the following practices to control construction dust on the site or other practices
10 that result in equivalent dust control that are acceptable to the Director.

11 **(1)** Water all active construction areas sufficiently to prevent dust from becoming airborne.
12 Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour.
13 Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the San Francisco
14 Public Works Code. If not required, reclaimed water should be used whenever possible.

15 **(2)** Provide as much water as necessary to control dust (without creating run-off) in any
16 area of land clearing, earth movement, excavation, drillings, and other dust-generating activity.

17 **(3)** During excavation and dirt-moving activities, wet sweep or vacuum the streets,
18 sidewalks, paths, and intersections where work is in progress at the end of the workday.

19 **(4)** Cover any inactive (no disturbance for more than seven days) stockpiles greater than ten
20 cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand,
21 road base, and soil with a 10 mil (0.01 inch) polyethylene plastic or equivalent tarp and brace it down
22 or use other equivalent soil stabilization techniques.

23 **(5)** Use dust enclosures, curtains, and dust collectors as necessary to control dust in the
24 excavation area.

1 106.3.2.6.4. Large projects. If the project is over one half acre in size and the project does not
2 qualify for an interior only tenant improvement project exemption or the Department of Public Health
3 has not issued a waiver for a site-specific dust control plan for the project; construction, demolition,
4 excavation, grading, foundation work, or other permitted activities may not commence until the owner
5 or the owner's agent has submitted to the Department a copy of the Director of Public Health's written
6 approval of the dust control plan. All site preparation and construction activities on the job site shall
7 comply with the general requirements for dust control and the site-specific dust control plan approved
8 by the Director of Public Health. The failure to comply with all provisions of the approved site-specific
9 dust control plan shall be considered a violation of this Code.

10 106.3.2.6.5. Waiver of requirements for compliance for small sites; rescission of waiver.

11 For sites less than a half acre in size:

12 (a) The Director may waive these requirements if the applicant demonstrates to the
13 Director's satisfaction that the proposed site preparation, demolition or construction activities are
14 unlikely to result in any visible windblown dust.

15 (b) If at any time, contrary to the applicant's assertions, the construction activities produce
16 visible windblown dust, the Director may issue a written order rescinding the waiver. A copy of the
17 rescission order shall be personally served on the owner of the property at the address on file with the
18 Department of Building Inspection and posted on the job site.

19 (c) If the Director orders rescission of the waiver, the owner of the property and the
20 contractor or other persons responsible for construction activities at the site shall comply immediately
21 with the above dust control requirements.

22 106.3.2.6.6. Permit notification. All building, demolition, excavation, grading, foundation, or
23 other permit subject to this section issued by the Central Permit Bureau shall bear notice of the above
24 requirements and of the owner's responsibility to control construction dust on the site.

1 (e) "Sensitive Receptor" means residence, school, childcare center, hospital or other
2 health-care facility or group living quarters.

3 SEC. 1241. APPLICABILITY OF ARTICLE.

4 This Article shall apply to any site preparation or construction activities taking place within the
5 City and County of San Francisco that has the potential to create dust or that will expose or disturb
6 soil.

7 SECTION 1242. SITE-SPECIFIC DUST CONTROL PLAN.

8 (a) Applicants for projects over a half acre in size shall submit a map showing the location
9 of the project and clearly identifying all surrounding sensitive receptors and particularly noting those
10 within 1000 feet of the project. The Director of Health shall review this map and any other information
11 available to the Director to verify compliance with this submittal requirement. If no sensitive receptors
12 are determined to be within 1000 feet of the project, then the Director of Health may issue a waiver to
13 the Applicant that specifies that the project is not required to have a site-specific dust control plan.

14 (b) For projects determined by the Director to be within 1000 feet of sensitive receptors, the
15 Applicant will submit a site-specific dust control plan to the Director for approval.

16 (c) The site-specific dust control plan shall contain all provisions of Section 106.3.2.6.3 of
17 the Building Code and enhanced site-specific dust monitoring and control measures that will apply to
18 the project. These site-specific measures may include the following or equivalent measures, which
19 accomplish the goal of minimizing visible dust:

20 (1) wetting down areas around soil improvement operations, visibly dry disturbed soil
21 surface areas, and visibly dry disturbed unpaved driveways at least three times per shift per day.

22 (2) analysis of the wind direction,

23 (3) placement of upwind and downwind particulate dust monitors,

24 (4) recordkeeping for particulate monitoring results,

1 (5) hiring of an independent third party to conduct inspections for visible dust and keeping
2 records of those inspections.

3 (6) requirements for when dust generating operations have to be shut down due to dust
4 crossing the property boundary or if dust is contained within the property boundary but not controlled
5 after a specified number of minutes.

6 (7) establishing a hotline for surrounding community members to call and report visible
7 dust problems so that the Applicant can promptly fix those problem; posting signs around the site with
8 the hotline number and making sure that the number is given to adjacent residents, schools and
9 businesses.

10 (8) limiting the area subject to excavation, grading, and other demolition or construction
11 activities at any one time.

12 (9) minimizing the amount of excavated material or waste materials stored at the site.

13 (10) installing dust curtains, plastic tarps or windbreaks, or planting tree windbreaks on the
14 property line on windward and down windward sides of construction areas, as necessary.

15 (11) paving, applying water three times daily, or applying non-toxic soil stabilizers on all
16 unpaved access roads, parking areas and staging areas at the construction site. Reclaimed water must
17 be used if required by Article 21, Section 1100 et seq. of the San Francisco Public Works Code, Article
18 22. If not required, reclaimed water should be used whenever possible.

19 (12) loading haul trucks carrying excavated material and other non-excavated material so
20 that the material does not extend above the walls or back of the truck bed. Tightly cover with
21 tarps or other effective covers all trucks hauling soil, sand, and other loose materials before the
22 trucks leave the loading area. Wet prior to covering if needed.

23 (13) establishing speed limits so that vehicles entering or exiting construction areas shall
24 travel at a speed that minimizes dust emissions. This speed shall be no more than 15 miles per hour.
25

1 (14) sweeping streets with water sweepers at the end of each day if visible soil material is
2 carried onto adjacent paved roads. Reclaimed water must be used if required by Article 21, Section
3 1100 et seq. of the San Francisco Public Works Code. If not required, reclaimed water should be used
4 whenever possible.

5 (15) installing wheel washers to clean all trucks and equipment leaving the construction site.
6 If wheel washers cannot be installed, tires or tracks and spoil trucks shall be brushed off before they re-
7 enter City streets to minimize deposition of dust-causing materials.

8 (16) terminating excavation, grading, and other construction activities when winds speeds
9 exceed 25 miles per hour.

10 (17) hydroseeding inactive construction areas, including previously graded areas inactive for
11 at least 10 calendar days, or applying non-toxic soil stabilizers.

12 (18) sweeping of surrounding streets during demolition, excavation and construction at least
13 once per day to reduce particulate emissions.

14 SEC. 1243. EXEMPTION FOR INTERIOR ONLY TENANT IMPROVEMENT PROJECTS

15 Interior Only Tenant Improvement Projects that are over one half acre in size and will not
16 produce any exterior visible dust are exempt from complying with these requirements. If the interior
17 only tenant improvement projects are changed during the course of construction and begin producing
18 exterior visible dust then they will be required to immediately comply with Section 1242 by submitting a
19 site-specific dust control plan for the Director's approval.

20 SEC. 1244. WAIVER OF REQUIREMENTS FOR COMPLIANCE; RESCISSION OF WAIVER.

21 (a) The Director may waive the requirements for a site-specific dust control plan as
22 described in Section 1242 (a) or if the Applicant demonstrates to the Director's satisfaction that a site-
23 specific dust control plan should not be required.

24 (b) The Director may rescind a waiver,

1 (1) if sensitive uses are placed within 1000 feet of the project;
2 (2) if requested by the Director of Building Inspection; or
3 (3) the Director is presented with information that contradicts the Applicant's
4 demonstration that a site-specific dust control plan should not be required.

5 The Director shall provide the Director of Building Inspection with a copy of the rescission
6 order. If the Director orders rescission of the waiver, the owner of the property and the contractor or
7 other persons responsible for construction activities at the site shall comply immediately with Section
8 1242 by submitting a site-specific dust control plan for the Director's approval.

9 SEC. 1245. DIRECTOR'S APPROVAL OF DUST CONTROL PLAN AND NOTIFICATION TO
10 THE DIRECTOR OF BUILDING INSPECTION.

11 After the Director has approved the Applicant's dust control plan, the Director shall provide the
12 Applicant and the Director of Building Inspection with written notification that the Applicant has
13 complied with the requirements of this Article.

14 SEC. 1246. RULES AND REGULATIONS.

15 The Director may adopt, and may thereafter amend, rules, regulations and guidelines that the
16 Director deems necessary to implement the provisions of this Article. A public hearing before the
17 Health Commission shall be held prior to the adoption or any amendment of the rules, regulations and
18 guidelines recommended for implementation. In addition to any notices required by law, the Director
19 shall send written notice, at least 15 days prior to the hearing, to any interested party who sends a
20 written request to the Director for notice of hearings related to the adoption of rules, regulations and
21 guidelines under this section.

22 SEC. 1247. CONSTRUCTION ON CITY PROPERTY.

23 All departments, boards, commissions, and agencies of the City and County of San Francisco
24 that authorize construction or improvements on land under their jurisdiction under circumstances
25

1 where no building, excavation, grading, foundation, or other permit needs to be obtained under the San
2 Francisco Building Code shall adopt rules and regulations to insure that the same dust control
3 requirements that are set forth in this Article are followed. The Directors of Public Health and
4 Building Inspection shall assist the departments, boards, commission and agencies to insure that these
5 requirements are met.

6 SEC. 1248. NO ASSUMPTION OF LIABILITY.

7 In undertaking the enforcement of this ordinance, the City is assuming an undertaking only to
8 promote the general welfare. It is not assuming, nor is it imposing on its officers and employees, an
9 obligation for breach of which it is liable in money damages to any person who claims that such breach
10 proximately caused injury.

11 SEC. 1249. FEES.

12 The Director is authorized to charge the following fees to defray the costs of document
13 processing and review, consultation with applicants, and administration of this Article: for fiscal year
14 2008-2009 (1) an initial fee of \$492, payable to the Department upon the filing of a Dust Control Plan
15 with the Department; and (2) an additional fee of \$164 per hour for time spent in document processing
16 and review and applicant consultation exceeding three hours or portion thereof, payable to the
17 Department. Beginning with fiscal year 2009-2010, no later than April 15 each year, the Controller
18 shall adjust the fees provided in this Article to reflect changes in the relevant Consumer Price Index,
19 without further action by the Board of Supervisors. In adjusting the fees, the Controller may round
20 these fees up or down to the nearest dollar. The Director shall perform an annual review of the fees
21 scheduled to be assessed for the following fiscal year and shall file a report with the Controller no later
22 than May 1st of each year, proposing, if necessary, an adjustment to the fees to ensure that costs are

1 fully recovered and that fees do not produce significantly more revenue than required to cover the costs
2 of operating the program. The Controller shall adjust fees when necessary in either case.

3
4 APPROVED AS TO FORM:
5 DENNIS J. HERRERA, City Attorney

6 By: 
7 JUDITH A. BOYAJIAN
8 Deputy City Attorney
9

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City and County of San Francisco

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

Tails Ordinance

File Number: 071009

Date Passed:

Ordinance amending the San Francisco Building Code by adding Section 106.3.2.6 to require that all site preparation work, demolition, or other construction activities within the City and County of San Francisco that have the potential to create dust or will expose or disturb more than 10 cubic yards or 500 square feet of soil must comply with specified dust control measures whether or not the activity requires a permit from the Department of Building Inspection, with provision for waiver by the Director for activities on sites less than one half acre that are unlikely to result in any visible windblown dust; amending the San Francisco Health Code by adding Article 22B to require, for projects over one half acre, that the project sponsor obtain approval of a dust control plan from the Director of Public Health unless the Director waives these requirements or the project qualifies for an interior only tenant improvement project exemption, and enacting fees to defray the costs of implementation; adopting environmental and general findings.

~~August 7, 2007 Board of Supervisors — SUBSTITUTED~~

June 24, 2008 Board of Supervisors — SUBSTITUTED

July 16, 2008 Board of Supervisors — PASSED ON FIRST READING

Ayes: 10 - Alioto-Pier, Chu, Daly, Dufty, Elsbernd, Maxwell, McGoldrick,
Mirkarimi, Peskin, Sandoval
Absent: 1 - Ammiano

July 22, 2008 Board of Supervisors — FINALLY PASSED

Ayes: 11 - Alioto-Pier, Ammiano, Chu, Daly, Dufty, Elsbernd, Maxwell,
McGoldrick, Mirkarimi, Peskin, Sandoval

File No. 071009

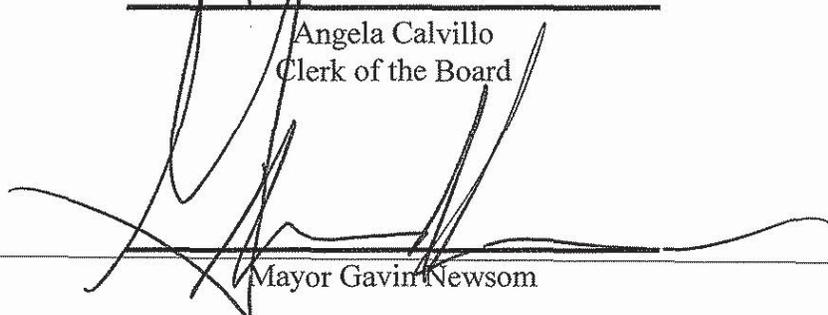
I hereby certify that the foregoing Ordinance
was **FINALLY PASSED** on July 22, 2008 by
the Board of Supervisors of the City and
County of San Francisco.



Angela Calvillo
Clerk of the Board

7-30-08

Date Approved



Mayor Gavin Newsom

APPENDIX D

CITY OF SAN FRANCISCO NOISE CONTROL ORDINANCE



NOISE CONTROL ORDINANCE

Police Code Section 2907(b) - It shall be unlawful for any person to operate any powered construction equipment, regardless of age or date of acquisition, if such equipment emits noise at a level in excess of 80 dBA when measured at a distance of one hundred feet from such equipment, or equivalent sound level at some other convenient distance;

Police Code Section 2907(c) - Requirements of Section 2907(b) need not be applied to impact tools and equipment, provided that such impact tools and equipment shall have intake and exhaust mufflers recommended by the manufacturers thereof and approved by the Director of Public Works as best accomplishing maximum noise attenuation, and that pavement breakers and jackhammers shall also be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof and approved by the Director of Public Works as best accomplishing maximum noise attenuation. In the absence of manufacturer's recommendation, the Director of Public Works may prescribe such means of accomplishing maximum noise attenuation as he deems to be in the public interest.

Police Code Section 2901.12 - Powered construction equipment includes any tools, machinery, or equipment used in connection with construction operations which can be driven by energy in any form other than manpower, including all types of motor vehicles when used in the construction process on any construction site, regardless of whether such construction site be located on-highway or off-highway, and further including all helicopters or other aircraft when used in the construction process except as may be pre-empted for regulation by State or Federal law.

Police Code Section 2908 - It shall be unlawful for any person, including employees and agents of the City and County of San Francisco, between the hours of 8:00 p.m. any day and 7:00 a.m. of the following day to erect, construct, demolish, excavate, alter or repair any building or structure, if the noise level created thereby is in excess of the ambient background noise level by 5 dBA at the nearest property line, unless a special permit therefor has been applied for and granted by the Director of Public Works. In granting such special permit the Director of Public Works shall consider if construction noise in the vicinity of the proposed work site would be less objectionable at night than during daytime because of different population levels or different neighboring activities, if obstruction and interferences with traffic particularly on streets of major importance, would be less objectionable at night than during daytime, if the kind of work to be performed emits noises at such a low level as to not cause significant disturbance in the vicinity of the work site, if the neighborhood of the proposed work site is primarily residential in character wherein sleep could be disturbed, if great economic hardship would occur if the work were spread over a longer time, if the work will abate or prevent hazard to life or property, if the proposed night work is in the general public interest; and he shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise emissions, as he deems to be required in the public interest.

END OF DOCUMENT



TECHNICAL MEMORANDUM

Attorney-Client Privileged and Confidential

From: Northgate Environmental Management, Inc.
Langan Engineering and Environmental Services,
Inc.

Date: August 24,
2017

To: File

RE: Environmental Testing Rationale at India Basin Redevelopment Project

On behalf of the San Francisco Recreation and Park Department (SFRPD) and BUILD, Inc. (BUILD), Northgate Environmental Management, Inc. (Northgate) and Langan Engineering and Environmental Services, Inc. (Langan) have prepared this Technical Memorandum (TM) to document our decision not to include radiation testing as part of the subsurface environmental investigations conducted by Weston, URS, Northgate and Langan at the India Basin Open Space (IBOS), India Basin Shoreline Park (IBSP), 900 Innes Avenue, and 700 Innes Avenue properties (collectively referred to as the Sites).

The Sites have been the subject of a number of Phase I Environmental Site Assessments (ESAs) and Phase II subsurface soil, sediment, and groundwater testing investigations since 2013. The Phase I ESAs included historical site assessment investigations that looked at all available information regarding the Sites and did not indicate the presence of a Recognized Environmental Condition (REC) or issue of potential concern related to radiological contamination. Therefore, in defining the scope of the sampling locations and analytical tests to run on the samples collected during the Phase II subsurface investigations, we followed normal protocols and did not include radiation testing.¹

The decision not to include radiation testing in the Phase II investigations was based on our professional judgment and experience as environmental engineers and also applicable regulatory guidance. For example, the United States Environmental Protection Agency's "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM) provides detailed guidance on how to evaluate whether a site should be tested for radiation hazards. As mentioned above, the Phase I historical investigation of the Sites did not reveal any risk factor that indicated the site should be included in radiation evaluation. The MARSSIM guidance accordingly would recommend no further radiation evaluation because there was no or a very low probability of radioactive materials being present at the Sites.

The results of the Phase II subsurface investigations verified the conclusions of the Phase I ESAs. The Phase II investigations uncovered no evidence of sub-surface materials of the type that might indicate a risk of radiological contamination. These results confirm our initial conclusion, based on Phase I data, that radiological contamination is not an issue of potential concern at the Sites.

¹ The samples were analyzed for the following constituents: metals, total petroleum hydrocarbons, volatile organic compounds, polyaromatic hydrocarbons, polychlorinated biphenyls, organochlorine pesticides, total organic carbon, cyanide, hexavalent chromium, fluoride, pH, organotins, and moisture content.

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Oakland, California 94612
tel 510.839.0688

24411 Ridge Route Drive, Suite 130
Laguna Hills, California 92653
tel 949.716.0050

20251 Century Boulevard, Suite 315
Germantown, Maryland 20874
tel 301.528.9912

SITE INVESTIGATIONS

Langan Treadwell Rollo (Langan) Phase I Environmental Site Assessments (ESAs), 700 Innes Avenue and India Basin Shoreline Park

In October, 2014 and June, 2015, Langan Treadwell Rollo (Langan) prepared an Updated Phase I ESA for the India Basin property at 700 Innes Avenue and a Phase I ESA for the India Basin Shoreline Park. These updated Phase I ESAs included searching online databases maintained by the California Regional Water Quality Control Board (RWQCB) and California Department of Toxic Substances Control (DTSC) regarding any additional files and evaluating any fuel and hazardous materials leaks reported at the Sites and neighboring properties including Hunter Point Naval Shipyard (HPNS). The investigations indicated that the majority of the Site areas were filled between 1946 and 1968 using material brought from a variety of sources with no association with radiological materials. Further, no evidence was uncovered indicating that radioactive material was ever used or disposed at the Sites. Therefore, radiation was not identified as an environmental concern.

Langan Treadwell Rollo (Langan) Phase II Environmental Site Assessment (ESA), India Basin

In November, 2013 and April, June, and August, 2014, Langan performed subsurface investigations at 700 Innes Avenue which included soil, groundwater and soil-gas testing and analyses with the analytical results presented in a Draft Phase II Environmental Site Assessment dated 2 September 2014. The investigations included a total of 22 geotechnical and environmental exploratory borings drilled at the Site with 75 soil, one (1) grab groundwater, and four (4) soil-gas samples analyzed. The Site was underlain by fill material consisting primarily of loose to medium dense sand with varying amounts of silt, clay, gravel, concrete, brick and wood fragments. No material related to radiological debris or sand blast materials were present in the borings.

Northgate Phase I ESA

In February, 2017, Northgate conducted a Phase I ESA for IBOS. During the course of the assessment, Northgate reviewed information readily available from regulatory agency databases, and previous reports covering IBOS and other nearby properties, including HPNS. Information collected from these sources indicated the potential presence of contamination at nearby sites associated with petroleum hydrocarbons, heavy metals, polychlorinated biphenyls, polycyclic aromatic hydrocarbons, and pesticides, but did not identify radioactive constituents as potential contaminants of concern. None of the information reviewed by Northgate indicated the likely presence of radiological contamination concerns at IBOS, IBSP, or 900 and 700 Innes Avenue. None of the information reviewed by Northgate included the documented presence of radiological contaminants at HPNS parcels in close proximity to the Sites. Accordingly, radiological contamination was not identified as a REC or issue of significant potential environmental concern.

Northgate Subsurface Characterization of the IBOS, 900 Innes and IBSP Sites

Northgate performed subsurface soil and sediment testing at the Sites as described in the September 7, 2016 Soil Characterization Report for the India Basin Open Space, and the April 2017 draft Site

Characterization Reports for 900 Innes Avenue and India Basin Shoreline Park. The scope of the testing was based on the findings of previous assessments, investigations and data gap analyses at the Sites and adjacent areas performed by Langan, Weston, URS and AECOM, none of which identified radiological contamination as a potential concern. Subsurface fill materials encountered in borings advanced during Northgate's investigations contained construction-related debris typical of the artificial fill that is present along the San Francisco Bay margin, such as concrete, wood, and glass, but no materials that are indicative of radiological waste disposal or industrial processes related to HPNS, such as gauges, compasses, dials, piping, instrumentation, or fittings. Further, there is no indication of any HPNS waste materials being disposed at the Sites, including sandblast grit associated with HPNS ship decommissioning activities.

In summary, we find no historical data or material evidence that supports the need for radiological testing at the Sites. There is neither evidence that the Sites were used to handle or dispose of radioactive materials, nor evidence that the fill material contains radioactive materials. The results of the investigations of the HPNS parcels located near the Sites only reinforce this conclusion. The extensive investigation and remediation activities at nearby HPNS areas have uncovered no radiological contamination that could migrate or threaten the Sites. These reports also categorized surface and subsurface soil at IR 07 and 18, the portion of HPNS property adjacent to the Site. This HPNS property contain fill material similar to the Sites, which have a low potential to be radiologically contaminated media.

EXTENT OF RADIATION CONTAMINATION AT HPNS

The areas of HPNS adjacent to the Sites provide the only risk of possible contaminant migration to the Sites. The portion of HPNS Parcel B containing IR 07 and IR18 and the portion of HPNS Parcel F containing dry docks 5, 6, and 7 are located directly adjacent to or within 900 feet of the southeast boundaries of 700 Innes Avenue and IBOS. In each case, an assessment performed by the Navy has concluded that these areas have a low or unlikely radiological contamination potential. Northgate and Langan's review of regulatory documentation regarding the potential radiological issues at HPNS performed as part of the Phase I ESAs indicated that there is little to no risk of residual HPNS contamination having been deposited or having migrated to the Sites, and radiological contamination was not identified in the reports as a REC or issue of significant potential environmental concern. We have included a more detailed summary of these areas in an appendix to this TM.

CLOSING

Based on historical research including aerial photographs, environmental regulatory documents, and a review of HPNS files, none of the firms that have performed environmental assessments for the Sites have determined that radiation issues constitute a significant potential environmental concern. As potential radiological contamination issues were not identified in the Site history assessments, specific testing for radioactive materials was not performed during the subsequent Phase II testing programs. Nevertheless, there were no indications of radiological debris or sand blast material noted during the subsurface investigations. A review of the regulatory documentation of investigations and remediation activities at the nearby areas of HPNS have uncovered no evidence that radiological contamination has migrated to or threatens the Sites.

As such, we continue to conclude based on the available information, our engineering opinions, and the available regulatory guidance, that radiological testing at the Sites is not required.

Hunters Point Naval Shipyard Parcels Appendix

The former Hunters Point Naval Shipyard property borders the Sites to the east. The attached Figure 4-1, Overall Impacted Sites (from the 1939-2003 Historical Radiological Assessment [HRA] prepared by the Navy in 2004) shows the layout of HPNS parcels, two of which – Parcel B and Parcel F – are located in close proximity to the Sites. Parcel B consists of a number of separate areas and buildings identified in the 2004 HRA as having a “potential for radioactive contamination based on historical information or is known to contain radioactive contamination.” Two of the areas located within Parcel B, identified as Installation Restoration (IR) Sites 07 and 18, comprise 12.6 acres of land located directly adjacent to the southeastern boundary of the Sites. Parcel F consists of on-land dry docks and the adjacent Bay-margin waters, located about 900 feet east of the Sites that were formerly used by the Navy to repair and maintain vessels, including the decommissioning of vessels exposed to radiation in the Pacific following WWII. Information presented in the HRA pertaining to Parcel B – IR07 and IR18, and Parcel F, is summarized below.

Parcel B: IR07 and IR18

The HRA references a number of radiological investigations of IR07 and IR18 conducted between 1988 and 1999. The investigation methodologies included surface scintillation surveys, subsurface boring and test pit excavation, surface and downhole gamma radiation surveys, and air, soil and groundwater sampling. The investigations found radiological activity at or below naturally-occurring background levels. The HRA categorized surface and subsurface soil at IR07 and IR18 as having a low potential to be radiologically contaminated media, and categorized sediment, surface water, groundwater, air, structures, and drainage systems as having no potential for contamination.

Remedial actions performed between 1998 and 2001 to address petroleum hydrocarbon contamination at IR07 and IR18 did encounter sandblast grit known to be associated with the decommissioning of vessels exposed to radiation in the Pacific. However, the Navy Assessment of Previous Reports on the Radiological History of IR Sites 07 and 18 at Hunters Point Shipyard dated November 7, 2008 states that “laboratory analysis [of sandblast grit] found only naturally occurring radium” and that the “Navy’s Radiological Affairs Support Office (RASO) concluded there were no radiological hazards associated with the sandblast grit.” Excavation performed as part of the remedial action to clean up petroleum hydrocarbon contamination removed soil from a significant portion of the IR07 and IR18 area and replaced it with imported fill. Residual non-radiological contamination at the IR sites was covered with an engineered cap of clean soil.

A Finding of Suitability to Transfer for Parcel B – IR Sites 07 and 18 stated that the Navy removed radiologically impacted sanitary sewers and storm drains in portions of IR07 and IR18, and that the remedial action objectives were achieved. Based on previous investigations and historical information, a MARSSIM Class 1 survey of IR07 and IR18 was conducted and the top one foot of the entire area was “remediated to levels specified in the amended [Record of Decision] to ensure a radiologically clean surface prior to the application of the [3-foot] cover remedy.” Additionally, “about 470 cubic yards of soil from inland areas plus additional sediment and debris (concrete, brick, and metal) from the shoreline were removed because cesium or radium concentrations exceeded release criteria. These materials were disposed of off-site as low-level radioactive waste.” A portion of IR07 and IR18 was designated as an area requiring institutional controls (ARIC). The document concludes that the IR07 and IR18 property is suitable for transfer and that non-Navy property (adjacent to the northwest of IR07 and IR18) “is not contaminated.” Response letters from the California Department of Toxic Substances Control, the San Francisco Bay Regional Water Quality Control Board, and the United States Environmental Protection Agency indicated concurrence that IR07 and IR18 is suitable for transfer.

A September 18, 2015 California Department of Public Health response to a radioactive licensing exemption request submitted by the Office of Community Investment and Infrastructure (OCII) states that the “CDPH conducted surface scans at [IR-07 and IR-18] both prior to and following the installation of the [3-foot] engineered cap soil cover” and that “CDPH scan results evidenced no potential risk to the public health and safety resulting from the measured surface gamma radiation levels.”

Parcel F, Dry Docks

Parcel F of HPNS contains former dry docks 5, 6, and 7, which were in part used to decommission vessels exposed to radiation in the Pacific. Information presented in the 2008 Navy Assessment of Previous Reports on the Radiological History of IR Sites 07 and 18 at Hunters Point Shipyard concluded that subsurface soil, surface soil, sediment, surface water, structures and drainage systems at and in the vicinity of the dry docks have a low potential for radiological contamination based on Navy records and the history of activities performed there.

Information presented in the 2016 Addendum to the Feasibility Study Report for Parcel F at HPNS stated that no radioluminescent items such as gauges, dials, and deck markers were found in sediments during exhaustive investigations throughout Parcel F. As a result of multiple radiological data gap investigations of Parcel F sediment, the document concludes that “no radioactivity in excess of naturally occurring background levels has been identified,” and that “no additional radiological investigation or remediation for [radionuclides of concern] in Parcel F sediment is warranted.”

Furthermore, the document states that a comprehensive Parcel F sediment stability study “concluded that storm waves would resuspend only the top few centimeters of sediment and that substantial erosion from currents and waves is unlikely,” and “it is unlikely that significant amounts of radiologically or chemically contaminated sediment historically would have been resuspended and transported from suspected source areas and deposited elsewhere.” Though no radioluminescent items were encountered during any Parcel F investigations, the Navy considers it appropriate to “place [institutional controls] on Parcel F sediments to manage future dredging activities and to ensure the proper assessment of sediments and disposal of potential radiological objects,” in the remote chance that radioluminescent items may be present therein.

Hunters Point Naval Shipyard Radiological Data Review

In 2012, as a part of its regular review of contractor data, the Navy learned of a discrepancy in radiological sampling by one contractor, Tetra Tech EC. The Navy reviewed the sampling data in question and determined that Tetra Tech EC had misrepresented radiological soil samples. Tetra Tech EC claimed that it took the soil samples from specifically designated areas that were undergoing remediation but, in fact, gathered the samples from alternate areas where remediation was not required.

Upon the discovery of the misrepresentation, the Navy notified the Nuclear Regulatory Commission (NRC) and the California Department of Public Health (CDPH), agencies that manage Tetra Tech EC's radiological licenses. With strict oversight, Tetra Tech EC was required to take corrective action.

In 2016, a former Tetra Tech EC contractor made additional claims about errors in Tetra Tech EC work. In response, in November 2016, the Navy hired an independent team of contractors to further review and evaluate the reliability of the radiological data collected by Tetra Tech EC. The Navy's contract team includes industry experts with extensive knowledge and experience in health physics (radioactivity),

environmental sampling, analysis of radiological samples, measurement of radioactivity, and statistical analysis of environmental data. Careful selection of contract team members was made to ensure that no individual who worked for Tetra Tech EC at HPNS were involved in any current data review that was started in 2017.

The Navy's contract team is working with the Navy's technical experts who also have extensive knowledge and experience in addressing radiological issues, and representatives from U.S. EPA, DTSC, CDPH, and the City of San Francisco's Health Department. The Navy's team, with review and input from these other agencies, is evaluating the existing radiological data collected by Tetra Tech EC during cleanup at HPNS to identify any clearly falsified or questionable data.

Once all falsified or questionable data have been identified by the technical team, the team will evaluate multiple lines of evidence to determine if radioactive levels at HPNS are, in fact, within regulatory limits.

While the Navy's review of past radiological sampling data is underway, to protect public health and the environment, the Navy is continuing with cleanup at HPNS according to federal guidance. The Navy will document the results of this radiological data evaluation and will include details about the evidence supporting that the radioactive levels are within regulatory limits. The evidence may include the results of future confirmation sampling that will be collected. All this work will be in a detailed confirmation report. The Navy will make the report available to the public.

Enclosures: Figure 4-1: Overall Impacted Sites from 2004 Navy HRA

References: *Navy Assessment of Previous Reports on the Radiological History of IR Sites 07 and 18 at Hunters Point Shipyard* (November 7, 2008)

Historical Radiological Assessment, Volume II, Use of General Radioactive Materials, 1939-2003, Hunters Point Shipyard

California Department of Public Health (CDPH), *Letter to Tiffany Bohee of the Office of Community Investment and Infrastructure* (December 12, 2012).

CDPH, *Letter to Tiffany Bohee of the Office of Community Investment and Infrastructure* (September 18, 2015).

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