File No	[613]2	Committee Board Item		
(COMMITTEE/BOAI		\ <u></u>	
	AGENDA PACK	•		
Committee:	Budget & Finance Comn	<u>nittee</u>		nuary 11, 2017
Board of Su	pervisors Meeting		Date	anuary 24, 2017
Cmte Boa □ □	rd Motion			,
	Resolution Ordinance Legislative Digest Budget and Legislative Youth Commission Rel		ort	
	Department/Agency Co MOU Grant Information Form Grant Budget Subcontract Budget Contract/Agreement Form 126 — Ethics Com Award Letter	1	l/or Repor	t
	Application Public Correspondence	Э		
OTHER	(Use back side if additi	onal space is	needed)	<i>,</i>
	by: Linda Wong by: Linda Wong	Date	January	6, 2017 V 17, 2017

AMENDED IN COMMITTEE 1/11/17 RESOLUTION NO.

FILE NO. 161312

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[Emergency Declaration - Repair Hetch Hetchy Power Kirkwood Generator Bypass System -Total Estimated Cost Not to Exceed \$590,000

Resolution approving an emergency declaration of the San Francisco Public Utilities Commission pursuant to San Francisco Administrative Code, Section 21.15(c), to repair dissipater valve of the Hetch Hetchy Power Kirkwood Generator Bypass System; with a total estimated cost not to exceed \$590,000.

WHEREAS, On October 6, 2016, the San Francisco Public Utilities Commission (SFPUC) inspected the Hetch Hetchy Power Kirkwood Generator Bypass System and determined that the stainless steel dissipater valve had failed, resulting in an unobstructed jet of water to strip a steel plate, rail, concrete, and rebar from the floor to a depth of about 30 inches, causing the Kirkwood Generator Bypass to be red-tagged and necessitating the repair of the dissipater valve and replacement of other parts; and

WHEREAS. This Kirkwood Generator Bypass structure is a critical asset and provides for continuous delivery of water to SFPUC water customers in the event Kirkwood Powerhouse is de-energized; inability to use this asset poses a threat to water deliveries, a basic service affecting the lives, property and welfare of the SFPUC water customers; and

WHEREAS, If the Kirkwood Generator Bypass System dissipater valve and other replacement parts are not repaired and expeditiously returned to service, there remains a significant threat to the ability of the SFPUC to ensure the continuous delivery of basic water service to its customers; and

WHEREAS, Administrative Code, Chapter 21, Section 21.15(c), authorizes department heads responsible for operations for which commodities or services are needed to declare an emergency to make repairs to maintain public health or welfare as a result of the breakdown of any plant equipment, structure, street or public work; and

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WHEREAS, On November 23, 2016, the SFPUC General Manager declared an emergency, approved by the President of the San Francisco Public Utilities Commission, to repair the Hetch Hetchy Power Kirkwood Generator Bypass System and thereby protect public health and safety; and

WHEREAS, Administrative Code, Section 21.15(c), requires that the General Manager seek Board of Supervisors' approval of the declaration of emergency for commodities or services with an estimated cost in excess of \$100,000; and

WHEREAS, The SFPUC General Manager estimates that the emergency work to repair and replace the Hetch Hetchy Power Kirkwood Generator Bypass System components, including the dissipater valve, steel plate flooring and other replacement parts will cost approximately \$590,000; and

WHEREAS, The SFPUC has attempted to obtain at least three bids for the emergency purchase of the dissipater valve; and

WHEREAS, The SFPUC anticipates executing an emergency contract with Oakland Machine Works for the fabrication and installation of the dissipater valve for approximately \$206,000, with the remaining work to be performed by City forces; and

WHEREAS, The Controller has certified that funds are available for this emergency work and contract; now, therefore, be it

RESOLVED, That the Board of Supervisors approves the emergency declaration to repair the Hetch Hetchy Power Kirkwood Generator Bypass System made by the SFPUC General Manager on November 23, 2016; and, be it

FURTHER RESOLVED, That actions taken to date by the San Francisco Public Utilities Commission to secure such emergency contracts and resolve the emergency condition are hereby ratified.

RECOMMENDED:

FUNDS AVAILABLE:

HARLAN L. KELLY, JR.

General Manager of the SFPUC

BEN RÓSENFIELD

Controller

Public Utilities Commission BOARD OF SUPERVISORS

Item 10	Department:
File 16-1312	Public Utilities Commission (PUC)

EXECUTIVE SUMMARY

Legislative Objectives

 The proposed resolution would approve the SFPUC's emergency declaration to repair the Kirkwood Generator Bypass System's dissipater valve and approve actions taken by the Public Utilities Commission of San Francisco (SFPUC) to secure such emergency contracts.

Key Points

- The SFPUC operates the Hetch Hetchy Water and Power system, which includes the Kirkwood Powerhouse, serves drinking water to 2.6 million customers in San Francisco, Alameda, Santa Clara and San Mateo counties. Water from Kirkwood Powerhouse is delivered either through Kirkwood Powerhouse generating units or the Kirkwood Powerhouse Bypass. The Kirkwood Powerhouse Bypass only operates if the Kirkwood Powerhouse generating units are out of service.
- On October 6, 2016, the SFPUC inspected the Kirkwood Generator Bypass System and determined that the stainless steel dissipater valve had failed, resulting in damages to surrounding structures. Hetch Hetchy Water and Power senior management red-tagged the Kirkwood Generator Bypass System, meaning it has been taken out of service as it is dangerous to operate unless repaired or replaced.
- A shutdown of water supply from Kirkwood has been scheduled from January 3 to March 3, 2017 and the Kirkwood Generator Bypass System dissipater valve needs to be in place by the time that the Hetch Hetchy Water System is operational in March 2017. Because manufacture of the dissipater valve could take up to 16 weeks, the SFPUC determined that there was not sufficient time to competitively bid for manufacture of the dissipater valve and make related repairs to the Kirkwood Generator Bypass System.
- SFPUC declared a state of emergency due to the failure of the Kirkwood Generator Bypass System on November 23, 2016. SFPUC then issued a purchase order with Oakland Machine Works for the dissipater valve on November 30, 2016.

Fiscal Impact

• The estimated cost for emergency repairs to the Kirkwood Generator Bypass System, including the \$206,000 contract between SFPUC and Oakland Machine Works to manufacture the dissipater valve, is \$590,000.

Policy Consideration

 Monitoring or inspection of Kirkwood Powerhouse dissipater valve requires a full water system delivery shutdown. The SFPUC has plans to inspect the new energy dissipater in November 2018 when additional rehabilitation work on Mountain Tunnel is scheduled.

Recommendations

- Amend the proposed resolution to correctly state that the emergency work will cost approximately \$590,000, not \$700,000.
- Approve the proposed resolution as amended.

MANDATE STATEMENT

Administrative Code Section 21.15(c) states that approval of the Board of Supervisors must be obtained for any emergency contract in excess of \$100,000.

BACKGROUND

The Public Utilities Commission of San Francisco (SFPUC) operates the Hetch Hetchy Water and Power system, which serves drinking water to 2.6 million residential, commercial, and industrial customers in San Francisco, Alameda, Santa Clara and San Mateo counties. The system includes three hydroelectric powerhouses: Moccasin Powerhouse, Kirkwood Powerhouse and Holm Powerhouse. The Kirkwood Powerhouse is located on the Tuolumne River six miles downstream from Hetch Hetchy Reservoir. Water from Kirkwood Powerhouse is delivered either through Kirkwood Powerhouse generating units or the Kirkwood Powerhouse Bypass. The Kirkwood Powerhouse Bypass only operates if the Kirkwood Powerhouse generating units are out of service. According to Ms. Margaret Hannaford, Hetch Hetchy Water and Power Division Manager, Kirkwood Powerhouse has periodically been out of service due to regulatory testing, forest fires, high river flows or construction. The frequency varies but the powerhouse is commonly taken out of service annually and the outages will last several days.

On October 6, 2016, the SFPUC inspected the Kirkwood Generator Bypass System and determined that the stainless steel dissipater valve had failed, resulting in damages to surrounding structures. The bypass system was last used for an extended period (11 days) during the Rim Fire. During that use, the force of the water flow stripped the steel plate, rail, concrete and rebar from the floor to a depth of about 30 inches. Hetch Hetchy Water and Power senior management red-tagged the Kirkwood Generator Bypass System, meaning it has been taken out of service as it is dangerous to operate unless repaired or replaced.

SFPUC requested quotes from five vendors to repair the Kirkwood Generator Bypass dissipater valve. Two of the vendors were not compliant with City requirements, one vendor did not have sufficient capacity, and one vendor was not able to provide a quote. SFPUC selected Oakland Machine Works to repair the Kirkwood Generator Bypass dissipater valve. According to Ms. Hannaford, Oakland Machine Works is an approved vendor with the City and Hetch Hetchy Water and Power has a blanket purchase order with Oakland Machine Works. Hetch Hetchy Water and Power requires fabrication of unique equipment for hydro-generating equipment and release equipment on dams. Oakland Machine Works has, in the past, fabricated and rebuilt moving parts for seven hydro-generators and discharge valves at Eleanor Dam.

SFPUC met with Oakland Machine Works on November 8, 2016, to discuss the design, materials, and manufacturing techniques for the new dissipater valve to mitigate the potential for a similar type of failure in the future. SFPUC received a quote from Oakland Machine Works on November 15, 2016.

¹ The Rim Fire was a wildfire started in the summer of 2013 and was the third largest wildfire in California's history. It occurred in the Sierra Nevada mountain range and was fully contained only after nine weeks.

The SFPUC General Manager declared a state of emergency due to the failure of the Kirkwood Generator Bypass System in a letter to the SFPUC President on November 23, 2016. SFPUC updated the design drawings, negotiated with Oakland Machine Works, and issued a purchase order on November 30, 2016. This resolution was submitted to the Board on December 5, 2016.

DETAILS OF PROPOSED LEGISLATION

The proposed resolution would approve the SFPUC's emergency declaration to repair the Kirkwood Generator Bypass System's dissipater valve and approve actions taken by the SFPUC to secure such emergency contracts.

In accordance with the City Administrative Code, because the project was declared an emergency, the SFPUC awarded the emergency contract to Oakland Machine Works without undergoing a formal competitive bidding process because the SFPUC determined that there was insufficient time to go through such a competitive selection process due to the scheduled shut-down of the Hetch Hetchy Water System. A shutdown of water supply from Kirkwood has been scheduled from January 3 to March 3, 2017 to inspect and make repairs to the Mountain Tunnel, which runs 19 miles and connects Kirkwood Powerhouse to Priest Reservoir.

According to Ms. Hannaford, the Kirkwood Generator Bypass System dissipater valve needs to be in place by the time that the Hetch Hetchy Water System is operational in March 2017. Because manufacture of the dissipater valve could take up to 16 weeks, the SFPUC determined that there was not sufficient time to competitively bid for manufacture of the dissipater valve and make related repairs to the Kirkwood Generator Bypass System.

Exhibit 1 below shows a portion of the Hetch Hetchy Water System, including the Kirkwood Powerhouse and Mountain Tunnel.

CHERRY 9 HOLM POWERHOUSE LAKE ievourierday (WM eat) reservo e POWERHOUSE (110 MW) Yosemite OUNTAIN National TUNNEL Park LAKE DON PEDRO (Modesto & Turlock Irrigation Districts)

Exhibit 1: Upper Portion of the Hetch Hetchy Power and Water System

FISCAL IMPACT

The budget for the emergency repairs to the Kirkwood Generator Bypass System, including the \$206,000 contract between SFPUC and Oakland Machine Works to manufacture the dissipater valve, is \$590,000, as seen in Table 1 below.

Table 1: Estimated Expenditures for Repair to Dissipater

Purpose	Estimated Cost
SFPUC Staff	\$196,341
Project Development	47,646
Professional Services	18,240
Oakland Machine Works	206,000
Materials and Supplies	. 55,875
Contingency	65,898
Total	\$590,000

According to Ms. Hannaford, Oakland Machine Works is currently fabricating the dissipater. SFPUC staff will perform all work required to prepare the site for construction during the shutdown, install the energy dissipater, and perform the remaining repair work to the Kirkwood Powerhouse Bypass Chamber. The dissipater is currently scheduled to arrive in the last week in March, but the SFPUC is exploring options for expediting the delivery. If it is delivered after the current shutdown, a special 2 day shutdown will be scheduled as soon as possible to complete the project.

Funds to pay for the emergency work will come from Hetch Hetchy's capital improvement project for power infrastructure, as previously appropriated by the Board of Supervisors. The current available balance is \$66,900,000, and if the amended resolution is approved, the remainder of the fund will be \$66,310,000.

The proposed resolution states that the emergency work will cost approximately \$700,000, and should be amended to correctly state that the emergency work will cost approximately \$590,000.

POLICY CONSIDERATION

According to Ms. Hannaford, monitoring or inspection of Kirkwood Powerhouse dissipater valve requires a full water system delivery shutdown, which stops water deliveries from Hetch Hetchy Reservoir to SFPUC customers, who in turn must rely on the local reservoir system. During shutdowns, the SFPUC must inspect many elements of the Hetch Hetchy Water System, including other powerhouses and the Mountain Tunnel. The shutdowns occur every two to five years. The dissipater is normally inspected concurrently with an inspection on Mountain Tunnel, which was last inspected in 2008.

The SFPUC has plans to inspect the new energy dissipater in November 2018 when additional rehabilitation work on Mountain Tunnel is scheduled.

RECOMMENDATIONS

- 1. Amend the proposed resolution to correctly state that the emergency work will cost approximately \$590,000, not \$700,000.
- 2. Approve the proposed resolution as amended.



Post Office Box 160 Moccasin, CA 95347 T 209.989.2000 F 209.989.2104 Junction of Hwy 49 and Hwy 120

November 23, 2016

INTER-OFFICE TRANSMITTAL MEMORANDUM

TO:

Teresa Roiz

Executive Secretary II, Deputy General Manager

FROM:

Cheryl Sperry

Administrative Services Manager

SUBJECT:

Amendment: Declaration of Emergency - Repair of HHP

facilities: Failure of the Kirkwood Generator Bypass System

Attached please find the amended above-referenced declaration for signature by Harlan Kelly. Would you facilitate his (or his designee) signature today and then forward to Donna Hood for the Commission. Thank you.

The changes in the Amendment are:

Previous:

Chapter 6, Article IV, Section 6.60(D) of the Administrative Code of the City and County of San Francisco

Change to:

Chapter 21, Section 21.15 (c) of the Administrative Code of the City and County of San Francisco

Edwin M. Lee Mayor

Anson Moran President

Ika Kwon Vice President

Ann Moller Coen Commissioner

Francesca Vietor

Commissioner
Vince Courtney

Commissioner

Harlan L. Kelly, Jr. General Manager





Post Office Box 160 Moccasin, CA 95347 T 209.989,2000 F 209.989,2104 Junction of Hwy 49 and Hwy 120

November 23, 2016

INTER-OFFICE MEMORANDUM

TO:

Anson Moran

President

FROM:

Harlan Kelly

General Manager

SUBJECT:

Declaration of Emergency - Repair of HHP facilities:

Failure of the Kirkwood Generator Bypass System

In accordance with Chapter 21, Section 21.15 (c) of the Administrative Code of the City and County of San Francisco, I am declaring an emergency on behalf of the Public Utilities Commission.

On October 6, 2016 the HHP Kirkwood Generator Bypass System was inspected. The stainless steel dissipater valve has failed. As a result, the unobstructed jet of water is now directed straight down onto the 1/2" steel plate, railroad rail and concrete structure. The bypass was last used for an extended period during the Rim Fire (11 days). During that use, the force of the water flow was able to strip the 1/2" steel plate, rail, concrete and rebar from the floor to a depth of about 30 inches. The Kirkwood Generator Bypass is currently red-tagged.

This Kirkwood Generator Bypass structure is a critical asset and provides for continuous delivery of water to SFPUC water customers in the event Kirkwood Powerhouse is de-energized. Inability to use this asset poses a threat to water deliveries, a basic service affecting the lives, property and welfare of the SFPUC water customers.

HHWP requires assistance from an outside vendor to fabricate a new dissipater valve and other replacement parts. It takes about two months to fabricate the valve and about 6 weeks to replace and install the valve. This work requires a shutdown of the powerhouse and water delivery system. HHWP has a shutdown scheduled for January 2017 at which time this work can be completed.

This request for emergency declaration is for resources to perform the repair work beyond the capabilities of City forces as soon as possible and is not anticipated to exceed \$0.7 million.

I am therefore declaring the existence of an emergency. I trust that this meets with your concurrence and approval.

Edwin M. Lee Mayor

Anson Moran President

Ika Kwon Vice President

Ann Moller Caen Commissioner

Francesca Vietor Commissioner

Vince Courtney Commissioner

Harian L. Kelly, Jr. General Manager



CONCUR AND APPROVE:

Orman

Andy Moran — President, San Francisco Public Utilities Commission

cc: I. Kwon

A. Moller Caen

V. Courtney

S. Ritchie

F. Victor M. Hannaford

C. Sperry

Mocc File

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* O R I G I N A L * * * * * CITY AND COUNTY OF SAN FRANCISCO

PAGE:01

PURCHASE ORDER HETCH HETCHY WATER/POWER

PO NUMBER:

POUH17000047

PO AMOUNT:

\$206,599.13

TO: OAKLAND WORKS INC PO PRINT DATE:

11/30/2016

561 4TH ST OAKLAND

CA 94607-3599

CONTACT: ANDY ANDERSON

PHONE: 510-893-7644

VENDOR ID: 13677

TERMS: NET 30

FOB : DEST

REQ # : RQUH17001238

DELIVERY DATE OR ARO: 02/01/2017

DELIVER TO: JCT STATE HWY 120 & 49, PO BOX 160

AUTHORIZED SIGNATURE:

GREG PUSTELNIK

PHONE: 415-554-6264

ORIGINAL ORDER MUST BE SIGNED TO BE VALID

OICE TO: HETCH HETCHY WATER & POWER

P O BOX 160

MOCCASIN

CA 95347

TERMS:

DO NOT DEVIATE FROM STATED PRICES.

DO NOT SEND MERCHANDISE TO THE INVOICE ADDRESS.

THE "PO" NUMBER ON THIS DOCUMENT MUST APPEAR ON YOUR INVOICES.

THE TERMS AND CONDITIONS LISTED ON THE REVERSE SIDE OF THIS PAGE AND THE TERMS AND CONDITIONS INCORPORATED INTO THE CITY'S BID DOCUMENT ARE HEREBY MADE A PART OF AND APPLICABLE TO THIS PURCHASE ORDER.

THE CASH DISCOUNT PERIOD BEGINS WHEN THE ORDER IS RECEIVED AT THE CORRECT ADDRESS, OR WHEN A CORRECT INVOICE IS RECEIVED AT THE ABOVE ADDRESS, WHICHEVER IS LATER.

* * O R I G I N A L * * * * * CITY AND COUNTY OF SAN FRANCISCO

PAGE:02

PURCHASE ORDER HETCH HETCHY WATER/POWER

ITEM COMMODE NAME/SPECS

PO NUMBER:

POUH17000047

PO AMOUNT:

\$206,599.13

UOM TAX QUANTITY UNIT PRICE

, TOTAL PRICE

1 9670-95

Y 1.00 $\mathbf{E}\mathbf{A}$

58,125.0000 PLUMBING & STEAM GENERATION SYS, EQPT, MATLS & SUPPL

MATERIAL TO FABRICATE DISSIPATION CONE FOR KIRKWOOD POWERHOUSE.

REFERENCE HHWP DRAWING NUMBER KP-9005 PAGES 1-10. DRAWING ISSUED FOR CONSTRUCTION ON 11/28/16.

PRICE REFLECTS OAKLAND MACHINE WORK'S QUOTE DATED 11/15/16.

2 9670-95

EA Y 1.00

130,550.0000

142,952.25

REFERENCE HHWP DRAWING NUMBER KP-9005 PAGES 1-10: DRAWING ISSUED FOR CONSTRUCTION ON 11/28/16.

HHWP REQUESTS SIGNED ACKNOWLEDGEMENT OF DRAWINGS AND PURCHASE ORDER FROM OAKLAND MACHINE WORKS WITHIN 5 DAYS OF PO RECEIPT.

FOB OAKLAND MACHINE WORKS - 516 FOURTH STREET OAKLAND, CA.

TOTAL ITEMS AMOUNT

\$188,675.00

SALES TAX

\$17,924.13

INVOICE AMOUNT

\$206,599.13

* * O R I G I N A L * * * * * CITY AND COUNTY OF SAN FRANCISCO

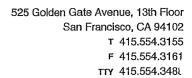
PAGE:03

PURCHASE ORDER HETCH HETCHY WATER/POWER

PO NUMBER: PO AMOUNT: POUH17000047

\$206,599.13

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TO:

Angela Calvillo, Clerk of the Board

FROM:

John Scarpulla, Policy and Government Affairs

DATE:

December 5, 2016

SUBJECT:

Emergency Declaration – Repair SFPUC Hetch Hetchy

Power Kirkwood Generator Bypass System

Attached please find an original and one copy of a proposed resolution approving an emergency declaration of the San Francisco Public Utilities Commission (SFPUC) pursuant to San Francisco Administrative Code Section 21.15(c) to repair dissipater valve of the Hetch Hetchy Power Kirkwood Generator Bypass System.

The following is a list of accompanying documents (2 sets):

1. Board of Supervisors Resolution

2. Letter from the PUC Commission President Ratifying Declaration

3. Form SFEC-126

Please contact John Scarpulla at (415) 934-5782 if you need additional information on these items.

2016 DEC -5 AM 8: 56

Edwin M. Lee Mayor

Francesca Vietor President

> **Anson Moran** Vice President

Ann Moller Caen Commissioner

> Vince Courtney Commissioner

> > Ike Kwon Commissioner

Harfan L. Kelly, Jr. General Manager



FORM SFEC-126: NOTIFICATION OF CONTRACT APPROVAL

(S.F. Campaign and Governmental Conduct Code § 1.126)

City Elective Officer Information (Please print clearly.)	Conduct Gode § 1.120)
	City elective office(s) held: Members, Board of Supervisors
Contractor Information (Please print clearly.) Name of contractor: Oakland Machine Works, Inc	
ivame of contractor. Oakiand watching works, inc	
Please list the names of (1) members of the contractor's board of direction financial officer and chief operating officer; (3) any person who has any subcontractor listed in the bid or contract; and (5) any political conditional pages as necessary.	ownership of 20 percent or more in the contractor; (4)
 Richard R. Anderson, President; John S, Anderson, Vice President Richard R. Anderson CEO, CFO; John S. Anderson COO Richard R. Anderson, John S. Anderson & (5) N/A 	; Susan Baxter, Sect/Treasurer
Contractor address: 561 Fourth Street, Oakland, CA 94607	
Date that contract was approved: 11/30/16	Amount of contract: \$206,000
Describe the nature of the contract that was approved: Emergency Rep Bypass System	airs of the Hetch Hetchy Power Kirkwood Generator
Comments:	
This contract was approved by (check applicable):	
the City elective officer(s) identified on this form	
✓ a board on which the City elective officer(s) serves <u>San Fran</u>	cisco Board of Supervisors Name of Board
☐ the board of a state agency (Health Authority, Housing Authori Board, Parking Authority, Relocation Appeals Board, and Local of the City elective officer(s) identified on this form sits	•
Print Name of Board	
Filer Information (Please print clearly.)	
Name of filer: Angela Calvillo, Clerk of the Board	Contact telephone number: (415.) 554-5184
Address: City Hall, Room 244, 1 Dr. Carlton B. Goodlett Pl., San Francisco, CA	E-mail: 94102 Board.of.Supervisors@sfgov.org
Signature of City Elective Officer (if submitted by City elective officer)	Date Signed
Signature of Board Secretary or Clerk (if submitted by Board Secretary S:\ALL FORMS\Campaign Finance\SFEC	or Clerk) Date Signed 126\ Form SFEC-126 Notification of Contract Approval 9.14.doc