

Curt Russell Topock Site Manager Chromium Remediation Gas Transmission &

Distribution

Topock Compressor Station 145453 National Trails Hwy Needles, CA 92363

Mailing Address P.O. Box 337 Needles, CA 92363

760.326.5582 Fax: 760.326.5542 Email: <u>gcr4@pge.com</u>

June 2, 2009

Doug Snyder Assistant Fire Marshal San Bernardino County Fire Department Hazardous Materials Division Certified Unified Program Agency 620 South "E" Street San Bernardino, CA 92415-0153 Tel: (909) 386-8401

Subject: Submittal of Closure Report for Interim Measures No. 2 PG&E Topock Compressor Station, BLM Groundwater Batch Treatment System Needles, California

Dear Mr. Snyder:

Pacific Gas and Electric Company (PG&E) hereby confirms that the Topock Interim Measures No. 2 (IM-2) Batch Treatment Facility located at the Monitoring Well 20 (MW-20) Bench has been deconstructed and soil confirmation sampling has been performed pursuant to the Batch Treatment Facility Decommissioning Work Plan (Work Plan, May 31, 2007) approved by the Bureau of Land Management (BLM).

The IM-2 Batch Treatment Facility treated groundwater containing chromium (by chemical reduction with ferrous chloride) under a grant of Conditional Authorization issued April 14, 2004 from the San Bernardino County Fire Department, Hazmat Division, the Certified Unified Program Agency (CUPA).

PG&E stopped treating groundwater at the IM-2 Batch Treatment Facility in August 2005 and has fully closed the unit. A summary of the deconstruction of the Batch Treatment Facility and confirmation sampling results are included in the attached Closure Report, which documents that PG&E has satisfied the closure requirements and closure performance standard for this unit.

PG&E requests written confirmation from your agency that it is released from the obligation to provide financial assurance for closure of the IM-2 Batch Treatment Facility, pursuant to Title 22, California Code of Regulations (22 CCR), Section 67450.13(g)(2). PG&E understands that, although Department of Toxic Substances Control (DTSC) holds the original financial assurance documentation, the CUPA is authorized to approve the release from financial assurance since the treatment unit is operating under a Conditional Authorization tier.

Please send the written confirmation of financial assurance requirement termination to PG&E with a copy to DTSC (Mr. Aaron Yue, Project Manager, 5796 Corporate Avenue, Cypress, CA 90630) and BLM (Ms. Cathy Wolff-White, Environmental Protection Specialist, 2610 Sweetwater Avenue, Lake Havasu City, AZ 86406).

A copy of the most recent financial assurance cost closure estimate is provided for your reference; the current obligation is \$106,339, including the original closure cost (\$93,807) plus inflation adjustments

Submittal of Closure Report for Interim Measures No. 2 Page 2

that have been made since the mechanism was established. A copy of the most recent (March 27, 2009) financial assurance Revised "Schedule A" for the Topock Groundwater Extraction Site is also provided for your reference; the current obligation of \$106,339 for IM-2 is included in this Revised "Schedule A."

Thank you for your consideration of this request. If you have any questions regarding this request or the enclosed report, please call me at (760) 326-5582.

Sincerely,

Curt Russell Topock Site Manager

Enclosures:

Closure Report for Batch Treatment Facility Deconstruction and Confirmation Sampling
 Most Recent Financial Assurance Cost Closure Estimate for Batch Treatment Facility

cc: Aaron Yue, Department of Toxic Substances Control Cathy Wolff-White, Department of the Interior BLM

Closure Report for Batch Treatment Facility Deconstruction and Confirmation Sampling

PREPARED FOR:	Curt Russell, Chris Smith (PG&E)
PREPARED BY:	John Porcella
COPIES:	Jim Robbins, Ken Vose, Christina Hong, Serena Lee, John Blasco, Andrew Redmond, (CH2M HILL)
DATE:	May 4, 2009

Pursuant to the Batch Treatment Facility Decommissioning Work Plan (Work Plan) (May 31, 2007) approved by the Bureau of Land Management, the Batch Treatment Facility located at the MW-20 bench has been deconstructed and soil confirmation sampling has been performed. A summary of the deconstruction of the Batch Treatment Facility and confirmation sampling results are described below.

Background

The Batch Treatment Facility treated chromium containing groundwater (by chemical reduction with ferrous chloride) under a grant of Conditional Authorization on April 14, 2004 from the San Bernardino County Fire Department, Hazmat Division (Certified Unified Program Agency). The treatment system consisted of treatment and storage tanks, pumps, clarifier, piping, chemical containers, and operator facilities. The process piping and pumps, clarifier, treatment and storage tanks were in contact with the hazardous waste concentrations in the groundwater. During operation, the batch treatment system was inspected daily for releases. The chromium reduction process used ferrous chloride as the active agent and this forms a bright rust-color in the liquid stream and resulting sludge making visual inspection effective in identifying locations of a release or equipment that were in contact with the waste. This closure report is intended to satisfy the closure requirements under the conditional authorization. The closure standards are as follows:

- Upon terminating operation of a treatment process or unit, remove or decontaminate all waste residues, containment system components, soils, and structures or equipment contaminated with hazardous waste.
- Close unit in manner that minimizes need for further maintenance, and controls, minimizes or eliminates post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated rainfall or run-off, or waste decomposition products.

In August and September 2005, the batch treatment system was put into standby mode ("laid-up"). As part of laying up the system, the equipment in contact with hazardous waste was flushed with water. This water was stored in containers and treated in a hazardous waste treatment facility. Some piping was disposed of as hazardous waste in a licensed

disposal facility. These activities were described in a September 6, 2005 letter PG&E sent to the Bureau of Land Management (PG&E, 2005).

Deconstruction and Waste Management

The deconstruction activities occurred from January 2008 to January 2009. Below is a summary of these activities.

- 1. Removal of white polyethylene tank.
- 2. Demolition and removal of temporary structures such as wood platforms, chemical tote stand.
- 3. Removal of piping, conduit, pumps, and ancillary equipment used at IM No. 2 facility.
- 4. Removal of six storage tanks and secondary containment berm and liner.

The clarifier associated with the batch treatment facility currently remains on site although it has been sold and will be removed in the near future. All piping and process and storage equipment that were in contact with the hazardous waste were decontaminated by pressure washing with water. Approximately 4,000 gallons of water was used for cleaning and stored in containers and hauled for treatment at the Interim Measure No. 3 (IM3) treatment plant. The equipment (e.g., piping and pumps) that was in contact with the hazardous waste or had visual evidence of such contact was disposed of as hazardous waste at the Kettleman Hills hazardous waste disposal facility (approximately 3.75 tons of material). The remaining 7.97 tons of solid waste material (e.g., containment liners, liner berms, non-hazardous process equipment) that was not in contact with the hazardous groundwater or sludge was stored in dumpsters and disposed of at Mesa Disposal in Mohave County, Arizona. The treatment and storage tanks were leased from DenBeste Transportation; after cleaning DenBeste removed them from the site.

Visual inspection of the sand base material that was added to the soil surface below the containment liner during initial construction of the facility showed no visible signs of contamination. An earlier spill at the Batch Treatment Facility in 2005 was entirely excavated (CH2M HILL, 2005). Therefore the sand base material is suitable for reuse.

Confirmation Sampling and Analytical Results

Following the deconstruction and visual inspection, five confirmation soil samples were collected from the top 6 inches of the ground surface that was within the footprint of the former Batch Treatment Facility (see Figure 1). The purpose for this confirmation sampling was to verify that no releases occurred from the facility. The threshold concentration for evidence of a release was the previously calculated background chromium concentration of 31 milligrams per kilogram for total chromium (Cr(T)) calculated from samples collected from the MW-20 bench area in March 2005 (CH2M HILL, 2005 – copy attached).

The samples were collected on February 12, 2009 and sent to a California certified laboratory, Advanced Technology Laboratories (Las Vegas, Nevada), for total chromium analysis by EPA Method 6010B. Table 1 lists the analytical results. These results are typical

of normal background concentrations at the site and are not indicative of any impacts from the operations at the site. A copy of the analytical reports is attached.

TABLE 1 Summary of Chromiun

Summary of Chromium Analytical Results

Batch Treatment Facility Decommissioning

Soil Sample Location/ID	Results (mg/Kg) ^a
NW Corner	18
NE Corner	15
Middle	15
SW Corner	18
SE Corner	10

a. mg/kg – milligrams per kilogram

PG&E is planning to reconfigure and upgrade the brine storage facilities at MW-20 Bench. These facilities will continue being used for supporting IM3 treatment plant operations. In the future, PG&E will prepare plans to close the site once all remediation activities are completed.

References

CH2M HILL. 2005a. Spill Event and Cleanup Report, April 10, 2005 Spill Event at IM-2 Batch Treatment Plant, Pacific Gas and Electric Company Topock Compressor Station, Needles, California. August 5.

_____. 2007. Batch Treatment Facility Decommissioning Work Plan, Pacific Gas and Electric Company Topock Compressor Station, Needles, California. May 31.

Pacific Gas and Electric Company. 2005. *Discontinuation of Interim Measure Batch Treatment Operations, Pacific Gas and Electric Company Topock Compressor Station, Needles, California.* September 6.

Attachments

- Figure 1 Location of Soil Samples
- Analytical Report Advanced Technology Laboratory Work Order N002549
- Spill Event and Cleanup Report, April 10, 2005 Spill Event at IM-2 Batch Treatment Plant, Pacific Gas and Electric Company Topock Compressor Station, Needles, California.



BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2009\IM2\SOIL_SAMPLE_LOCSIM2.MXD 3/18/2009 10:10:43

- CH2MHILL

CH2M Hill

Project: PG&E Topock IM2 Site Closure

ATL Work Order: N002549

ANALYTICAL and QC RESULTS SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL



Table of Contents

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EPA 6010B	21-47
PMOIST	48-50



February 25, 2009

Shawn P. Duffy CH2M HILL 155 Grand Avenue, Suite 1000 Oakland, CA 94612

TEL: (530) 229-3303 FAX: (530) 339-3303 CA-ELAP No.: 2676 NV Cert. No.: NV-009222007A

Workorder No.: N002549

RE: Pg&E Topock IM2 Site Closure

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on February 12, 2009 by Advanced Technology Laboratories - Las Vegas . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



Advanced Technology Laboratories

CLIENT:CH2M HILLProject:Pg&E Topock IM2 Site ClosureLab Order:N002549

CASE NARRATIVE

AMPLE RECEIVING/GENERAL COMMENTS

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.



CLIENT: Project: Lab Order: Contract No:	CH2M HILL Pg&E Topock IM2 Site N002549	Closure	Work Order Sample Summary							
Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported					
N002549-001A	NW Corner	Soil	2/12/2009 10:10:00 AM	2/12/2009	2/25/2009					
N002549-002A	NE Corner	Soil	2/12/2009 10:05:00 AM	2/12/2009	2/25/2009					
N002549-003A	SW Corner	Soil	2/12/2009 9:55:00 AM	2/12/2009	2/25/2009					
N002549-004A	SE Corner	Soil	2/12/2009 9:45:00 AM	2/12/2009	2/25/2009					
N002549-005A	Middle	Soil	2/12/2009 9:30:00 AM	2/12/2009	2/25/2009					

Page 1 of 1

Date: 25-Feb-09



Advanced Technology Laboratories

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Advanced Technology 3151 W. Post Rd. Las Vegas, NV 89118 720-307-2659	dvanced Technology Laboratories 151 W. Post Rd. as Vegas, NV 89118 20-307-2659				CHAIN OF CUSTODY RECORD [IM2 Site Closure]							COC N TURNA DATE	Normann ROUNI 02/12	D TIME	10 D PAGE	ay TAT)F 1	
COMPANY PROJECT NAME PG&E T PHONE 530-2 ADDRESS 155 G Oakla P.O. NUMBER 38265	E2 Topock IM2 Site Closu 229-3303 Grand Ave Ste 1000 Ind, CA 94612 3. FP. 04. FW	re FAX <u>530</u>	9-339-3303		lotal Cr					/					R OF CONTAINERS	7	COMME	NTS
SAMPLE LD.	DATE	TIME	DESCRIPTION	60105		/ /									BIND			
NW Corner	02/12/09	1010	Soil	x	Í									1				
NE Corner	02/12/09	1005		X								 	 	1				
SW Corner	02/12/09	0455		X								 	 	1				
SE Corner	02/12/09	0945		X								 	 	1				
Middle	02/12/09	0930		X								 	 	1				
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	<u>, , , , , , , , , , , , , , , , , , , </u>		<u></u>											5	TOTAL	NUMBER	OF CONTA	INERS

Λ				
CH	IAIN OF CUSTODY SI	GNATURE RECORD		SAMPLE CONDITIONS
Signature (Relinquished)	Printed Barry Collen	Company/ Agency CH2M Hill	Date/ 2-12-09 Time 1241	RECEIVED COOL 🛛 WARM 🗌 <u>39°C 👎</u>
Signature (Received)	Printed MARLEN CAVET	Agency	Date/ 2/12/07 Time 0-1249	CUSTODY SEALED YES 🗖 NO 🗹
Signature (Relinguished) / MMM/////	Printed Name MARLON CAPEN	Agency AT	Date/ 2/12/09 @ 3: 2071 Time	SPECIAL REQUIREMENTS:
Signature (Received)	Printed Name	Company/ Att Magency	Date/ 2/12/04 @ 3:21 PA	
Signature/ (Relinquished)	Printed Name	Company/ Agency	Date/ Time	
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	

Please review the checklist below. Any NO and/or NA signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (562) 989-4045.

Sample Receipt Checklist											
Client Name: CH2M HILL-OAKLAND		Date Time Rec	eived: 2/12	2009 3:37:34 PM							
Work Order Number: N002549		Received by:	MBC								
Cooler Temp (Deg C): 3.9											
Checklist completed by: 2/17 Signature Dat	2.] <i>0</i> 1 e	Reviewed by:	M Initials	71315 Date							
Carrier name	e: <u>ATL</u>										
1. Shipping container/cooler in good condition?	Yes 🖌	No	Not Present	[]							
2. Custody seals intact on shippping container/cooler?	Yes	No	Not Present								
3. Custody seals intact on sample bottles?	Yes	No	Not Present								
4. Chain of custody present?	Yes 🔽	No									
5. Sampler's name present in COC?	Yes 🗸	No									
6. Chain of custody signed when relinquished and received?	Yes 🗸	No									
7. Chain of custody agrees with sample labels?	Yes 🔽	No 🗔									
8. Samples in proper container/bottle?	Yes 🔽	Νο									
9. Sample containers intact?	Yes 🗸	No 🛄									
10. Sufficient sample volume for indicated test?	Yes 🔽	No									
11. All samples received within holding time?	Yes 🔽	No									
12. Container/Temp Blank temperature in compliance?	Yes 🔽	No									
13. Water - VOA vials have zero headspace?	Yes	No	NA								
14. Water - pH acceptable upon receipt? pH > 12 for (CN,S); pH<2 for Metals	Yes 🗍	No 🗔	NA								

Comments:

WORK ORDER Summary

Client ID: CH2M HILL-OAKLAND

14-1 60-07	eb-09	-Fe	$^{\prime}2$	1	
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Work Order N002549

Project: Pg&E Topock IM2 Site Closure **Comments:**

QC Level: Level IV

Date Received: 2/12/2009 3:37:34 PM

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	HId MS SEL Sub Storage
N002549-001A	NW Corner	2/12/2009 10:10:00 AM	2/18/2009	Soil	EPA 3050B	SOPREP TOTAL METALS	
			2/18/2009		EPA 6010B	ICP METALS	□ □ ♥ □ ws
·			2/18/2009		D2216	PERCENT MOISTURE	ws
N002549-002A	NE Corner	2/12/2009 10:05:00 AM	2/18/2009		EPA 3050B	SOPREP TOTAL METALS	
			2/18/2009		EPA 6010B	ICP METALS	□ □ ∨ □ ₩S
			2/18/2009		D2216	PERCENT MOISTURE	
N002549-003A	SW Corner	2/12/2009 9:55:00 AM	2/18/2009		EPA 3050B	SOPREP TOTAL METALS	ws
			2/18/2009		EPA 6010B	ICP METALS	□ [] ∨ [] ₩S
			2/18/2009		D2216	PERCENT MOISTURE	
N002549-004A	SECorner	2/12/2009 9:45:00 AM	2/18/2009		EPA 3050B	SOPREP TOTAL METALS	ws
			2/18/2009		EPA 6010B	ICP METALS	
			2/18/2009		D2216	PERCENT MOISTURE	
N002549-005A	Middle	2/12/2009 9:30:00 AM	2/18/2009		EPA 3050B	SOPREP TOTAL METALS	ws
			2/18/2009		EPA 6010B	ICP METALS	□ □ ₩S
			2/18/2009		D2216	PERCENT MOISTURE	WS
N002549-006A	Folder		2/18/2009		Folder	Folder	

CLIENT	Г: С	H2M HILL				Clier	nt Sample ID:	NW Corn	er	
Lab Oro	der: N	1002549				llection Date:	2/12/2009	0 10:10:0	00 AM	
Project:	: F	g&E Topock	M2 Site Closu	ıre			Matrix:	SOIL		
Lab ID:	1	1002549-001					anananan ang kanananan sa saka na saka na saka na saka sa sa saka sa			
Analyse	:5		Res	sult	MDL	PQL	Qual Units		DF	Date Analyzed
ICP ME	TALS		EPA 3050B				EPA 6010B			
RunID:	ICP1_0902	19D	QC Batch:	330)49		Pre	pDate:	2/19/20	109 Analyst: JPA
Chron	nium			18	0.15	2.1	1 mg.	/Kg-dry	2	2/19/2009 05:26 F

ANALYTICAL RESULTS

Print Date: 25-Feb-09

Qualifiers:

- Analyte detected in the associated Method Blank В
 - Holding times for preparation or analysis exceeded
- Н
- Spike/Surrogate outside of limits due to matrix interference S
- DO Surrogate Diluted Out

- Value above quantitation range Е
- ND Not Detected at the Reporting Limit
 - Results are wet unless otherwise specified



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								,			
CLIEN	T: CH	2M HILL	,,.,.,.,.,			Cli	ent Sar	nple ID:	NE Corn	er	
Lab Ore	der: N0	02549				C	ollecti	on Date:	2/12/200	9 10:05	:00 AM
Project:	: Pg	&E Topock IM2 Si	te Closu	re		2		Matrix:	SOIL		
Lab ID:	: N0	02549-002						Augusta		·	
Analyse	es		Res	ult	MDL	PQL	Qual	Units		DF	Date Analyzed
ICP ME	ETALS										
		EPA	3050B				EPA	6010B			
RunID:	ICP1_090219	D Q	C Batch:	33	049			Pre	oDate:	2/19/2	2009 Analyst: JPA
Chron	mium			15	0.078		1.1	mg/	Kg-dry	1	2/19/2009 06:47 PN

ANALYTICAL RESULTS

Print Date: 25-Feb-09

Qualifiers:

В Analyte detected in the associated Method Blank

- Holding times for preparation or analysis exceeded Н
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

- Value above quantitation range Е
- ND Not Detected at the Reporting Limit
 - Results are wet unless otherwise specified



Advance	ed Technology I	aboratories - L	as V	⁷ egas	S Print Date: 25-Feb-09						
CLIENT:	CH2M HIL	L			Client Sa	nple ID: SW Cor	ner	ann y an onashinnan a na an an an an Ar annana an an ar Ar annana an an an Ar			
Lab Orde	r: N002549				Collecti	on Date: 2/12/20	09 9:55:0	00 AM			
Project:	Pg&E Topc	ock IM2 Site Closur	e			Matrix: SOIL					
Lab ID:	N002549-0	03				1 yearynaansaa aanaa aa aanaa aa aa aa aa aa aa aa a					
Analyses		Resu	ilt N	MDL	PQL Qual	Units	DF	Date Analyzed			
ICP MET	ALS				ED/	6010B					
		EPA 30506			L1" J						
RunID; I	CP1_090219D	QC Batch:	3304	9		PrepDate:	2/19/2	009 Analyst: JPA			
Chromiu	Jm		18	0.076	1.0	mg/Kg-dry	1	2/19/2009 07:03 PM			

Qualifiers: В

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

Spike/Surrogate outside of limits due to matrix interference S

DO Surrogate Diluted Out



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Value above quantitation range

ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

Е

ANALYTICAL RESULTS

1 100 10000				······		
CLIENT	CH2M F	ILL		Client Sam	ple ID: SE Corr	ner
Lab Ord	ler: N002549)		Collectio	n Date: 2/12/20	09 9:45:00 AM
Project:	Pg&E To	ppock IM2 Site Closure		ŗ	Matrix: SOIL	
Lab ID:	N002549	0-004				Annahole, 19,94,9111 1111111111 1111 11111111111
Analyses	3	Result	MDL	PQL Qual	Units	DF Date Analyzed
ICP ME	TALS	EPA 3050B		EPA	6010B	
RunID:	ICP1_090219D	QC Batch: 3	3049		PrepDate:	2/19/2009 Analyst: JPA
Chrom	ium	10	0.078	1.1	mg/Kg-dry	1 2/19/2009 07:19 PM

ANALYTICAL RESULTS

Print Date: 25-Feb-09

Qualifiers:

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded Н

Spike/Surrogate outside of limits due to matrix interference S

DO Surrogate Diluted Out



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E Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified

Auvan	ccu reenn	JIOGJ Encornicol					L	The Date.		
CLIENT	r: CH	2M HILL				Client S	ample ID:	Middle		
Lab Ord	der: NO	02549				Collec	tion Date:	2/12/2009	9 9:30:0	00 AM
Project:	Pg	&E Topock IM2 Site	Closur	e			Matrix:	SOIL		
Lab ID:	. N0	02549-005				·				
Analyse	s		Resi	ılt	MDL	PQL Qua	ıl Units		DF	Date Analyzed
ICP ME	TALS						A 6040D			
		EPA 30)50B			E	-A 6010B			
RunID:	ICP1_090219	D QC	Batch:	330)49		Pre	pDate:	2/19/2	2009 Analyst: JPA
Chron	nium			15	0.078	1.1	mg	/Kg-dry	1	2/19/2009 07:53 PM

ANALYTICAL RESULTS

Print Date: 25-Feb-09

Analyte detected in the associated Method Blank Qualifiers: В Holding times for preparation or analysis exceeded Н Spike/Surrogate outside of limits due to matrix interference S

DO Surrogate Diluted Out



Advanced Technology Laboratories

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Value above quantitation range Е

Results are wet unless otherwise specified

ND Not Detected at the Reporting Limit

Pg&E Topock IM2 Site Closure

CH2M HILL

N002549

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPGE

Sample ID: MB-33049	SampType: MBLK	TestCode: 6010_SPGE Units: mg/Kg Prep Date: 2/19/2009	RunNo: 73751
Client ID: PBS	Batch ID: 33049	TestNo: EPA 6010B EPA 3050B Analysis Date: 2/19/2009	SeqNo: 1109563
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Chromium	ND	1.0	
Sample ID: LCS-33049	SampType: LCS	TestCode: 6010_SPGE Units: mg/Kg Prep Date: 2/19/2009	RunNo: 73751
Client ID: LCSS	Batch ID: 33049	TestNo: EPA 6010B EPA 3050B Analysis Date: 2/19/2009	SeqNo: 1109564
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Chromium	50.939	1.0 50.00 0 102 85 115	
Sample ID: LCSD-33049 Client ID: LCSS02	SampType: LCSD Batch ID: 33049	TestCode: 6010_SPGE Units: mg/Kg Prep Date: 2/19/2009 TestNo: EPA 6010B EPA 3050B Analysis Date: 2/19/2009	RunNo: 73751 SeqNo: 1109565
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Chromium	52.557	1.0 50.00 0 105 85 115 50.94	3.13 20
Sample ID: N002549-001AMS	SampType: MS Batch ID: 33049	TestCode:6010_SPGEUnits:mg/Kg-dryPrep Date:2/19/2009TestNo:EPA 6010BEPA 3050BAnalysis Date:2/19/2009	RunNo: 73751 SeqNo: 1109570
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Chromium	275.166	5.3 265.3 17.53 97.1 75 125	
Sample ID: N002549-001AMSD Client ID: ZZZZZZ	SampType: MSD Batch ID: 33049	TestCode: 6010_SPGE Units: mg/Kg-dry Prep Date: 2/19/2009 TestNo: EPA 6010B EPA 3050B Analysis Date: 2/19/2009	RunNo: 73751 SeqNo: 1109571
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Chromium	296.962	5.3 265.0 17.53 105 75 125 275.2	7.62 20

CLIENT:

Project:

Work Order:

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit

DO Surrogate Diluted Out

- E Value above quantitation range
- R RPD outside accepted recovery limits Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Auvanceu	Auvanceu Technology Daboratories - Eas vega			, Frint Date: 2 <i>3</i> - <i>Fe0-09</i>				
CLIENT:	CH2M HILL	······································		Client Sam	ple ID: NW Co	rner		
Lab Order:	N002549	N002549			Collection Date: 2/12/2009 10:10:00 AM			
Project:	Pg&E Topock I	M2 Site Closure		Ν	Aatrix: SOIL			
Lab ID:	N002549-001					·	· ·	
Analyses		Result	MDL F	QL Qual	Units	DF	Date Analyzed	
PERCENT	MOISTURE			D2	216			
RunID: W	ETCHEM_090216B	QC Batch: R7	3716		PrepDate:		Analyst: JPA	
Percent M	loisture	5.844	0.1000	0.1000	wt%	1	2/16/2009	

ANALYTICAL RESULTS Print Date: 25-Feb-09

Qualifiers:	В	Analyte detected in the associated Method Blank
	Н	Holding times for preparation or analysis exceeded
	ç	Spike/Surrogate outside of limits due to matrix interference

DO Surrogate Diluted Out



Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2695

- Ε Value above quantitation range
- ND Not Detected at the Reporting Limit Results are wet unless otherwise specified
- S Spike/Surrogate outside of limits due to matrix interference

Advanced T	Advanced Technology Laboratories - Las Vega				Print Date: 25-Feb-09				
CLIENT: Lab Order: Project: Lab ID:	CH2M HILL N002549 Pg&E Topock N002549-002	IM2 Site Closure		Client Sam Collection N	ple ID: NE Cor 1 Date: 2/12/20 1atrix: SOIL	ner 09 10:05	:00 AM		
Analyses		Result	MDL PO	QL Qual 1	Units	DF	Date Analyzed		
PERCENT M	DISTURE			D2	216				
RunID: WET	CHEM_090216B sture	QC Batch: R7 7.273	3716 0.1000	0.1000	PrepDate: wt%	1	Analyst: JPA 2/16/2009		

ANALYTICAL RESULTS Print Date: 25-Feb-09

Qualifiers:

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded Н Spike/Surrogate outside of limits due to matrix interference

S

DO Surrogate Diluted Out

Value above quantitation range Ε

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified



Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-26916

Advance	Advanced Technology Laboratories - Las Vegas				Print Date: 25-Feb-09				
CLIENT:	CH2M HILL	······································		Client Sa	mple ID: SW Co	rner			
Lab Order	: N002549			Collecti	on Date: 2/12/20	09 9:55:	00 AM		
Project:	Pg&E Topock	IM2 Site Closure			Matrix: SOIL				
Lab ID:	N002549-003								
Analyses		Result	MDL	PQL Qual	Units	DF	Date Analyzed		
PERCENT	MOISTURE			E	02216				
RuniD: V	ETCHEM_090216B	QC Batch: R7	3716		PrepDate:		Analyst: JPA		
Percent N	Moisture	5.084	0.1000	0.1000	wt%	1	2/16/2009		

Qualifiers:

Analyte detected in the associated Method Blank В

- Н Holding times for preparation or analysis exceeded
- Spike/Surrogate outside of limits due to matrix interference s
- DO Surrogate Diluted Out

Value above quantitation range E

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified



Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-26917

ANALYTICAL RESULTS

ANALYTICAL RESULTS

Advanced Technology Laboratories - Las Vegas Print Date: 25-Feb-09

CLIENT: Lab Orde Project:	: CH2M HILL er: N002549 Pg&E Topock II	M2 Site Closure		Client Samp Collection M	ole ID: SE Cor Date: 2/12/20 Iatrix: SOIL	ner 109 9:45:(00 AM
Lab ID:	N002549-004				· · · · ·		· · · · · · · · · · · · · · · · · · ·
Analyses		Result	MDL P	QL Qual U	J nits	DF	Date Analyzed
PERCEN	NT MOISTURE			D2	216		
RunID:	WETCHEM_090216B	QC Batch: R7	3716		PrepDate:		Analyst: JPA
Percen	t Moisture	6.447	0.1000	0.1000	wt%	1	2/16/2009

Qualifiers:

B Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

Н Spike/Surrogate outside of limits due to matrix interference S

DO Surrogate Diluted Out

Value above quantitation range Е

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified



Advanced Technology Laboratories

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2698

Advanced	dvanced Technology Laboratories - Las Veg				IS Print Date: 25-Feb-09				
CLIENT: Lab Order: Project: Lab ID:	CH2M HILL N002549 Pg&E Topock N002549-005	IM2 Site Closure		Client Sam Collectio	nple ID: Middle n Date: 2/12/20 Matrix: SOIL	09 9:30:0	00 AM		
Analyses		Result	MDL I	QL Qual	Units	DF	Date Analyzed		
PERCENT	MOISTURE			D	2216				
RunID: WE	ETCHEM_090216B	QC Batch: R7 6.947	3716 0.1000	0.1000	PrepDate: wt%	1	Analyst: JPA 2/16/2009		

B Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

- Н Spike/Surrogate outside of limits due to matrix interference S
- DO Surrogate Diluted Out

Έ Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified

ANALYTICAL RESULTS



Advanced Technology Laboratories

Qualifiers:

3151 W. Post Road Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-26919

Date: 25-Feb-09

DEDODT

CLIENT: Work Order: Project:	CH2M HILL N002549 Pg&E Topock II	M2 Site Closure			ANALYTICAL QC SU TestCode: P	MOIST
Sample ID: MB-737 Client ID: PBS	16	SampType: MBLK Batch ID: R73716	TestCode: PMOIST TestNo: D2216	Units: wt%	Prep Date: Analysis Date: 2/16/2009 Low imit HighLimit RPD Ref Val	RunNo: 73716 SeqNo: 1109059 %RPD RPDLimit Qual
Analyte Percent Moisture		Result ND	0.1000			Duplio: 72746
Sample ID: N00254 Client ID: ZZZZZ	19-001ADUP Z	SampType: DUP Batch ID: R73716	TestCode: PMOIST TestNo: D2216	Units: wt%	Prep Date: Analysis Date: 2/16/2009	SeqNo: 1109065
Analyte Percent Moisture		Result 5.800	PQL SPK value SPK 0.1000	Ref Val %REC	LowLimit HighLimit RPD Ref Val 5.844	0.756 30

Qualifiers:

Laboratories

Las Vegas, NV 89118

Tel: 702-307-2659

Fax: 702-307-2620

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out

- E Value above quantitation range
- R RPD outside accepted recovery limits Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Pacific Gas and Electric Company **Yvonne J. Meeks** Site Remediation – Portfolio Manager Environmental Affairs 6588 Ontario Road San Luis Obispo, CA 93405

Mailing Address 4325 South Higuera Street San Luis Obispo, CA 93401

805.546.5243 Internal: 644.5243 Fax: 805.546.5232 Email: <u>YJM1@pge.com</u>

August 5, 2005

Norman Shopay Department Toxic Substances Control 700 Heinz Avenue, Suite 200 Berkeley, CA 94710

Cathy Wolff-White U.S. Bureau of Land Management 2610 Sweetwater Avenue Lake Havasu, AZ 86406

Subject: Spill Event and Cleanup Report, April 10, 2005 Spill Event at IM-2 Batch Treatment Plant, Pacific Gas and Electric Company, Topock Compressor Station, Needles, California

Dear Mr. Shopay and Ms. Wolff-White:

This letter transmits the cleanup report for the April 10, 2005 Spill Event at the Interim Measures (IM) No. 2 Batch Treatment Plant. Final cleanup activities were completed on July 18, 2005 after confirmation sample results for total chromium were reported below the spill cleanup goal of 31 mg/kg.

If you have any questions, please do not hesitate to hesitate to call me.

Sincerely,

Matte Jon for Yvonne Meeks

cc: Kate Burger/DTSC Fred Zanoria/DTSC Karen Baker/DTSC Aaron Yue/DTSC

Spill Event and Cleanup Report April 10, 2005 Spill Event at IM-2 Batch Treatment Plant Pacific Gas and Electric Company Topock Compressor Station, Needles, California

Pacific Gas and Electric Company (PG&E) is implementing an Interim Measure (IM) at the Topock Compressor Station near Needles, California. The IM consists of extraction, treatment, and management of treated groundwater to control chromium plume boundaries near the Colorado River. Until mid-July 2005, IM activities involved treatment of groundwater at a batch treatment plant located on the bench above and to the west of the river floodplain (commonly referred to as the MW20 bench), as described in the *Final Interim Measures Work Plan No.* 2 (CH2M HILL, 2004a), *Addenda to Interim Measures Work Plan No.* 2 (CH2M HILL, 2004a), *Addenda to Interim Measures Work Plan No.* 2 (CH2M HILL, 2004a), and Batch Treatment Work Plan (CH2M HILL, 2004c) and under authorization by the California Department of Toxic Substances Control (DTSC) and United States Bureau of Land Management (BLM 2004a, 2004b).

This report describes the spill event that occurred at the IM-2 batch treatment plant on April 10, 2005 and subsequent response activities. The objective of the response activities was cleanup of sludge released from the phase separator container and removal of potentially affected soils to restore the area to pre-existing conditions.

Summary of Spill Event

A spill of hazardous material occurred on Sunday, April 10, 2005, while transferring sludge from the clarifier to a phase separator container at the IM No. 2 batch treatment plant. The transfer operation is not automated, but rather completed by onsite operators by opening valves and starting pump(s) every few days to remove solids that accumulate in the clarifier during of the treatment process. The phase separator is used to contain the solids for offsite transport. The phase separator is similar to a roll-off box, except it is also designed to separate excess liquid(s) that are transferred back into an excess liquid storage tank at the site.

At approximately 8:15 am, the phase separator was overfilled, spilling approximately 1,700 to 1,800 gallons of treated water and potentially hazardous solids onto an underlying drip pad and ground surface in the vicinity of the phase separator. The transfer of sludge from the clarifier to the phase separator was stopped after the operator observed the spillage. The extent of the spill area is shown on the attached facility map (**Figure 1**).

Immediate Response Activities

Initial Notifications

PG&E immediately notified the DTSC and BLM of the spill event. The notification procedures were consistent with the existing environmental compliance plan (ECP) for IM-2. As described below, notifications to other agencies were not required by regulation as the spill was contained within the facility.

Emergency reporting procedures, applicable to management of hazardous waste at the IM-2 site are described in the California Code of Regulations, Title 22, Division 4.5, Chapter 15, Article 4, Section 66265.56. In summary, whenever there is an imminent or actual emergency (e.g., spill of untreated groundwater, a hazardous waste), the emergency coordinator must identify the source, nature, amount and extent of released materials. The coordinator simultaneously assesses the threat to human health and the environment considering direct and indirect effects of the release. If the coordinator determines that the release will affect human health or the environment outside of the facility, he/she is required to notify the Governor's Office of Emergency Services (OES).

In addition, the California Health Safety Code, Chapter 6.95 requires a handler of hazardous materials (including hazardous waste) to immediately report to the administering agency (i.e., Certified Unified Program Agency, the San Bernardino County Fire Department) and the OES any release or threatened release of a hazardous material. An exception to this reporting requirement is found at 19CCR 2703(c), which provides that an immediate report is not required if there is a reasonable belief that the release or threatened release poses no significant present or potential hazard to human health and safety, property or the environment.

In this case, plant operators promptly contained and cleaned up the spill within the facility, including removal of affected soil. Because of these response actions and the containment within the facility, it was determined that there was no threat outside of the facility and no significant threat to the environment, and thus the OES and CUPA notifications were not required.

Immediate Cleanup Activities

The following spill cleanup activities were completed by the onsite operators from April 10 to 12, 2005 after the spill occurred. The volumes presented below are based on field estimates by onsite staff:

- Approximately 300 gallons of liquid were pumped out of the phase separator into the excess liquid storage tank to bring the sludge level down in the phase separator.
- Approximately 1,400 to 1,500 gallons of the spill were contained within the drip pad under the phase separator. This liquid was pumped back into the phase separator and transferred into the excess liquid storage tank.
- Approximately 300 gallons of liquid drained onto the ground. The liquid spread laterally to areas surrounding the phase separator, and a portion flowed into the valve vault excavation. The affected area within the valve vault excavation was limited to the

exposed soil between the concrete floor slab and the excavation sidewall along the east side of the excavation. Visual evidence confirmed that no material collected on the concrete floor slab or other areas of the valve vault excavation. This liquid was pumped back into the phase separator and transferred into the excess liquid storage tank.

The spill cleanup activities described above were completed within one hour after the spill. After the excess liquids were contained, stained and saturated soils were hand excavated and placed onto plastic sheeting onsite. Hand excavation was also completed in the valve vault excavation. The extent of excavation at the surface was determined based on visual observation of saturated soil, and by the reddish characteristic of the material compared to the light tan native soils. The excavated soils were subsequently placed in a roll-off container that was delivered on Monday, April 11, 2005. Additional excavation of affected soils was completed on April 12, 2005, using a Bobcat® skid-steer loader. Approximately 15 to 18 cubic yards (CY) of potentially affected soils were removed and placed into the roll-off container. Up to 8 inches of surface soil were excavated in areas as a conservative measure to collect any residual sludge that may have infiltrated the soil.

The excavation around the containment area was backfilled with sand (approximately 8 inches deep or less) to restore the original grade and provide a safe work area for the operators.

Additional Response Activities and Confirmation Sampling

Following the immediate response activities, PG&E initiated a series of activities to assess the affects of the spill and define and implement additional response activities to confirm that the affected area was restored to pre-existing conditions. Additional response activities included:

- Characterization of clarifier sludge to determine constituents of potential concern for the confirmation sampling program;
- Assessment of background concentrations of constituents of potential concern to be used as cleanup goals for the spill;
- Collection of confirmation soil samples in areas affected by the spill;
- Excavation of additional soil in areas where confirmation samples were collected that indicated constituents of potential concern at concentrations greater than background.

Table 1 is a timeline to summary of the communications, subsequent cleanup, and confirmation sampling activities that were completed to address the spill.

A complete tabulation of confirmation sample results is provided in **Attachment 1**. The results include all data that were collected and used to assess the progress of the cleanup activities. Photographs of the spill area and cleanup activities are provided in **Attachment 2**.

TABLE 1 Summary of Cleanup Activities Interim Measure No. 2 Spill Cleanup

Date	Phase	Cleanup Action	Confirmation Sampling	Results
April 10-12, 2005	Spill event and initial response actions	Approximately 15 to 18 CY of visibly stained soils were excavated and placed in bins. Liquids were pumped back into phase separator container.	None.	
April 20-22, 2005	Submit Confirmation Sampling Work Plan and collect confirmation samples (CH2M HILL 2005b)	Minor hand excavation in areas were stained soils still observed (e.g., around fence posts)	Collected 1 sludge sample and 13 confirmation samples (CS1-CS13)	Cleanup around extraction well TW- 2S complete. Additional soil removal and re-sampling is required for other areas.
April 28-30, 2005	Submit preliminary results of confirmation sampling from April 20-22 (CH2M HILL 2005c).	Excavated approximately 3 CY of soil from Valve Vault No. 1 excavation and approximately 30 CY of soil from phase separator container area	Collected confirmation samples from 11 locations (CS4 through CS8, CS10-CS-12, CS14-CS16)	Valve Vault No. 1 excavation complete. Additional cleanup appears to be needed around the phase separator container area where the spill originated.
May 25–26, 2005	Submit Background Sampling and Depth Profiling Sampling Plan (CH2M HILL 2005d).	No additional cleanup during this time. Background sampling intended to better define the amount of addition soil removal required around phase separator container area.	Collected background samples from 10 locations across MW-20 bench. Collect depth profile samples from two locations (CS6 and CS8) to assess potential excavation.	
June 23, 2005	Submit Background Sampling and Depth Profile Results and Plan for Additional Response Activities (CH2M HILL 2005e).	None.	None.	DTSC establishes a cleanup goal of 31 mg/kg for total chromium at the site.
July 5-13, 2005	Perform final cleanup and confirmation sampling	Excavated approximately 70 CY of soil on July 5. Overexcavated approximately 10 CY in CS8/CS6 area on July 7. Excavated additional 3 CY of soil on July 13 in CS8 area.	Collected confirmation samples from 6 locations (CS6, CS7, CS8, CS10, CS15, and CS16) on July 5. Re-sampled CS8 and CS16 on July 8. Re-sampled CS8 on July 13.	Continued excavation and confirmation sampling until confirmation sample results less than 31 mg/kg for total chromium were achieved.
July 18, 2005	Cleanup is complete.	Backfilled excavation.	None.	

Sludge Characteristics

A sample of the sludge was collected from the phase separator container on April 20, 2005. The sludge sample was analyzed for Title 22 metals, hexavalent chromium, and total iron. The sample was also analyzed for toxicity characteristic leaching procedure (TCLP) for Resource Conservation and Recovery Act (RCRA) metals and soluble threshold limit concentration (STLC) Title 22 metals.

Table 2 is a summary of the sludge analytical results. The sludge had detectable concentrations of metals, several of which had total concentrations above available site background data as presented in the draft RCRA Facility Investigation (RFI) (CH2M HILL 2005a). Constituents of potential concern for the confirmation sampling program were determined to be metals found in the sludge sample at concentrations greater than site background data.

Assessment of Background Concentrations and Cleanup Goals

Confirmation sample data from April 2005 (initial two confirmation sampling events) were compared to the sludge characterization data as well as to a set of soil data collected from a set of 12 samples collected in 2002 as part of a pump test completed on the MW-20 bench and site background data from the draft RFI report (E&E 2002, CH2M HIL, 2005a). As described in **Table 1**, these comparisons were sufficient to make determinations that cleanup around extraction well TW-2S and within the Valve Vault No. 1 excavation were complete, and IM-3 construction work in the area could be completed without further delay. The confirmation sampling data from two events in April 2005 also confirmed that concentrations of all constituents of potential concern, with the exception of total chromium, were similar to or less than concentrations in the sludge characterization data and the site wide background data.

To better define the amount of cleanup remaining, PG&E submitted a work plan to collect background surface soil samples from 10 locations on the MW-20 bench to establish a cleanup goal based on total chromium concentrations (CH2M HILL, 2005d). Background soil samples were collected on May 25, 2005, from 10 locations on the MW-20 bench (**Figure 2**). Sample locations were field located with the DTSC prior to sampling to be outside the footprint of the IM-2 facility and away from IM-3 construction.

Table 3 is a summary of the background soil sample results from the MW-20 bench. The results were submitted to DTSC on June 23, 2005 (CH2M HILL, 2005e). DTSC reviewed the results and established a cleanup goal of 31 milligrams per kilogram (mg/kg) for total chromium, corresponding to the maximum background soil concentration on the MW-20 bench (DTSC, 2005).

Soil Removal and Confirmation Sampling Results

As summarized in **Table 1**, approximately 130 CY of potentially affected soil was excavated because of the spill. **Table 4** is a summary of the final confirmation sample data for total chromium and hexavalent chromium and the depth of the excavation. The results indicate that total chromium levels were less than 31 mg/kg at all confirmation sample locations and

Analyte	Method	Site Background ² (mg/kg)	TTLC Concentration (mg/kg)	TCLP Concentration (mg/L)	STLC Concentration (mg/L)
Antimony	6010B	ND	11.6		3.06
Arsenic	6010B	4.81	10.7	ND (0.125)	0.719
Barium	6010B	425	6.47	0.139	0.473
Beryllium	6010B	3.26	7.97		0.656
Cadmium	6010B	ND	ND (0.277)	ND (0.125)	ND (0.125)
Cobalt	6010B	9.38	ND (0.454)		ND (0.025)
Copper	6010B	19.2	3.88		ND (0.372)
Hexavalent Chromium	7199	NA	230 J		
Chromium (total)	6010B	32.4	3,810	0.174	277
Lead	6010B	8.4	2.33	ND (0.05	ND (0.447)
Mercury	6010B	ND	ND (0.04)	ND (0.001)	ND (0.001)
Molybdenum	6010B	0.542	ND (0.908)		ND (1)
Nickel	6010B	21.6	ND (0.908)		0.081
Selenium	6010B	0.927	50.4	ND (0.125)	5.99
Silver	6010B	NA	ND (0.454)	ND (0.025)	ND (0.025)
Thallium	6010B	ND	ND (1.36)		0.119
Vanadium	6010B	38.7	8.53		0.47
Zinc	6010B	55.2	24.4		ND (1.45)
Iron	6010B	23,900	27,600		2,110

TABLE 2 Sludge Analytical Data¹ Interim Measure No. 2 Spill Cleanup

ft bgs: feet below ground surface mg/kg: milligrams per kilogram ND: Not detected at the reporting limit ¹Sludge sample was collected from phase separator container on April 20, 2005 ²Site background concentration from 0 to 10 ft below ground surface from Draft RI report, Table 10-1 (CH2M HILL, 2005a)

Sample Location	Sample Date	Depth Interval (ft bgs)	Total Chromium (mg/kg)		
BG1	5/25/2005	0 to 1	13.9		
BG2	5/25/2005	0 to 1	31.0		
BG3	5/25/2005	0 to 1	15.8		
BG4	5/25/2005	0 to 1	25.0		
BG5	5/25/2005	0 to 1	21.1		
BG6	5/25/2005	0 to 1	9.69		
BG7	5/25/2005	0 to 1	13.8		
BG8	5/25/2005	0 to 1	12.4		
BG9	5/25/2005	0 to 1	15.0		
BG10	5/25/2005	0 to 1	11.2		

TABLE 3 Background Soil Analytical Results from MW-20 Bench – May 2005 Interim Measure No. 2 Spill Cleanup

ft bgs: feet below ground surface mg/kg: milligrams per kilogram

TABLE 4 Final Confirmation Sample Results Interim Measure No. 2 Spill Cleanup

Sample Location	Sample Date	Depth Interval ² (ft bgs)	Total Chromium (mɑ/kɑ)	Hexavalent Chromium (mg/kg)	Comment	
Confirmation Samples Collected from Perimeter of Spill Area						
CS1	4/21/2005	0 to 1	23	ND (0.42)	Near TW-2S	
CS3	4/21/2005	5 to 6	17	ND (0.41)	In valve vault No. 1 excavation	
CS9	4/21/2005	0 to 1	19	ND (0.41)	East side of spill area	
Confirmation Sa	mples Collected	from TW-2S	Area			
CS2	4/21/2005	0 to 1	14	ND (0.42)	Excavation backfilled concurrent with Valve Vault No. 1 excavation.	
Confirmation Sa	mples Collected	from Valve	Vault No. 1 Exca	avation		
CS4	4/28/2005	6 to 7	16	ND (0.43)	Valve Vault No. excavation backfilled	
CS13	4/21/2005	5 to 6	11	ND (0.41)	sample results from April 28, 2005 to	
CS14	4/28/2005	6 to 7	20	ND (0.42)	allow IM3 construction to proceed without delay.	
Confirmation Sa	mple Collected f	rom Phase \$	Separator Conta	iner Area		
CS5	4/30/2005	1 to 2	15 J	ND (0.41)	Excavation was backfilled on July 18,	
CS6	7/5/2005	6 to 7	15 J	See Note 1	IM2-CS8 was less than 31 mg/kg.	
CS7	7/5/2005	6 to 7	19	See Note 1		
CS8	7/13/2005	9 to 10	23 J	See Note 1		
CS10	7/5/2005	3 to 4	21	See Note 1		
CS11	4/30/2005	1 to 2	27	ND (0.42)		
CS12	4/30/2005	1 to 2	22	ND (0.41)		
CS15	7/5/2005	3 to 4	25	See Note 1		
CS16	7/8/2005	6 to 7	27	See Note 1		

bgs: below ground surface

ft: feet

mg/kg: milligrams per kilogram ND not detected at the reporting limit ¹Hexavalant chromium was not detected in previous confirmation samples on 4/30/2005. ²Depth intervals are approximate based on estimates to surrounding ground surface.

hexavalent chromium levels were less than analytical detection limits. A complete listing of confirmation sample data, including confirmation sample data that were not used to determine cleanup, is provided in **Attachment 1**.

The excavated soils were characterized as non-RCRA hazardous waste (California Regulated Hazardous Waste) and were transported to the Chemical Waste Management facility in Kettleman City, California, for disposal. The excavation was backfilled on July 18, 2005, with existing site soil stockpiled from IM-3 construction activities.

Biological and Cultural Resources Support

Biological and cultural resources support was provided during the cleanup effort. The spill occurred over a weekend, and the onsite biologist and cultural resources monitor were notified of the incident when they returned on Monday, April 11, to the project site. The spill area was previously disturbed and contained within a fully enclosed chain-link fence with shade cloth. A single creosote bush was located directly adjacent to the area. No other vegetation occurred in the immediate area.

Prior to removal of the contaminated soil, staff was provided with sensitivity training, a presurvey was performed, and excavation activities were monitored by the onsite biologist and cultural resources monitor. Impacts to biological and cultural resources were not observed as a result of the spill and cleanup activities. Between laboratory analyses to determine the amount of soil to be removed, the final excavation was left open, creating a potential wildlife pitfall trap. To mitigate any potential impacts to wildlife, the northern bank of the excavation was sloped at an approximate 3 (horizontal) to 1 (vertical) ratio to facilitate the escape of any wildlife. Additionally, the biologist spot-checked the excavation for entrapped wildlife during normal work hours. The excavation was inspected outside normal work hours by onsite personnel. No wildlife was observed entrapped in the excavation. After laboratory results confirmed that the remaining soils met the cleanup goal, the excavation was backfilled with existing site soil stockpiled from IM-3 construction.

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Figures





BAO \/ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\MW20_BG_LOCS_V2.MXD MW20_BG_LOCS_V2.PDF 8/1/2005 15:47:17



Confirmation Sample <u>Cr (T)</u> <u>Depth</u> Ft bgs

mg/kg

Figure 3 **Final Total Chromium Concentrations** Pacific Gas and Electric **Topock Compressor Station** Interim Measure No.2

Cleanup of Spill of April 10, 2005

ATTACHMENT 1 Confirmation Sample Results

Attachment 1

Confirmation Sample Analytical Summary PG&E Topock Compressor Station, Needles, California

Location Hexavalent Total Sample Depth, Antimony Arsenic Barium Beryllium Cadmium Cobalt Copper Mercury Molybdenum Nickel Sel Lead Chromium Chromium ID Date ft bgs **Final Confirmation Samples** CS01 4/21/2005 0 - 1 ND (0.42) 23 ------------------------------------CS02 4/21/2005 0 - 1 ND (0.42) 14 ---------------------------------------CS03 17 4/21/2005 5 - 6 ND (0.41) -------------------------------------CS04 4/28/2005 7 - 8 ND (6.4) 6.2 290 ND (0.53) 8.8 ND (0.43) 16 3.9 ND -----------------CS05 ND (6.2) J ND (0.52) 15 J 4/30/2005 1 - 2 6.4 81 ----10 ND (0.41) 7.4 ------------CS06 7/5/2005 6 - 7 15 J ---------------------------------------7/5/2005 6 - 7 FD 20 J ---------------------------------------CS07 7/5/2005 6 - 7 19 ---**CS08** 7/13/2005 9 - 10 -----------------------23 J ------------------CS09 4/21/2005 ND (0.41) 0 - 1 19 -------------------------------------CS10 7/5/2005 21 3 - 4 --CS11 4/30/2005 1 - 2 ND (6.2) 6.1 170 ND (0.52) 8.5 ND (0.42) 27 6.1 -----------------CS12 ND (0.52) 22 4/30/2005 1 - 2 ND (6.2) 6.2 110 ---9.9 ND (0.41) 8.5 -------------CS13 4/21/2005 5 - 6 -------------ND (0.41) 11 ---------------------CS14 4/28/2005 6 - 7 ND (6.3) J 5.9 47 ND (0.52) 11 ND (0.42) 20 3 -------------------**CS15** 25 7/5/2005 3 - 4 --CS16 7/8/2005 6 - 7 27 --Removed During Cleanup CS04 6 - 7 0.47 42 4/21/2005 -------------------------------------CS05 4/21/2005 0 - 1 ND (6.2) J 7.1 140 ND (0.52) ND (0.52) ND (5.2) 9 ND (0.42) 21 ND (0.1) ND (4.2) 8.6 7.7 CS06 ND (6.3) 4/21/2005 6.9 990 ND (0.52) ND (0.52) 5.3 10 ND (0.42) 46 ND (0.1) ND (4.2) 10 0 - 1 8.4 4/30/2005 1 - 2 ND (6.3) 9.9 340 ND (0.53) 11 ND (0.42) 54 4.3 ------------------5/11/2005 39.8 2 - 3 --5/11/2005 3 - 4 41.4 ---5/25/2005 4 - 5 34.1 --5/25/2005 5 - 6 35.2 ---------------------------------------CS07 4/21/2005 0 - 1 ND (0.42) 30 ---31 4/30/2005 1 - 2 ND (6.4) 6.6 270 ND (0.53) ------7.1 ND (0.43) 3.4 ---------CS08 4/21/2005 0 - 1 ND (0.41) 28 ---------------------------4/30/2005 ND (6.3) 270 ND (0.52) 10 ND (0.42) 39 1 - 2 8.4 ------3.9 -----------5/25/2005 2 - 3 26.1 --5/25/2005 3 - 4 -------------------------36.8 -------------7/5/2005 4 - 5 ---37 -------------------------------------7/8/2005 6 - 7 -------34 -------------------------------CS10 4/21/2005 49 0 - 1 ND (0.41) ---------------------------------------4/30/2005 1 - 2 ND (6.2) 6.4 190 ND (0.52) 11 ND (0.41) 32 4.5 ----------------ND CS11 4/21/2005 0 - 1 ND (6.3) 5.5 120 ND (0.52) ND (0.52) ND (5.2) 11 0.45 34 20 ND (0.1) ND (4.2) 10 CS12 4/21/2005 0 - 1 -------ND (0.41) 29 ---ND -----------------------------CS13 4/21/2005 5-6 FD ND (6.3) 4.4 130 ND (0.52) ND (0.52) ND (5.2) 8.4 ND (0.42) 29 16 ND (0.1) ND (4.2) 8.1 CS15 1 - 2 34 4/30/2005 ND (6.2) 6.7 ND (0.52) ND (0.42) 110 6.4 4 ----------------CS16 1 - 2 53 J 4/30/2005 ND (6.3) 8.4 220 ND (0.53) 9.7 ND (0.42) 4.3 ------------------ND (0.53) 4/30/2005 1 - 2 FD ND (6.3) 8.8 220 9.7 ND (0.42) 42 J -------4.4 ---------7/5/2005 44 J 5 - 6 --7/5/2005 5 - 6 FD 30 J -------------------------------------

Notes:

FD field duplicate

ft bgs feet below ground surface

ND parameter not detected at the listed reporting limit

J estimated value

lenium	Silver	Thallium	Vanadium	Zinc	Iron	
0.82					13000	
0.96					12000	
0.67					13000	
0 (0.53)			27	22		
1.3			32 J	23		
0.79					12000	
0.69			31	24		
0.98			31	26		
0.78					7200	
0.54			26	22		
0.78					10000	
0.9	ND (1)	ND (1)	33	26	11000	
1.7	ND (1)	ND (1)	28	79	14000	
1.5			42	30		
1.1					13000	
0.94			27	21		
0.67					12000	
1.1			32	26		
1.1					11000	
0 (0.52)			32	21		
1.2	ND (1)	ND (1)	25	32	12000	
0 (0.52)					12000	
0.97	ND (1)	ND (1)	22	27	9900	
0.99			28	18		
1.6			34	28		
1			32	29		



Site Photographs



Spill area looking east towards TW-2S and phase separator container that was overfilled



Soil removal in Valve Vault No. 1 excavation on April 28, 2005



Spill area looking south towards batch plant with phase separators removed



Soil removal in phase separator container area on April 30, 2005



Soil removal in phase separator container area on July 5, 2005



Final excavation at location CS8 on July 13, 2005

Site Photographs



Backfilled excavation looking west towards TW-2S in new vault - July 2005



Backfilled excavation looking north along former phase separator container area. New IM3 brine tanks in background – July 2005



Backfilled excavation looking west towards TW-2S in new vault and IM3 Brine Tanks July 2005



IM-2 batch plant configuration July 2005

Financial Assurance Documentation

Hazardous waste facility EPA Identification			Closure Cost	Post-Closure	
Number	Facility Name	Address	Estimate	Cost Estimate	Liability Coverage
CAD077966349	Diablo Canyon Power Plant	P.O. Box 56 Avila Beach, CA 93424	\$2,656,083	NA	
CAD981290974	Martin Service Center	731 Schwerin Street Daly City, CA 94014	NA	\$2,021,628	
CAD980886873	Stockton Manufactured Gas Plant	535 South Center St, Stockton, CA 95203	NA	\$511,727	
CAD981450737	Willows Manufactured Gas Plant	310 East Wood Street, Willows, CA 95988	NA	\$189,344	
CAD981450190	Marysville Manufactured Gas Plant	Fourth & A Street, Marysville, CA 95901	NA	\$527,548	
CAR000016105	Sacramento Manufactured Gas Plant	Front & T Street, Sacramento, CA 95814	NA	\$1,593,536	
CAD981370117	Oakland MGP	Gas Load Center at 50 Market St., Oakland, CA	NA	\$559,594	
CAC002619481	Chico MGP	825 West Second St., Chico, CA	NA	\$587,030	
CAR000151118	Topock IM2 Unit Closure	Highway I-40 and Park Moabi Road, Needles, CA 92363	\$106,339	NA	
CAR000151118	Topock IM3 Unit Closure	Highway I-40 and Park Moabi Road, Needles, CA 92363	\$479,881	NA	
All DTSC Sites					Sudden per occurrence: \$1,000,000 Sudden Annual aggregate: \$2,000,000 Nonsudden per occurrence: Nonsudden Annual aggregate: Total aggregate: \$2,000,000
			Total Closure	Total Post Closure	Total Liability Coverage
			\$3,242,303	\$5,990,407	\$2,000,000

Combined Total: \$11,232,710 Date of Revised Estimates: 3/26/2009

Topock Batch Treatment Plant Closure Cost Estimate

4/7/2004

		Cost (\$)
General Contractor		
Pre construction activities		5 364
Mobilize equipment to site		2 050
Clean and remove 60' x 80' liner		5 533
Remove fence, office, storage co	ntainer, generator, misc piping	16,769
Tank and Equipment Cleaning	Contractor	
Labor and equipment		4 760
Dispose of rinsate		5,000
	Subtotal Construction Subcontractor Cost	39,475
Supervision		26,860
Construction Related Costs		3,524
(including car rentals, communica	tion costs, sanitation, and supplies)	
	Subtotal Construction Cost	69,859
	Fee @ 10% of Subs	3,948
	Total Construction Cost	73,807
Engineering		
Work Plan		10,000
Closure Report		10,000
		10,000
·	Total Engineering Cost	20,000
Total Closure Cost		93 807



John Blodgett Sr. Project Analyst Environmental Remediation 3401 Crow Canyon Rd. San Ramon, CA 94583

(925) 415-6306 (phone) (925) 415-6852 (fax) J7B2@pge.com

March 27, 2009

Ms. Julie Mullins Financial Responsibility Section Department of Toxic Substances Control 8800 Cal Center Drive Sacramento, CA 95826-3200

Dear Ms. Mullins:

RE: <u>Revised "Schedule A" for Pacific Gas & Electric Company's (PG&E's) Financial</u> <u>Assurance Trust Agreement.</u>

Attached is a revised "Schedule A" for PG&E's financial assurance trust agreement covering the Topock Groundwater Extraction Site. The revisions reflect the annual inflation adjustment for the amount of financial assurance required

The inflation adjustment is calculated as follows:

2008 Closure Cost Estimate for Topock Groundwater Extraction = \$ 573,601. 2009 Inflation Factor = 1.022 2009 Closure Cost Inflation Adjustment = \$ 573,601 X 1.022 = \$586,220

The total adjusted closure cost estimate for the Topock Groundwater Extraction Site (\$586,220), plus the third party liability (\$2,000,000) bring the required financial assurance amount to \$2,586,220. (This figure is reflected in the revised Schedule A).

A representative from Mellon Bank will be contacting you regarding confirmation of the account balance. If you have any questions, please contact me at (925) 415-6306.

Sincerely, (A)

John Blodgett Sr. Project Analyst Environmental Remediation

cc (w/ attachment):

San Bernardino County Fire Department Hazardous Materials Division 620 South "E" Street San Bernardino, CA 92415-0153 Attn: Susan Williams, REHS III bcc (w/ attachment):

Dave Gilbert Bob Doss Tim Hopkins Rich McCurdy Curt Russell

TRUST AGREEMENT SCHEDULE A

This Agreement demonstrates financial assurance for the following cost estimate(s) for the following facility(ies):

Hazardous Waste Facility Identification Number	Name of Facility	Address of Hazardous Waste Facility	Cost Estimates for which Financial Assurance Being Demonstrated by this Agreement
CAR000151118	Topock Groundwater Extraction Site	Highway I-40 and Park Moabi Road Needles, CA 92363	Closure: <i>\$586,220</i> Postclosure: <i>N/A</i>
			Total: \$586,220

The cost estimates listed here were last adjusted on (date): <u>March 30, 2009</u> Mellon Bank Trust Account # 10510777000

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TRUST AGREEMENT SCHEDULE A (continued)

This Agreement demonstrates financial assurance for liability coverage for the following facility(ies):

Hazardous Waste Facility Identification Number	Name of Facility	Address of Hazardous Waste Facility	Liability Coverage Being Demonstrated by this Agreement
CAR000151118	Topock Groundwater Extraction Site	Highway I-40 and Park Moabi Road Needles, CA 92363	Sudden per occurrence: \$1,000,000 Sudden Annual aggregate: \$2,000,000 Nonsudden per occurrence: Nonsudden Annual aggregate:
			Total aggregate: <i>\$2,000,000</i>

The Liability coverage listed here is effective on (date): <u>March 30, 2009</u>. Mellon Bank Trust Account # 10510777000