



**Pacific Gas and  
Electric  
Company**

**Richard A. McCurdy**  
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September 7, 2006

Mr. Chris Guerre  
California Department of Toxic Substances Control  
5796 Corporate Avenue  
Cypress, CA 90630-4732

**Subject:** December 24, 2005 and April 23, 2006 Lubricating Oil Releases at the Topock  
Compressor Station – Results of Investigation

Dear Mr. Guerre:

This letter documents an investigation following two lubricating oil releases that occurred at PG&E's Topock Compressor Station on December 24, 2005 and April 23, 2006. Both events involved the release of limited amounts of oil to a localized area near the center of the fenced compressor station. This report is being issued to the California Department of Toxic Substances Control (DTSC) for informational purposes.

## **Background**

The Topock facility has ten Cooper-Bessemer model GMW-10 natural gas compressor units, which are designated K-1 through K-10. Each compressor unit is equipped with a large lubricating oil system which pumps oil outside the compressor building to two large oil filter vessels, a strainer, and a cooler. One-quarter-inch copper tubing is connected to the top of the filters and the strainer. The purpose of the tubing is to vent air from these vessels to the engine crankcase. Appendix A contains photographs showing the locations of both the December 24, 2005 and April 23, 2006 releases.

### **December 24, 2005 Release**

On December 24, 2005 at approximately 4:30 p.m., a station operator discovered oil leaking from the quarter-inch copper line connected to one of the K-6 oil filters (see Appendix B for site diagram). Oil was observed on the concrete under the filters and the soil area between the concrete and pavement on the east side of the compressor building. Oil also spread under the K-6 aqua cooling tower and towards the K-7 aqua cooling tower. It is estimated that 50 gallons of oil was released. The operator shut down K-6, which depressurized the oil system and terminated the leak. The operator also spread absorbent on the oil. The quarter-inch copper tubing connected to the K-6 oil filters and strainer was replaced and all of the oil on the concrete under the filters was cleaned up.

Since the oil was contained and the further spread of the oil on the soil was unlikely, clean-up was delayed until a later date. Heavily stained soil was removed from the affected area during the week of December 27, 2005. On February 8, 2006, approximately 10 cubic yards of soil was removed. The spill occurred under the walkways in areas of above-ground piping and footings,

so removal of impacted soil was difficult. The soil was broken up manually and then vacuumed up. The removed soil was disposed of as oily solids at a hazardous waste landfill. Soil samples from the release area were taken on March 8, 2006.

#### **April 23, 2006 Release**

After a two-month-long overhaul of K-6, the unit was placed back into operation on April 23, 2006. At about 5:00 p.m., an operator noticed oil on the ground near K-6. Oil was released from an air vent fitting on top of one of the lube oil filter vessels. The unit was shut down and the leak from the air vent ceased. It is estimated that 50 gallons of oil leaked from the K-6 lube oil system. The area under the K-6 oil filters is covered with a concrete slab. The oil from the leaking fitting ran onto the concrete slab and then onto the soil between K-6 and K-7. An area of soil about 18 inches wide and 25 feet long was covered with oil from the release. No oil was released to the nearby street and no oil was released offsite.

The operator used a large vacuum to capture much of the released oil and he spread dry sweep absorbent material on the liquid that could not be vacuumed up. The leaking vent fitting was repaired on April 24, 2006. A tubing section was replaced and K-6 was returned to service. Soil samples were taken on April 26, 2006. Heavily stained soils were removed during the week of April 30, 2006, and disposed of as oily solids at a hazardous waste landfill.

#### **Follow-up Investigation**

Following the December 24, 2005 leak, four soil samples were taken in the affected areas of the release:

- Sample No. 1 – Composite surface sample obtained on March 8, 2006.
- Sample No. 2 – Sample of visually clean soil obtained on March 8, 2006.
- Sample No. 3 – Sample of a heavily stained soil surface obtained on March 8, 2006.
- Sample No. 4 – Sample of a moderately stained soil surface obtained on March 8, 2006.

After the April 23, 2006 oil release, additional soil samples were taken in the area of the release. Three samples were obtained:

- Sample No. 1 – Sample of the absorbent near the K-6 filter obtained on April 26, 2006.
- Sample No. 2 – Sample of saturated soil near the northeast intersection of the walkway obtained on April 26, 2006.
- Sample No. 3 – Sample of visually clean soil, near the northeast intersection of the walkway, obtained on April 26, 2006.

Drawings showing the December 24, 2005 release soil sample locations and the April 23, 2006 release soil sample locations are attached in Appendix B. Samples were submitted to BC Laboratories in Bakersfield, CA for analysis. All soil samples were analyzed for total petroleum hydrocarbons (TPH) using the California LUFT method. Samples 1 through 4 from the December 24, 2005 release were also analyzed for Title 22 Metals. A summary of the test results is shown in Appendix C and copies of the laboratory test reports are shown in Appendix D.

## Review of Results

TPH in the hydraulic/motor oil range was detected in Samples 1 through 4 from the December 24, 2005 release. TPH concentration found in the visually clean soil sample (Sample 2) was 220 mg/kg. TPH concentrations  $\leq 10,000$  mg/kg are considered non-hazardous waste and can be disposed of at a Class II landfill. Total chromium levels in two of the samples were higher than the U.S. Environmental Protection Agency (EPA) Screening Levels.

TPH as lubricating oil was detected in Samples 1 through 3 from the April 23, 2006 release. TPH was present in the visually clean soil sample (Sample 3) at a concentration of 510 mg/kg. TPH concentration in Sample 2 was 25,000 mg/kg.

## Corrective Measures

Both oil releases are believed to have been caused by failures of flared copper fittings in the K-6 air vent system. This air vent tubing system has been in service for at least 30 years. Therefore, the lube oil vent tubing on K-6 has been replaced with new stainless steel tubing and compression-type fittings, which have higher resistance to fatigue cracking. Additionally, plans are underway to replace the oil filter air vent tubing systems on all of the other compressor units at Topock. Half of the oil filter air vent tubing systems have been retrofitted. All will be retrofitted by the end of October.

Based on this investigation of the affected area, there was no threat to human health or the environment. No further action is being proposed.

Should you have any questions or require any additional information, please contact me at (925) 974-4079.

Sincerely,

A handwritten signature in blue ink that reads "John Edwards for Rich McCurdy". The signature is fluid and cursive.

Richard A. McCurdy  
Senior Consulting Environmental Specialists

## Attachments:

- Appendix A, Photos of Affected Area
- Appendix B, Sample Location Drawings
- Appendix C, Summary of Test Results
- Appendix D, Copy of Laboratory Test Reports

Mr. Chris Guerre  
September 7, 2006  
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cc:

Ms. Karen Baker  
Department of Toxic Substances Control  
Cypress Regional Office  
5796 Corporate Ave.  
Cypress, CA 90630-4732

Mr. Jose Cortez  
California Regional Water Quality Control Board  
Colorado River Basin  
73-720 Fred Waring Drive, Suite 100  
Palm Desert, CA 92260

Mr. Tom Vandenberg  
California Regional Water Quality Control Board  
Colorado River Basin  
73-720 Fred Waring Drive, Suite 100  
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Ms. Julie Eakins  
CH2M HILL  
155 Grand Ave., Suite 1000  
Oakland, CA 94612

Mr. John Earl  
Havasui National Wildlife Refuge  
317 Mesquite Ave.  
Needles, CA 92363

Mr. Drew Page  
Latham and Watkins, LLP  
600 West Broadway, Suite 1800  
San Diego, CA 92101

**APPENDIX A**  
**PHOTOS OF AFFECTED AREA**

## December 24, 2005 Release

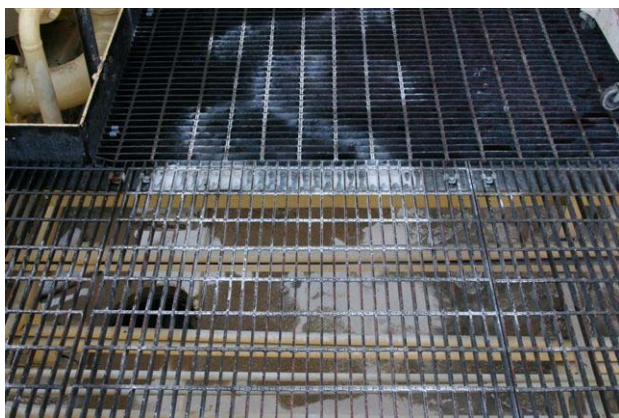
Photos taken March 8, 2006





**April 23, 2006 Release**

Photos taken April 26, 2006



**April 23, 2006 Release (continued)**

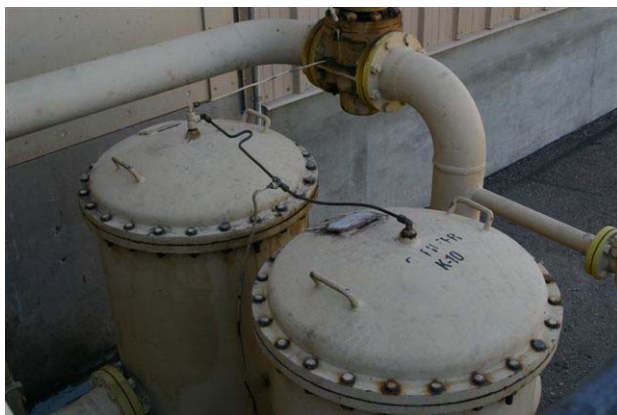
Photos taken June 19, 2006



Old fitting similar to those on K-6 and K-7.

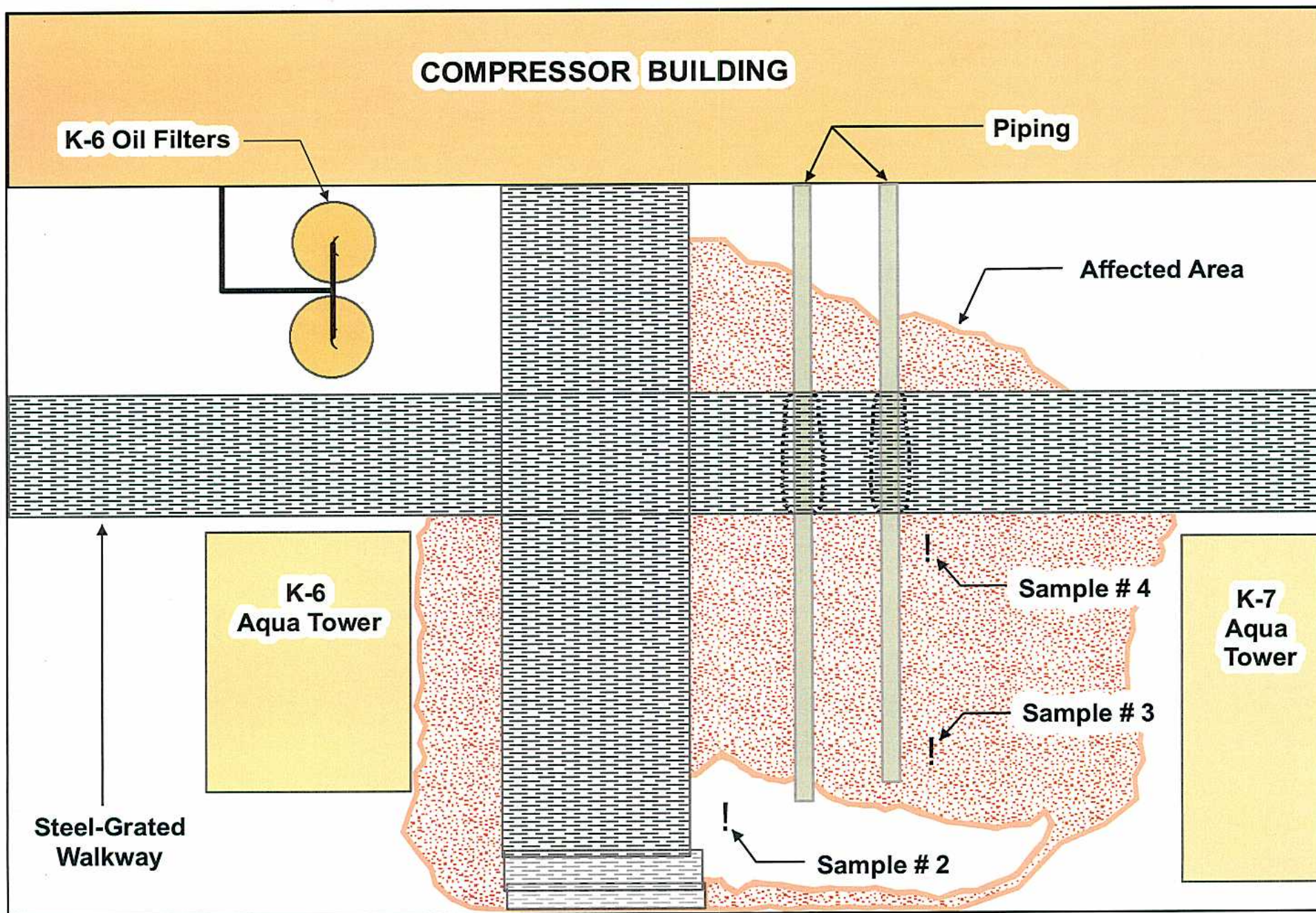


New fitting similar to those on K-6 and K-7.

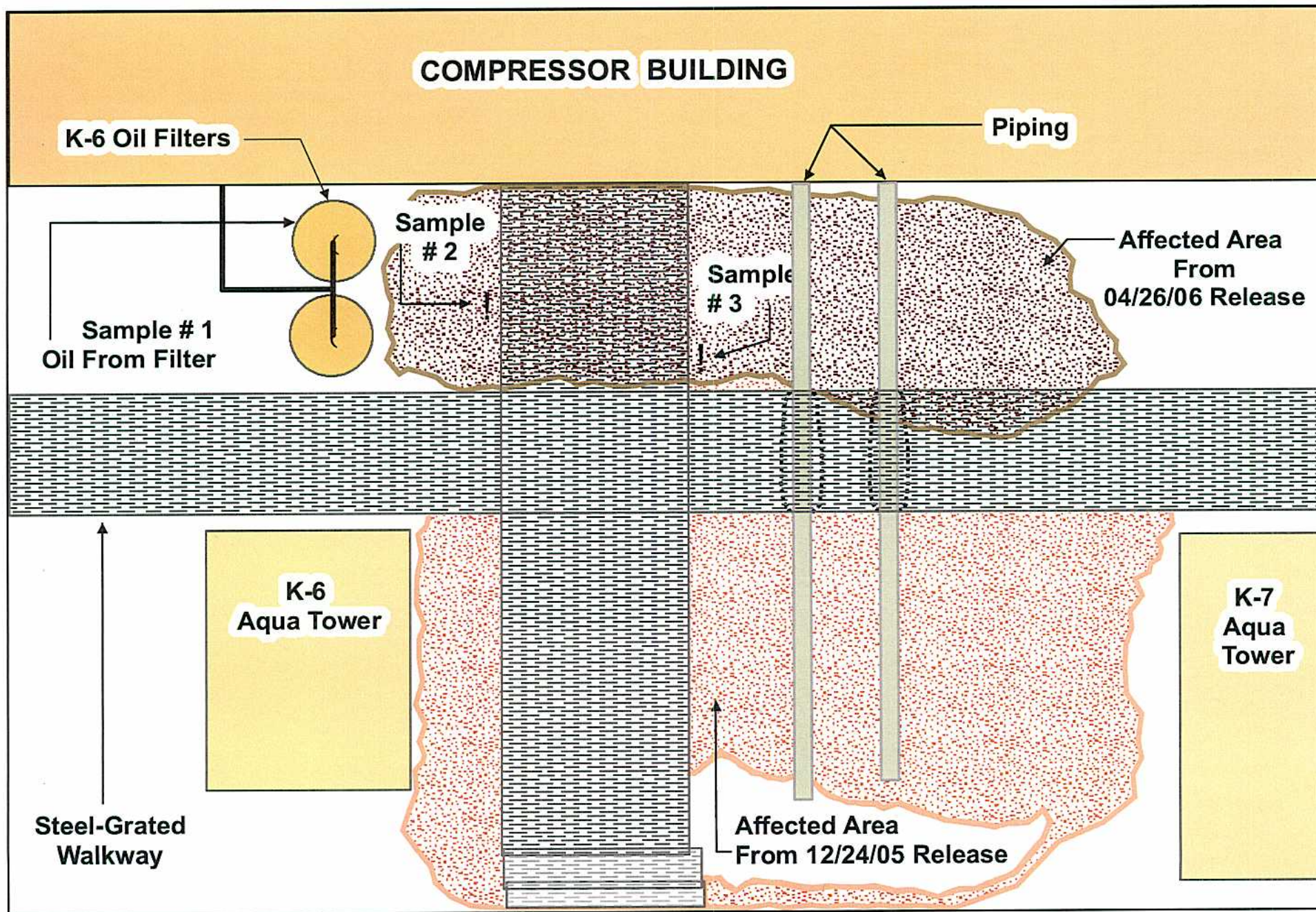




**APPENDIX B**  
**SAMPLE LOCATION DRAWING**







**APPENDIX C**  
**SUMMARY OF TEST RESULTS**



**Summary of Soil Sampling Analytical Results**  
**Topock Compressor Station, K-6 Oil Filter Releases**  
**December 24, 2005**

SAMPLE No.	1	2	3	4				
DESCRIPTION	Composite Surface Sample Obtained on 03/08/06 <small>See Notes</small>	Visually Clean - Surface Sample	Heavily Stained Soil	Moderately Stained Soil	Bat Cave Wash COC EPA PRGs <sup>1</sup>	EPA Soil Screening Level <sup>2</sup>	CA Title 22 TTLC <sup>3</sup>	CA Title 22 STLC <sup>4</sup>
<b>Total Petroleum Hydrocarbons (mg/kg)</b>								
Gasoline	N/A <small>See Notes</small>	ND (< 20)	ND (< 410)	ND (< 400)				
Kerosene	N/A	ND (< 10)	ND (< 200)	ND (< 200)				
Diesel	N/A	ND (< 20)	ND (< 200)	ND (< 200)				
Hydraulic Oil / Motor Oil	5200	220	4800	3900				
<b>Title 22 Metals (mg/kg)</b>								
Antimony	ND (< 10)	ND (< 5.0)	ND (< 5.0)	ND (< 10)			500	15
Arsenic	3.3	2.9	4.5	3.9			500	5
Barium	160	96	100	160			10000	100
Beryllium	0.47	ND (< 0.50)	ND (< 0.50)	ND (< 1.0)			75	0.75
Cadmium	0.39	ND (< 0.50)	ND (< 0.50)	ND (< 1.0)			100	1
Total Chromium	49	13	20	51	2900	40	2500	5
Hexavalent Chromium	N/A	N/A	N/A	N/A	64	40	500	5
Cobalt	7.5	3.3	4.6	ND (< 5.0)			8000	80
Copper	26	7.5	13	43	76,000	N/A	2500	25
Lead	46	57	24	170			1000	5
Mercury	ND (< 0.16)	ND (< 0.16)	ND (< 0.16)	ND (< 0.16)			20	0.2
Molybdenum	ND (< 5.0)	ND (< 2.5)	ND (< 2.5)	15			3500	350
Nickel	22	7.8	13	13	41,000	100	2000	20
Selenium	ND (< 1.0)	ND (< 0.50)	ND (< 0.50)	1.0			100	1
Silver	ND (< 1.0)	ND (< 0.50)	ND (< 0.50)	ND (1.0)			500	5
Thallium	ND (< 10)	ND (< 5.0)	ND (< 5.0)	ND (< 10)			700	7
Vanadium	37	16	30	23			2400	24
Zinc	140	42	65	200	100,000	10,000	5000	250

**NOTES:**

Sample actually consisted of samples 2, 3 and 4. It was mistakenly composited by the testing laboratory.

N/A = constituent was not analyzed.

<sup>1</sup> **Bat Cave Wash COC EPA PRGs**-EPA Region 9 chemicals of concern for Bat Cave Wash, Preliminary Remediation Goals

<sup>2</sup> **EPA Soil Screening Level**-Soil screening levels to evaluate potential for migration to groundwater

<sup>3</sup> **California Title 22 TTLC**- Total Threshold Limit Concentration

<sup>4</sup> **California Title 22 STLC**- Soluble Threshold Limit Concentration

**Summary of Soil Sampling Analytical Results**  
**Topock Compressor Station, K-6 Oil Filter Release**  
**April 23, 2006**

<b>SAMPLE No.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>DESCRIPTION</b>	Oil obtained from K-6 Filter (used as a standard for analysis) <sup>1</sup>	Saturated Absorbant material obtained near the K-6 Filter	Stained Surface Soil Obtained at Northeast Intersection Below Walkway, next to K-6 Oil filters	Clean Appearing Surface Soil Obtained Near the Sample # 3
<b>Total Petroleum Hydrocarbons (mg/kg)</b>				
Gasoline	N/A	ND (< 16000) <sup>2</sup>	ND (< 2000)	ND (< 40)
Kerosene	N/A	ND (< 8000)	ND (< 1000)	ND (< 20)
Diesel	N/A	ND (< 8000)	ND (< 1000)	ND (< 20)
K-6 Lubricating Oil	N/A	240,000	25,000	510

Notes:

<sup>1</sup> Sample 1 was not analyzed. It was used as an analytical standard.

<sup>2</sup> ND - Practical quantitation limits for samples 2 and 4 were raised due to large sample dilution required for analysis

**APPENDIX D**  
**COPY OF LABORATORY TEST REPORTS**

Date of Report: 08/02/2006

Marji Ferguson

Pacific Gas & Electric

P. O. Box 337

Needles, CA 92363

RE: Misc. Samples

BC Lab Number: 0602304

Enclosed are the results of analyses for samples received by the laboratory on 03/09/06 12:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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Contact Person: Shelley Taylor

Client Service Rep

---

Authorized Signature



Pacific Gas & Electric  
P. O. Box 337  
Needles CA, 92363

Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

Reported: 08/02/06 13:44

## Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information				
0602304-01	COC Number:	---	Receive Date:	03/09/06 12:30	Waste Type:
	Project Number:	---	Sampling Date:	03/08/06 07:43	
	Sampling Location:	---	Sample Depth:	---	
	Sampling Point:	Topock K-6 Oil Filter Area	Sample Matrix:	Solids	
	Sampled By:	Rich McCurty			
0602304-02	COC Number:	---	Receive Date:	03/09/06 12:30	Waste Type:
	Project Number:	---	Sampling Date:	03/08/06 07:44	
	Sampling Location:	---	Sample Depth:	---	
	Sampling Point:	Top K-6 Oil Filter area	Sample Matrix:	Solids	
	Sampled By:	Rich McCurty			
0602304-03	COC Number:	---	Receive Date:	03/09/06 12:30	Waste Type:
	Project Number:	---	Sampling Date:	03/08/06 07:46	
	Sampling Location:	---	Sample Depth:	---	
	Sampling Point:	Top K-6 Oil Filter area	Sample Matrix:	Solids	
	Sampled By:	Rich McCurty			
0602304-04	COC Number:	---	Receive Date:	03/09/06 12:30	Waste Type:
	Project Number:	---	Sampling Date:	03/08/06 07:43	
	Sampling Location:	---	Sample Depth:	---	
	Sampling Point:	Topock K-6 Oil Filter Area	Sample Matrix:	Solids	
	Sampled By:	Rich McCurty			

Pacific Gas & Electric  
P. O. Box 337  
Needles CA, 92363

Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

Reported: 08/02/06 13:44

## Purgeable Aromatics and Total Petroleum Hydrocarbons

<b>BCL Sample ID:</b> 0602304-01		<b>Client Sample Name:</b> Topock K-6 Oil Filter Area, 3/8/2006 7:43:00AM, Rich McCurdy											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
TPH - Gasoline	ND	mg/kg	20		Luft/FFP	03/13/06	03/14/06 08:39	VTR	GC-13A	1	BPC0612	ND	
TPH - Kerosene	ND	mg/kg	10		Luft/FFP	03/13/06	03/14/06 08:39	VTR	GC-13A	1	BPC0612	ND	
TPH - Diesel (FFP)	ND	mg/kg	10		Luft/FFP	03/13/06	03/14/06 08:39	VTR	GC-13A	1	BPC0612	ND	
TPH - Hydraulic Oil / Motor Oil	210	mg/kg	20		Luft/FFP	03/13/06	03/14/06 08:39	VTR	GC-13A	1	BPC0612	ND	A57
Tetracosane (Surrogate)		%	44 - 117 (LCL - UCL)		Luft/FFP	03/13/06	03/14/06 08:39	VTR	GC-13A	1	BPC0612		A18

Pacific Gas & Electric  
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Needles CA, 92363

Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

Reported: 08/02/06 13:44

## Total Concentrations (TTLC)

BCL Sample ID: 0602304-01		Client Sample Name: Topock K-6 Oil Filter Area, 3/8/2006 7:43:00AM, Rich McCurdy											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Antimony	ND	mg/kg	5.0		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	ND	
Arsenic	3.3	mg/kg	0.50		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	ND	
Barium	120	mg/kg	0.50		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.069	
Beryllium	ND	mg/kg	0.50		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.025	
Cadmium	ND	mg/kg	0.50		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.005	
Chromium	34	mg/kg	0.50		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.005	
Cobalt	3.5	mg/kg	2.5		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.010	
Copper	13	mg/kg	1.0		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.059	
Lead	100	mg/kg	2.5		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.015	
Mercury	ND	mg/kg	0.16		EPA-7471A	03/15/06	03/17/06 16:22	PRA	CETAC1	0.95	BPC0686	0.001	
Molybdenum	16	mg/kg	2.5		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.039	
Nickel	8.8	mg/kg	0.50		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.005	
Selenium	0.54	mg/kg	0.50		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.034	
Silver	ND	mg/kg	0.50		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.020	
Thallium	ND	mg/kg	5.0		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	ND	
Vanadium	21	mg/kg	0.50		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.010	
Zinc	100	mg/kg	2.5		EPA-6010B	03/13/06	03/14/06 13:21	JCC	TJA61E	0.98	BPC0552	0.12	

Pacific Gas & Electric  
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Needles CA, 92363

Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

Reported: 08/02/06 13:44

## Purgeable Aromatics and Total Petroleum Hydrocarbons

<b>BCL Sample ID:</b> 0602304-02		<b>Client Sample Name:</b> Top K-6 Oil Filter area, 3/8/2006 7:44:00AM, Rich McCurty												
Constituent	Result	Units	PQL	MDL	Method	Prep		Run		Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
						Date	Date/Time	Analyst						
TPH - Gasoline	ND	mg/kg	20		Luft/FFP	03/27/06	03/30/06	12:22	VTR	GC-13A	1.00	BPC1321	ND	S05
TPH - Kerosene	ND	mg/kg	10		Luft/FFP	03/27/06	03/30/06	12:22	VTR	GC-13A	1.00	BPC1321	ND	S05
TPH - Diesel (FFP)	ND	mg/kg	10		Luft/FFP	03/27/06	03/30/06	12:22	VTR	GC-13A	1.00	BPC1321	ND	S05
TPH - Hydraulic Oil / Motor Oil	220	mg/kg	20		Luft/FFP	03/27/06	03/30/06	12:22	VTR	GC-13A	1.00	BPC1321	ND	S05, A57
Tetracosane (Surrogate)	87.2	%	44 - 117 (LCL - UCL)		Luft/FFP	03/27/06	03/30/06	12:22	VTR	GC-13A	1.00	BPC1321		S05



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## Total Concentrations (TTLC)

BCL Sample ID: 0602304-02		Client Sample Name: Top K-6 Oil Filter area, 3/8/2006 7:44:00AM, Rich McCurdy											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Antimony	ND	mg/kg	5.0		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	0.092	
Arsenic	2.9	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	ND	
Barium	96	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	0.024	
Beryllium	ND	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	0.063	
Cadmium	ND	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	ND	
Chromium	13	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	0.034	
Cobalt	3.3	mg/kg	2.5		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	ND	
Copper	7.5	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	ND	
Lead	57	mg/kg	2.5		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	0.010	
Mercury	ND	mg/kg	0.16		EPA-7471A	03/28/06	03/28/06 13:30	PRA	TSP1	1.01	BPC1155	ND	
Molybdenum	ND	mg/kg	2.5		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	ND	
Nickel	7.8	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	0.024	
Selenium	ND	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	0.010	
Silver	ND	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	ND	
Thallium	ND	mg/kg	5.0		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	0.015	
Vanadium	16	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	0.010	
Zinc	42	mg/kg	2.5		EPA-6010B	03/27/06	03/28/06 16:00	JCC	TJA61E	0.97	BPC1114	0.034	

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Project Manager: Marji Fergerson

Reported: 08/02/06 13:44

## Purgeable Aromatics and Total Petroleum Hydrocarbons

<b>BCL Sample ID:</b> 0602304-03		<b>Client Sample Name:</b> Top K-6 Oil Filter area, 3/8/2006 7:46:00AM, Rich McCurty												
Constituent	Result	Units	PQL	MDL	Method	Prep	Run		Instru-	ment ID	Dilution	QC	MB	Lab
						Date	Date/Time	Analyst						
TPH - Gasoline	ND	mg/kg	410		Luft/FFP	03/27/06	03/30/06	15:45	VTR	GC-13A	20.27	BPC1321	ND	S05
TPH - Kerosene	ND	mg/kg	200		Luft/FFP	03/27/06	03/30/06	15:45	VTR	GC-13A	20.27	BPC1321	ND	S05
TPH - Diesel (FFP)	ND	mg/kg	200		Luft/FFP	03/27/06	03/30/06	15:45	VTR	GC-13A	20.27	BPC1321	ND	S05
TPH - Hydraulic Oil / Motor Oil	4800	mg/kg	410		Luft/FFP	03/27/06	03/30/06	15:45	VTR	GC-13A	20.27	BPC1321	ND	A57, S05, A01
Tetracosane (Surrogate)		%	44 - 117 (LCL - UCL)		Luft/FFP	03/27/06	03/30/06	15:45	VTR	GC-13A	20.27	BPC1321		A18, S05, V11

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Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

Reported: 08/02/06 13:44

## Total Concentrations (TTLC)

BCL Sample ID: 0602304-03		Client Sample Name: Top K-6 Oil Filter area, 3/8/2006 7:46:00AM, Rich McCurdy											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Antimony	ND	mg/kg	5.0		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	0.091	
Arsenic	4.5	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	ND	
Barium	100	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	0.024	
Beryllium	ND	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	0.062	
Cadmium	ND	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	ND	
Chromium	20	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	0.034	
Cobalt	4.6	mg/kg	2.5		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	ND	
Copper	13	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	ND	
Lead	24	mg/kg	2.5		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	0.010	
Mercury	ND	mg/kg	0.16		EPA-7471A	03/28/06	03/28/06 13:30	PRA	TSP1	0.98	BPC1155	ND	
Molybdenum	ND	mg/kg	2.5		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	ND	
Nickel	13	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	0.024	
Selenium	ND	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	0.010	
Silver	ND	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	ND	
Thallium	ND	mg/kg	5.0		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	0.014	
Vanadium	30	mg/kg	0.50		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	0.010	
Zinc	65	mg/kg	2.5		EPA-6010B	03/27/06	03/28/06 16:04	JCC	TJA61E	0.96	BPC1114	0.034	

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## Purgeable Aromatics and Total Petroleum Hydrocarbons

<b>BCL Sample ID:</b> 0602304-04		<b>Client Sample Name:</b> Topock K-6 Oil Filter Area, 3/8/2006 7:43:00AM, Rich McCurdy												
Constituent	Result	Units	PQL	MDL	Method	Prep	Run		Instru-	Dilution	QC	MB	Lab	
						Date	Date/Time	Analyst						ment ID
TPH - Gasoline	ND	mg/kg	400		Luft/FFP	03/27/06	03/30/06	16:09	VTR	GC-13A	20	BPC1321	ND	S05
TPH - Kerosene	ND	mg/kg	200		Luft/FFP	03/27/06	03/30/06	16:09	VTR	GC-13A	20	BPC1321	ND	S05
TPH - Diesel (FFP)	ND	mg/kg	200		Luft/FFP	03/27/06	03/30/06	16:09	VTR	GC-13A	20	BPC1321	ND	S05
TPH - Hydraulic Oil / Motor Oil	3900	mg/kg	400		Luft/FFP	03/27/06	03/30/06	16:09	VTR	GC-13A	20	BPC1321	ND	A01, A57, S05
Tetracosane (Surrogate)		%	44 - 117 (LCL - UCL)		Luft/FFP	03/27/06	03/30/06	16:09	VTR	GC-13A	20	BPC1321		A18, S05, V11

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Project: Misc. Samples  
Project Number: Topock K-6  
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## Total Concentrations (TTLC)

BCL Sample ID: 0602304-04		Client Sample Name: Topock K-6 Oil Filter Area, 3/8/2006 7:43:00AM, Rich McCurdy												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time		Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Antimony	ND	mg/kg	10		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	0.19	A01
Arsenic	3.9	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	ND	A01
Barium	160	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	0.049	A01
Beryllium	ND	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	0.13	A01
Cadmium	ND	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	ND	A01
Chromium	51	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	0.069	A01
Cobalt	ND	mg/kg	5.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	ND	A01
Copper	43	mg/kg	2.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	ND	A01
Lead	170	mg/kg	5.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	0.020	A01
Mercury	0.21	mg/kg	0.16		EPA-7471A	03/28/06	03/28/06	13:30	PRA	TSP1	0.95	BPC1155	ND	
Molybdenum	15	mg/kg	5.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	ND	A01
Nickel	13	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	0.049	A01
Selenium	1.0	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	0.020	A01
Silver	ND	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	ND	A01
Thallium	ND	mg/kg	10		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	0.029	A01
Vanadium	23	mg/kg	1.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	0.020	A01
Zinc	200	mg/kg	5.0		EPA-6010B	03/27/06	03/28/06	16:18	JCC	TJA61E	1.96	BPC1114	0.069	A01

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## Purgeable Aromatics and Total Petroleum Hydrocarbons

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
TPH - Diesel (FFP)	BPC0612	Matrix Spike	0600802-78	ND	83.623	82.508	mg/kg		101		49 - 120	
		Matrix Spike Duplicate	0600802-78	ND	92.025	82.237	mg/kg	10.3	112	30	49 - 120	
Tetracosane (Surrogate)	BPC0612	Matrix Spike	0600802-78	ND	2.5459	3.3003	mg/kg		77.1		44 - 117	V11
		Matrix Spike Duplicate	0600802-78	ND	2.5771	3.2895	mg/kg		78.3		44 - 117	V11
TPH - Diesel (FFP)	BPC1321	Matrix Spike	0600802-52	ND	64.571	83.333	mg/kg		77.5		49 - 120	
		Matrix Spike Duplicate	0600802-52	ND	61.933	83.056	mg/kg	3.81	74.6	30	49 - 120	
Tetracosane (Surrogate)	BPC1321	Matrix Spike	0600802-52	ND	2.7408	3.3333	mg/kg		82.2		44 - 117	
		Matrix Spike Duplicate	0600802-52	ND	2.4444	3.3223	mg/kg		73.6		44 - 117	



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Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

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## Total Concentrations (TTLIC)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Antimony	BPC0552	Duplicate	0602304-01	ND	ND		mg/kg			20		
		Matrix Spike	0602304-01	ND	15.588	98.039	mg/kg		15.9		16 - 119	Q03
		Matrix Spike Duplicate	0602304-01	ND	21.451	98.039	mg/kg	31.7	21.9	20	16 - 119	Q02
Arsenic	BPC0552	Duplicate	0602304-01	3.3235	2.7059		mg/kg	20.5		20		Q01
		Matrix Spike	0602304-01	3.3235	7.9412	4.9020	mg/kg		94.2		75 - 125	
		Matrix Spike Duplicate	0602304-01	3.3235	7.7549	4.9020	mg/kg	4.12	90.4	20	75 - 125	
Barium	BPC0552	Duplicate	0602304-01	122.30	144.66		mg/kg	16.8		20		
		Matrix Spike	0602304-01	122.30	260.69	98.039	mg/kg		141		75 - 125	Q03
		Matrix Spike Duplicate	0602304-01	122.30	224.71	98.039	mg/kg	30.2	104	20	75 - 125	Q02
Beryllium	BPC0552	Duplicate	0602304-01	0.21078	0.24510		mg/kg	15.1		20		
		Matrix Spike	0602304-01	0.21078	9.1618	9.8039	mg/kg		91.3		75 - 125	
		Matrix Spike Duplicate	0602304-01	0.21078	9.1765	9.8039	mg/kg	0.219	91.5	20	75 - 125	
Cadmium	BPC0552	Duplicate	0602304-01	0.44118	0.42157		mg/kg	4.55		20		
		Matrix Spike	0602304-01	0.44118	9.2108	9.8039	mg/kg		89.5		75 - 125	
		Matrix Spike Duplicate	0602304-01	0.44118	9.0588	9.8039	mg/kg	1.80	87.9	20	75 - 125	
Chromium	BPC0552	Duplicate	0602304-01	34.500	24.966		mg/kg	32.1		20		Q01
		Matrix Spike	0602304-01	34.500	112.40	98.039	mg/kg		79.5		75 - 125	
		Matrix Spike Duplicate	0602304-01	34.500	108.77	98.039	mg/kg	4.76	75.8	20	75 - 125	
Cobalt	BPC0552	Duplicate	0602304-01	3.5098	3.7010		mg/kg	5.30		20		
		Matrix Spike	0602304-01	3.5098	90.196	98.039	mg/kg		88.4		75 - 125	
		Matrix Spike Duplicate	0602304-01	3.5098	90.245	98.039	mg/kg	0.113	88.5	20	75 - 125	
Copper	BPC0552	Duplicate	0602304-01	13.270	28.603		mg/kg	73.2		20		Q01
		Matrix Spike	0602304-01	13.270	107.60	98.039	mg/kg		96.2		75 - 125	
		Matrix Spike Duplicate	0602304-01	13.270	106.08	98.039	mg/kg	1.57	94.7	20	75 - 125	
Lead	BPC0552	Duplicate	0602304-01	101.81	81.716		mg/kg	21.9		20		Q01
		Matrix Spike	0602304-01	101.81	192.25	98.039	mg/kg		92.2		75 - 125	
		Matrix Spike Duplicate	0602304-01	101.81	128.43	98.039	mg/kg	109	27.2	20	75 - 125	Q02, Q03

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## Total Concentrations (TTLIC)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Molybdenum	BPC0552	Duplicate	0602304-01	16.284	2.7990		mg/kg	141		20		Q01
		Matrix Spike	0602304-01	16.284	100.20	98.039	mg/kg		85.6		75 - 125	
		Matrix Spike Duplicate	0602304-01	16.284	85.049	98.039	mg/kg	19.9	70.1	20	75 - 125	Q03
Nickel	BPC0552	Duplicate	0602304-01	8.7745	9.7206		mg/kg	10.2		20		
		Matrix Spike	0602304-01	8.7745	97.647	98.039	mg/kg		90.7		75 - 125	
		Matrix Spike Duplicate	0602304-01	8.7745	98.824	98.039	mg/kg	1.31	91.9	20	75 - 125	
Selenium	BPC0552	Duplicate	0602304-01	0.53922	0.50490		mg/kg	6.57		20		
		Matrix Spike	0602304-01	0.53922	4.5392	4.9020	mg/kg		81.6		75 - 125	
		Matrix Spike Duplicate	0602304-01	0.53922	4.5000	4.9020	mg/kg	0.985	80.8	20	75 - 125	
Silver	BPC0552	Duplicate	0602304-01	ND	ND		mg/kg			20		
		Matrix Spike	0602304-01	ND	4.0392	9.8039	mg/kg		41.2		75 - 125	Q03
		Matrix Spike Duplicate	0602304-01	ND	8.8529	9.8039	mg/kg	74.7	90.3	20	75 - 125	Q02
Thallium	BPC0552	Duplicate	0602304-01	ND	ND		mg/kg			20		
		Matrix Spike	0602304-01	ND	89.363	98.039	mg/kg		91.2		75 - 125	
		Matrix Spike Duplicate	0602304-01	ND	89.167	98.039	mg/kg	0.220	91.0	20	75 - 125	
Vanadium	BPC0552	Duplicate	0602304-01	21.456	21.471		mg/kg	0.0699		20		
		Matrix Spike	0602304-01	21.456	110.74	98.039	mg/kg		91.1		75 - 125	
		Matrix Spike Duplicate	0602304-01	21.456	111.67	98.039	mg/kg	0.983	92.0	20	75 - 125	
Zinc	BPC0552	Duplicate	0602304-01	99.608	90.980		mg/kg	9.05		20		
		Matrix Spike	0602304-01	99.608	178.33	98.039	mg/kg		80.3		75 - 125	
		Matrix Spike Duplicate	0602304-01	99.608	173.87	98.039	mg/kg	5.90	75.7	20	75 - 125	
Mercury	BPC0686	Duplicate	0602304-01	0.079091	0.087656		mg/kg	10.3		20		
		Matrix Spike	0602304-01	0.079091	0.72076	0.75758	mg/kg		84.7		85 - 115	Q03
		Matrix Spike Duplicate	0602304-01	0.079091	0.66556	0.69444	mg/kg	0.236	84.5	20	85 - 115	Q03
Antimony	BPC1114	Duplicate	0602577-12	ND	ND		mg/kg			20		
		Matrix Spike	0602577-12	ND	57.723	99.010	mg/kg		58.3		16 - 119	
		Matrix Spike Duplicate	0602577-12	ND	50.545	99.010	mg/kg	13.2	51.1	20	16 - 119	

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## Total Concentrations (TTLIC)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits	
										RPD	Percent Recovery Lab Quals
Arsenic	BPC1114	Duplicate	0602577-12	0.93069	0.47525		mg/kg	64.8		20	A02
		Matrix Spike	0602577-12	0.93069	5.6238	4.9505	mg/kg		94.8		75 - 125
		Matrix Spike Duplicate	0602577-12	0.93069	5.6634	4.9505	mg/kg	0.840	95.6	20	75 - 125
Barium	BPC1114	Duplicate	0602577-12	14.856	14.832		mg/kg	0.162		20	
		Matrix Spike	0602577-12	14.856	127.82	99.010	mg/kg		114		75 - 125
		Matrix Spike Duplicate	0602577-12	14.856	112.13	99.010	mg/kg	14.9	98.2	20	75 - 125
Beryllium	BPC1114	Duplicate	0602577-12	0.16832	0.16337		mg/kg	2.98		20	
		Matrix Spike	0602577-12	0.16832	10.292	9.9010	mg/kg		102		75 - 125
		Matrix Spike Duplicate	0602577-12	0.16832	9.9505	9.9010	mg/kg	3.19	98.8	20	75 - 125
Cadmium	BPC1114	Duplicate	0602577-12	ND	ND		mg/kg			20	
		Matrix Spike	0602577-12	ND	10.119	9.9010	mg/kg		102		75 - 125
		Matrix Spike Duplicate	0602577-12	ND	9.8119	9.9010	mg/kg	2.88	99.1	20	75 - 125
Chromium	BPC1114	Duplicate	0602577-12	3.9703	3.8416		mg/kg	3.29		20	
		Matrix Spike	0602577-12	3.9703	99.554	99.010	mg/kg		96.5		75 - 125
		Matrix Spike Duplicate	0602577-12	3.9703	95.891	99.010	mg/kg	3.91	92.8	20	75 - 125
Cobalt	BPC1114	Duplicate	0602577-12	0.70792	0.68317		mg/kg	3.56		20	
		Matrix Spike	0602577-12	0.70792	98.218	99.010	mg/kg		98.5		75 - 125
		Matrix Spike Duplicate	0602577-12	0.70792	95.149	99.010	mg/kg	3.20	95.4	20	75 - 125
Copper	BPC1114	Duplicate	0602577-12	2.1089	1.9554		mg/kg	7.55		20	
		Matrix Spike	0602577-12	2.1089	97.624	99.010	mg/kg		96.5		75 - 125
		Matrix Spike Duplicate	0602577-12	2.1089	93.020	99.010	mg/kg	4.99	91.8	20	75 - 125
Lead	BPC1114	Duplicate	0602577-12	1.9406	1.9257		mg/kg	0.771		20	
		Matrix Spike	0602577-12	1.9406	97.327	99.010	mg/kg		96.3		75 - 125
		Matrix Spike Duplicate	0602577-12	1.9406	94.059	99.010	mg/kg	3.49	93.0	20	75 - 125
Molybdenum	BPC1114	Duplicate	0602577-12	0.30693	0.34158		mg/kg	10.7		20	
		Matrix Spike	0602577-12	0.30693	94.059	99.010	mg/kg		94.7		75 - 125
		Matrix Spike Duplicate	0602577-12	0.30693	88.119	99.010	mg/kg	6.54	88.7	20	75 - 125

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## Total Concentrations (TTLIC)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Nickel	BPC1114	Duplicate	0602577-12	2.6683	2.4703		mg/kg	7.71		20		
		Matrix Spike	0602577-12	2.6683	101.34	99.010	mg/kg		99.7		75 - 125	
		Matrix Spike Duplicate	0602577-12	2.6683	138.07	99.010	mg/kg	31.5	137	20	75 - 125	Q02, Q03
Selenium	BPC1114	Duplicate	0602577-12	ND	ND		mg/kg			20		
		Matrix Spike	0602577-12	ND	4.5891	4.9505	mg/kg		92.7		75 - 125	
		Matrix Spike Duplicate	0602577-12	ND	4.4703	4.9505	mg/kg	2.62	90.3	20	75 - 125	
Silver	BPC1114	Duplicate	0602577-12	ND	ND		mg/kg			20		
		Matrix Spike	0602577-12	ND	9.5644	9.9010	mg/kg		96.6		75 - 125	
		Matrix Spike Duplicate	0602577-12	ND	9.1188	9.9010	mg/kg	4.77	92.1	20	75 - 125	
Thallium	BPC1114	Duplicate	0602577-12	ND	ND		mg/kg			20		
		Matrix Spike	0602577-12	ND	97.822	99.010	mg/kg		98.8		75 - 125	
		Matrix Spike Duplicate	0602577-12	ND	94.158	99.010	mg/kg	3.82	95.1	20	75 - 125	
Vanadium	BPC1114	Duplicate	0602577-12	6.5644	6.3317		mg/kg	3.61		20		
		Matrix Spike	0602577-12	6.5644	106.68	99.010	mg/kg		101		75 - 125	
		Matrix Spike Duplicate	0602577-12	6.5644	102.43	99.010	mg/kg	4.25	96.8	20	75 - 125	
Zinc	BPC1114	Duplicate	0602577-12	11.416	9.5891		mg/kg	17.4		20		
		Matrix Spike	0602577-12	11.416	108.91	99.010	mg/kg		98.5		75 - 125	
		Matrix Spike Duplicate	0602577-12	11.416	106.39	99.010	mg/kg	2.67	95.9	20	75 - 125	
Mercury	BPC1155	Duplicate	0602551-01	ND	ND		mg/kg			20		
		Matrix Spike	0602551-01	ND	0.83091	0.80645	mg/kg		103		85 - 115	
		Matrix Spike Duplicate	0602551-01	ND	0.70447	0.80645	mg/kg	16.4	87.4	20	85 - 115	

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Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

Reported: 08/02/06 13:44

## Purgeable Aromatics and Total Petroleum Hydrocarbons

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
TPH - Diesel (FFP)	BPC0612	BPC0612-BS1	LCS	88.964	81.967	10	mg/kg	109		58 - 120		
Tetracosane (Surrogate)	BPC0612	BPC0612-BS1	LCS	2.6900	3.2787		mg/kg	82.0		44 - 117		V11
TPH - Diesel (FFP)	BPC1321	BPC1321-BS1	LCS	71.616	84.175	10	mg/kg	85.1		58 - 120		
Tetracosane (Surrogate)	BPC1321	BPC1321-BS1	LCS	3.3968	3.3670		mg/kg	101		44 - 117		

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Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

Reported: 08/02/06 13:44

## Total Concentrations (TTLC)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Antimony	BPC0552	BPC0552-BS1	LCS	1.7050	1.6362	5.0	mg/kg	104		75 - 125		
Arsenic	BPC0552	BPC0552-BS1	LCS	9.1700	10.260	0.50	mg/kg	89.4		75 - 125		
Barium	BPC0552	BPC0552-BS1	LCS	88.350	92.340	0.50	mg/kg	95.7		75 - 125		
Beryllium	BPC0552	BPC0552-BS1	LCS	5.2650	5.9400	0.50	mg/kg	88.6		75 - 125		
Cadmium	BPC0552	BPC0552-BS1	LCS	5.3450	5.4540	0.50	mg/kg	98.0		75 - 125		
Chromium	BPC0552	BPC0552-BS1	LCS	12.740	13.608	0.50	mg/kg	93.6		75 - 125		
Cobalt	BPC0552	BPC0552-BS1	LCS	8.7750	8.8020	2.5	mg/kg	99.7		75 - 125		
Copper	BPC0552	BPC0552-BS1	LCS	11.825	13.986	1.0	mg/kg	84.5		75 - 125		
Lead	BPC0552	BPC0552-BS1	LCS	9.9600	9.5580	2.5	mg/kg	104		75 - 125		
Molybdenum	BPC0552	BPC0552-BS1	LCS	5.3350	5.9400	2.5	mg/kg	89.8		75 - 125		
Nickel	BPC0552	BPC0552-BS1	LCS	10.830	11.394	0.50	mg/kg	95.1		75 - 125		
Selenium	BPC0552	BPC0552-BS1	LCS	4.9500	4.7628	0.50	mg/kg	104		75 - 125		
Silver	BPC0552	BPC0552-BS1	LCS	4.9600	5.2218	0.50	mg/kg	95.0		75 - 125		
Thallium	BPC0552	BPC0552-BS1	LCS	5.1700	5.0706	5.0	mg/kg	102		75 - 125		
Vanadium	BPC0552	BPC0552-BS1	LCS	27.755	28.782	0.50	mg/kg	96.4		75 - 125		
Zinc	BPC0552	BPC0552-BS1	LCS	37.100	34.938	2.5	mg/kg	106		75 - 125		
Mercury	BPC0686	BPC0686-BS1	LCS	1.3248	1.5000	0.16	mg/kg	88.3		75 - 125		
Antimony	BPC1114	BPC1114-BS1	LCS	1.5000	1.6059	5.0	mg/kg	93.4		75 - 125		
Arsenic	BPC1114	BPC1114-BS1	LCS	9.6650	10.070	0.50	mg/kg	96.0		75 - 125		
Barium	BPC1114	BPC1114-BS1	LCS	88.900	90.630	0.50	mg/kg	98.1		75 - 125		
Beryllium	BPC1114	BPC1114-BS1	LCS	5.3750	5.8300	0.50	mg/kg	92.2		75 - 125		
Cadmium	BPC1114	BPC1114-BS1	LCS	5.2050	5.3530	0.50	mg/kg	97.2		75 - 125		
Chromium	BPC1114	BPC1114-BS1	LCS	12.505	13.356	0.50	mg/kg	93.6		75 - 125		
Cobalt	BPC1114	BPC1114-BS1	LCS	8.6600	8.6390	2.5	mg/kg	100		75 - 125		
Copper	BPC1114	BPC1114-BS1	LCS	11.980	13.727	1.0	mg/kg	87.3		75 - 125		
Lead	BPC1114	BPC1114-BS1	LCS	9.9650	9.3810	2.5	mg/kg	106		75 - 125		
Molybdenum	BPC1114	BPC1114-BS1	LCS	5.0550	5.8300	2.5	mg/kg	86.7		75 - 125		

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Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

Reported: 08/02/06 13:44

## Total Concentrations (TTLC)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Control Limits				
								Percent Recovery	RPD	Percent Recovery	RPD	Lab Quals
Nickel	BPC1114	BPC1114-BS1	LCS	10.525	11.183	0.50	mg/kg	94.1		75 - 125		
Selenium	BPC1114	BPC1114-BS1	LCS	4.6800	4.6746	0.50	mg/kg	100		75 - 125		
Silver	BPC1114	BPC1114-BS1	LCS	4.9200	5.1251	0.50	mg/kg	96.0		75 - 125		
Thallium	BPC1114	BPC1114-BS1	LCS	5.0850	4.9767	5.0	mg/kg	102		75 - 125		
Vanadium	BPC1114	BPC1114-BS1	LCS	27.200	28.249	0.50	mg/kg	96.3		75 - 125		
Zinc	BPC1114	BPC1114-BS1	LCS	33.955	34.291	2.5	mg/kg	99.0		75 - 125		
Mercury	BPC1155	BPC1155-BS1	LCS	1.3039	1.5000	0.16	mg/kg	86.9		75 - 125		

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Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

Reported: 08/02/06 13:44

## Purgeable Aromatics and Total Petroleum Hydrocarbons

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
TPH - Gasoline	BPC0612	BPC0612-BLK1	ND	mg/kg	20	5.0	
TPH - Kerosene	BPC0612	BPC0612-BLK1	ND	mg/kg	10	5.0	
TPH - Diesel (FFP)	BPC0612	BPC0612-BLK1	ND	mg/kg	10	2.0	
TPH - Hydraulic Oil / Motor Oil	BPC0612	BPC0612-BLK1	ND	mg/kg	20	10	
Tetracosane (Surrogate)	BPC0612	BPC0612-BLK1	74.6	%	44 - 117 (LCL - UCL)		V11
TPH - Gasoline	BPC1321	BPC1321-BLK1	ND	mg/kg	20	5.0	
TPH - Kerosene	BPC1321	BPC1321-BLK1	ND	mg/kg	10	5.0	
TPH - Diesel (FFP)	BPC1321	BPC1321-BLK1	ND	mg/kg	10	2.0	
TPH - Hydraulic Oil / Motor Oil	BPC1321	BPC1321-BLK1	ND	mg/kg	20	10	
Tetracosane (Surrogate)	BPC1321	BPC1321-BLK1	98.1	%	44 - 117 (LCL - UCL)		



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Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Ferguson

Reported: 08/02/06 13:44

## Total Concentrations (TTLIC)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Antimony	BPC0552	BPC0552-BLK1	ND	mg/kg	5.0	0.36	
Arsenic	BPC0552	BPC0552-BLK1	ND	mg/kg	0.50	0.37	
Barium	BPC0552	BPC0552-BLK1	0.070000	mg/kg	0.50	0.067	
Beryllium	BPC0552	BPC0552-BLK1	0.025000	mg/kg	0.50	0.022	
Cadmium	BPC0552	BPC0552-BLK1	ND	mg/kg	0.50	0.052	
Chromium	BPC0552	BPC0552-BLK1	ND	mg/kg	0.50	0.17	
Cobalt	BPC0552	BPC0552-BLK1	ND	mg/kg	2.5	0.13	
Copper	BPC0552	BPC0552-BLK1	ND	mg/kg	1.0	0.30	
Lead	BPC0552	BPC0552-BLK1	ND	mg/kg	2.5	0.29	
Molybdenum	BPC0552	BPC0552-BLK1	ND	mg/kg	2.5	0.12	
Nickel	BPC0552	BPC0552-BLK1	ND	mg/kg	0.50	0.25	
Selenium	BPC0552	BPC0552-BLK1	ND	mg/kg	0.50	0.39	
Silver	BPC0552	BPC0552-BLK1	ND	mg/kg	0.50	0.049	
Thallium	BPC0552	BPC0552-BLK1	ND	mg/kg	5.0	0.42	
Vanadium	BPC0552	BPC0552-BLK1	ND	mg/kg	0.50	0.064	
Zinc	BPC0552	BPC0552-BLK1	ND	mg/kg	2.5	0.31	
Mercury	BPC0686	BPC0686-BLK1	ND	mg/kg	0.16	0.041	
Antimony	BPC1114	BPC1114-BLK1	ND	mg/kg	5.0	0.36	
Arsenic	BPC1114	BPC1114-BLK1	ND	mg/kg	0.50	0.37	
Barium	BPC1114	BPC1114-BLK1	ND	mg/kg	0.50	0.067	
Beryllium	BPC1114	BPC1114-BLK1	0.065000	mg/kg	0.50	0.022	
Cadmium	BPC1114	BPC1114-BLK1	ND	mg/kg	0.50	0.052	
Chromium	BPC1114	BPC1114-BLK1	ND	mg/kg	0.50	0.17	
Cobalt	BPC1114	BPC1114-BLK1	ND	mg/kg	2.5	0.13	
Copper	BPC1114	BPC1114-BLK1	ND	mg/kg	1.0	0.30	

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Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Ferguson

Reported: 08/02/06 13:44

## Total Concentrations (TTLIC)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Lead	BPC1114	BPC1114-BLK1	ND	mg/kg	2.5	0.29	
Molybdenum	BPC1114	BPC1114-BLK1	ND	mg/kg	2.5	0.12	
Nickel	BPC1114	BPC1114-BLK1	ND	mg/kg	0.50	0.25	
Selenium	BPC1114	BPC1114-BLK1	ND	mg/kg	0.50	0.39	
Silver	BPC1114	BPC1114-BLK1	ND	mg/kg	0.50	0.049	
Thallium	BPC1114	BPC1114-BLK1	ND	mg/kg	5.0	0.42	
Vanadium	BPC1114	BPC1114-BLK1	ND	mg/kg	0.50	0.064	
Zinc	BPC1114	BPC1114-BLK1	ND	mg/kg	2.5	0.31	
Mercury	BPC1155	BPC1155-BLK1	ND	mg/kg	0.16	0.041	

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Project: Misc. Samples  
Project Number: Topock K-6  
Project Manager: Marji Fergerson

**Reported:** 08/02/06 13:44

### Notes and Definitions

V11 The Continuing Calibration Verification (CCV) recovery is not within established control limits.

S05 The sample holding time was exceeded.

Q03 Matrix spike recovery(s) is(are) not within the control limits.

Q02 Matrix spike precision is not within the control limits.

Q01 Sample precision is not within the control limits.

J Estimated value

A57 Chromatogram not typical of motor oil.

A18 Surrogate not reportable due to matrix interference.

A02 The difference between duplicate readings is less than the PQL.

A01 PQL's and MDL's are raised due to sample dilution.

ND Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Date of Report: 07/06/2006

Marji Ferguson

Pacific Gas & Electric

P. O. Box 337

Needles, CA 92363

RE: Misc. Samples

BC Lab Number: 0604174

Enclosed are the results of analyses for samples received by the laboratory on 04/28/06 10:24. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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Contact Person: Shelley Taylor

Client Service Rep

---

Authorized Signature

Pacific Gas & Electric  
P. O. Box 337  
Needles CA, 92363

Project: Misc. Samples  
Project Number: K6 Lube oil #2  
Project Manager: Marji Fergerson

Reported: 07/06/06 15:03

## Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
0604174-02	COC Number:	41158	Receive Date:	04/28/06 10:24
	Project Number:	---	Sampling Date:	04/26/06 15:00
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	K-6 Absorbant near K-6 Filter	Sample Matrix:	Solids
	Sampled By:	Rich McCurty	Waste Type:	
0604174-03	COC Number:	41158	Receive Date:	04/28/06 10:24
	Project Number:	---	Sampling Date:	04/26/06 15:03
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	K-6 Saturated soil near NE Intersection of Walk way	Sample Matrix:	Solids
	Sampled By:	Rich McCurty	Waste Type:	
0604174-04	COC Number:	41158	Receive Date:	04/28/06 10:24
	Project Number:	---	Sampling Date:	04/26/06 15:04
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	K-6 Clean Soil near NE Intersection of Walkway	Sample Matrix:	Solids
	Sampled By:	Rich McCurty	Waste Type:	

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Project: Misc. Samples  
Project Number: K6 Lube oil #2  
Project Manager: Marji Fergerson

Reported: 07/06/06 15:03

## Purgeable Aromatics and Total Petroleum Hydrocarbons

<b>BCL Sample ID:</b> 0604174-02		<b>Client Sample Name:</b> K-6 Absorbant near K-6 Filter, 4/26/2006 3:00:00PM, Rich McCurty											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
TPH - Gasoline	ND	mg/kg	16000		Luft/FFP	05/02/06	05/09/06 12:45	VTR	GC-2	797.3	BPE0248	ND	
TPH - Kerosene	ND	mg/kg	8000		Luft/FFP	05/02/06	05/09/06 12:45	VTR	GC-2	797.3	BPE0248	ND	
TPH - Diesel (FFP)	ND	mg/kg	8000		Luft/FFP	05/02/06	05/09/06 12:45	VTR	GC-2	797.3	BPE0248	ND	
TPH - Hydraulic Oil / Motor Oil	240000	mg/kg	16000		Luft/FFP	05/02/06	05/09/06 12:45	VTR	GC-2	797.3	BPE0248	ND	A01
Tetracosane (Surrogate)		%	44 - 117 (LCL - UCL)		Luft/FFP	05/02/06	05/09/06 12:45	VTR	GC-2	797.3	BPE0248		A17, V11

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Project: Misc. Samples  
Project Number: K6 Lube oil #2  
Project Manager: Marji Fergerson

Reported: 07/06/06 15:03

## Purgeable Aromatics and Total Petroleum Hydrocarbons

<b>BCL Sample ID:</b> 0604174-03		<b>Client Sample Name:</b> K-6 Saturated soil near NE Intersection of Walk way, 4/26/2006 3:03:00PM, Rich McCurty											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
TPH - Gasoline	ND	mg/kg	2000		Luft/FFP	05/02/06	05/09/06 11:07	VTR	GC-2	99.34	BPE0248	ND	
TPH - Kerosene	ND	mg/kg	1000		Luft/FFP	05/02/06	05/09/06 11:07	VTR	GC-2	99.34	BPE0248	ND	
TPH - Diesel (FFP)	ND	mg/kg	1000		Luft/FFP	05/02/06	05/09/06 11:07	VTR	GC-2	99.34	BPE0248	ND	
TPH - Hydraulic Oil / Motor Oil	25000	mg/kg	2000		Luft/FFP	05/02/06	05/09/06 11:07	VTR	GC-2	99.34	BPE0248	ND	A01
Tetracosane (Surrogate)		%	44 - 117 (LCL - UCL)		Luft/FFP	05/02/06	05/09/06 11:07	VTR	GC-2	99.34	BPE0248		A17, V11

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Project: Misc. Samples  
Project Number: K6 Lube oil #2  
Project Manager: Marji Fergerson

Reported: 07/06/06 15:03

## Purgeable Aromatics and Total Petroleum Hydrocarbons

<b>BCL Sample ID:</b> 0604174-04		<b>Client Sample Name:</b> K-6 Clean Soil near NE Intersection of Walkway, 4/26/2006 3:04:00PM, Rich McCurty											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
TPH - Gasoline	ND	mg/kg	40		Luft/FFP	05/02/06	05/07/06 22:19	VTR	GC-2	1.99	BPE0248	ND	
TPH - Kerosene	ND	mg/kg	20		Luft/FFP	05/02/06	05/07/06 22:19	VTR	GC-2	1.99	BPE0248	ND	
TPH - Diesel (FFP)	ND	mg/kg	20		Luft/FFP	05/02/06	05/07/06 22:19	VTR	GC-2	1.99	BPE0248	ND	
TPH - Hydraulic Oil / Motor Oil	510	mg/kg	40		Luft/FFP	05/02/06	05/07/06 22:19	VTR	GC-2	1.99	BPE0248	ND	A01
Tetracosane (Surrogate)	61.6	%	44 - 117 (LCL - UCL)		Luft/FFP	05/02/06	05/07/06 22:19	VTR	GC-2	1.99	BPE0248		V11



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Project: Misc. Samples  
Project Number: K6 Lube oil #2  
Project Manager: Marji Fergerson

Reported: 07/06/06 15:03

## Purgeable Aromatics and Total Petroleum Hydrocarbons

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
TPH - Diesel (FFP)	BPE0248	Matrix Spike	0602391-66	ND	80.747	82.781	mg/kg		97.5		49 - 120	
		Matrix Spike Duplicate	0602391-66	ND	89.070	83.056	mg/kg	9.29	107	30	49 - 120	
Tetracosane (Surrogate)	BPE0248	Matrix Spike	0602391-66	ND	2.7096	3.3113	mg/kg		81.8		44 - 117	V11
		Matrix Spike Duplicate	0602391-66	ND	2.7855	3.3223	mg/kg		83.8		44 - 117	V11

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Project: Misc. Samples  
Project Number: K6 Lube oil #2  
Project Manager: Marji Fergerson

Reported: 07/06/06 15:03

## Purgeable Aromatics and Total Petroleum Hydrocarbons

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
TPH - Diesel (FFP)	BPE0248	BPE0248-BS1	LCS	74.037	83.333	10	mg/kg	88.8		58 - 120		
Tetracosane (Surrogate)	BPE0248	BPE0248-BS1	LCS	2.4328	3.3333		mg/kg	73.0		44 - 117		V11

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Project: Misc. Samples  
Project Number: K6 Lube oil #2  
Project Manager: Marji Fergerson

Reported: 07/06/06 15:03

## Purgeable Aromatics and Total Petroleum Hydrocarbons

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
TPH - Gasoline	BPE0248	BPE0248-BLK1	ND	mg/kg	20	5.0	
TPH - Kerosene	BPE0248	BPE0248-BLK1	ND	mg/kg	10	2.2	
TPH - Diesel (FFP)	BPE0248	BPE0248-BLK1	ND	mg/kg	10	2.0	
TPH - Hydraulic Oil / Motor Oil	BPE0248	BPE0248-BLK1	ND	mg/kg	20	10	
Tetracosane (Surrogate)	BPE0248	BPE0248-BLK1	66.4	%	44 - 117 (LCL - UCL)		V11

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Needles CA, 92363

Project: Misc. Samples  
Project Number: K6 Lube oil #2  
Project Manager: Marji Fergerson

**Reported:** 07/06/06 15:03

### Notes and Definitions

V11 The Continuing Calibration Verification (CCV) recovery is not within established control limits.

A17 Surrogate not reportable due to sample dilution.

A01 PQL's and MDL's are raised due to sample dilution.

ND Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference