

recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 1,000 mg/kg.

Assessment and Results

On June 25, 2007, Highlander personnel inspected and sampled the spill area which is located within the facility firewall and to the southeast of the firewall. The spill area measured approximately 45' x 15' within the firewall and 75' x 15' and 25' x 25' outside the firewall. A total of seven (7) auger holes (AH-1 through AH-7) were installed using a stainless steel hand auger to assess the impacted soils. Three auger holes AH-1, AH-2 and AH-3, were placed in the spill areas outside the firewall and the remaining four auger holes AH-4, AH-5, AH-6 and AH-7, were placed inside the firewall. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0.

TPH concentrations exceeded the RRAL in AH-1, AH-2 and AH-3 to a depth of 1 foot and in AH-5 at a depth of 1-1.5 feet. All three of the samples selected for BTEX were above the RRAL. All of the chloride concentrations were below 250 mg/kg, with the exception of AH-1 at 1.0'-1.5' (492 mg/kg). Copies of laboratory analysis and chain-of-custody documentation are included in Appendix B. The auger hole locations are shown on Figure 3. The results of the sampling are summarized in Table 1.

In July 2007, Pogo had subcontractors onsite to excavate the first one to two feet of soil in the area of auger holes AH-1, AH-2 and AH-3. The soils were excavated and stockpiled onsite before being transported for disposal to Sundance in Eunice, New Mexico.

On July 19, 2007, Highlander was onsite to resample the previously impacted areas adjacent to auger holes AH-1, AH-2, AH-3, and AH-5. Sample points SP-1, SP-2 and SP-3 were installed at AH-1, AH-2, AH-3. Auger hole AH-5, was resampled to confirm if the impact was in the 0-1.0' horizon or the 1.0'-1.5' horizon. The samples were collected and submitted for analysis of TPH with select samples analyzed for BTEX. Analytical results for the three sample points (SP) indicated each of the samples were below the respective RRAL. The confirmation sample at AH-5 (AH-5A) showed the impact above the RRAL to be confined to the first foot. This area was also excavated to a depth of 1.0' and the soil hauled to disposal. The sample points are shown on Figure 3. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix B. The results of the sampling are summarized in Table 2.

Conclusions

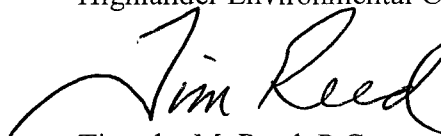
The impacted area was confined to a 45' x 15' within the berm and 75' x 15' and 25' x 25' areas outside the berm. Approximately 1.0 – 2.0 feet of soil was excavated and stockpiled onsite prior to disposal at Sundance in Eunice, New Mexico. No remaining TPH or BTEX concentrations



currently exceed the RRAL. Chloride concentrations are all below 250 mg/kg in the soils, with the exception of the 1.0'-1.5' sample from AH-1 (492 mg/kg), and do not pose an environmental concern.

Based upon the results of the assessment work performed at this site, Latigo Petroleum, Inc. (Pogo Producing Company) requests closure of this Site. If you require any additional information or have any questions or comments concerning the assessment/closure report, please call at (432) 682-4559.

Respectfully submitted,
Highlander Environmental Corp.



Timothy M. Reed, P.G.
Vice President

cc: Pat Ellis – Pogo Producing Company
Don Riggs – Pogo Producing Company





AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



App Number: pPAC0717849242

1RP - 1441

LATIGO PETROLEUM, INC

11/9/2007

SITE INFORMATION

RP# 1441

Report Type: CLOSURE REPORT

General Site Information:

Site:	Central Corbin Queen Unit Tank Battery
Company:	Latigo Petroleum, Inc. (Pogo Producing Company)
Line Location	Section 4, T18S R33E
Spill Location:	Section 4, T18S R33E
Unit Letter:	Unit K
Lease Number:	
County:	Lea
Spill GPS:	32° 46.473', 103° 40.194'
Surface Owner:	
Mineral Owner:	
Directions:	

Release Data:

Date Released:	6/20/2007
Type Release:	Oil
Source of Contamination:	Tank ran over.
Fluid Released:	35 bbls
Fluids Recovered:	None

Official Communication:

Name:	Pat Ellis	Don Riggs	Ike Tavarez
Company:	Pogo Producing Company	Pogo Producing Company	Highlander Environmental Corp.
Address:	300 N. Marienfeld St.	5 Greenway Plaza, Suite 2700	1910 N. Big Spring
P.O. Box	Box 10340		
City:	Midland Texas, 79701-7340	Houston, Texas 77046	Midland, Texas
Phone number:	(432) 685-8100	(713) 297-5045	(432) 682- 4559
Email:	EllisP@pogoproducing.com	riggsd@pogoproducing.com	itavarez@hec-enviro.com

Ranking Criteria

Depth to Groundwater:	Ranking Score	Site Data
<50 ft	20	
50-99 ft	10	Average Depth >50'<100' BS
>100 ft.	0	

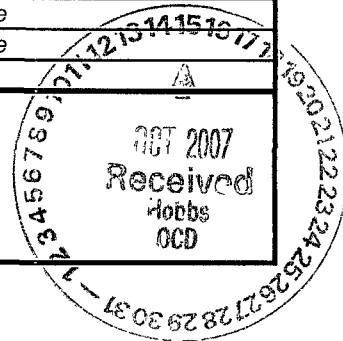
WellHead Protection:	Ranking Score	Site Data
Water Source <1,000 ft., Private <200 ft.	20	None
Water Source >1,000 ft., Private >200 ft.	0	

Surface Body of Water:	Ranking Score	Site Data
<200 ft.	20	None
200 ft - 1,000 ft.	10	None
>1,000 ft.	0	

Total Ranking Score: 10

Acceptable Soil RRAL (mg/kg)

Benzene	Total BTEX	TPH
10	50	1,000



FIGURES

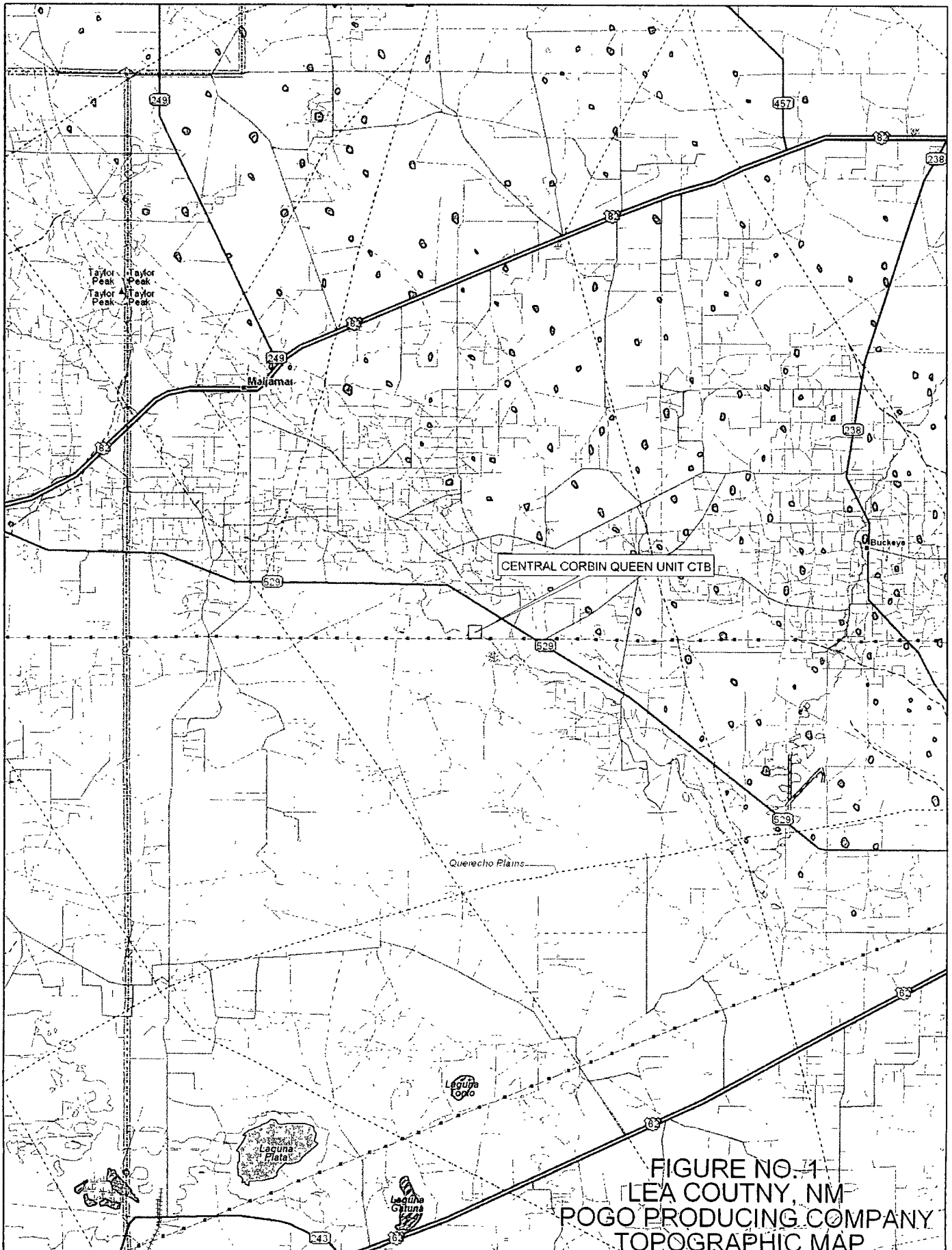
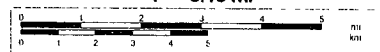


FIGURE NO. 1
LEA COUNTY, NM
POGO PRODUCING COMPANY
TOPOGRAPHIC MAP



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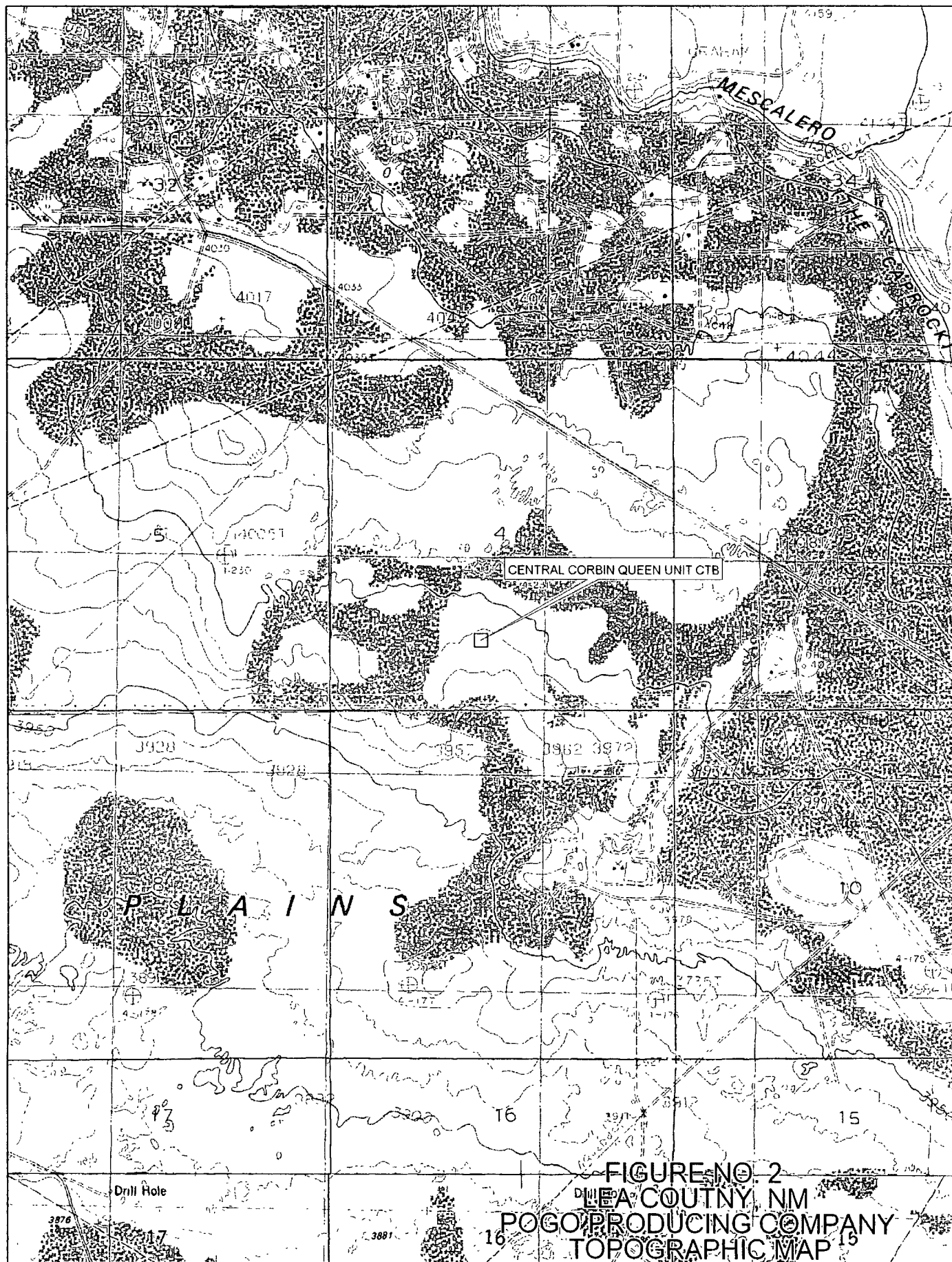
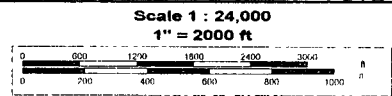


FIGURE NO. 2
 POGO PRODUCING COMPANY
 TOPOGRAPHIC MAP



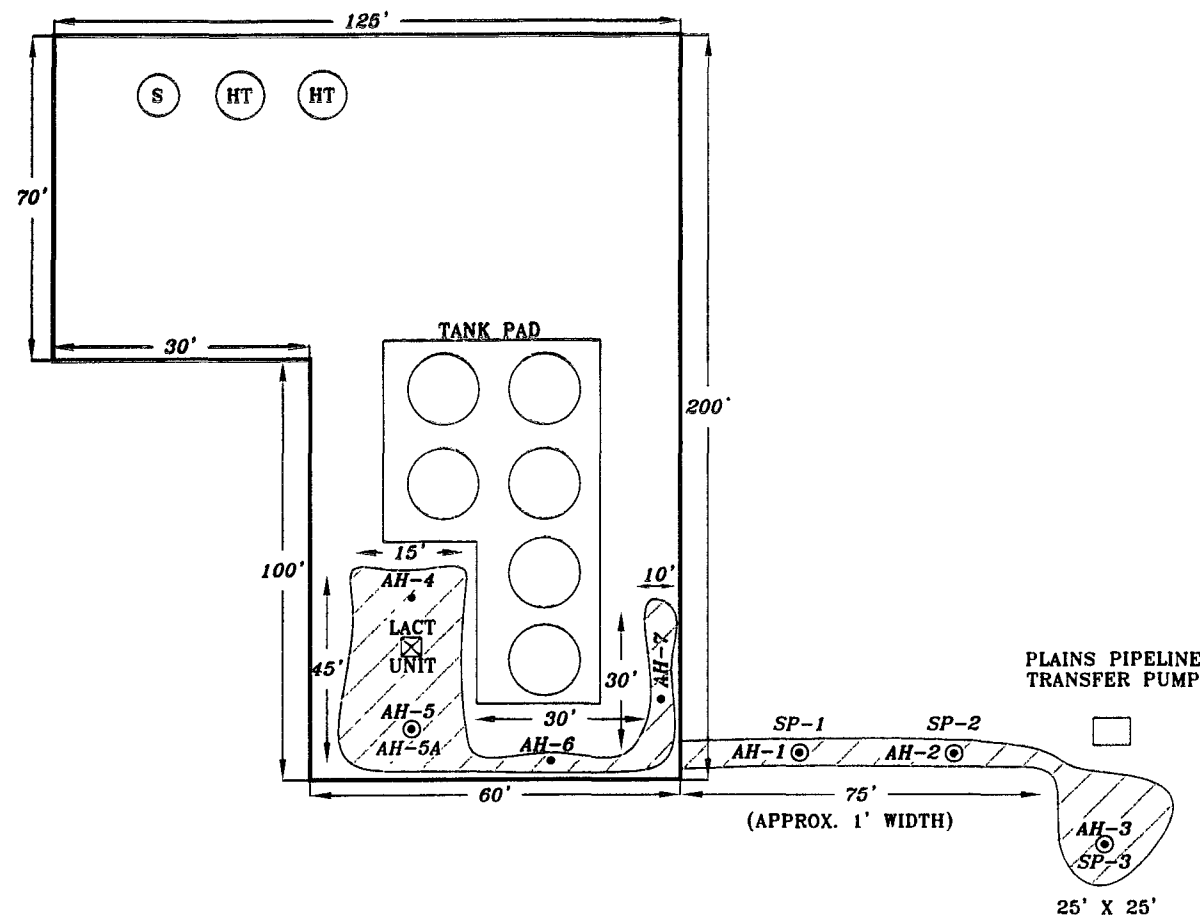
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WELL

LEASE RD.



-  SPILL AREA
-  CONFIRMATION SAMPLE POINTS
-  AUGER HOLE LOCATIONS

NOT TO SCALE

FIGURE NO. 3

LEA COUNTY, NEW MEXICO

POGO PRODUCING COMPANY
CENTRAL CORBIN QUEEN UNIT CTB

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE
8/3/07
OWN BY
JJ
FILE
C:\POGO\30361
CCOU CTB

TABLES

Table 1
Pogo Producing
Central Corbin Queen Unit TB
Lea County, New Mexico

Sample ID	Soils Status		Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
	Insitu	Removed			DRO	GRO	Total					
AH-1		X	6/25/2007	0-1.0'	2,350	3,100	5,450	12.7	95.6	50.5	105	87.6
AH-1	X		6/25/2007	1'-1.5'	117	6.57	123.57	-	-	-	-	492
AH-2		X	6/25/2007	0-1.0'	2,610	4,420	7,030	24.1	136	70.0	146	16.8
AH-2	X		6/25/2007	1'-1.5'	159	234	393	-	-	-	-	21.4
AH-3		X	6/25/2007	0-1.0'	1,570	6,390	7,960	13.0	138	74.1	155	11.8
AH-3	X		6/25/2007	1'-1.5'	213	286	499	-	-	-	-	12.1
AH-4	X		6/25/2007	0-1.0'	<50.0	27.7	27.7	-	-	-	-	16.3
AH-4	X		6/25/2007	1'-1.5'	<50.0	3.84	3.84	-	-	-	-	20.6
AH-5	X		6/25/2007	0-1.0'	<50.0	5.20	5.20	-	-	-	-	19.4
AH-5	X		6/25/2007	1'-1.5'	1,200	245	1,445	-	-	-	-	19.8
AH-6	X		6/25/2007	0-1.0'	742	113	855	-	-	-	-	23.8
AH-6	X		6/25/2007	1'-1.5'	<50.0	3.05	3.05	-	-	-	-	23.6
AH-7	X		6/25/2007	0-1.0'	125	14.2	139.2	-	-	-	-	53.0
AH-7	X		6/25/2007	1'-1.5'	<50.0	2.50	2.50	-	-	-	-	13.2

(-) Not Analyzed

Table 2
Pogo Producing
Central Corbin Queen Unit TB
Lea County, NM

Sample ID	Soils Status		Date Sampled	Excavation Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)
	Insitu	Removed			DRO	GRO	Total				
SP-1 (0-0.5') BEB	X		7/19/2007	2.5'	<50.0	1.04	1.04	<0.0100	<0.0100	<0.0100	0.0441
SP-2 (0-0.5') BEB	X		7/19/2007	2.0'	<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	0.0200
SP-3 (0-0.5') BEB	X		7/19/2007	2.0'	<50.0	<1.00	<50.0	<0.0100	<0.0100	<0.0100	0 0161
AH-5A 0-1.0'		X	7/19/2007	NE	810	1,000	1,810	-	-	-	-
AH-5A 1'-1.5'	X		7/19/2007	NE	<50.0	2.63	2.63	-	-	-	-
AH-5A 2'-2.5'	X		7/19/2007	NE	<50.0	2.42	2.42	-	-	-	-

(-) Not Analyzed

APPENDIX A

Water Well Data
Average Depth to Groundwater (ft)
Pogo - Central Corbin Queen Unit, Lea County, New Mexico

17 South			32 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Lea County Line

17 South			33 East		
6	90	5	4	3	155
				2	158
				1	150
7	167	8	173	9	161
				10	
18		17	16	15	14
				13	
188	180				165
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

17 South			34 East		
6	120	5	4	65	3
				2	80
				1	77
157					
7	8	9	10	11	12
140	140		95	92	115
18	17	16	15	114	14
				13	
160	113	60	60	79	84
19	20	21	22	23	24
78	140	153	109		
30	29	28	27	26	25
					82
31	32	33	34	35	36

18 South			32 East		
6	5	4	65	3	2
					1
7	460	8	9	10	11
					12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

18 South			33 East		
6	5	4	Site	3	2
					1
7	8	9	10	11	12
					143
18	17	16	15	14	13
					60
	85			36	
19	20	21	22	23	24
>140					195
30	29	28	27	26	25
31	32	33	34	35	36

18 South			34 East		
6	5	4	3	2	1
130	105		87	102	107
7	8	9	10	11	12
					115
83	148		148	110	92
18	17	16	15	114	14
				13	
125		108	110	103	96
19	20	21	22	23	24
105	125				
30	29	28	27	26	25
31	32	33	34	35	36

19 South			32 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
102	345				
30	29	28	27	26	25
31	32	33	34	35	36

19 South			33 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
340	116				
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

19 South			34 East		
6	244	5	4	3	2
					100
					1
7	8	9	29	10	11
					123
					12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)
 Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

APPENDIX B

Summary Report

Ike Tavaréz
Highlander Environmental Services
1910 N Big Spring Street
Midland, TX, 79705

Report Date: July 5, 2007

Work Order: 7062608



Project Location: Lea County, NM
Project Name: Pogo/Central Corbin Queen Unit TB
Project Number: 3036

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
128568	AH-1 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128569	AH-1 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128570	AH-2 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128571	AH-2 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128572	AH-3 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128573	AH-3 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128574	AH-4 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128575	AH-4 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128577	AH-5 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128578	AH-5 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128580	AH-6 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128581	AH-6 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128583	AH-7 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128584	AH-7 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26

Sample - Field Code	BTEX				MTBE	TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	MTBE (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
128568 - AH-1 (0-1.0')	12.7	95.6	50.5	105		2350	3100
128569 - AH-1 (1.0-1.5')						117	6.57
128570 - AH-2 (0-1.0')	24.1	136	70.0	146		2610	4420
128571 - AH-2 (1.0-1.5')						159	234
128572 - AH-3 (0-1.0')	13.0	138	74.1	155		1570	6390
128573 - AH-3 (1.0-1.5')						213	
128574 - AH-4 (0-1.0')						<50.0	27.7
128575 - AH-4 (1.0-1.5')						<50.0	3.84
128577 - AH-5 (0-1.0')						<50.0	5.20
128578 - AH-5 (1.0-1.5')						1200	245
128580 - AH-6 (0-1.0')						742	113
128581 - AH-6 (1.0-1.5')						<50.0	3.05
128583 - AH-7 (0-1.0')						125	14.2
128584 - AH-7 (1.0-1.5')						<50.0	2.50

Sample: 128568 - AH-1 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		87.6	mg/Kg	1.00

Sample: 128569 - AH-1 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		492	mg/Kg	1.00

Sample: 128570 - AH-2 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		16.8	mg/Kg	1.00

Sample: 128571 - AH-2 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		21.4	mg/Kg	1.00

Sample: 128572 - AH-3 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		11.8	mg/Kg	1.00

Sample: 128573 - AH-3 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		12.1	mg/Kg	1.00

Sample: 128574 - AH-4 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		16.3	mg/Kg	1.00

Sample: 128575 - AH-4 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		20.6	mg/Kg	1.00

Sample: 128577 - AH-5 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		19.4	mg/Kg	1.00

Sample: 128578 - AH-5 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		19.8	mg/Kg	1.00

Sample: 128580 - AH-6 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		23.8	mg/Kg	1.00

Sample: 128581 - AH-6 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		23.6	mg/Kg	1.00

Sample: 128583 - AH-7 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		53.0	mg/Kg	1.00

Sample: 128584 - AH-7 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		13.2	mg/Kg	1.00

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft Worth, Texas 76132 817•201•5260
E-Mail lab@traceanalysis.com

Analytical and Quality Control Report

Ike Tavarez
Highlander Environmental Services
1910 N. Big Spring Street
Midland, TX. 79705

Report Date July 5, 2007

Work Order: 7002608



Project Location: Lea County, NM
Project Name: Pogo/Central Corbin Queen Unit TE
Project Number: 3036

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
128568	AH-1 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128569	AH-1 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128570	AH-2 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128571	AH-2 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128572	AH-3 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128573	AH-3 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128574	AH-4 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128575	AH-4 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128577	AH-5 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128578	AH-5 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128580	AH-6 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128581	AH-6 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26
128583	AH-7 (0-1.0')	soil	2007-06-25	00:00	2007-06-26
128584	AH-7 (1.0-1.5')	soil	2007-06-25	00:00	2007-06-26

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 27 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank

Case Narrative

Samples for project Pogo/Central Corbin Queen Unit TB were received by TraceAnalysis, Inc. on 2007-06-26 and assigned to work order 7062608. Samples for work order 7062608 were received intact at a temperature of 4 deg C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021E
Chloride (IC)	E 300.0
TPH DRO	Mod 8015E
TPH GRC	S 8015E

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 7062608 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 128568 - AH-1 (0-1.0')

Analysis	BTEX	Analytical Method	S 8021B	Prep Method	S 5035
QC Batch:	38677	Date Analyzed	2007-06-30	Analyzed By	AG
Prep Batch:	33477	Sample Preparation	2007-06-30	Prepared By	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		12.7	mg/Kg	100	0.0100
Toluene		95.6	mg/Kg	100	0.0100
Ethylbenzene		50.5	mg/Kg	100	0.0100
Xylene		105	mg/Kg	100	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		49.4	mg/Kg	100	100	49	26 - 117.8
4-Bromofluorobenzene (4-BFB)		93.6	mg/Kg	100	100	94	51.1 - 119.1

Sample: 128568 - AH-1 (0-1.0')

Analysis	Chloride (IC)	Analytical Method	E 300.0	Prep Method:	N/A
QC Batch	38732	Date Analyzed	2007-07-03	Analyzed By:	AR
Prep Batch	33538	Sample Preparation		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		87.6	mg/Kg	5	1.00

Sample: 128568 - AH-1 (0-1.0')

Analysis:	TPH DRO	Analytical Method	Mod 8015B	Prep Method:	N/A
QC Batch	38661	Date Analyzed	2007-06-28	Analyzed By:	
Prep Batch:	33456	Sample Preparation	2007-06-28	Prepared By	

Parameter	Flag	RL Result	Units	Dilution	RL
DRC		2350	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		180	mg/Kg	1	150	120	32.9 - 167

Sample: 128568 - AH-1 (0-1.0')

Analysis	TPH GRO	Analytical Method	S 8015B	Prep Method:	S 5035
QC Batch:	38678	Date Analyzed	2007-06-30	Analyzed By	AG
Prep Batch:	33477	Sample Preparation:	2007-06-30	Prepared By	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		3100	mg/Kg	100	100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		42.4	mg/Kg	100	100	42	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		138	mg/Kg	100	100	138	67.5 - 140.3

Sample: 128569 - AH-1 (1.0-1.5')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38752	Date Analyzed:	2007-07-03	Analyzed By:	AR
Prep Batch:	33538	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		492	mg/Kg	10	1.00

Sample: 128569 - AH-1 (1.0-1.5')

Analysis:	TPE DRO	Analytical Method:	Mod 8015B	Prep Method:	N/A
QC Batch:	38558	Date Analyzed:	2007-06-27	Analyzed By:	
Prep Batch:	33370	Sample Preparation:	2007-06-27	Prepared By:	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		117	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		127	mg/Kg	1	150	85	61.7 - 143.2

Sample: 128569 - AH-1 (1.0-1.5')

Analysis:	TPE GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38078	Date Analyzed:	2007-06-30	Analyzed By:	AG
Prep Batch:	33477	Sample Preparation:	2007-06-30	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		6.57	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.676	mg/Kg	1	1.00	68	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.825	mg/Kg	1	1.00	82	67.5 - 140.3

¹ Surrogate out due to peak interference

Sample: 128570 - AH-2 (0-1.0')

Analysis	BTEX	Analytical Method:	S 8021B	Prep Method	S 5035
QC Batch	38677	Date Analyzed:	2007-06-30	Analyzed By:	AG
Prep Batch	33477	Sample Preparation	2007-06-30	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		24.1	mg/Kg	100	0.0100
Toluene		136	mg/Kg	100	0.0100
Ethylbenzene		70.0	mg/Kg	100	0.0100
Xylene		146	mg/Kg	100	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		64.9	mg/Kg	100	100	65	26 - 117.8
4-Bromofluorobenzene (4-BFB)		101	mg/Kg	100	100	101	51.1 - 119.1

Sample: 128570 - AH-2 (0-1.0')

Analysis	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch	38752	Date Analyzed:	2007-07-03	Analyzed By:	AR
Prep Batch:	33338	Sample Preparation		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		16.8	mg/Kg	5	1.00

Sample: 128570 - AH-2 (0-1.0')

Analysis	TPH DRO	Analytical Method	Mod. 8015B	Prep Method:	N/A
QC Batch:	38558	Date Analyzed:	2007-06-27	Analyzed By:	
Prep Batch:	33370	Sample Preparation:	2007-06-27	Prepared By:	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		2616	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		149	mg/Kg	1	150	99	61.7 - 145.2

Sample: 128570 - AH-2 (0-1.0')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method	S 5035
QC Batch	38678	Date Analyzed:	2007-06-30	Analyzed By:	AG
Prep Batch:	33477	Sample Preparation:	2007-06-30	Prepared By:	AG

continued

sample 128570 continued.

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		4420	mg/Kg	100	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	2	34.4	mg/Kg	100	100	34	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		99.6	mg/Kg	100	100	100	67.5 - 140.3

Sample: 128571 - AH-2 (1.0-1.5')

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 38752 Date Analyzed: 2007-07-03 Analyzed By: AR
Prep Batch: 33538 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	F	21.4	mg/Kg	5	1.00

Sample: 128571 - AH-2 (1.0-1.5')

Analysis: TPH DRO Analytical Method: Mod 8015B Prep Method: N/A
QC Batch: 38558 Date Analyzed: 2007-06-27 Analyzed By:
Prep Batch: 33370 Sample Preparation: 2007-06-27 Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		159	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		121	mg/Kg	1	150	81	61.7 - 145.2

Sample: 128571 - AH-2 (1.0-1.5')

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 38680 Date Analyzed: 2007-07-01 Analyzed By: AG
Prep Batch: 33478 Sample Preparation: 2007-07-01 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		234	mg/Kg	20	1.00

²Surrogate out due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		15.0	mg/Kg	20	20.0	75	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		17.9	mg/Kg	20	20.0	90	67.5 - 140.5

Sample: 128572 - AH-3 (0-1.0')

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 38679 Date Analyzed: 2007-07-01 Analyzed By: AG
Prep Batch: 33478 Sample Preparation: 2007-07-01 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		13.0	mg/Kg	500	0.0100
Toluene		138	mg/Kg	500	0.0100
Ethylbenzene		74.1	mg/Kg	500	0.0100
Xylene		155	mg/Kg	500	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		369	mg/Kg	500	500	74	26 - 117.8
4-Bromofluorobenzene (4-BFB)		377	mg/Kg	500	500	75	51.1 - 119.1

Sample: 128572 - AH-3 (0-1.0')

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 38752 Date Analyzed: 2007-07-03 Analyzed By: AR
Prep Batch: 33538 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	F	11.8	mg/Kg	5	1.00

Sample: 128572 - AH-3 (0-1.0')

Analysis: TPH DRO Analytical Method: Mod 8015B Prep Method: N/A
QC Batch: 38661 Date Analyzed: 2007-06-28 Analyzed By: Prepared By: Sample Preparation: 2007-06-28

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		1570	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		87.2	mg/Kg	1	150	58	32.9 - 167

Sample: 128572 - AH-3 (0-1.0')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method	S 5035
QC Batch	38680	Date Analyzed:	2007-07-01	Analyzed By	AG
Prep Batch	33478	Sample Preparation	2007-07-01	Prepared By	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		6390	mg/Kg	500	1 00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		283	mg/Kg	500	500	57	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		452	mg/Kg	500	500	90	67.5 - 140.3

Sample: 128573 - AH-3 (1.0-1.5')

Analysis:	Chloride (IC)	Analytical Method:	E 300 0	Prep Method	N/A
QC Batch:	38733	Date Analyzed:	2007-07-03	Analyzed By:	AR
Prep Batch	33539	Sample Preparation		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	B	12.1	mg/Kg	5	1.00

Sample: 128573 - AH-3 (1.0-1.5')

Analysis:	TPH DRO	Analytical Method:	Mod 8015B	Prep Method:	N/A
QC Batch:	38558	Date Analyzed:	2007-06-27	Analyzed By:	
Prep Batch:	33370	Sample Preparation:	2007-06-27	Prepared By	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		213	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		131	mg/Kg	1	150	87	61.7 - 142.2

Sample: 128573 - AH-3 (1.0-1.5')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method	S 5035
QC Batch:	38680	Date Analyzed:	2007-07-01	Analyzed By:	AG
Prep Batch:	33478	Sample Preparation:	2007-07-01	Prepared By:	AG

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.94	mg/Kg	10	10.0	59	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)	³	15.2	mg/Kg	10	10.0	152	67.5 - 140.3

³High surrogate recovery due to peak interference

Sample: 128574 - AH-4 (0-1.0')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38753	Date Analyzed:	2007-07-03	Analyzed By:	AR
Prep Batch:	33339	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	b	16.3	mg/Kg	5	1.00

Sample: 128574 - AH-4 (0-1.0')

Analysis:	TPH DRO	Analytical Method:	Mod 8015B	Prep Method:	N/A
QC Batch:	38558	Date Analyzed:	2007-06-27	Analyzed By:	
Prep Batch:	33370	Sample Preparation:	2007-06-27	Prepared By:	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		128	mg/Kg	1	150	85	61.7 - 143.2

Sample: 128574 - AH-4 (0-1.0')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38680	Date Analyzed:	2007-07-01	Analyzed By:	AG
Prep Batch:	33478	Sample Preparation:	2007-07-01	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		27.7	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.686	mg/Kg	1	1.00	69	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.34	mg/Kg	1	1.00	134	67.5 - 140.3

Sample: 128575 - AH-4 (1.0-1.5')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38753	Date Analyzed:	2007-07-03	Analyzed By:	AR
Prep Batch:	33339	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		20.6	mg/Kg	5	1.00

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Sample: 128575 - AH-4 (1.0-1.5')

Analysis	TPH DRO	Analytical Method	Mod 8015B	Prep Method	N/A
QC Batch	38558	Date Analyzed	2007-06-27	Analyzed By	
Prep Batch	33370	Sample Preparation	2007-06-27	Prepared By	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		122	mg/Kg	1	150	81	61.7 - 145.2

Sample: 128575 - AH-4 (1.0-1.5')

Analysis	TPH GRO	Analytical Method	S 8015B	Prep Method	S 5635
QC Batch	38680	Date Analyzed	2007-07-01	Analyzed By	AG
Prep Batch	33478	Sample Preparation	2007-07-01	Prepared By	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		3.84	mg/Kg	1	100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.676	mg/Kg	1	1.00	68	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.830	mg/Kg	1	1.00	83	67.5 - 140.2

Sample: 128577 - AH-5 (0-1.0')

Analysis	Chloride (IC)	Analytical Method	E 300.0	Prep Method	N/A
QC Batch	33753	Date Analyzed	2007-07-03	Analyzed By	AR
Prep Batch	33539	Sample Preparation		Prepared By	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		19.4	mg/Kg	5	100

Sample: 128577 - AH-5 (0-1.0')

Analysis	TPH DRO	Analytical Method	Mod. 8015B	Prep Method	N/A
QC Batch	38558	Date Analyzed	2007-06-27	Analyzed By	
Prep Batch	33370	Sample Preparation	2007-06-27	Prepared By	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		123	mg/Kg	1	150	82	61.7 - 143.2

Sample: 128577 - AH-5 (0-1.0')

Analysis	TPH GRO	Analytical Method	S 8015B	Prep Method	S 5035
QC Batch	38680	Date Analyzed	2007-07-01	Analyzed By	AG
Prep Batch	33478	Sample Preparation	2007-07-01	Prepared By	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		5.20	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.668	mg/Kg	1	1.00	67	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.00	mg/Kg	1	1.00	100	67.5 - 140.3

Sample: 128578 - AH-5 (1.0-1.5')

Analysis	Chloride (IC)	Analytical Method	E 300.0	Prep Method	N/A
QC Batch	38753	Date Analyzed	2007-07-03	Analyzed By	AR
Prep Batch	33339	Sample Preparation		Prepared By	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		19.8	mg/Kg	5	1.00

Sample: 128576 - AH-5 (1.0-1.5')

Analysis	TPH DRO	Analytical Method	Mod 8015B	Prep Method	N/A
QC Batch	38558	Date Analyzed	2007-06-27	Analyzed By	
Prep Batch	33370	Sample Preparation	2007-06-27	Prepared By	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		1200	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		158	mg/Kg	1	150	105	61.7 - 143.2

Sample: 128578 - AH-5 (1.0-1.5')

Analysis	TPH GRO	Analytical Method	S 8015B	Prep Method	S 5035
QC Batch	38680	Date Analyzed	2007-07-01	Analyzed By	AG
Prep Batch	33478	Sample Preparation	2007-07-01	Prepared By	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		245	mg/kg	10	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6.88	mg/Kg	10	10.0	69	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)	4	14.3	mg/Kg	10	10.0	143	67.5 - 140.3

Sample: 128580 - AH-6 (0-1.0')

Analysis	Chloride (IC)	Analytical Method	E 300.0	Prep Method	N/A
QC Batch	38753	Date Analyzed	2007-07-03	Analyzed By	AR
Prep Batch	33539	Sample Preparation		Prepared By	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		23.8	mg/Kg	5	1.00

Sample: 128580 - AH-6 (0-1.0')

Analysis	TPH DRO	Analytical Method	Mod. 8015B	Prep Method	N/A
QC Batch	38661	Date Analyzed	2007-06-28	Analyzed By	
Prep Batch	33456	Sample Preparation	2007-06-28	Prepared By	

Parameter	Flag	RL Result	Units	Dilution	RL
DRC		742	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		184	mg/Kg	1	150	123	32.9 - 167

Sample: 128580 - AH-6 (0-1.0')

Analysis	TPH GRO	Analytical Method	S 8015B	Prep Method	S 5035
QC Batch	38680	Date Analyzed	2007-07-01	Analyzed By	AG
Prep Batch	33478	Sample Preparation	2007-07-01	Prepared By	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		113	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3.09	mg/Kg	5	5.00	62	32.4 - 123.7
4-Bromofluorobenzene (4-BFB)		6.71	mg/Kg	5	5.00	134	67.5 - 140.3

⁴High surrogate recovery due to peak interference

Sample: 128581 - AH-6 (1.0-1.5')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38753	Date Analyzed:	2007-07-03	Analyzed By:	AR
Prep Batch:	33539	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		23.6	mg/Kg	5	1.00

Sample: 128581 - AH-6 (1.0-1.5')

Analysis:	TPH DRO	Analytical Method:	Mod 8015B	Prep Method:	N/A
QC Batch:	38661	Date Analyzed:	2007-06-28	Analyzed By:	
Prep Batch:	33456	Sample Preparation:	2007-06-28	Prepared By:	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		155	mg/Kg	1	150	103	32.9 - 167

Sample: 128581 - AH-6 (1.0-1.5')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38680	Date Analyzed:	2007-07-01	Analyzed By:	AG
Prep Batch:	33478	Sample Preparation:	2007-07-01	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		3.05	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.672	mg/Kg	1	1.00	67	32.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.03	mg/Kg	1	1.00	103	67.5 - 140.3

Sample: 128583 - AH-7 (0-1.0')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38753	Date Analyzed:	2007-07-03	Analyzed By:	AR
Prep Batch:	33539	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		53.0	mg/Kg	5	1.00

Sample: 128583 - AH-7 (0-1.0')

Analysis:	TPH DRO	Analytical Method:	Mod 8015B	Prep Method:	N/A
QC Batch:	38661	Date Analyzed:	2007-06-28	Analyzed By:	
Prep Batch:	33456	Sample Preparation:	2007-06-28	Prepared By:	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		125	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		130	mg/Kg	1	150	87	32.9 - 167

Sample: 128583 - AH-7 (0-1.0')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38680	Date Analyzed:	2007-07-01	Analyzed By:	AG
Prep Batch:	33478	Sample Preparation:	2007-07-01	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		14.2	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.079	mg/Kg	1	1.00	68	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.868	mg/Kg	1	1.00	87	67.5 - 140.3

Sample: 128584 - AH-7 (1.0-1.5')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38753	Date Analyzed:	2007-07-03	Analyzed By:	AR
Prep Batch:	33539	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	E	13.2	mg/Kg	5	1.00

Sample: 128584 - AH-7 (1.0-1.5')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	38661	Date Analyzed:	2007-06-28	Analyzed By:	
Prep Batch:	33456	Sample Preparation:	2007-06-28	Prepared By:	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		129	mg/Kg	1	150	86	32.6 - 167

Sample 128584 - AH-7 (1.0-1.5')

Analysis: TPE GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 38680 Date Analyzed: 2007-07-01 Analyzed By: AG
Prep Batch: 33478 Sample Preparation: 2007-07-01 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		2.50	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.704	mg/Kg	1	1.00	70	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.842	mg/Kg	1	1.00	84	67.5 - 140.3

Method Blank (1) QC Batch: 38558

QC Batch: 38558 Date Analyzed: 2007-06-27 Analyzed By:
Prep Batch: 33370 QC Preparation: 2007-06-27 Prepared By:

Parameter	Flag	MDL Result	Units	RL
DRO		<13.4	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		118	mg/Kg	1	150	79	61.7 - 143.2

Method Blank (1) QC Batch: 38601

QC Batch: 38601 Date Analyzed: 2007-06-28 Analyzed By:
Prep Batch: 33456 QC Preparation: 2007-06-28 Prepared By:

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		147	mg/Kg	1	150	98	44.7 - 133.0

Method Blank (1) QC Batch: 38677

QC Batch: 38677 Date Analyzed: 2007-06-30 Analyzed By: AG
Prep Batch: 33477 QC Preparation: 2007-06-30 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00110	mg/Kg	0.01
Toluene		<0.00150	mg/Kg	0.01
Ethylbenzene		<0.00160	mg/Kg	0.01
Xylene		<0.00410	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.732	mg/Kg	1	1.00	73	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.729	mg/Kg	1	1.00	73	53.9 - 125.1

Method Blank (1) QC Batch: 38678

QC Batch: 38678 Date Analyzed: 2007-06-30 Analyzed By: AG
Prep Batch: 33477 QC Preparation: 2007-06-30 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.739	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.765	mg/Kg	1	1.00	76	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.717	mg/Kg	1	1.00	72	67.5 - 140.3

Method Blank (1) QC Batch: 38679

QC Batch: 38679 Date Analyzed: 2007-07-01 Analyzed By: AG
Prep Batch: 33478 QC Preparation: 2007-07-01 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00110	mg/Kg	0.01
Toluene		<0.00150	mg/Kg	0.01
Ethylbenzene		<0.00160	mg/Kg	0.01
Xylene		<0.00410	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.714	mg/Kg	1	1.00	71	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.690	mg/Kg	1	1.00	69	53.9 - 125.1

Method Blank (1) QC Batch: 38680

QC Batch: 38680 Date Analyzed: 2007-07-01 Analyzed By: AG
Prep Batch: 33478 QC Preparation: 2007-07-01 Prepared By: AG

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Parameter	Flag	MDL Result	Units	RL
GRO		<6.739	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.762	mg/Kg	1	1.00	76	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.682	mg/Kg	1	1.00	68	67.5 - 140.3

Matrix Blank (1) QC Batch 38752

QC Batch: 38752 Date Analyzed: 2007-07-03 Analyzed By: AR
Prep Batch: 33538 QC Preparation: 2007-06-29 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		3.94	mg/Kg	1

Matrix Blank (1) QC Batch 38753

QC Batch: 38753 Date Analyzed: 2007-07-03 Analyzed By: AR
Prep Batch: 33538 QC Preparation: 2007-06-29 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		3.95	mg/Kg	1

Laboratory Control Spike (LCS-1)

QC Batch: 38558 Date Analyzed: 2007-06-27 Analyzed By:
Prep Batch: 33370 QC Preparation: 2007-06-27 Prepared By:

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec Limit
DRO	219	mg/Kg	1	250	<13.4	88	62.5 - 135.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
DRO	200	mg/Kg	1	250	<13.4	80	62.5 - 135.4	9	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil	Spike Amount	LCS Rec.	LCSD Rec.	Rec Limit
n-Triacontane	113	101	mg/Kg	1	150	75	67	66.6 - 140.9

Laboratory Control Spike (LCS-1)

QC Batch: 38661
Prep Batch: 33456

Date Analyzed: 2007-06-28
QC Preparation: 2007-06-28

Analyzed By:
Prepared By:

Param	LCS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
DRO	166	mg/Kg	1	250	<14.6	62	47.5 - 144.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result

Param	LCSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
DRO	184	mg/Kg	1	250	<14.6	74	47.5 - 144.1	16	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil	Spike Amount	LCS Rec	LCSD Rec	Rec Limit
n-Triacontane	109	110	mg/Kg	1	150	73	73	57.5 - 131.6

Laboratory Control Spike (LCS-1)

QC Batch: 38677
Prep Batch: 33477

Date Analyzed: 2007-06-30
QC Preparation: 2007-06-30

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
Benzene	1.05	mg/Kg	1	1.00	<0.00110	105	68.6 - 123.4
Toluene	1.05	mg/Kg	1	1.00	<0.00150	105	74.6 - 119.3
Ethylbenzene	1.02	mg/Kg	1	1.00	<0.00160	102	72.3 - 126.2
Xylene	3.07	mg/Kg	1	3.00	<0.00410	102	76.5 - 121.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result

Param	LCSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
Benzene	1.04	mg/Kg	1	1.00	<0.00110	104	68.6 - 123.4	1	20
Toluene	1.06	mg/Kg	1	1.00	<0.00150	106	74.6 - 119.3	1	20
Ethylbenzene	1.04	mg/Kg	1	1.00	<0.00160	104	72.3 - 126.2	2	20
Xylene	3.15	mg/Kg	1	3.00	<0.00410	105	76.5 - 121.6	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result

Surrogate	LCS Result	LCSD Result	Units	Dil	Spike Amount	LCS Rec	LCSD Rec	Rec Limit
Trifluorotoluene (TFT)	0.669	0.666	mg/Kg	1	1.00	67	67	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	0.762	0.765	mg/Kg	1	1.00	76	76	68.7 - 125.8

Laboratory Control Spike (LCS-1)

QC Batch: 38678
Prep Batch: 33477

Date Analyzed: 2007-06-30
QC Preparation: 2007-06-30

Analyzed By: AG
Prepared By: AG

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec Limit
GRO	9.24	mg/Kg	1	10.0	<0.739	92	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec. Limit	RPD	RPD Limit
GRO	8.51	mg/Kg	1	10.0	<0.739	85	57.7 - 102.5	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec	LCSD Rec	Rec Limit
Trifluorotoluene (TFT)	1.00	0.971	mg/Kg	1	1.00	100	91	30.3 - 152.5
4-Bromofluorobenzene (4-BFB)	0.857	0.779	mg/Kg	1	1.00	86	78	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 38679
Prep Batch: 33478

Date Analyzed: 2007-07-01
QC Preparation: 2007-07-01

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec Limit
Benzene	1.01	mg/Kg	1	1.00	<0.00110	101	68.6 - 123.4
Toluene	1.02	mg/Kg	1	1.00	<0.00150	102	74.6 - 119.3
Ethylbenzene	0.977	mg/Kg	1	1.00	<0.00160	98	72.3 - 126.2
Xylene	2.95	mg/Kg	1	3.00	<0.00410	98	76.5 - 121.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
Benzene	1.04	mg/Kg	1	1.00	<0.00110	104	68.6 - 123.4	3	20
Toluene	1.05	mg/Kg	1	1.00	<0.00150	105	74.6 - 119.3	3	20
Ethylbenzene	1.02	mg/Kg	1	1.00	<0.00160	102	72.3 - 126.2	4	20
Xylene	3.07	mg/Kg	1	3.00	<0.00410	102	76.5 - 121.6	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec	LCSD Rec	Rec Limit
Trifluorotoluene (TFT)	0.649	0.654	mg/Kg	1	1.00	65	65	64.1 - 118.1
4-Bromofluorobenzene (4-BFB)	0.746	0.745	mg/Kg	1	1.00	75	74	68.7 - 125.8

Laboratory Control Spike (LCS-1)

QC Batch: 38680
Prep Batch: 33478

Date Analyzed: 2007-07-01
QC Preparation: 2007-07-01

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec Limit
GRO	9.40	mg/Kg	1	10.0	<0.739	94	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
GRO	8.52	mg/Kg	1	10.0	<0.739	85	57.7 - 102.5	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil	Spike Amount	LCS Rec	LCSD Rec	Rec Limit
Trifluorotoluene (TFT)	1.05	0.932	mg/Kg	1	1.00	105	93	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.554	0.775	mg/Kg	1	1.00	85	78	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch 38752
Prep Batch 33538

Date Analyzed: 2007-07-03
QC Preparation: 2007-06-29

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
Chloride	10.4	mg/Kg	1	12.5	3.936	100	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
Chloride	15.8	mg/Kg	1	12.5	3.936	95	90 - 110	4	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch 38753
Prep Batch 33539

Date Analyzed: 2007-07-03
QC Preparation: 2007-06-29

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
Chloride	17.2	mg/Kg	1	12.5	3.95	100	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
Chloride	16.2	mg/Kg	1	12.5	3.95	98	90 - 110	6	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 128477

QC Batch: 38558
Prep Batch 33370

Date Analyzed: 2007-06-27
QC Preparation: 2007-06-27

Analyzed By:
Prepared By:

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
DRO	518	mg/Kg	1	250	<13.4	127	29.7 - 168.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
DRO	308	mg/Kg	1	250	<13.4	123	29.7 - 168.6	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil	Spike Amount	MS Rec	MSD Rec	Rec Limit
n-Triacontane	125	119	mg/Kg	1	150	83	79	43.4 - 193.6

Matrix Spike (MS-1) Spiked Sample 128581

QC Batch: 38661
Prep Batch: 33456Date Analyzed: 2007-06-28
QC Preparation: 2007-06-28Analyzed By:
Prepared By:

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
DRO	283	mg/Kg	1	250	<14.6	113	11.7 - 152.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
DRO	208	mg/Kg	1	250	<14.6	83	11.7 - 152.3	30	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil	Spike Amount	MS Rec	MSD Rec	Rec Limit
n-Triacontane	155	119	mg/Kg	1	150	102	79	17 - 163.1

Matrix Spike (MS-1) Spiked Sample 128845

QC Batch: 38677
Prep Batch: 33477Date Analyzed: 2007-06-30
QC Preparation: 2007-06-30Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
Benzene	1.15	mg/Kg	1	1.00	<0.00110	113	64.4 - 113.7
Toluene	1.19	mg/Kg	1	1.00	<0.00150	119	57.8 - 124.4
Ethylbenzene	1.18	mg/Kg	1	1.00	<0.00160	118	64.8 - 125.8
Xylene	3.58	mg/Kg	1	3.00	<0.00410	119	65.2 - 121.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
Benzene	1.07	mg/Kg	1	1.00	<0.00110	107	64.4 - 113.7	7	20
Toluene	1.13	mg/Kg	1	1.00	<0.00150	113	57.8 - 124.4	5	20
Ethylbenzene	1.14	mg/Kg	1	1.00	<0.00160	114	64.8 - 125.8	3	20
Xylene	3.46	mg/Kg	1	3.00	<0.00410	115	65.2 - 121.8	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil	Spike Amount	MS Rec	MSD Rec	Rec Limit
Trifluorotoluene (TFT)	0.632	0.649	mg/Kg	1	1	63	65	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	0.819	0.807	mg/Kg	1	1	82	81	66.7 - 131.9

Matrix Spike (MS-1) Spiked Sample 128845

QC Batch: 38678 Date Analyzed: 2007-06-30 Analyzed By: AG
Prep Batch: 33477 QC Preparation: 2007-06-30 Prepared By: AG

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
GRO	7.75	mg/Kg	1	10.0	3.31	44	10 - 141.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
GRO	8.27	mg/Kg	1	10.0	3.32	50	10 - 141.5	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil	Spike Amount	MS Rec	MSD Rec	Rec Limit
Trifluorotoluene (TFT)	0.587	0.584	mg/Kg	1	1	59	58	40 - 125.3
4-Bromofluorobenzene (4-BFB)	0.952	0.887	mg/Kg	1	1	95	89	80.7 - 144.5

Matrix Spike (MS-1) Spiked Sample 128599

QC Batch: 38679 Date Analyzed: 2007-07-01 Analyzed By: AG
Prep Batch: 33478 QC Preparation: 2007-07-01 Prepared By: AG

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
Benzene	0.980	mg/Kg	1	1.00	<0.00110	98	64.4 - 115.7
Toluene	1.02	mg/Kg	1	1.00	<0.00150	102	57.8 - 124.4
Ethylbenzene	1.01	mg/Kg	1	1.00	<0.00160	101	64.8 - 125.8
Xylene	3.06	mg/Kg	1	3.00	<0.00410	102	65.2 - 121.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
Benzene	1.03	mg/Kg	1	1.00	<0.00110	103	64.4 - 115.7	5	20
Toluene	1.07	mg/Kg	1	1.00	<0.00150	107	57.8 - 124.4	5	20
Ethylbenzene	1.07	mg/Kg	1	1.00	<0.00160	107	64.8 - 125.8	6	20
Xylene	3.25	mg/Kg	1	3.00	<0.00410	108	65.2 - 121.8	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil	Spike Amount	MS Rec	MSD Rec	Rec Limit
Trifluorotoluene (TFT)	0.642	0.622	mg/Kg	1	1	64	62	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	0.803	0.787	mg/Kg	1	1	80	79	66.7 - 131.9

Matrix Spike (MS-1) Spiked Sample 128584

QC Batch: 38680
Prep Batch: 33478

Date Analyzed: 2007-07-01
QC Preparation: 2007-07-01

Analyzed By: AG
Prepared By: AG

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
GRO	7.62	mg/Kg	1	10.0	2.5	51	10 - 141.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
GRO	7.45	mg/Kg	1	10.0	2.5	50	10 - 141.5	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil	Spike Amount	MS Rec	MSD Rec	Rec Limit
Trifluorotoluene (TFT)	0.569	0.592	mg/Kg	1	1	57	59	40 - 125.3
4-Bromofluorobenzene (4-BFB)	0.914	0.860	mg/Kg	1	1	91	86	86 - 144.5

Matrix Spike (MS-1) Spiked Sample: 128523

QC Batch: 38752
Prep Batch: 33538

Date Analyzed: 2007-07-03
QC Preparation: 2007-06-29

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
Chloride	409	mg/Kg	5	62.5	385.269	38	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
Chloride	406	mg/Kg	5	62.5	385.269	33	90 - 110	1	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample 128584

QC Batch: 38753
Prep Batch: 33539

Date Analyzed: 2007-07-03
QC Preparation: 2007-06-29

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
Chloride	37.0	mg/Kg	5	62.5	13.1749	38	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

⁵Surrogate out due to peak interference.

⁶Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁷Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁸Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Param	MSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit	RPD	RPD Limit
Chloride	⁹ 83.6	mg/Kg	5	62.5	13.1749	113	90 - 110	77	

Percent recovery is based on the spike result RPD is based on the spike and spike duplicate result

Standard (CCV-1)

QC Batch 38558

Date Analyzed 2007-06-27

Analyzed By

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	220	88	85 - 115	2007-06-27

Standard (CCV-2)

QC Batch 38558

Date Analyzed: 2007-06-27

Analyzed By

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	221	88	85 - 115	2007-06-27

Standard (CCV-3)

QC Batch: 38558

Date Analyzed: 2007-06-27

Analyzed By

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	223	89	85 - 115	2007-06-27

Standard (CCV-1)

QC Batch 38661

Date Analyzed: 2007-06-28

Analyzed By

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	236	94	85 - 115	2007-06-28

Standard (CCV-2)

QC Batch: 38661

Date Analyzed: 2007-06-28

Analyzed By

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	230	92	85 - 115	2007-06-28

⁹Matrix spike recovery out of control limits due to matrix interference Use LCS/LCSEL to demonstrate analysis is under control

Standard (ICV-1)

QC Batch: 38677

Date Analyzed: 2007-06-30

Analyzed By: AC

Param	Flag	Units	ICVs True Conc	ICVs Found Conc	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.101	101	85 - 115	2007-06-30
Toluene		mg/Kg	0.100	0.104	104	85 - 115	2007-06-30
Ethylbenzene		mg/Kg	0.100	0.101	101	85 - 115	2007-06-30
Xylene		mg/Kg	0.300	0.306	102	85 - 115	2007-06-30

Standard (CCV-1)

QC Batch: 38677

Date Analyzed: 2007-06-30

Analyzed By: AG

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.101	101	85 - 115	2007-06-30
Toluene		mg/Kg	0.100	0.103	103	85 - 115	2007-06-30
Ethylbenzene		mg/Kg	0.100	0.0976	98	85 - 115	2007-06-30
Xylene		mg/Kg	0.300	0.296	99	85 - 115	2007-06-30

Standard (ICV-1)

QC Batch: 38678

Date Analyzed: 2007-06-30

Analyzed By: AG

Param	Flag	Units	ICVs True Conc	ICVs Found Conc	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.908	91	85 - 115	2007-06-30

Standard (CCV-1)

QC Batch: 38678

Date Analyzed: 2007-06-30

Analyzed By: AG

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.01	101	85 - 115	2007-06-30

Standard (ICV-1)

QC Batch: 38679

Date Analyzed: 2007-07-01

Analyzed By: AG

Param	Flag	Units	ICVs True Conc	ICVs Found Conc	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.105	105	85 - 115	2007-07-01
Toluene		mg/Kg	0.100	0.105	105	85 - 115	2007-07-01

continued ..

standard continued...

Param	Flag	Units	ICVs True Conc	ICVs Found Conc	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		mg/Kg	0.100	0.101	101	85 - 115	2007-07-01
Xylene		mg/Kg	0.300	0.306	102	85 - 115	2007-07-01

Standard (CCV-1)

QC Batch: 38679

Date Analyzed: 2007-07-01

Analyzed By: AG

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0964	96	85 - 115	2007-07-01
Toluene		mg/Kg	0.100	0.0982	98	85 - 115	2007-07-01
Ethylbenzene		mg/Kg	0.100	0.0936	94	85 - 115	2007-07-01
Xylene		mg/Kg	0.300	0.285	95	85 - 115	2007-07-01

Standard (ICV-1)

QC Batch: 38680

Date Analyzed: 2007-07-01

Analyzed By: AG

Param	Flag	Units	ICVs True Conc	ICVs Found Conc	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GR0		mg/Kg	1.00	1.02	102	85 - 115	2007-07-01

Standard (CCV-1)

QC Batch: 38680

Date Analyzed: 2007-07-01

Analyzed By: AG

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GR0		mg/Kg	1.00	1.06	106	85 - 115	2007-07-01

Standard (ICV-1)

QC Batch: 38752

Date Analyzed: 2007-07-03

Analyzed By: AR

Param	Flag	Units	ICVs True Conc	ICVs Found Conc	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	12.7	101	90 - 110	2007-07-03

Standard (CCV-1)

QC Batch: 38752

Date Analyzed: 2007-07-03

Analyzed By: AR

Report Date July 5, 2007
3036

Work Order 7062608
Pogo/Central Corbin Queen Unit TB

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Lea County, NM

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	12.3	98	90 - 110	2007-07-03

Standard (ICV-1)

QC Batch 38753

Date Analyzed 2007-07-05

Analyzed By: AR

Param	Flag	Units	ICVs True Conc	ICVs Found Conc	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	12.5	98	90 - 110	2007-07-03

Standard (CCV-1)

QC Batch 38753

Date Analyzed 2007-07-03

Analyzed By: AR

Param	Flag	Units	CCVs True Conc	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	12.3	99	90 - 110	2007-07-03

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.

Midland, Texas 79705

(432) 682 4559

Fax (432) 682-3946

CLIENT NAME:

Pogo

SITE MANAGER:

Ike Tavares

PROJECT NO.:

3036

PROJECT NAME:

Pogo/Central Cochise Quatern Unit TB

Lea County, NM

SAMPLE IDENTIFICATION

LAB I.D.
NUMBER

DATE

TIME

MATRIX

COMP.

GRAB

NUMBER OF CONTAINERS

FILTERED (Y/N)

HCL

HNO3

ICE

NONE

PRESERVATIVE
METHOD

BTEX 3020/802

MTH 8030/803

412.1

PAH 8070

HCTA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 3240/8280/824

GC/MS Semi. Vol. 8270/825

PCB's 8080/808

Pest. 808/808

808, 183, 24, 183, 183

Gamma Spec.

Alpha Beta (air)

PLM (Asbestos)

128568

6/25/07

S

X

AH-1 (0-1.0')

1

X

X

X

569

S

X

AH-1 (1.0'-1.5')

1

X

X

X

570

S

X

AH-2 (0-1.0')

1

X

X

X

571

S

X

AH-2 (1.0'-1.5')

1

X

X

X

572

S

X

AH-3 (0-1.0')

1

X

X

X

573

S

X

AH-3 (1.0'-1.5')

1

X

X

X

574

S

X

AH-4 (0-1.0')

1

X

X

X

575

S

X

AH-4 (1.0'-1.5')

1

X

X

X

576

S

X

AH-4 (2.0'-2.5')

1

X

X

577

S

X

AH-5 (0-1.0')

1

X

X

X

RELINQUISHED BY: (Signature)

Date: June 26, 2007

RECEIVED BY: (Signature)

Date: 6-26-07

SAMPLED BY: (Print & Sign)

Date: 6/25/07

RELINQUISHED BY: (Signature)

Date: 6/26/07

RECEIVED BY: (Signature)

Date: 6/26/07

SAMPLE SHIPPED BY: (Circle)

Time: 9:00

RELINQUISHED BY: (Signature)

Date: 6/26/07

RECEIVED BY: (Signature)

Date: 6/26/07

FEDEX

RUS

AIRBILL #

RELINQUISHED BY: (Signature)

Date: 6/26/07

RECEIVED BY: (Signature)

Date: 6/26/07

HAND DELIVERED

UPS

OTHER:

RELINQUISHED BY: (Signature)

Date: 6/26/07

RECEIVED BY: (Signature)

Date: 6/26/07

HIGHLANDER CONTACT PERSON:

Results by:

RECEIVING LABORATORY: Trace

RECEIVED BY: (Signature)

ADDRESS:

CITY: Midland

STATE: TX

ZIP:

CONTACT:

PHONE:

DATE:

TIME:

SAMPLE CONDITION WHEN RECEIVED:

MATRIX:

R - Water

A - Air

SD - Solid

S - Soil

SL - Sludge

O - Other

REMARKS:

Run 3 BTEX on Highest TPH

Summary Report

Ike Tavarez
Highlander Environmental Services
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: July 26, 2007

Work Order: 7072022



Project Location: Lea County, NM
Project Name: Pogo/Central Corbin Queen Unit TB
Project Number: 3036

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
130493	SP-1 0-0.5' BEB (2.5')	soil	2007-07-19	00:00	2007-07-20
130494	SP-2 0-0.5' BEB (2.0')	soil	2007-07-19	00:00	2007-07-20
130495	SP-3 0-0.5' BEB (2.0')	soil	2007-07-19	00:00	2007-07-20
130496	AH-5A (0-1.0')	soil	2007-07-19	00:00	2007-07-20
130497	AH-5A (1'-1.5')	soil	2007-07-19	00:00	2007-07-20
130498	AH-5A (2'-2.5')	soil	2007-07-19	00:00	2007-07-20

Sample - Field Code	TPH DRO	TPH GRO
	DRO (mg/Kg)	GRO (mg/Kg)
130493 - SP-1 0-0.5' BEB (2.5')	<50.0	1.04
130494 - SP-2 0-0.5' BEB (2.0')	<50.0	<1.00
130495 - SP-3 0-0.5' BEB (2.0')	<50.0	<1.00
130496 - AH-5A (0-1.0')	810	1000
130497 - AH-5A (1'-1.5')	<50.0	2.63
130498 - AH-5A (2'-2.5')	<50.0	2.42

Sample: 130493 - SP-1 0-0.5' BEB (2.5')

Param	Flag	Result	Units	RL
Benzene		<0.0100	mg/Kg	0.0100
Toluene		<0.0100	mg/Kg	0.0100
Ethylbenzene		<0.0100	mg/Kg	0.0100
Xylene		0.0441	mg/Kg	0.0100

Sample: 130494 - SP-2 0-0.5' BEB (2.0')

Param	Flag	Result	Units	RL
Benzene		<0.0100	mg/Kg	0.0100
Toluene		<0.0100	mg/Kg	0.0100
Ethylbenzene		<0.0100	mg/Kg	0.0100
Xylene		0.0200	mg/Kg	0.0100

Report Date: July 26, 2007
3036

Work Order: 7072022
Pogo/Central Corbin Queen Unit TB

Page Number: 2 of 2
Lea County, NM

Sample: 130495 - SP-3 0-0.5' BEB (2.0')

Param	Flag	Result	Units	RL
Benzene		<0.0100	mg/Kg	0.0100
Toluene		<0.0100	mg/Kg	0.0100
Ethylbenzene		<0.0100	mg/Kg	0.0100
Xylene		0.0161	mg/Kg	0.0100

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite S Lubbock Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1296
200 East Sunset Road, Suite L El Paso, Texas 79922 800•585•3443 915•585•3443 FAX 915•585•3443
5002 Basin Street, Suite A1 Midland Texas 79703 432•689•6301 FAX 432•689•6313
6915 Harris Parkway, Suite 112 Ft Worth Texas 76132 817•201•5260
E-Mail lab@traceanalysis.com

Analytical and Quality Control Report

Ike Tavaréz
Highlander Environmental Services
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: July 26, 2007

Work Order: 7072022



Project Location: Lea County, NM
Project Name: Pogo/Central Corbin Queen Unit TB
Project Number: 3036

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
130493	SP-1 0-0.5' BEB (2.5')	soil	2007-07-19	00:00	2007-07-20
130494	SP-2 0-0.5' BEB (2.0')	soil	2007-07-19	00:00	2007-07-20
130495	SP-3 0-0.5' BEB (2.0')	soil	2007-07-19	00:00	2007-07-20
130496	AH-5A (0-1.0')	soil	2007-07-19	00:00	2007-07-20
130497	AH-5A (1'-1.5')	soil	2007-07-19	00:00	2007-07-20
130498	AH-5A (2'-2.5')	soil	2007-07-19	00:00	2007-07-20

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Analytical Report

Sample: 130493 - SP-1 0-0.5' BEB (2.5')

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 39383	Date Analyzed: 2007-07-24	Analyzed By:
Prep Batch: 34091	Sample Preparation: 2007-07-24	Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		0.0441	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.06	mg/Kg	1	1.00	106	26 - 117.8
4-Bromofluorobenzene (4-BFB)		1.15	mg/Kg	1	1.00	115	51.1 - 119.1

Sample: 130493 - SP-1 0-0.5' BEB (2.5')

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 39275	Date Analyzed: 2007-07-20	Analyzed By:
Prep Batch: 33995	Sample Preparation: 2007-07-20	Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		148	mg/Kg	1	150	99	32.9 - 167

Sample: 130493 - SP-1 0-0.5' BEB (2.5')

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 39405	Date Analyzed: 2007-07-25	Analyzed By:
Prep Batch: 34114	Sample Preparation: 2007-07-25	Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	1.04	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.815	mg/Kg	1	1.00	82	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.01	mg/Kg	1	1.00	101	67.5 - 140.3

Report Date: July 26, 2007
3036

Work Order: 7072022
Pogo/Central Corbin Queen Unit TB

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Lea County, NM

Sample: 130494 - SP-2 0-0.5' BEB (2.0')

Analysis: BTEX
QC Batch: 39383
Prep Batch: 34091

Analytical Method: S 8021B
Date Analyzed: 2007-07-24
Sample Preparation: 2007-07-24

Prep Method: S 5035
Analyzed By:
Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		0.0200	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.06	mg/Kg	1	1.00	106	26 - 117.8
4-Bromofluorobenzene (4-BFB)		1.12	mg/Kg	1	1.00	112	51.1 - 119.1

Sample: 130494 - SP-2 0-0.5' BEB (2.0')

Analysis: TPH DRO
QC Batch: 39275
Prep Batch: 33995

Analytical Method: Mod. 8015B
Date Analyzed: 2007-07-20
Sample Preparation: 2007-07-20

Prep Method: N/A
Analyzed By:
Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		140	mg/Kg	1	150	93	32.9 - 167

Sample: 130494 - SP-2 0-0.5' BEB (2.0')

Analysis: TPH GRO
QC Batch: 39405
Prep Batch: 34114

Analytical Method: S 8015B
Date Analyzed: 2007-07-25
Sample Preparation: 2007-07-25

Prep Method: S 5035
Analyzed By:
Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.820	mg/Kg	1	1.00	82	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.976	mg/Kg	1	1.00	98	67.5 - 140.3

Sample: 130495 - SP-3 0-0.5' BEB (2.0')

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 39383	Date Analyzed: 2007-07-24	Analyzed By:
Prep Batch: 34091	Sample Preparation: 2007-07-24	Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		0.0161	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.04	mg/Kg	1	1.00	104	26 - 117.8
4-Bromofluorobenzene (4-BFB)		1.13	mg/Kg	1	1.00	113	51.1 - 119.1

Sample: 130495 - SP-3 0-0.5' BEB (2.0')

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 39275	Date Analyzed: 2007-07-20	Analyzed By:
Prep Batch: 33995	Sample Preparation: 2007-07-20	Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		145	mg/Kg	1	150	97	32.9 - 167

Sample: 130495 - SP-3 0-0.5' BEB (2.0')

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 39405	Date Analyzed: 2007-07-25	Analyzed By:
Prep Batch: 34114	Sample Preparation: 2007-07-25	Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.836	mg/Kg	1	1.00	84	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.975	mg/Kg	1	1.00	98	67.5 - 140.3

Report Date: July 26, 2007
3036

Work Order: 7072022
Pogo/Central Corbin Queen Unit TB

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Lea County, NM

Sample: 130496 - AH-5A (0-1.0')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	39275	Date Analyzed:	2007-07-20	Analyzed By:	
Prep Batch:	33995	Sample Preparation:	2007-07-20	Prepared By:	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		810	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		172	mg/Kg	1	150	115	32.9 - 167

Sample: 130496 - AH-5A (0-1.0')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	39405	Date Analyzed:	2007-07-25	Analyzed By:	
Prep Batch:	34114	Sample Preparation:	2007-07-25	Prepared By:	

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1000	mg/Kg	50	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		33.5	mg/Kg	50	50.0	67	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		65.8	mg/Kg	50	50.0	132	67.5 - 140.3

Sample: 130497 - AH-5A (1'-1.5')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	39275	Date Analyzed:	2007-07-20	Analyzed By:	
Prep Batch:	33995	Sample Preparation:	2007-07-20	Prepared By:	

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		147	mg/Kg	1	150	98	32.9 - 167

Sample: 130497 - AH-5A (1'-1.5')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	39405	Date Analyzed:	2007-07-25	Analyzed By:	
Prep Batch:	34114	Sample Preparation:	2007-07-25	Prepared By:	

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	2.63	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.819	mg/Kg	1	1.00	82	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.12	mg/Kg	1	1.00	112	67.5 - 140.3

Sample: 130498 - AH-5A (2'-2.5')

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 39275 Date Analyzed: 2007-07-20 Analyzed By:
Prep Batch: 33995 Sample Preparation: 2007-07-20 Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		151	mg/Kg	1	150	101	32.9 - 167

Sample: 130498 - AH-5A (2'-2.5')

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 39405 Date Analyzed: 2007-07-25 Analyzed By:
Prep Batch: 34114 Sample Preparation: 2007-07-25 Prepared By:

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	2.42	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.815	mg/Kg	1	1.00	82	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.951	mg/Kg	1	1.00	95	67.5 - 140.3

Method Blank (1) QC Batch: 39275

QC Batch: 39275 Date Analyzed: 2007-07-20 Analyzed By:
Prep Batch: 33995 QC Preparation: 2007-07-20 Prepared By:

Parameter	Flag	MDL Result	Units	RL
DRO		<14.6	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		139	mg/Kg	1	150	93	44.7 - 133.6

Method Blank (1) QC Batch: 39383

QC Batch: 39383
Prep Batch: 34091

Date Analyzed: 2007-07-24
QC Preparation: 2007-07-24

Analyzed By:
Prepared By:

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00110	mg/Kg	0.01
Toluene		<0.00150	mg/Kg	0.01
Ethylbenzene		<0.00160	mg/Kg	0.01
Xylene		<0.00410	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.02	mg/Kg	1	1.00	102	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.955	mg/Kg	1	1.00	96	53.9 - 125.1

Method Blank (1) QC Batch: 39405

QC Batch: 39405
Prep Batch: 34114

Date Analyzed: 2007-07-25
QC Preparation: 2007-07-25

Analyzed By:
Prepared By:

Parameter	Flag	MDL Result	Units	RL
GRO		0.868	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.910	mg/Kg	1	1.00	91	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.816	mg/Kg	1	1.00	82	67.5 - 140.3

Laboratory Control Spike (LCS-1)

QC Batch: 39275
Prep Batch: 33995

Date Analyzed: 2007-07-20
QC Preparation: 2007-07-20

Analyzed By:
Prepared By:

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	182	mg/Kg	1	250	<14.6	73	47.5 - 144.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	180	mg/Kg	1	250	<14.6	72	47.5 - 144.1	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	122	122	mg/Kg	1	150	81	81	57.3 - 131.6

Laboratory Control Spike (LCS-1)

QC Batch: 39383
Prep Batch: 34091

Date Analyzed: 2007-07-24
QC Preparation: 2007-07-24

Analyzed By:
Prepared By:

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.982	mg/Kg	1	1.00	<0.00110	98	68.6 - 123.4
Toluene	0.987	mg/Kg	1	1.00	<0.00150	99	74.6 - 119.3
Ethylbenzene	0.975	mg/Kg	1	1.00	<0.00160	98	72.3 - 126.2
Xylene	2.93	mg/Kg	1	3.00	<0.00410	98	76.5 - 121.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.920	mg/Kg	1	1.00	<0.00110	92	68.6 - 123.4	6	20
Toluene	0.923	mg/Kg	1	1.00	<0.00150	92	74.6 - 119.3	7	20
Ethylbenzene	0.917	mg/Kg	1	1.00	<0.00160	92	72.3 - 126.2	6	20
Xylene	2.75	mg/Kg	1	3.00	<0.00410	92	76.5 - 121.6	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.857	0.877	mg/Kg	1	1.00	86	88	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	1.01	0.995	mg/Kg	1	1.00	101	100	68.7 - 125.8

Laboratory Control Spike (LCS-1)

QC Batch: 39405
Prep Batch: 34114

Date Analyzed: 2007-07-25
QC Preparation: 2007-07-25

Analyzed By:
Prepared By:

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.16	mg/Kg	1	10.0	<0.739	82	57.7 - 102.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	7.31	mg/Kg	1	10.0	<0.739	73	57.7 - 102.5	11	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.20	0.817	mg/Kg	1	1.00	120	82	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.897	0.896	mg/Kg	1	1.00	90	90	70 - 130

Matrix Spike (MS-1) Spiked Sample: 130493

QC Batch: 39275
Prep Batch: 33995

Date Analyzed: 2007-07-20
QC Preparation: 2007-07-20

Analyzed By:
Prepared By:

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	198	mg/Kg	1	250	<14.6	79	11.7 - 152.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	206	mg/Kg	1	250	<14.6	82	11.7 - 152.3	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	124	127	mg/Kg	1	150	83	85	17 - 163.1

Matrix Spike (MS-1) Spiked Sample: 130746

QC Batch: 39383
Prep Batch: 34091

Date Analyzed: 2007-07-24
QC Preparation: 2007-07-24

Analyzed By:
Prepared By:

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1	1.61	mg/Kg	1	1.00	<0.00110	161	64.4 - 115.7
Toluene	2	1.70	mg/Kg	1	1.00	<0.00150	170	57.8 - 124.4
Ethylbenzene	3	1.77	mg/Kg	1	1.00	<0.00160	177	64.8 - 125.8
Xylene	4	5.34	mg/Kg	1	3.00	0.0298	177	65.2 - 121.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	5	1.64	mg/Kg	1	1.00	<0.00110	164	64.4 - 115.7	2	20
Toluene	6	1.69	mg/Kg	1	1.00	<0.00150	169	57.8 - 124.4	1	20
Ethylbenzene	7	1.78	mg/Kg	1	1.00	<0.00160	178	64.8 - 125.8	1	20
Xylene	8	5.36	mg/Kg	1	3.00	0.0298	178	65.2 - 121.8	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.887	0.855	mg/Kg	1	1	89	86	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	1.07	1.05	mg/Kg	1	1	107	105	66.7 - 131.9

Matrix Spike (MS-1) Spiked Sample: 130497

QC Batch: 39405
Prep Batch: 34114

Date Analyzed: 2007-07-25
QC Preparation: 2007-07-25

Analyzed By:
Prepared By:

¹Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
²Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
³Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
⁴Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
⁵Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
⁶Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
⁷Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
⁸Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRÖ	6.22	mg/Kg	1	10.0	2.6288	36	10 - 141.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRÖ	⁹ 9.84	mg/Kg	1	10.0	2.6288	72	10 - 141.5	45	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.722	0.688	mg/Kg	1	1	72	69	40 - 125.3
4-Bromofluorobenzene (4-BFB)	1.08	1.01	mg/Kg	1	1	108	101	86.7 - 144.5

Standard (ICV-1)

QC Batch: 39275

Date Analyzed: 2007-07-20

Analyzed By:

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	221	88	85 - 115	2007-07-20

Standard (CCV-1)

QC Batch: 39275

Date Analyzed: 2007-07-20

Analyzed By:

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	226	90	85 - 115	2007-07-20

Standard (ICV-1)

QC Batch: 39383

Date Analyzed: 2007-07-24

Analyzed By:

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0948	95	85 - 115	2007-07-24
Toluene		mg/Kg	0.100	0.0963	96	85 - 115	2007-07-24
Ethylbenzene		mg/Kg	0.100	0.0947	95	85 - 115	2007-07-24
Xylene		mg/Kg	0.300	0.291	97	85 - 115	2007-07-24

Standard (CCV-1)

QC Batch: 39383

Date Analyzed: 2007-07-24

Analyzed By:

⁹RPD is out of control limits due to extraction process. Use LCS/LCSD to demonstrate method is under control

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0956	96	85 - 115	2007-07-24
Toluene		mg/Kg	0.100	0.0954	95	85 - 115	2007-07-24
Ethylbenzene		mg/Kg	0.100	0.0928	93	85 - 115	2007-07-24
Xylene		mg/Kg	0.300	0.276	92	85 - 115	2007-07-24

Standard (ICV-1)

QC Batch: 39405

Date Analyzed: 2007-07-25

Analyzed By:

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRÖ		mg/Kg	1.00	1.15	115	85 - 115	2007-07-25

Standard (CCV-1)

QC Batch: 39405

Date Analyzed: 2007-07-25

Analyzed By:

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRÖ		mg/Kg	1.00	0.925	92	85 - 115	2007-07-25

7- HS

APPENDIX C

District I
1625 N French Dr, Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St. Francis Dr, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised October 10, 2003

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

**Corrected
Copy!*

Release Notification and Corrective Action

OPERATOR

☒ Initial Report

☐ Final Report

Name of Company	Latigo Petroleum, Inc.	Contact	Lisa Hunt
Address	P.O. Box 10340 Midland, TX 79702-7340	Telephone No.	(432)685-8229
Facility Name	Central Corbin Queen Unit	Facility Type	Tank Battery

Surface Owner	State of New Mexico	Mineral Owner	NM	Lease No.	
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	4	18S	33E					Lea

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Oil spill	Volume of Release	35 BO	Volume Recovered	None
Source of Release	Tank battery	Date and Hour of Occurrence	6/20/07	Date and Hour of Discovery	6/20/07
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Gary Wink		
By Whom?	Bill Hearne	Date and Hour	6/20/07 @ 3:45 pm		
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Tank spill ran over. Most was contained in the firewall. There was an area 60 x 20' affected outside the firewall. Backhoe is working to clean up.

Describe Area Affected and Cleanup Action Taken.*

Highlander has been notified and should be out soon to remediate soil.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Lisa Hunt</i>	OIL CONSERVATION DIVISION	
Printed Name: Lisa Hunt	Approved by District Supervisor: <i>[Signature]</i>	
Title: Regulatory Analyst	Approval Date: 7.9.07	Expiration Date: 9.10.07
E-mail Address: huntl@pogoproducing.com	Conditions of Approval:	Attached ☐
Date: 06/21/2007 Phone: (432)685-8229	Submit Final C-141 by <i>[Signature]</i>	

* Attach Additional Sheets If Necessary

W/ SUPPORTING DOCUMENTATION

RP# 1441

District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised June 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Latigo Petroleum, Inc.	Contact: Pat Ellis
Address: P.O. Box 10340 Midland, Texas 79702-7340	Telephone No. (432) 685-8229
Facility Name: Central Corbin Queen Unit	Facility Type: Tank Battery

Surface Owner State of New Mexico	Mineral Owner State of New Mexico	Lease No.
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LOCATION OF RELEASE

Unit Letter K	Section 4	Township 18S	Range 33E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release Oil Spill	Volume of Release 35 BO	Volume Recovered None
Source of Release Tank Battery	Date and Hour of Occurrence 06/20/07	Date and Hour of Discovery 06/20/07
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Gary Wink	
By Whom? Bill Hearn	Date and Hour 06/20/07 @ 3:45 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
None

Tank spill ran over. Most was contained in the firewall. There was an area 60' x 20' affected outside the firewall. Backhoe utilized to clean up. Area within tank battery scrapped.

Describe Area Affected and Cleanup Action Taken. Highlander was onsite to delineate utilizing a hand auger. On June 25, 2007 approximately 1 foot of soils were excavated and removed from the areas around auger holes AH-1 to AH-3.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Pat Ellis</i>	OIL CONSERVATION DIVISION <i>Johnson</i>	
Printed Name: Pat Ellis	Approved by District Superintendent ENVIRONMENTAL ENGINEER	
Title: EH&S Supervisor	Approval Date: 11.9.07	Expiration Date: _____
E-mail Address: ellisp@pogoproducing.com	Conditions of Approval:	1 RP# Attached ☐ 1441
Date: _____ Phone: (432) 685-8100		

* Attach Additional Sheets If Necessary