



Highlander Environmental Corp.

Midland, Texas

August 7, 2007



Mr. Larry Johnson
Environmental Engineer Specialist
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

Re: Assessment and Closure Report for the Cimarex Energy Co., Laughlin 5 #3 Tank Battery Release Located in Unit I, Section 5, Township 20 South, Range 37 East, Lea County, New Mexico.

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by Cimarex Energy Co. (Cimarex) to assess a spill from the Laughlin 5 #3 Tank Battery, located in Unit I, Section 5, Township 20 South, Range 37 East, Lea County, New Mexico (Site). The spill site coordinates are N 32° 36.040', W 103° 16.061'. The Site is shown on Figure 1.

Background

According to the State of New Mexico C-141 Initial Report, approximately 125 barrels of oil were released from a circulating pump failure at the tank battery which occurred on March 28, 2007. A total of 125 bbls were recovered. The State of New Mexico C-141 (Initial and Final) are included in Appendix C.

Groundwater and Regulatory

The New Mexico State Engineer's Office database showed 7 water wells located within Section 5, Township 20 South, Range 37 East, with a reported average depth to water of 38 feet below ground surface (bgs). The New Mexico State Engineer water well report is shown in Appendix A.

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine 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 100 mg/kg.

Assessment and Remedial Activities

After a vacuum truck had picked up all of the fluids, Cimarex had a local dirt contractor remove the visually impacted soils and place them on plastic adjacent to the well. On April 12, 2007, Highlander personnel inspected and sampled the spill area. The spill area ran across a closed reserve pit for the Plantation Operating Britt-Laughlin Well # 6 and then east off of the common pad. The spill extended approximately 260' east of the pad at a width of 2' to 10'. A total of five (5) auger holes (AH-1 through AH-5) were installed using a stainless steel hand auger to assess the impacted soils. Samples were not collected across the closed reserve pit. Samples were analyzed for TPH analysis by EPA method 8015 modified, and chloride by EPA method 300.0. Selected samples were analyzed for BTEX by EPA Method 8021B. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix B. The sample locations and spill area is shown on Figure 2. The results of the sampling are summarized in Table 1.

Referring to Table 1, the 0-1' samples from AH-1, AH-2 and AH-5 exceeded the RRAL for TPH. All BTEX concentrations were below the RRAL. The chloride concentrations were elevated in the 0-1' samples in AH-1, AH-2 and AH-3, but decreased to below 250 mg/kg at 1.0'-1.5'. The areas around auger holes AH-1, AH-2 and AH-5 were excavated an additional foot with the soils added to the previous stockpiles.

On June 11, 2007 confirmation samples SP-1, SP-2 and SP-3 were collected and analyzed for TPH, BTEX and chloride. TPH and BTEX concentrations were below the RRAL. Chloride concentrations were below 250 mg/kg for SP-2 and SP-3 and were slightly above at 271 mg/kg at SP-1. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix B. The sample point locations are shown on Figure 3. The results of the sampling are summarized in Table 2.

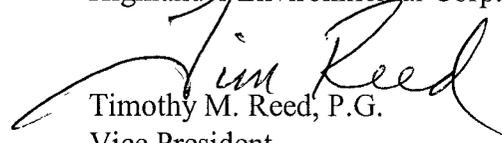
Conclusions

The impacted soils have been excavated and stockpiled on the well pad. No remaining TPH or BTEX concentrations currently exceed the RRAL. The residual chloride concentrations do not appear to be an imminent threat to groundwater. The soil stockpiles will be removed and taken to an approved disposal and the excavation backfilled with clean fill material.



Based upon the results of the assessment work performed at this site, Cimarex 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: Evan Wauhob – Cimarex Energy Co.
Bob Jennings – Cimarex Energy Co.



SITE INFORMATION

Report Type: ASSESSMENT & CLOSURE REPORT

General Site Information:

Site:	Laughlin 5 #3 Tank Battery
Company:	Cimarex of Colorado
Well Location:	Section 5, T20S R37E
Spill Location:	Section 5, T20S R37E
Unit Letter:	Unit JI
Lease Number:	
County:	Lea
Spill GPS:	32° 36.040', 103° 16.061'
Surface Owner:	Randy Crawford
Mineral Owner:	
Directions:	From the intersection of Hwy 8 and C.R. 322 in Monument, head south on 8 for 1.7 miles. Turn right onto lease road. Take right fork for 0.01 miles to fork in road. Take right fork 200 yards to tank battery.

Release Data:

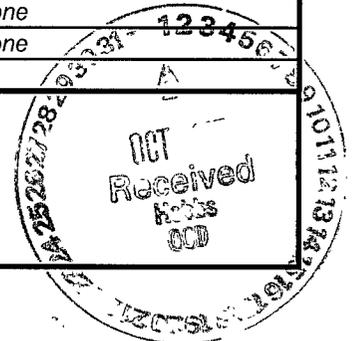
Date Released:	3/28/2007
Type Release:	Oil
Source of Contamination:	Leak at circulating pump.
Fluid Released:	125 barrels
Fluids Recovered:	125 barrels

Official Communication:

Name:	Hugo Naegle, Jr.	Evan Wauhob	Ike Tavarez
Company:	Cimarex of Colorado	Cimarex of Colorado	Highlander Environmental Corp.
Address:	300 W. Texas	508 W. Wall, Suite 600	1910 N. Big Spring
P.O. Box	P.O.Box 1237		
City:	Eunice, New Mexico	Midland, Texas 79701	Midland, Texas
Phone number:	(505) 390-9394	(432) 571-7800	(432) 682- 4559
Email:	hnaegle@cimarex	ewauhob@cimarex.com	itavarez@hec-enviro.com

Ranking Criteria

Depth to Groundwater:	Ranking Score	Site Data
<50 ft	20	
50-99 ft	10	
>100 ft.	0	Average Depth <50 BS
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:		20
Acceptable Soil RRAL (mg/kg)		
Benzene	Total BTEX	TPH
10	50	100



FIGURES

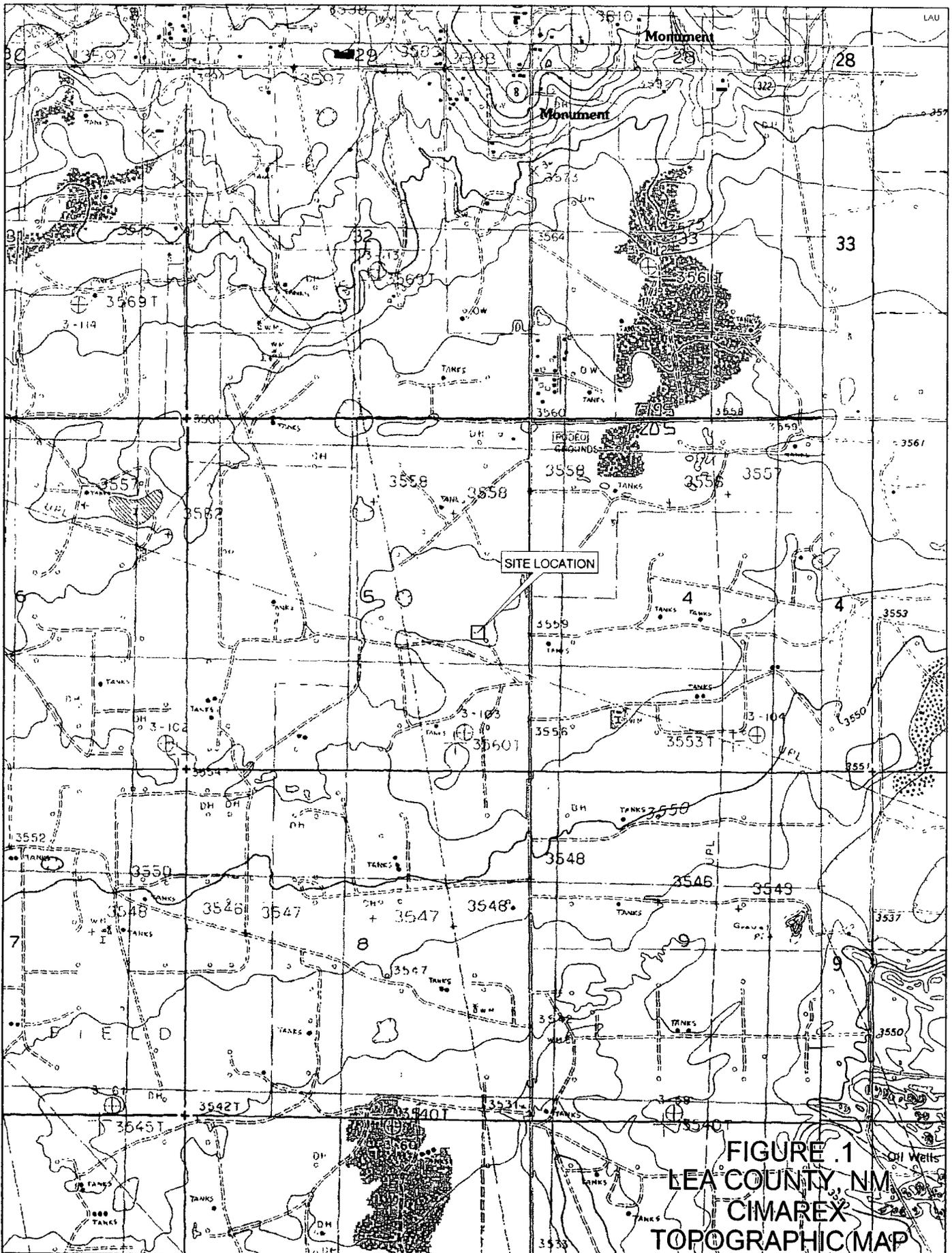
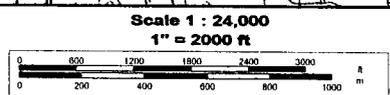
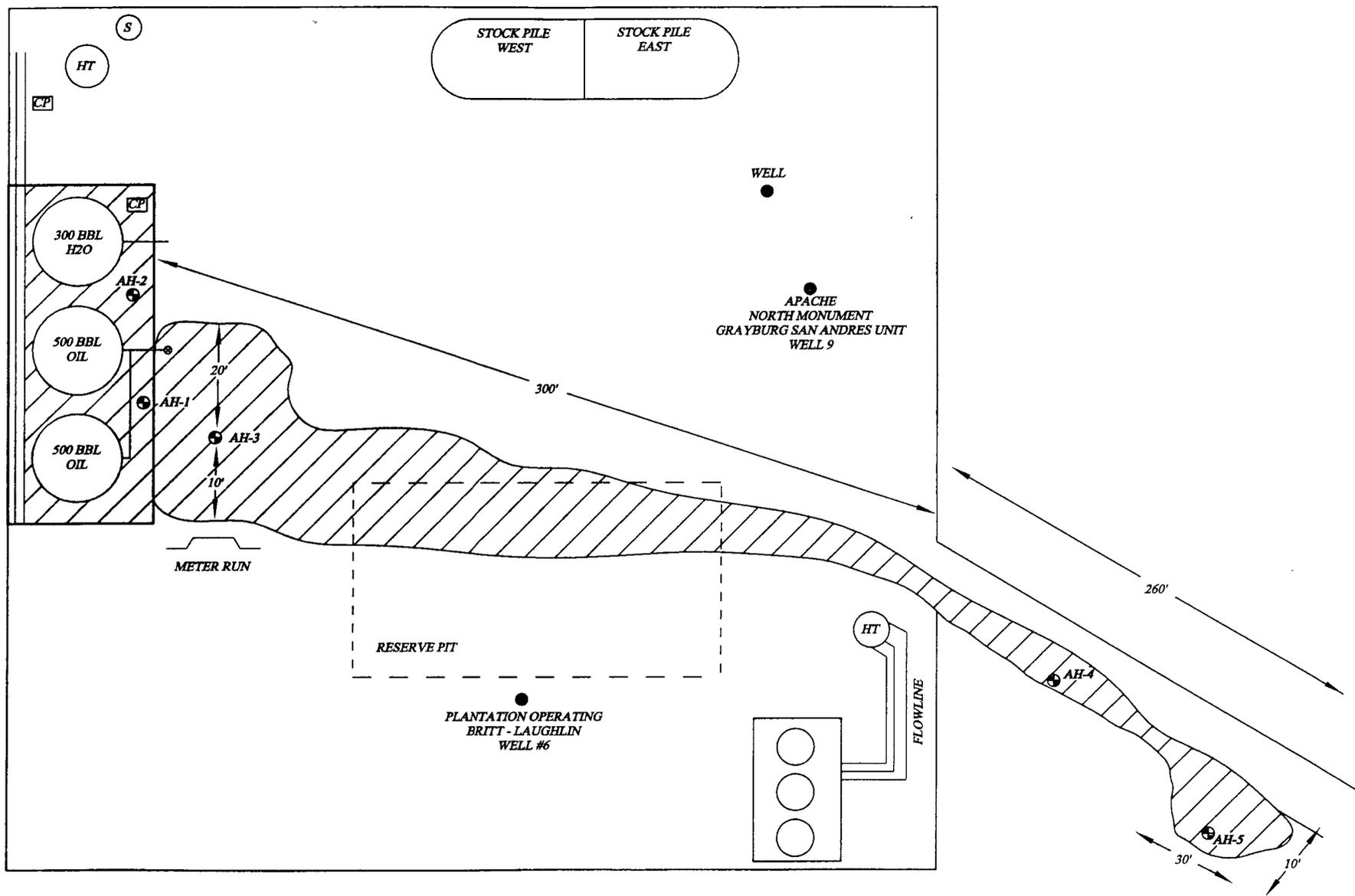


FIGURE 1
LEA COUNTY, NM
CIMAREX
TOPOGRAPHIC MAP

DELORME
 © 2002 DeLorme. 3-D TopoQuads ©. Data copyright of content owner.
 www.delorme.com





 SPILL AREA

FIGURE .2

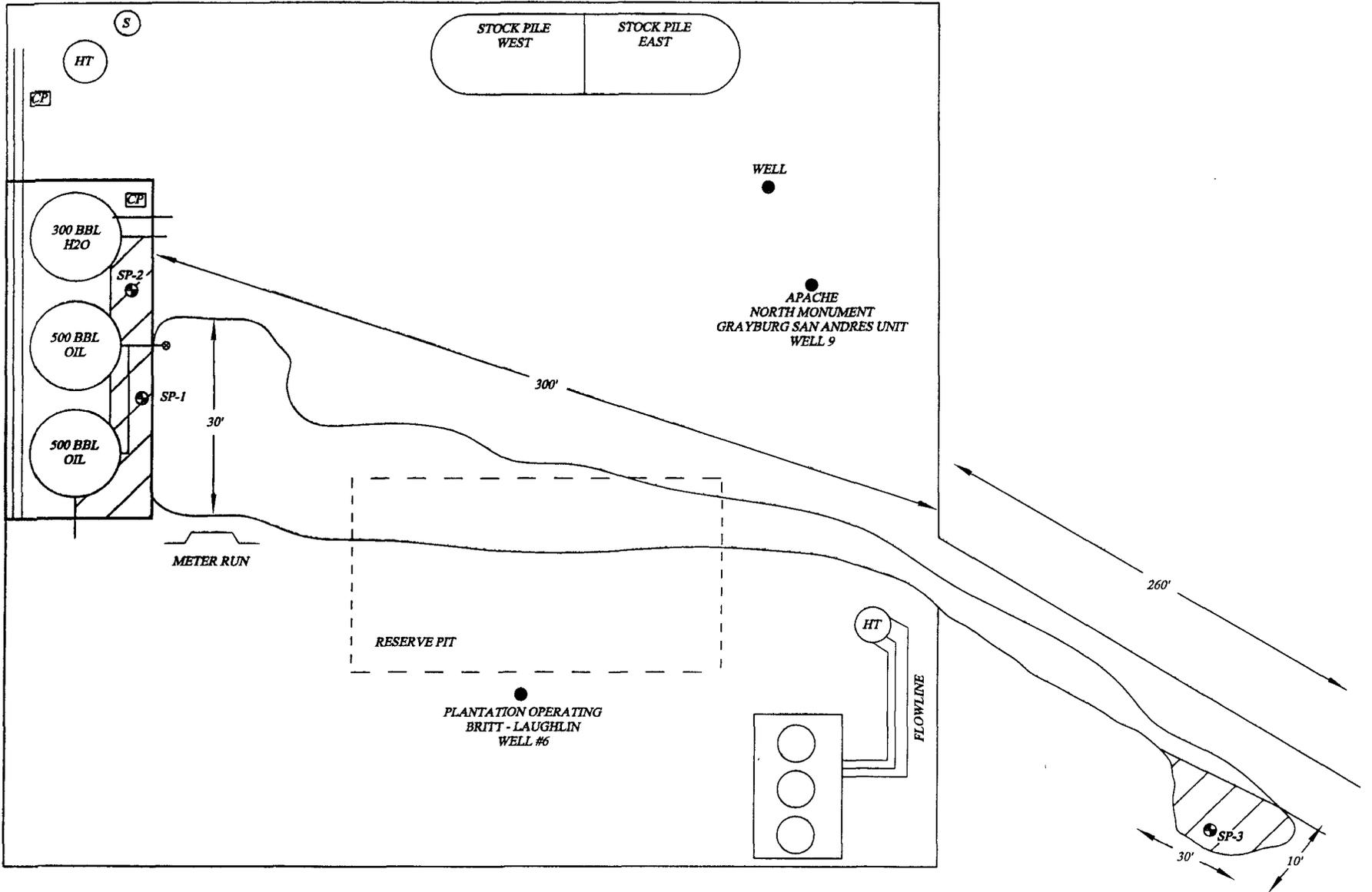
LEA COUNTY, NEW MEXICO

CIMAREX ENERGY COMPANY
LAUGHLIN 5 #3 TB

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE:
5/2/07
DWN BY
RC
FILE:
C:\CIMAREX\2005\
LAUGHLIN

NOT TO SCALE



-  EXCAVATED AREA 1.0'
-  SAMPLE POINT

FIGURE .3

LEA COUNTY, NEW MEXICO	
CIMAREX ENERGY COMPANY LAUGHLIN 5 #3 TB	
HIGHLANDER ENVIRONMENTAL CORP. MIDLAND, TEXAS	

DATE: 5/2/07
DWN. BY RC
FILE C:\CIMAREX\2005\LAUGHLIN

NOT TO SCALE

TABLES

Table 1
 Cimarex Energy
 Laughlin 5 #3 TB
 Lea County, NM

Sample ID	Soil 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	4/12/2007	0-1.0'	888	473	1,361	0.313	7.76	2.68	10.8	2,690
AH-1	X		4/12/2007	1'-1.5'	<50.0	7.36	7.36	-	-	-	-	16.1
AH-1	X		4/12/2007	2'-2.5'	-	-	-	-	-	-	-	14.9
AH-2		X	4/12/2007	0-1.0'	947	953	1,900	-	-	-	-	671
AH-2	X		4/12/2007	1'-1.5'	<50.0	9.10	9.10	-	-	-	-	11.6
AH-3	X		4/12/2007	0-1.0'	<50.0	4.12	4.12	<0.0100	<0.0100	<0.0100	<0.0100	539
AH-3	X		4/12/2007	1'-1.5'	-	-	-	-	-	-	-	2,390
AH-3	X		4/12/2007	2'-2.5'	-	-	-	-	-	-	-	222
AH-4	X		4/12/2007	0-1.0'	<50.0	9.31	9.31	<0.0100	<0.0100	<0.0100	0.0151	60.4
AH-4	X		4/12/2007	1'-1.5'	<50.0	2.15	2.15	-	-	-	-	-
AH-5		X	4/12/2007	0-1.0'	99.5	162	261.5	-	-	-	-	39.4
AH-5	X		4/12/2007	1'-1.5'	<50.0	4.65	4.65	-	-	-	-	-
Stockpile West		X	4/12/2007	Composite	11,600	2,310	13,910	0.418	39.0	20.0	66.1	3,100
Stockpile East		X	4/12/2007	Composite	12,200	3,480	15,680	0.301	30.7	18.5	63.2	2,790

(-) Not Analyzed

Table 2
 Cimarex Energy
 Laughlin 5 #3 TB
 Lea County, NM

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					
SP #1 0-1.0' BEB	X		6/11/2007	1.0'	<50.0	3.12	3.12	<0.0100	<0.0100	<0.0100	<0.0100	271
SP #2 0-1.0' BEB	X		6/11/2007	1.0'	<50.0	1.84	1.84	<0.0100	<0.0100	<0.0100	<0.0100	188
SP #3 0-1.0' BEB	X		6/12/2007	1.0'	<50.0	1.43	1.43	<0.0100	<0.0100	<0.0100	<0.0100	192
Stockpile Tank Battery		X	6/13/2007	Composite	6,920	2,700	9,620	-	-	-	-	160
Stockpile Pasture		X	6/13/2007	Composite	747	24.0	771	-	-	-	-	<50.0

(-) Not Analyzed

APPENDIX A

Water Well Data
Average Depth to Groundwater (ft)
Cimarex - Laughlin 5 #3 Tank Battery, Lea County, New Mexico

19 South 36 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

19 South 37 East

6	50	5	4	39	3	41	2	1	34	
7	43	8	42	9	10	43	11	22	12	63
18	53	17	16	15	14	13	14	13	46	
19	48	20	21	33	22	38	23	24	48	
30	20	29	28	30	27	26	25			
31	24	32	29	33	32	34	22	35	36	

19 South 38 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

20 South 36 East

6	32	5	4	3	2	92	1	
7	28	8	9	38	10	11	12	40
18	33	17	16	15	14	13	32	29
19	34	20	21	22	23	24	45	
30	29	28	27	26	106	25	170	
31	32	33	34	35	122	36	170	

20 South 37 East

6	37	5	4	22	3	2	1
7	36	8	35	9	10	11	12
18	17	16	15	14	13	78	
19	35	20	21	22	23	24	
30	29	28	27	26	25		
31	32	33	40	34	35	36	198

20 South 38 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

21 South 35 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

21 South 36 East

6	5	4	3	2	1		
7	8	9	10	11	12		
18	17	16	15	14	13		
19	106	21	195	22	23	130	24
30	29	28	27	26	150	25	148
31	32	33	34	35	36		

21 South 37 East

6	73	5	4	75	3	2	1
7	8	9	10	11	12		
18	17	16	15	14	13		
19	71	70	21	22	53	23	24
30	98	28	27	26	25		
31	85	71	76	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

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 20S Range: 37E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

AVERAGE DEPTH OF WATER REPORT 08/07/2007

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet)		
								Min	Max	Avg
L	20S	37E	04				1	22	22	22
L	20S	37E	05				7	32	46	38
L	20S	37E	06				8	35	40	37
L	20S	37E	07				4	34	38	36
L	20S	37E	08				10	30	38	35
L	20S	37E	13				2	70	85	78
L	20S	37E	19				6	35	35	35
L	20S	37E	28				2	40	40	40
L	20S	37E	33				2	120	275	198

Record Count: 42

APPENDIX B

Summary Report

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

Report Date: May 7, 2007

Work Order: 7041709



Project Location: Lea County, NM
Project Name: Cimarex/Laughlin 5 #3 TB
Project Number: 2985

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
121908	AH-1 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121909	AH-1 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121910	AH-1 (2.0-2.5')	soil	2007-04-12	00:00	2007-04-17
121911	AH-2 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121912	AH-2 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121914	AH-3 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121915	AH-3 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121916	AH-3 (2.0-2.5')	soil	2007-04-12	00:00	2007-04-17
121917	AH-4 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121918	AH-4 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121920	AH-5 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121921	AH-5 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17

Sample - Field Code	BTEX				MTBE MTBE (mg/Kg)	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/Kg)			
121908 - AH-1 (0-1.0')	0.313	7.76	2.68	10.8		888	473
121909 - AH-1 (1.0-1.5')						<50.0	7.36
121911 - AH-2 (0-1.0')						947	953
121912 - AH-2 (1.0-1.5')						<50.0	9.10
121914 - AH-3 (0-1.0')	<0.0100	<0.0100	<0.0100	<0.0100		<50.0	4.12
121917 - AH-4 (0-1.0')	<0.0100	<0.0100	<0.0100	0.0151		<50.0	9.31
121918 - AH-4 (1.0-1.5')						<50.0	2.15
121920 - AH-5 (0-1.0')						99.5	162
121921 - AH-5 (1.0-1.5')						<50.0	4.65

Sample: 121908 - AH-1 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		2690	mg/Kg	1.00

Sample: 121909 - AH-1 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		16.1	mg/Kg	1.00

Sample: 121910 - AH-1 (2.0-2.5')

Param	Flag	Result	Units	RL
Chloride		14.9	mg/Kg	1.00

Sample: 121911 - AH-2 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		671	mg/Kg	1.00

Sample: 121912 - AH-2 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		11.6	mg/Kg	1.00

Sample: 121914 - AH-3 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		539	mg/Kg	1.00

Sample: 121915 - AH-3 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride	1	2390	mg/Kg	1.00

Sample: 121916 - AH-3 (2.0-2.5')

Param	Flag	Result	Units	RL
Chloride		222	mg/Kg	1.00

Sample: 121917 - AH-4 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		60.4	mg/Kg	1.00

Sample: 121920 - AH-5 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		39.4	mg/Kg	1.00

¹Sample reran May 4, 2007, result confirmed •

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: May 7, 2007

Work Order: 7041709



Project Location: Lea County, NM
Project Name: Cimarex/Laughlin 5 #3 TB
Project Number: 2985

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
121908	AH-1 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121909	AH-1 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121910	AH-1 (2.0-2.5')	soil	2007-04-12	00:00	2007-04-17
121911	AH-2 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121912	AH-2 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121914	AH-3 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121915	AH-3 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121916	AH-3 (2.0-2.5')	soil	2007-04-12	00:00	2007-04-17
121917	AH-4 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121918	AH-4 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121920	AH-5 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121921	AH-5 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17

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 24 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 'Cimarex/Laughlin 5 #3 TB' were received by TraceAnalysis, Inc. on 2007-04-17 and assigned to work order 7041709. Samples for work order 7041709 were received intact without headspace and at a temperature of 4 deg C.

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

Test	Method
BTEX	S 8021B
Chloride (IC)	E 300.0
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

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 7041709 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: 121908 - AH-1 (0-1.0')

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 36564	Date Analyzed: 2007-04-18	Analyzed By: ss
Prep Batch: 31714	Sample Preparation: 2007-04-18	Prepared By: ss

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		0.313	mg/Kg	1	0.0100
Toluene		7.76	mg/Kg	1	0.0100
Ethylbenzene		2.68	mg/Kg	1	0.0100
Xylene		10.8	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.746	mg/Kg	1	1.00	75	26 - 117.8
4-Bromofluorobenzene (4-BFB)	1	1.49	mg/Kg	1	1.00	149	51.1 - 119.1

Sample: 121908 - AH-1 (0-1.0')

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 36632	Date Analyzed: 2007-04-19	Analyzed By: AR
Prep Batch: 31771	Sample Preparation:	Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2690	mg/Kg	100	1.00

Sample: 121908 - AH-1 (0-1.0')

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 36623	Date Analyzed: 2007-04-18	Analyzed By: AG
Prep Batch: 31763	Sample Preparation: 2007-04-18	Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		888	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	2	339	mg/Kg	1	150	226	32.9 - 167

Sample: 121908 - AH-1 (0-1.0')

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 36628	Date Analyzed: 2007-04-20	Analyzed By: ss
Prep Batch: 31766	Sample Preparation: 2007-04-20	Prepared By: ss

¹High surrogate recovery due to peak interference

²High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		473	mg/Kg	50	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		45.2	mg/Kg	50	50.0	90	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		51.2	mg/Kg	50	50.0	102	67.5 - 140.3

Sample: 121909 - AH-1 (1.0-1.5')

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
 QC Batch: 36782 Date Analyzed: 2007-04-25 Analyzed By: AR
 Prep Batch: 31907 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	B	16.1	mg/Kg	5	1.00

Sample: 121909 - AH-1 (1.0-1.5')

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
 QC Batch: 36623 Date Analyzed: 2007-04-18 Analyzed By: AG
 Prep Batch: 31763 Sample Preparation: 2007-04-18 Prepared By: AG

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		220	mg/Kg	1	150	147	32.9 - 167

Sample: 121909 - AH-1 (1.0-1.5')

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
 QC Batch: 36562 Date Analyzed: 2007-04-18 Analyzed By: ss
 Prep Batch: 31714 Sample Preparation: 2007-04-18 Prepared By: ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	7.36	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.810	mg/Kg	1	1.00	81	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.06	mg/Kg	1	1.00	106	67.5 - 140.3

Sample: 121910 - AH-1 (2.0-2.5')

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
 QC Batch: 36782 Date Analyzed: 2007-04-25 Analyzed By: AR
 Prep Batch: 31907 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	B	14.9	mg/Kg	5	1.00

Sample: 121911 - AH-2 (0-1.0')

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
 QC Batch: 36665 Date Analyzed: 2007-04-20 Analyzed By: AR
 Prep Batch: 31798 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		671	mg/Kg	50	1.00

Sample: 121911 - AH-2 (0-1.0')

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
 QC Batch: 36623 Date Analyzed: 2007-04-18 Analyzed By: AG
 Prep Batch: 31763 Sample Preparation: 2007-04-18 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		947	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	3	294	mg/Kg	1	150	196	32.9 - 167

Sample: 121911 - AH-2 (0-1.0')

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
 QC Batch: 36628 Date Analyzed: 2007-04-20 Analyzed By: ss
 Prep Batch: 31766 Sample Preparation: 2007-04-20 Prepared By: ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		953	mg/Kg	50	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		42.2	mg/Kg	50	50.0	84	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		65.0	mg/Kg	50	50.0	130	67.5 - 140.3

³High surrogate recovery due to peak interference.

Sample: 121912 - AH-2 (1.0-1.5')

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 36782	Date Analyzed: 2007-04-25	Analyzed By: AR
Prep Batch: 31907	Sample Preparation:	Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	B	11.6	mg/Kg	5	1.00

Sample: 121912 - AH-2 (1.0-1.5')

Analysis: TPH DRO	Analytical Method: Mod 8015B	Prep Method: N/A
QC Batch: 36623	Date Analyzed: 2007-04-18	Analyzed By: AG
Prep Batch: 31763	Sample Preparation: 2007-04-18	Prepared By: AG

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		201	mg/Kg	1	150	134	32.9 - 167

Sample: 121912 - AH-2 (1.0-1.5')

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 36562	Date Analyzed: 2007-04-18	Analyzed By: ss
Prep Batch: 31714	Sample Preparation: 2007-04-18	Prepared By: ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	9.10	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.805	mg/Kg	1	1.00	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.10	mg/Kg	1	1.00	110	67.5 - 140.3

Sample: 121914 - AH-3 (0-1.0')

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 36564	Date Analyzed: 2007-04-18	Analyzed By: ss
Prep Batch: 31714	Sample Preparation: 2007-04-18	Prepared By: ss

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

continued ..

sample 121914 continued . .

Parameter	Flag	RL Result	Units	Dilution	RL
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.903	mg/Kg	1	1.00	90	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.874	mg/Kg	1	1.00	87	51.1 - 119.1

Sample: 121914 - AH-3 (0-1.0')

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
 QC Batch: 36665 Date Analyzed: 2007-04-20 Analyzed By: AR
 Prep Batch: 31798 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		539	mg/Kg	10	1.00

Sample: 121914 - AH-3 (0-1.0')

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
 QC Batch: 36623 Date Analyzed: 2007-04-18 Analyzed By: AG
 Prep Batch: 31763 Sample Preparation: 2007-04-18 Prepared By: AG

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		244	mg/Kg	1	150	163	32.9 - 167

Sample: 121914 - AH-3 (0-1.0')

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
 QC Batch: 36562 Date Analyzed: 2007-04-18 Analyzed By: ss
 Prep Batch: 31714 Sample Preparation: 2007-04-18 Prepared By: ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	4.12	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.795	mg/Kg	1	1.00	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	1.00	107	67.5 - 140.3

Sample: 121915 - AH-3 (1.0-1.5')

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
 QC Batch: 36782 Date Analyzed: 2007-04-25 Analyzed By: AR
 Prep Batch: 31907 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride	4	2390	mg/Kg	100	1.00

Sample: 121916 - AH-3 (2.0-2.5')

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
 QC Batch: 36980 Date Analyzed: 2007-05-04 Analyzed By: AR
 Prep Batch: 32081 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		222	mg/Kg	5	1.00

Sample: 121917 - AH-4 (0-1.0')

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 36564 Date Analyzed: 2007-04-18 Analyzed By: ss
 Prep Batch: 31714 Sample Preparation: 2007-04-18 Prepared By: ss

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		0.0151	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.908	mg/Kg	1	1.00	91	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.888	mg/Kg	1	1.00	89	51.1 - 119.1

Sample: 121917 - AH-4 (0-1.0')

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
 QC Batch: 36633 Date Analyzed: 2007-04-19 Analyzed By: AR
 Prep Batch: 31772 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		60.4	mg/Kg	5	1.00

⁴Sample reran May 4, 2007, result confirmed •

Sample: 121917 - AH-4 (0-1.0')

Analysis:	TPH DRO	Analytical Method:	Mod 8015B	Prep Method:	N/A
QC Batch:	36623	Date Analyzed:	2007-04-18	Analyzed By:	AG
Prep Batch:	31763	Sample Preparation:	2007-04-18	Prepared By:	AG

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		206	mg/Kg	1	150	137	32.9 - 167

Sample: 121917 - AH-4 (0-1.0')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	36562	Date Analyzed:	2007-04-18	Analyzed By:	ss
Prep Batch:	31714	Sample Preparation:	2007-04-18	Prepared By:	ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	E	9.31	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.812	mg/Kg	1	1.00	81	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.09	mg/Kg	1	1.00	109	67.5 - 140.3

Sample: 121918 - AH-4 (1.0-1.5')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	36623	Date Analyzed:	2007-04-18	Analyzed By:	AG
Prep Batch:	31763	Sample Preparation:	2007-04-18	Prepared By:	AG

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		200	mg/Kg	1	150	133	32.9 - 167

Sample: 121918 - AH-4 (1.0-1.5')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	36562	Date Analyzed:	2007-04-18	Analyzed By:	ss
Prep Batch:	31714	Sample Preparation:	2007-04-18	Prepared By:	ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	2.15	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.801	mg/Kg	1	1.00	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.03	mg/Kg	1	1.00	103	67.5 - 140.3

Sample: 121920 - AH-5 (0-1.0')

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
 QC Batch: 36633 Date Analyzed: 2007-04-19 Analyzed By: AR
 Prep Batch: 31772 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		39.4	mg/Kg	5	1.00

Sample: 121920 - AH-5 (0-1.0')

Analysis: TPH DRO Analytical Method: Mod 8015B Prep Method: N/A
 QC Batch: 36623 Date Analyzed: 2007-04-18 Analyzed By: AG
 Prep Batch: 31763 Sample Preparation: 2007-04-18 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO	B	99.5	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		190	mg/Kg	1	150	127	32.9 - 167

Sample: 121920 - AH-5 (0-1.0')

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
 QC Batch: 36628 Date Analyzed: 2007-04-20 Analyzed By: ss
 Prep Batch: 31766 Sample Preparation: 2007-04-20 Prepared By: ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		162	mg/Kg	20	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		17.4	mg/Kg	20	20.0	87	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		19.8	mg/Kg	20	20.0	99	67.5 - 140.3

Sample: 121921 - AH-5 (1.0-1.5')

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 36623	Date Analyzed: 2007-04-18	Analyzed By: AG
Prep Batch: 31763	Sample Preparation: 2007-04-18	Prepared By: AG

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		175	mg/Kg	1	150	117	32.9 - 167

Sample: 121921 - AH-5 (1.0-1.5')

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 36567	Date Analyzed: 2007-04-18	Analyzed By: ss
Prep Batch: 31719	Sample Preparation: 2007-04-18	Prepared By: ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	B	4.65	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.787	mg/Kg	1	1.00	79	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.03	mg/Kg	1	1.00	103	67.5 - 140.3

Method Blank (1) QC Batch: 36562

QC Batch: 36562	Date Analyzed: 2007-04-18	Analyzed By: ss
Prep Batch: 31714	QC Preparation: 2007-04-18	Prepared By: ss

Parameter	Flag	MDL Result	Units	RL
GRO		0.935	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.901	mg/Kg	1	1.00	90	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.910	mg/Kg	1	1.00	91	67.5 - 140.3

Method Blank (1) QC Batch: 36564

QC Batch: 36564	Date Analyzed: 2007-04-18	Analyzed By: ss
Prep Batch: 31714	QC Preparation: 2007-04-18	Prepared By: ss

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)		0.893	mg/Kg	1	1.00	89	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.768	mg/Kg	1	1.00	77	53.9 - 125.1

Method Blank (1) QC Batch: 36567

QC Batch: 36567 Date Analyzed: 2007-04-18 Analyzed By: ss
Prep Batch: 31719 QC Preparation: 2007-04-18 Prepared By: ss

Parameter	Flag	MDL Result	Units	RL
GRO		0.741	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.905	mg/Kg	1	1.00	90	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.932	mg/Kg	1	1.00	93	67.5 - 140.3

Method Blank (1) QC Batch: 36623

QC Batch: 36623 Date Analyzed: 2007-04-18 Analyzed By: AG
Prep Batch: 31763 QC Preparation: 2007-04-18 Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
DRO		15.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		178	mg/Kg	1	150	119	44.7 - 133.6

Method Blank (1) QC Batch: 36628

QC Batch: 36628 Date Analyzed: 2007-04-20 Analyzed By: ss
Prep Batch: 31766 QC Preparation: 2007-04-20 Prepared By: ss

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)		0.880	mg/Kg	1	1.00	88	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.974	mg/Kg	1	1.00	97	67.5 - 140.3

Matrix Blank (1) QC Batch: 36632

QC Batch: 36632 Date Analyzed: 2007-04-19 Analyzed By: AR
Prep Batch: 31771 QC Preparation: 2007-04-19 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		3.05	mg/Kg	1

Matrix Blank (1) QC Batch: 36633

QC Batch: 36633 Date Analyzed: 2007-04-19 Analyzed By: AR
Prep Batch: 31772 QC Preparation: 2007-04-19 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		3.12	mg/Kg	1

Matrix Blank (1) QC Batch: 36665

QC Batch: 36665 Date Analyzed: 2007-04-20 Analyzed By: AR
Prep Batch: 31798 QC Preparation: 2007-04-20 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		3.11	mg/Kg	1

Matrix Blank (1) QC Batch: 36782

QC Batch: 36782 Date Analyzed: 2007-04-25 Analyzed By: AR
Prep Batch: 31907 QC Preparation: 2007-04-25 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		3.15	mg/Kg	1

Matrix Blank (1) QC Batch: 36980

QC Batch: 36980 Date Analyzed: 2007-05-04 Analyzed By: AR
Prep Batch: 32081 QC Preparation: 2007-05-04 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		3.18	mg/Kg	1

Laboratory Control Spike (LCS-1)

QC Batch: 36562 Date Analyzed: 2007-04-18 Analyzed By: ss
Prep Batch: 31714 QC Preparation: 2007-04-18 Prepared By: ss

Param	LCS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
GRO	7.58	mg/Kg	1	10.0	<0.739	76	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	7.93	mg/Kg	1	10.0	<0.739	79	57.7 - 102.5	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)	1.15	1.17	mg/Kg	1	1.00	115	117	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.998	0.995	mg/Kg	1	1.00	100	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 36564 Date Analyzed: 2007-04-18 Analyzed By: ss
Prep Batch: 31714 QC Preparation: 2007-04-18 Prepared By: ss

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec Limit
Benzene	0.863	mg/Kg	1	1.00	<0.00110	86	68.6 - 123.4
Toluene	0.870	mg/Kg	1	1.00	<0.00150	87	74.6 - 119.3
Ethylbenzene	0.853	mg/Kg	1	1.00	<0.00160	85	72.3 - 126.2
Xylene	2.57	mg/Kg	1	3.00	<0.00410	86	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	0.838	mg/Kg	1	1.00	<0.00110	84	68.6 - 123.4	3	20
Toluene	0.850	mg/Kg	1	1.00	<0.00150	85	74.6 - 119.3	2	20
Ethylbenzene	0.844	mg/Kg	1	1.00	<0.00160	84	72.3 - 126.2	1	20
Xylene	2.54	mg/Kg	1	3.00	<0.00410	85	76.5 - 121.6	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
Trifluorotoluene (TFT)	0.824	0.849	mg/Kg	1	1.00	82	85	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	0.814	0.820	mg/Kg	1	1.00	81	82	68.7 - 125.8

Laboratory Control Spike (LCS-1)

QC Batch: 36567
Prep Batch: 31719

Date Analyzed: 2007-04-18
QC Preparation: 2007-04-18

Analyzed By: ss
Prepared By: ss

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.43	mg/Kg	1	10.0	<0.739	74	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	7.97	mg/Kg	1	10.0	<0.739	80	57.7 - 102.5	7	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)	1.15	1.17	mg/Kg	1	1.00	115	117	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.991	0.992	mg/Kg	1	1.00	99	99	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 36623
Prep Batch: 31763

Date Analyzed: 2007-04-18
QC Preparation: 2007-04-18

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	283	mg/Kg	1	250	<14.6	113	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	285	mg/Kg	1	250	<14.6	114	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	193	189	mg/Kg	1	150	129	126	57.3 - 131.6

Laboratory Control Spike (LCS-1)

QC Batch: 36628
Prep Batch: 31766

Date Analyzed: 2007-04-20
QC Preparation: 2007-04-20

Analyzed By: ss
Prepared By: ss

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.53	mg/Kg	1	10.0	<0.739	75	57.7 - 102.5

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

matrix spikes continued ...

Param	MSD Result	Units	Dil	Spike Amount	Matrix Result	Rec.	Rec Limit	RPD	RPD Limit
GR0	⁶ 6.81	mg/Kg	1	100	8.64	0	10 - 141.5	24	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)	0.732	0.755	mg/Kg	1	1	73	76	40 - 125.3
4-Bromofluorobenzene (4-BFB)	1.17	1.19	mg/Kg	1	1	117	119	86.7 - 144.5

Matrix Spike (MS-1) Spiked Sample: 121917

QC Batch: 36564 Date Analyzed: 2007-04-18 Analyzed By: ss
Prep Batch: 31714 QC Preparation: 2007-04-18 Prepared By: ss

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec Limit
Benzene	0.881	mg/Kg	1	1.00	<0.00110	88	64.4 - 115.7
Toluene	0.916	mg/Kg	1	1.00	<0.00150	92	57.8 - 124.4
Ethylbenzene	0.931	mg/Kg	1	1.00	<0.00160	93	64.8 - 125.8
Xylene	2.82	mg/Kg	1	3.00	0.0151	93	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	0.888	mg/Kg	1	1.00	<0.00110	89	64.4 - 115.7	1	20
Toluene	0.938	mg/Kg	1	1.00	<0.00150	94	57.8 - 124.4	2	20
Ethylbenzene	0.977	mg/Kg	1	1.00	<0.00160	98	64.8 - 125.8	5	20
Xylene	2.97	mg/Kg	1	3.00	0.0151	98	65.2 - 121.8	5	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)	0.823	0.888	mg/Kg	1	1	82	89	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	0.868	0.875	mg/Kg	1	1	87	88	66.7 - 131.9

Matrix Spike (MS-1) Spiked Sample: 121909

QC Batch: 36623 Date Analyzed: 2007-04-18 Analyzed By: AG
Prep Batch: 31763 QC Preparation: 2007-04-18 Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec Limit
DRO	271	mg/Kg	1	250	<14.6	108	11.7 - 152.3

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

⁶Matrix 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
DRO	248	mg/Kg	1	250	<14.6	99	11.7 - 152.3	9	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	190	178	mg/Kg	1	150	127	119	17 - 163.1

Matrix Spike (MS-1) Spiked Sample: 121908

QC Batch: 36632 Date Analyzed: 2007-04-19 Analyzed By: AR
Prep Batch: 31771 QC Preparation: 2007-04-19 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	3910	mg/Kg	100	1250	2692.32	97	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	3900	mg/Kg	100	1250	2692.32	97	90 - 110	0	

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

Matrix Spike (MS-1) Spiked Sample: 121930

QC Batch: 36633 Date Analyzed: 2007-04-19 Analyzed By: AR
Prep Batch: 31772 QC Preparation: 2007-04-19 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	2540	mg/Kg	100	1250	1164.22	110	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	2390	mg/Kg	100	1250	1164.22	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: 121911

QC Batch: 36665 Date Analyzed: 2007-04-20 Analyzed By: AR
Prep Batch: 31798 QC Preparation: 2007-04-20 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	171	mg/Kg	50	625	671.223	-80	90 - 110

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

⁷Matrix 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	1360	mg/Kg	50	625	671.223	110	90 - 110	155	

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

Matrix Spike (MS-1) Spiked Sample: 121915

QC Batch: 36782 Date Analyzed: 2007-04-25 Analyzed By: AR
Prep Batch: 31907 QC Preparation: 2007-04-25 Prepared By: AR

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
Chloride	3600	mg/Kg	100	1250	2394.96	96	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	3550	mg/Kg	100	1250	2394.96	92	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:

QC Batch: 36980 Date Analyzed: 2007-05-04 Analyzed By: AR
Prep Batch: 32081 QC Preparation: 2007-05-04 Prepared By: AR

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
Chloride	⁸ 3800	mg/Kg	100	1250	2428.91	110	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	⁹ 3610	mg/Kg	100	1250	2428.91	94	90 - 110	5	

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

Standard (ICV-1)

QC Batch: 36562 Date Analyzed: 2007-04-18 Analyzed By: ss

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.09	109	85 - 115	2007-04-18

Standard (CCV-1)

QC Batch: 36562 Date Analyzed: 2007-04-18 Analyzed By: ss

⁸MS/MSD for sample 121915, not reported in this batch. •
⁹MS/MSD for sample 121915, not reported in this batch. •

7041709

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: Cimarex SITE MANAGER: Ike Tavares

PROJECT NO.: 2985 PROJECT NAME: Cimarex/Laughlin S #3 TB
Lea Co, NM

LAB I.D. NUMBER DATE TIME MATRIX COMP. GRAB SAMPLE IDENTIFICATION NUMBER OF CONTAINERS FILTERED (Y/N) PRESERVATIVE METHOD

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE
121908	4/12/07		S			XAH-1 (0-1.0')	1				X	
09			S			XAH-1 (1.0'-1.5')	1				X	
10			S			XAH-1 (2.0'-2.5')	1				X	
11			S			XAH-2 (0-1.0')	1				X	
12			S			XAH-2 (1.0'-1.5')	1				X	
13			S			XAH-2 (2.0'-2.5')	1				X	
14			S			XAH-3 (0-1.0')	1				X	
15			S			XAH-3 (1.0'-1.5')	1				X	
16			S			XAH-3 (2.0'-2.5')	1				X	
17			S			XAH-4 (0-1.0')	1				X	

TX1005	TX1006	TX1007	TX1008	TX1009	TX1010	TX1011	TX1012	TX1013	TX1014	TX1015	TX1016	TX1017	TX1018	TX1019	TX1020	TX1021	TX1022	TX1023	TX1024	TX1025	TX1026	TX1027	TX1028	TX1029	TX1030	

RELINQUISHED BY: (Signature) Date: 4/17/07 Time: 9:15 RECEIVED BY: (Signature) Date: 4/17/07 Time: 9:15

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: TUBE ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE: DATE: TIME:

SAMPLED BY: (Print & Sign) Date: 4/13/07
Ray Taylor / Kelt Harrison

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS AIRBILL #
HAND DELIVERED UPS OTHER:

HIGHLANDER CONTACT PERSON: Ike Tavares

Results by:
RUSH Charges Authorized:
Yes No

SAMPLE CONDITION WHEN RECEIVED: 40 MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other REMARKS: all tests - Midland

Please fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

7041709

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:			SITE MANAGER:			NUMBER OF CONTAINERS	PRESERVATIVE METHOD				CITEX 8020/802	NTEB 8090/808	418.1	6015 MOD	TXIG05	PCRA 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. B240/B280/B24	GC/MS Seml. Vol. B270/B25	PCF's 8080/808	Pest. 808/808	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	
PROJECT NO.:			PROJECT NAME:				FILTERED (Y/N)	HCL	HNO3	ICE																			NONE
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION																							
Cimarex			Ike Tavares																										
2985			Cimarex / Laughlin 5 #3 TB																										
						Lea Co, NM																							
12918	4/13/07		S	X		AH-4 (1.0'-1.5')																							
19			S	X		AH-4 (2.0'-2.5')																							
20			S	X		AH-5 (0-1.0')																							
21			S	X		AH-5 (1.0'-1.5')																							
22			S	X		AH-5 (2.0'-2.5')																							

RELINQUISHED BY: (Signature) <i>[Signature]</i>	Date: 4/11/07 Time: 9:15	RECEIVED BY: (Signature) <i>[Signature]</i>	Date: 4/11/07 Time: 9:15	SAMPLED BY: (Print & Sign) Ray Taylor / Kait Harriss	Date: 4/13/07
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____	SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL # _____ HAND DELIVERED UPS OTHER: _____	
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____	HIGHLANDER CONTACT PERSON: Ike Tavares	Results by: RUSH Charges Authorized: Yes No
RECEIVING LABORATORY: Trace	ADDRESS: _____	CITY: Midland	STATE: TX	ZIP: _____	
CONTACT: _____	PHONE: _____	DATE: _____	TIME: _____		

SAMPLE CONDITION WHEN RECEIVED: 40

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS:

Please fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

Summary Report

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

Report Date: April 23, 2007

Work Order: 7041712



Project Location: Lea County, NM
Project Name: Cimarex/Laughlin 5 #3 TB
Project Number: 2985

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
121925	Stockpile West	soil	2007-04-12	00:00	2007-04-17
121926	Stockpile East	soil	2007-04-12	00:00	2007-04-17

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)
121925 - Stockpile West	0.418	39.0	20.0	66.1	<0.0500	11600	2310
121926 - Stockpile East	0.301	30.7	18.5	63.2	<0.0200	12200	3480

Sample: 121925 - Stockpile West

Param	Flag	Result	Units	RL
Chloride		3100	mg/Kg	1.00

Sample: 121926 - Stockpile East

Param	Flag	Result	Units	RL
Chloride		2790	mg/Kg	1.00

Summary Report

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

Report Date: April 23, 2007

Work Order: 7041709



Project Location: Lea County, NM
Project Name: Cimarex/Laughlin 5 #3 TB
Project Number: 2985

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
121908	AH-1 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121909	AH-1 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121911	AH-2 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121912	AH-2 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121914	AH-3 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121917	AH-4 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121918	AH-4 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17
121920	AH-5 (0-1.0')	soil	2007-04-12	00:00	2007-04-17
121921	AH-5 (1.0-1.5')	soil	2007-04-12	00:00	2007-04-17

Sample - Field Code	BTEX				MTBE (mg/Kg)	TPH DRO (mg/Kg)	TPH GRO (mg/Kg)
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)			
121908 - AH-1 (0-1.0')	0.313	7.76	2.68	10.8	<0.0100	888	473
121909 - AH-1 (1.0-1.5')						<50.0	7.36
121911 - AH-2 (0-1.0')						947	953
121912 - AH-2 (1.0-1.5')						<50.0	9.10
121914 - AH-3 (0-1.0')	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	4.12
121917 - AH-4 (0-1.0')	<0.0100	<0.0100	<0.0100	0.0151	<0.0100	<50.0	9.31
121918 - AH-4 (1.0-1.5')						<50.0	2.15
121920 - AH-5 (0-1.0')						99.5	162
121921 - AH-5 (1.0-1.5')						<50.0	4.65

Sample: 121908 - AH-1 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		2690	mg/Kg	1.00

Sample: 121911 - AH-2 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		671	mg/Kg	1.00

Sample: 121914 - AH-3 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		539	mg/Kg	1.00

Sample: 121917 - AH-4 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		60.4	mg/Kg	1.00

Sample: 121920 - AH-5 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		39.4	mg/Kg	1.00

Summary Report

Tim Reed
Highlander Environmental Services
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: June 26, 2007

Work Order: 7061525



Project Location: Lea County, NM
Project Name: Cimarex/Laughlin 5 #3 TB
Project Number: 2985

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
127582	SP #1 0-1.0' BEB (1.0)	soil	2007-06-11	00:00	2007-06-15
127583	SP #2 0-1.0' BEB (1.0)	soil	2007-06-11	00:00	2007-06-15
127584	SP #3 0-1.0' BEB (1.0)	soil	2007-06-12	00:00	2007-06-15
127585	Stockpile Tank Battery	soil	2007-06-13	00:00	2007-06-15
127586	Stockpile Pasture	soil	2007-06-13	00:00	2007-06-15

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)
127582 - SP #1 0-1.0' BEB (1.0)	<0.0100	<0.0100	<0.0100	<0.0100		<50.0	3.12
127583 - SP #2 0-1.0' BEB (1.0)	<0.0100	<0.0100	<0.0100	<0.0100		<50.0	1.84
127584 - SP #3 0-1.0' BEB (1.0)	<0.0100	<0.0100	<0.0100	<0.0100		<50.0	1.43
127585 - Stockpile Tank Battery						6920	2700
127586 - Stockpile Pasture						747	24.0

Sample: 127582 - SP #1 0-1.0' BEB (1.0)

Param	Flag	Result	Units	RL
Chloride		271	mg/Kg	2.00

Sample: 127583 - SP #2 0-1.0' BEB (1.0)

Param	Flag	Result	Units	RL
Chloride		188	mg/Kg	2.00

Sample: 127584 - SP #3 0-1.0' BEB (1.0)

Param	Flag	Result	Units	RL
Chloride		192	mg/Kg	2.00

Sample: 127585 - Stockpile Tank Battery

Param	Flag	Result	Units	RL
Chloride		160	mg/Kg	2.00

Sample: 127586 - Stockpile Pasture

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	2.00



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1296
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

Tim Reed
Highlander Environmental Services
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: June 26, 2007

Work Order: 7061525



Project Location: Lea County, NM
Project Name: Cimarex/Laughlin 5 #3 TB
Project Number: 2985

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
127582	SP #1 0-1.0' BEB (1.0)	soil	2007-06-11	00:00	2007-06-15
127583	SP #2 0-1.0' BEB (1.0)	soil	2007-06-11	00:00	2007-06-15
127584	SP #3 0-1.0' BEB (1.0)	soil	2007-06-12	00:00	2007-06-15
127585	Stockpile Tank Battery	soil	2007-06-13	00:00	2007-06-15
127586	Stockpile Pasture	soil	2007-06-13	00:00	2007-06-15

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 19 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 Cimarex/Laughlin 5 #3 TB were received by TraceAnalysis, Inc. on 2007-06-15 and assigned to work order 7061525. Samples for work order 7061525 were received intact at a temperature of 2.5 deg C.

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

Test	Method
BTEX	S 8021B
Chloride (Titration)	SM 4500-Cl B
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

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 7061525 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.

Sample: 127583 - SP #2 0-1.0' BEB (1.0)

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
QC Batch: 38457 Date Analyzed: 2007-06-21 Analyzed By: JW
Prep Batch: 33281 Sample Preparation: 2007-06-21 Prepared By: JW

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1.84	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.802	mg/Kg	1	1.00	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.971	mg/Kg	1	1.00	97	67.5 - 140.3

Sample: 127584 - SP #3 0-1.0' BEB (1.0)

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 38402 Date Analyzed: 2007-06-21 Analyzed By: JW
Prep Batch: 33238 Sample Preparation: Prepared By: JW

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		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.893	mg/Kg	1	1.00	89	26 - 117.8
4-Bromofluorobenzene (4-BFB)		0.976	mg/Kg	1	1.00	98	51.1 - 119.1

Sample: 127584 - SP #3 0-1.0' BEB (1.0)

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 38277 Date Analyzed: 2007-06-18 Analyzed By: AR
Prep Batch: 33141 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		192	mg/Kg	25	2.00

Sample: 127584 - SP #3 0-1.0' BEB (1.0)

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 38384 Date Analyzed: 2007-06-20 Analyzed By:
Prep Batch: 33157 Sample Preparation: 2007-06-18 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		172	mg/Kg	1	150	115	32.9 - 167

Sample: 127584 - SP #3 0-1.0' BEB (1.0)

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035
 QC Batch: 38457 Date Analyzed: 2007-06-21 Analyzed By: JW
 Prep Batch: 33281 Sample Preparation: 2007-06-21 Prepared By: JW

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1.43	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.795	mg/Kg	1	1.00	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.958	mg/Kg	1	1.00	96	67.5 - 140.3

Sample: 127585 - Stockpile Tank Battery

Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 38277 Date Analyzed: 2007-06-18 Analyzed By: AR
 Prep Batch: 33141 Sample Preparation: Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		160	mg/Kg	25	2.00

Sample: 127585 - Stockpile Tank Battery

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
 QC Batch: 38472 Date Analyzed: 2007-06-24 Analyzed By: AG
 Prep Batch: 33294 Sample Preparation: 2007-06-24 Prepared By: AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		6920	mg/Kg	10	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		229	mg/Kg	10	150	153	32.9 - 167

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.843	mg/Kg	1	1.00	84	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.13	mg/Kg	1	1.00	113	67.5 - 140.3

Method Blank (1) QC Batch: 38276

QC Batch: 38276 Date Analyzed: 2007-06-18 Analyzed By: AR
Prep Batch: 33139 QC Preparation: 2007-06-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.500	mg/Kg	2

Method Blank (1) QC Batch: 38277

QC Batch: 38277 Date Analyzed: 2007-06-18 Analyzed By: AR
Prep Batch: 33141 QC Preparation: 2007-06-18 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.500	mg/Kg	2

Method Blank (1) QC Batch: 38384

QC Batch: 38384 Date Analyzed: 2007-06-20 Analyzed By:
Prep Batch: 33157 QC Preparation: 2007-06-18 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		116	mg/Kg	1	150	77	44.7 - 133.6

Method Blank (1) QC Batch: 38402

QC Batch: 38402 Date Analyzed: 2007-06-21 Analyzed By: JW
Prep Batch: 33238 QC Preparation: 2007-06-21 Prepared By: JW

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)		0.904	mg/Kg	1	1.00	90	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.854	mg/Kg	1	1.00	85	53.9 - 125.1

Method Blank (1) QC Batch: 38457

QC Batch: 38457
Prep Batch: 33281

Date Analyzed: 2007-06-21
QC Preparation: 2007-06-21

Analyzed By: JW
Prepared By: JW

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)		0.929	mg/Kg	1	1.00	93	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.835	mg/Kg	1	1.00	84	67.5 - 140.3

Method Blank (1) QC Batch: 38460

QC Batch: 38460
Prep Batch: 33284

Date Analyzed: 2007-06-22
QC Preparation: 2007-06-22

Analyzed By: JW
Prepared By: JW

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)		0.0900	mg/Kg	1	0.100	90	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.0852	mg/Kg	1	0.100	85	67.5 - 140.3

Method Blank (1) QC Batch: 38472

QC Batch: 38472
Prep Batch: 33294

Date Analyzed: 2007-06-24
QC Preparation: 2007-06-24

Analyzed By: AG
Prepared By: AG

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		140	mg/Kg	1	150	93	44.7 - 133.6

Method Blank (1) QC Batch: 38482

QC Batch: 38482 Date Analyzed: 2007-06-25 Analyzed By: JW
Prep Batch: 33303 QC Preparation: 2007-06-25 Prepared By: JW

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)		0.882	mg/Kg	1	1.00	88	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.841	mg/Kg	1	1.00	84	67.5 - 140.3

Laboratory Control Spike (LCS-1)

QC Batch: 38276 Date Analyzed: 2007-06-18 Analyzed By: AR
Prep Batch: 33139 QC Preparation: 2007-06-18 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.0	mg/Kg	1	100	<0.500	97	85 - 115

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	97.9	mg/Kg	1	100	<0.500	98	85 - 115	1	20

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: 38277 Date Analyzed: 2007-06-18 Analyzed By: AR
Prep Batch: 33141 QC Preparation: 2007-06-18 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	97.2	mg/Kg	1	100	<0.500	97	85 - 115

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	98.1	mg/Kg	1	100	<0.500	98	85 - 115	1	20

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: 38384 Date Analyzed: 2007-06-20 Analyzed By:
Prep Batch: 33157 QC Preparation: 2007-06-18 Prepared By:

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	250	mg/Kg	1	250	<14.6	100	47.5 - 144.1

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	263	mg/Kg	1	250	<14.6	105	47.5 - 144.1	5	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Triacontane	153	166	mg/Kg	1	150	102	111	57.3 - 131.6

Laboratory Control Spike (LCS-1)

QC Batch: 38402
Prep Batch: 33238

Date Analyzed: 2007-06-21
QC Preparation: 2007-06-21

Analyzed By: JW
Prepared By: JW

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.939	mg/Kg	1	1.00	<0.00110	94	68.6 - 123.4
Toluene	0.961	mg/Kg	1	1.00	<0.00150	96	74.6 - 119.3
Ethylbenzene	0.933	mg/Kg	1	1.00	<0.00160	93	72.3 - 126.2
Xylene	2.82	mg/Kg	1	3.00	<0.00410	94	76.5 - 121.6

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.786	mg/Kg	1	1.00	<0.00110	79	68.6 - 123.4	18	20
Toluene	0.926	mg/Kg	1	1.00	<0.00150	93	74.6 - 119.3	4	20
Ethylbenzene	0.925	mg/Kg	1	1.00	<0.00160	92	72.3 - 126.2	1	20
Xylene	2.79	mg/Kg	1	3.00	<0.00410	93	76.5 - 121.6	1	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.815	0.817	mg/Kg	1	1.00	82	82	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	0.920	0.913	mg/Kg	1	1.00	92	91	68.7 - 125.8

Laboratory Control Spike (LCS-1)

QC Batch: 38457
Prep Batch: 33281

Date Analyzed: 2007-06-21
QC Preparation: 2007-06-21

Analyzed By: JW
Prepared By: JW

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.23	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	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD	RPD Limit
GRO	9.60	mg/Kg	1	10.0	<0.739	96	57.7 - 102.5	4	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.16	1.14	mg/Kg	1	1.00	116	114	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.998	1.00	mg/Kg	1	1.00	100	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 38460
Prep Batch: 33284

Date Analyzed: 2007-06-22
QC Preparation: 2007-06-22

Analyzed By: JW
Prepared By: JW

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
GRO	7.90	mg/Kg	1	10.0	<0.739	79	57.7 - 102.5

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Limit	RPD	RPD Limit	
GRO	7.43	mg/Kg	1	10.0	<0.739	74	57.7 - 102.5	6	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.18	0.809	mg/Kg	1	1.00	118	81	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.912	0.921	mg/Kg	1	1.00	91	92	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 38472
Prep Batch: 33294

Date Analyzed: 2007-06-24
QC Preparation: 2007-06-24

Analyzed By: AG
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
DRO	232	mg/Kg	1	250	<14.6	93	47.5 - 144.1

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Limit	RPD	RPD Limit	
DRO	239	mg/Kg	1	250	<14.6	96	47.5 - 144.1	3	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Triacontane	158	159	mg/Kg	1	150	105	106	57.3 - 131.6

Laboratory Control Spike (LCS-1)

QC Batch: 38482
Prep Batch: 33303

Date Analyzed: 2007-06-25
QC Preparation: 2007-06-25

Analyzed By: JW
Prepared By: JW

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.79	mg/Kg	1	10.0	<0.739	78	57.7 - 102.5

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	7.13	mg/Kg	1	10.0	<0.739	71	57.7 - 102.5	9	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.17	0.804	mg/Kg	1	1.00	117	80	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.939	0.930	mg/Kg	1	1.00	94	93	70 - 130

Matrix Spike (MS-1) Spiked Sample: 127582

QC Batch: 38276
Prep Batch: 33139

Date Analyzed: 2007-06-18
QC Preparation: 2007-06-18

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	2660	mg/Kg	25	2500	271.028	96	85 - 115

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

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	2680	mg/Kg	25	2500	271.028	96	85 - 115	1	20

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

Matrix Spike (MS-1) Spiked Sample: 127586

QC Batch: 38277
Prep Batch: 33141

Date Analyzed: 2007-06-18
QC Preparation: 2007-06-18

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	2540	mg/Kg	25	2500	97.726	98	85 - 115

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

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	2560	mg/Kg	25	2500	97.726	102	85 - 115	1	20

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

Matrix Spike (MS-1) Spiked Sample: 127573

QC Batch: 38384
Prep Batch: 33157

Date Analyzed: 2007-06-20
QC Preparation: 2007-06-18

Analyzed By:
Prepared By:

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	251	mg/Kg	1	250	<14.6	100	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	276	mg/Kg	1	250	<14.6	110	11.7 - 152.3	10	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	136	145	mg/Kg	1	150	91	97	17 - 163.1

Matrix Spike (MS-1) Spiked Sample: 127642

QC Batch: 38402
Prep Batch: 33238

Date Analyzed: 2007-06-21
QC Preparation: 2007-06-21

Analyzed By: JW
Prepared By: JW

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	1.10	mg/Kg	1	1.00	<0.00110	110	64.4 - 115.7
Toluene	1.16	mg/Kg	1	1.00	<0.00150	116	57.8 - 124.4
Ethylbenzene	1.18	mg/Kg	1	1.00	<0.00160	118	64.8 - 125.8
Xylene	3.59	mg/Kg	1	3.00	<0.00410	120	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	0.973	mg/Kg	1	1.00	<0.00110	97	64.4 - 115.7	12	20
Toluene	1.03	mg/Kg	1	1.00	<0.00150	103	57.8 - 124.4	12	20
Ethylbenzene	1.03	mg/Kg	1	1.00	<0.00160	103	64.8 - 125.8	14	20
Xylene	3.26	mg/Kg	1	3.00	<0.00410	109	65.2 - 121.8	10	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)	0.791	0.797	mg/Kg	1	1	79	80	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	0.950	0.972	mg/Kg	1	1	95	97	66.7 - 131.9

Matrix Spike (MS-1) Spiked Sample: 127642

QC Batch: 38457
Prep Batch: 33281

Date Analyzed: 2007-06-21
QC Preparation: 2007-06-21

Analyzed By: JW
Prepared By: JW

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	41.4	mg/Kg	1	10.0	36.6192	48	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	43.4	mg/Kg	1	10.0	36.6192	68	10 - 141.5	5	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)	0.666	0.616	mg/Kg	1	1	67	62	40 - 125.3
4-Bromofluorobenzene (4-BFB)	^{3 4} 1.49	1.52	mg/Kg	1	1	149	152	86.7 - 144.5

Matrix Spike (MS-1) Spiked Sample: 127628

QC Batch: 38460 Date Analyzed: 2007-06-22 Analyzed By: JW
Prep Batch: 33284 QC Preparation: 2007-06-22 Prepared By: JW

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.27	mg/Kg	1	10.0	5.75	15	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	7.38	mg/Kg	1	10.0	5.75	16	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)	0.763	0.716	mg/Kg	1	1	76	72	40 - 125.3
4-Bromofluorobenzene (4-BFB)	1.01	1.03	mg/Kg	1	1	101	103	86.7 - 144.5

Matrix Spike (MS-1) Spiked Sample: 128343

QC Batch: 38472 Date Analyzed: 2007-06-24 Analyzed By: AG
Prep Batch: 33294 QC Preparation: 2007-06-24 Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	246	mg/Kg	1	250	<14.6	98	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	279	mg/Kg	1	250	<14.6	112	11.7 - 152.3	13	20

³High surrogate recovery due to peak interference.

⁴High surrogate recovery due to peak interference.

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	128	137	mg/Kg	1	150	85	91	17 - 163.1

Matrix Spike (MS-1) Spiked Sample: 127639

QC Batch: 38482 Date Analyzed: 2007-06-25 Analyzed By: JW
Prep Batch: 33303 QC Preparation: 2007-06-25 Prepared By: JW

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1970	mg/Kg	50	500	1816.24	31	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	⁵ 1850	mg/Kg	50	500	1816.24	7	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)	32.6	31.8	mg/Kg	50	50	65	64	40 - 125.3
4-Bromofluorobenzene (4-BFB)	^{6 7} 85.8	80.2	mg/Kg	50	50	172	160	86.7 - 144.5

Standard (ICV-1)

QC Batch: 38276 Date Analyzed: 2007-06-18 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.1	98	85 - 115	2007-06-18

Standard (CCV-1)

QC Batch: 38276 Date Analyzed: 2007-06-18 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2007-06-18

Standard (ICV-1)

QC Batch: 38277 Date Analyzed: 2007-06-18 Analyzed By: AR

⁵ Matrix spike recovery out of control limits due to peak interference. Use I.CS/I.CSD to demonstrate analysis is under control.

⁶ High surrogate recovery due to peak interference.

⁷ High surrogate recovery due to peak interference.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	241	96	85 - 115	2007-06-24

Standard (CCV-3)

QC Batch: 38472

Date Analyzed: 2007-06-24

Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	238	95	85 - 115	2007-06-24

Standard (ICV-1)

QC Batch: 38482

Date Analyzed: 2007-06-25

Analyzed By: JW

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.963	96	85 - 115	2007-06-25

Standard (CCV-1)

QC Batch: 38482

Date Analyzed: 2007-06-25

Analyzed By: JW

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	2007-06-25

Work order: 7061525

Analysis Request and Chain of Custody Record

PAGE: OF:

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559

Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: Cimarex

SITE MANAGER: Ike Tavares

PROJECT NO.: 2985

PROJECT NAME: Cimarex/Laughlin 5#3 TB

LAB I.D. NUMBER DATE TIME MATRIX COMP. GRAB SAMPLE IDENTIFICATION

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION
127582	6/11/07		S	X		SP #1 0-1.0' BEB (1.0')
583	6/11/07		S	X		SP #2 0-1.0' BEB (1.0')
584	6/12/07		S	X		SP #3 0-1.0' BEB (1.0')
585	6/13/07		S	X		Stockpile Tank Battery
586	6/13/07		S	X		Stockpile Pasture

NUMBER OF CONTAINERS
FILTERED (Y/N)

PRESERVATIVE METHOD

HCL HNO3 ICE NONE

TEST	MTBE	PAH	PCRA Metals	TCLP Metals	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC-MS Vol	GC-MS Semi. Vol.	PCB's	Pest.	BOD, TSS, pH, TDS	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
ETEX 9020/802	8020/802	416.1 (SOLIS MOD.)	Ag As Ba Cd Cr Pb Hg Se	Ag As Ba Cd Cr Pb Hg Se				8240/8240/824	8270/825	8080/808	808/808				
X	X	X											X		
X	X	X											X		
X	X	X											X		
X	X	X											X		

RELINQUISHED BY: (Signature) [Signature] Date: 6/15/07 Time: 11:35

RECEIVED BY: (Signature) _____ Date: _____ Time: _____

SAMPLED BY: (Print & Sign) Blair Taylor / Keith Harrison Date: 6/15/07 Time: _____

RELINQUISHED BY: (Signature) _____ Date: _____ Time: _____

RECEIVED BY: (Signature) _____ Date: _____ Time: _____

SAMPLE SHIPPED BY: (Circle) FEDX BUS UPS AIRBILL # _____

RELINQUISHED BY: (Signature) _____ Date: _____ Time: _____

RECEIVED BY: (Signature) [Signature] Date: 6.15.07 Time: 11:35

HAND DELIVERED OTHER: _____

RECEIVING LABORATORY: TRAC ADDRESS: _____ CITY: Midland STATE: TX ZIP: _____ CONTACT: _____ PHONE: _____

RECEIVED BY: (Signature) [Signature] DATE: 6.15.07 TIME: 11:35

HIGHLANDER CONTACT PERSON: Ike Tavares Results by: _____ RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.5°C MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: _____

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

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

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company	Cimarex Energy Co. of Colorado	Contact	Zeno Farris
Address	PO Box 140907; Irving, TX 75014	Telephone No.	972-443-6489
Facility Name	Laughlin 5 No. 3	Facility Type	300 bbl oil tank
Surface Owner	State	Mineral Owner	State
		Lease No.	V0-5271-0001

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	5	20S	37E	2100	South	740	East	Lea

Latitude 326023 N Longitude 1032731 W

WTR 30'

NATURE OF RELEASE

Type of Release	Oil	Volume of Release	125 bbls	Volume Recovered	125 bbls
Source of Release	Oil tank	Date and Hour of Occurrence	03-28-07, 12:00 am to 6:00 am	Date and Hour of Discovery	8:15 am 03-28-07
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Malcolm Coombs (landowner), Larry Johnson (NMOCD)		
By Whom?	Hugo Naegele	Date and Hour	Coombs 9:45 am 03-28-07, Sanders 8:30 am 03-28-07		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
There was an oil spill while the tank bottom was being circulated.

Describe Area Affected and Cleanup Action Taken.*
All oil was spilled into dikes (65 bbls) and on location (60 bbls). A vacuum truck was called to suck up the spill, a gang was called in to clean the tanks, and a backhoe was hired to pick contaminated soil and put on plastic. Micro-Blaze will be sprayed.

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>Zeno Farris</i>	OIL CONSERVATION DIVISION	
Printed Name: Zeno Farris	Approved by District ^{ENVIRONMENTAL} Supervisor <i>[Signature]</i>	
Title: Manager Operations Administration	Approval Date: <i>6-5-07</i>	Expiration Date:
E-mail Address: zfarris@cimarex.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 03-29-07	Phone: 972-443-6489	

* Attach Additional Sheets If Necessary

R# 1421

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

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side of form

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company	Cimarex Energy Co. of Colorado	Contact	Zeno Farris
Address	PO Box 140907; Irving, TX 75014	Telephone No.	972-443-6489
Facility Name	Laughlin 5 No. 3	Facility Type	300 bbl oil tank

Surface Owner	State	Mineral Owner	State	Lease No.	V0-5271-0001
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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
I	5	20S	37E	2100	South	740	East	Lea

Latitude 326023 N Longitude 1032731 W

NATURE OF RELEASE

Type of Release	Oil	Volume of Release	125 bbls	Volume Recovered	125 bbls
Source of Release	Oil tank	Date and Hour of Occurrence	03-28-07, 12:00 am to 6:00 am	Date and Hour of Discovery	8:15 am 03-28-07
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Malcolm Coombs (landowner), Larry Johnson (NMOCD)		
By Whom?	Hugo Naegele	Date and Hour	Coombs 9:45 am 03-28-07, Sanders 8:30 am 03-28-07		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse			

If a Watercourse was Impacted, Describe Fully *

Describe Cause of Problem and Remedial Action Taken *
There was an oil spill while the tank bottom was being circulated

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Signature: <i>Zeno Farris</i>	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Zeno Farris	Approved by District Supervisor:	
Title: Manager Operations Administration	Approval Date:	Expiration Date:
E-mail Address: zfarris@cimarex.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 03-29-07 Phone: 972-443-6489		

* Attach Additional Sheets If Necessary

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Energy Minerals and Natural Resources

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Form C-141
Revised October 10, 2003

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side of form

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company	Cimarex Energy Co. of Colorado	Contact	Zeno Farris
Address	PO Box 140907; Irving TX 75014	Telephone No.	972-443-6489
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Surface Owner	State	Mineral Owner	State	Lease No.	V0-5271-0001
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Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* (See Attached Initial C-141)
There was an oil spill while the tank bottom was being circulated

Describe Area Affected and Cleanup Action Taken.*

All oil was spilled into dikes (65 bbls) and on location (60 bbls). A vacuum truck picked up all the fluids. Cimarex had a local dirt contractor remove the visually impacted soils. Highlander Environmental personnel inspected and sampled the spill area. The impacted areas exceeding the RRAL were excavated and hauled to proper disposal. A final closure report was prepared and submitted to the NMOCD.

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>Evan L Wauhob</i>		OIL CONSERVATION DIVISION	
Printed Name: Evan L Wauhob		Approved by District Supervisor:	
Title: Production Superintendent	Approval Date:	Expiration Date:	
E-mail Address: ewauhob@cimarex.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: <u>8/21/07</u>	Phone: 432-571-7848		

* Attach Additional Sheets If Necessary