Highlander Environmental Corp.

Midland, Texas

August 7, 2007

RP # 1241

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 of Colorado, J.W. Cooper #7 Tank Battery Release Located in Unit J, Section 14, Township 24 South, Range 36 East, Lea County, New Mexico.

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by Cimarex of Colorado (Cimarex) to assess a spill from the J.W. Cooper #7 Tank Battery, located in Unit J, Section 14, Township 24 South, Range 36 East, Lea County, New Mexico (Site). The spill site coordinates are N 32° 12.879', W 103° 14.088'. The Site is shown on Figure 1.

Background

According to the State of New Mexico C-141 Initial Report, approximately 78 barrels (bbls) of produced water were released from a water tank overflow. The overflow occurred when there was a power failure from a storm which occurred on March 11, 2007. A total of 78 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 water wells located in adjacent sections 23, and 15, Township 24 South, Range 36 East, with reported average depths to water ranging from 160 feet to 312 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 5,000 mg/kg.

Assessment and Results

The pumper, responding to an alarm, built up the dike to keep as much of the produced water inside the facility dike as possible. After a vacuum truck had picked up all of the fluids, Cimarex had a local dirt contractor clean up around the facility. The spill ran off site down the pumper road during the heavy rainfall.

On April 11, 2007, Highlander personnel inspected and sampled the spill area. A total of five (8) auger holes (AH-1 through AH-8) were installed using a stainless steel hand auger to assess the impacted soils. Five (5) auger holes were placed inside the facility dike and three (3) auger holes were placed in the spill area off the pad. 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. The auger hole locations are shown on Figure 2. The results of the sampling are summarized in Table 1.

Referring to Table 1, TPH concentrations inside the dike exceeded the RRAL at AH-1, AH-2 and AH-4. Outside the dike, AH-7 had a TPH slightly above the RRAL at 5025 mg/L. All BTEX concentrations were below the RRAL, and all chloride concentrations were below 250 mg/kg. The areas around auger holes AH-1, AH-2 and AH-4 were excavated an additional 1'-3' and stockpiled onsite. The remainder of the inside of the dike was tilled.

Referring to Table 2, confirmation samples SP-1 through SP-4 and stockpile samples were collected on June 19, 2007. Sample SP-1 was collected in the same area as AH-7 to evaluate the level slightly above the RRAL. All samples, including the stockpile samples were well below the RRAL for TPH. Additionally, BTEX samples taken from the stockpiles were below reporting limits and chloride concentrations from the stockpiles were below 50 mg/kg. The sample point locations are shown on Figure 3. The results of the sampling are summarized in Table 2. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix B.

Conclusions

The impacted soils have been excavated and stockpiled on the well pad. No remaining TPH or BTEX concentrations currently exceed the RRAL and the chloride concentrations are all below 250 mg/kg. Since the stockpiles do not exceed the RRAL and chloride concentrations are below 50 mg/kg, this material will be blended with clean soil and used to backfill the excavation. 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.

Tim Reed

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

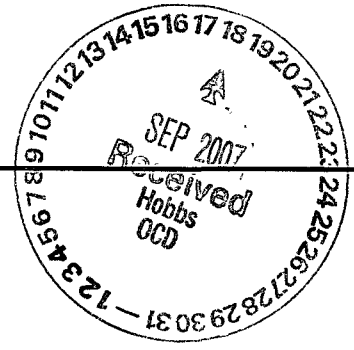
General Site Information:	
Site:	J.W. Cooper #7 Tank Battery
Company:	Cimarex of Colorado
Well Location:	Section 14, T24S R36E
Spill Location:	Section 14, T24S R36E
Unit Letter:	Unit J
Lease Number:	
County:	Lea
Spill GPS:	32° 12.879', 103° 14.088'
Surface Owner:	Randy Crawford
Mineral Owner:	
Directions:	From the intersection of Hwy 18 and 128 in Jal, head north on 18 for 6.2 miles. Turn left on
	Cooper Cemetary Road and go west 2.4 miles. Turn right on dirt road and go north 0.3 mile
	to tank battery.

Release Data:	
Date Released:	3/11/2007
Type Release:	Produced water
Source of Contamination:	Tank overflow from power failure during storm.
Fluid Released:	78 barrels
Fluids Recovered:	78 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 >100 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:	**0**	

Acceptable Soil RRAL (mg/kg)		
Benzene	*Total BTEX*	*TPH*
10	**50**	**5,000**



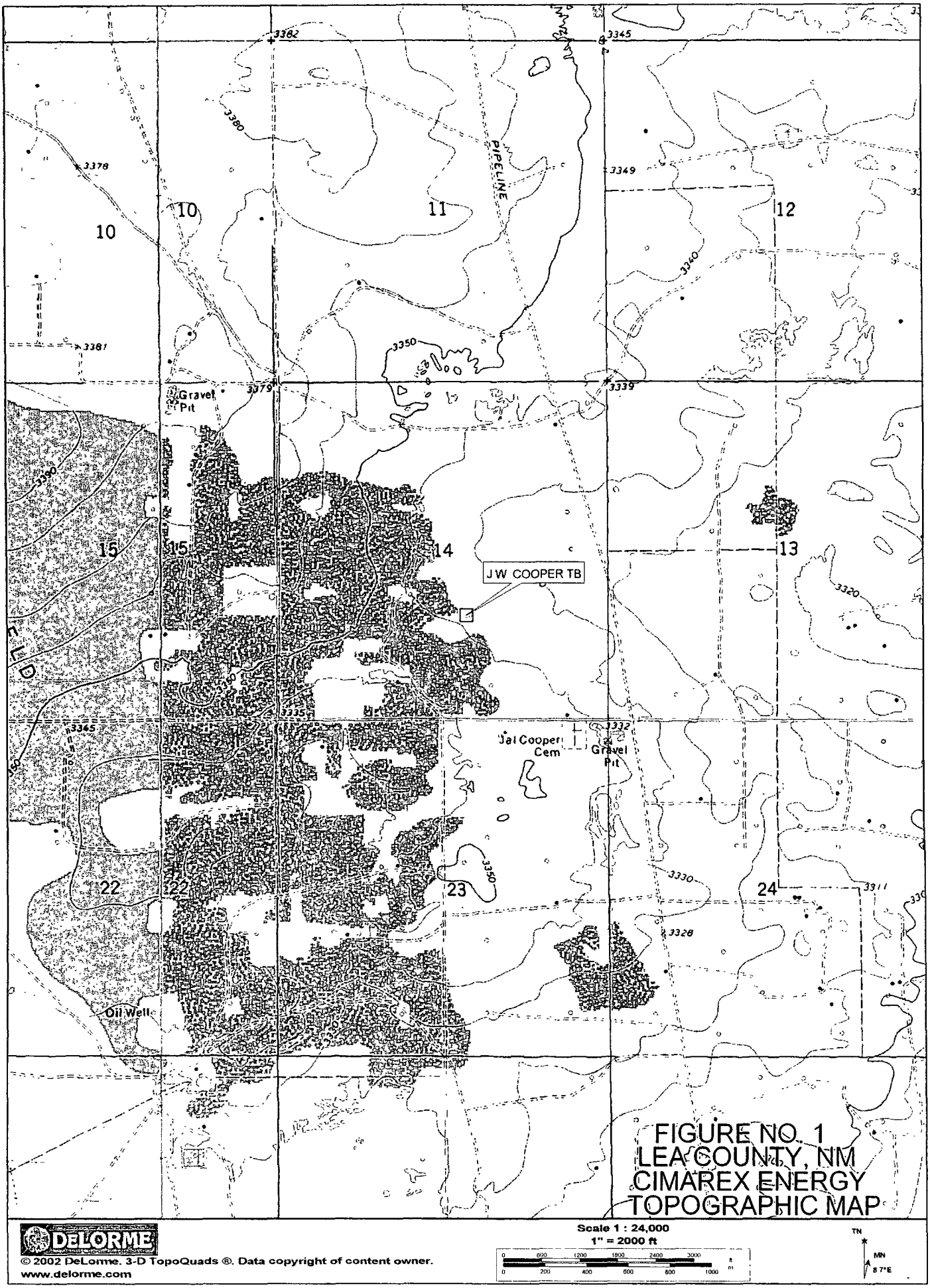


FIGURE NO. 1
LEA COUNTY, NM
CIMAREX ENERGY
TOPOGRAPHIC MAP

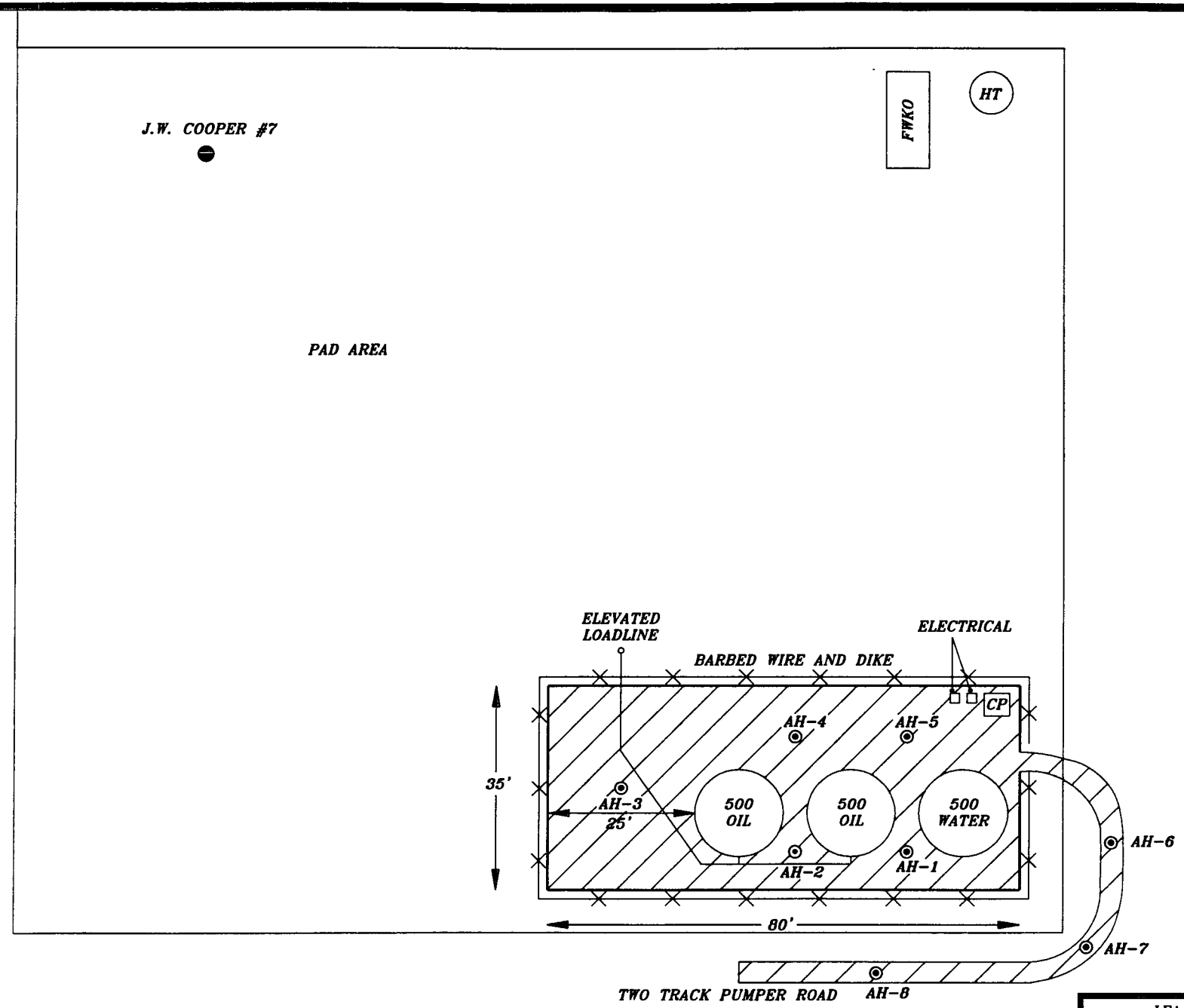


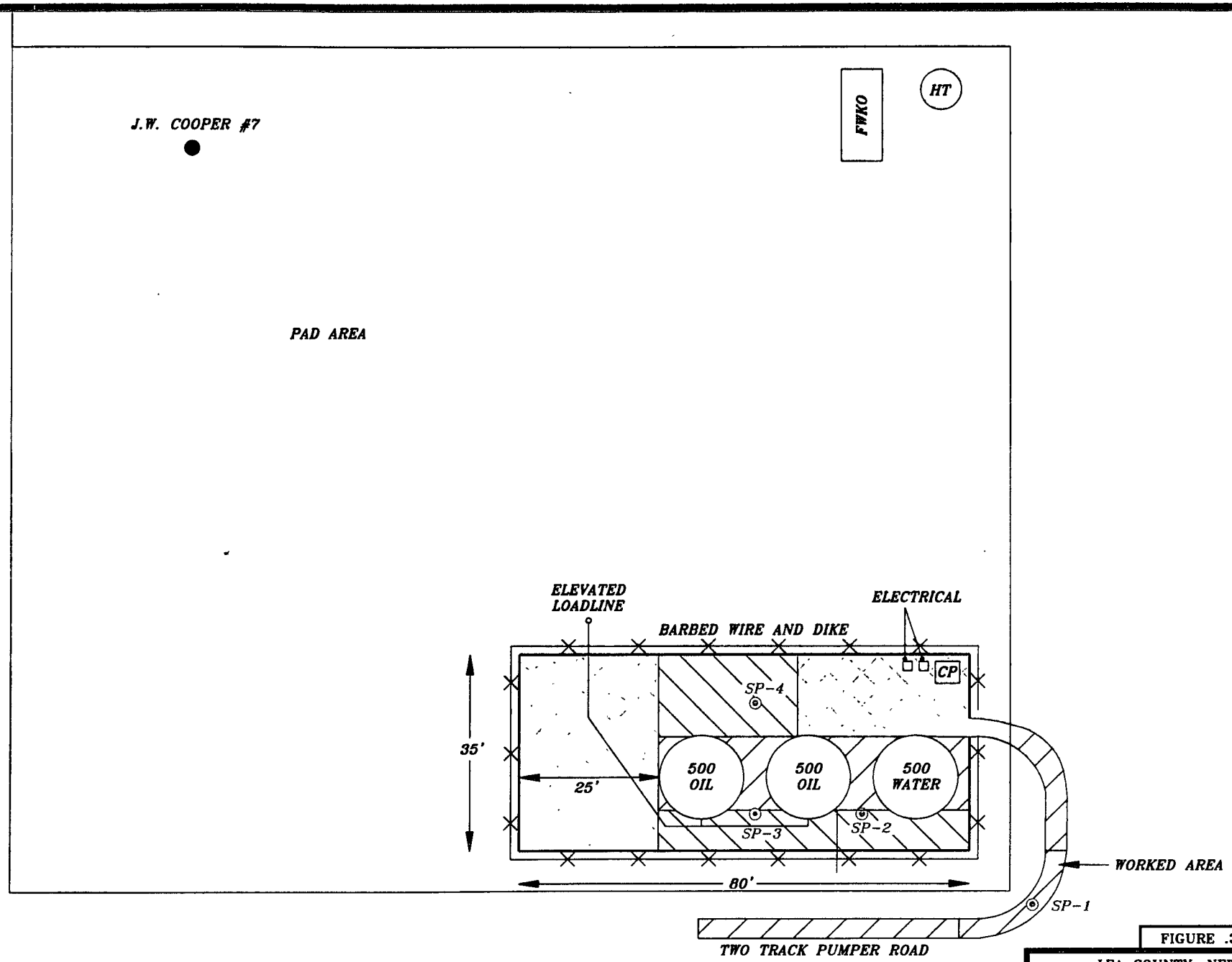
FIGURE .2

LEA COUNTY, NEW MEXICO

CIMAREX ENERGY COMPANY
J.W. COOPER TB
SEC. 14

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 4/25/07
DWN. BY: RC
FILE: C:\CIMAREX\2963\JW COOPER TB



EXCAVATED 3.0'
EXCAVATED 1.0'
SPILLED AREA
SAMPLE POINTS

NOT TO SCALE

FIGURE .3

LEA COUNTY, NEW MEXICO

CIMAREX ENERGY COMPANY
J.W. COOPER TB
SEC. 14

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 4/25/07
DWN. BY: RC
FILE: C:\CIMAREX\2983\JW COOPER TB

Table 1
Cimarex Energy
J.W. Cooper Tank Battery
Lea County, NM

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			DRO	GRO	Total					
AH-1	4/11/2007	0-1.0'	10,100	71.4	10,171.4	<0.0100	0.0154	0.0117	0.190	135
AH-1	4/11/2007	1'-1.5'	3,270	1,510	4,780	<0.100	0.291	0.816	2.46	54.2
AH-2	4/11/2007	0-1.0'	2,900	29.1	2,929.1					48.1
AH-2	4/11/2007	1'-1.5'	4,580	827	5,407	<0.100	<0.100	<0.100	1.45	29.9
AH-3	4/11/2007	0-1.0'	1,640	17.5	1,657.5	-	-	-	-	47.0
AH-4	4/11/2007	0-1.0'	6,970	53.1	7,023.1	-	-	-	-	125
AH-4	4/11/2007	1'-1.5'	199	7.05	206.05	-	-	-	-	60.8
AH-5	4/11/2007	0-1.0'	4,680	39.5	4,719.5	-	-	-	-	222
AH-5	4/11/2007	1'-1.5'	764	5.03	769.03	-	-	-	-	207
AH-6	4/11/2007	0-1.0'	524	2.94	526.94	-	-	-	-	69.1
AH-6	4/11/2007	1'-1.5'	267	1.40	268.4	-	-	-	-	82.5
AH-7	4/11/2007	0-1.0'	5,020	5.51	5,025.51	-	-	-	-	101
AH-8	4/11/2007	0-0.5'	579	1.30	580.3	-	-	-	-	12.9

(-) Not Analyzed

Table 2
Cimarex Energy
J.W. Cooper Tank Battery
Lea County, NM

Sample ID	Date Sampled	Excavation Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			DRO	GRO	Total					
* SP #1	6/18/2007	0-1.0'	55.9	2,681	2,740	-	-	-	-	-
SP #2 (0-0.5' BEB)	6/19/2007	1.0'	1,820	72.6	1,892.6	-	-	-	-	-
SP #3 (0-0.5' BEB)	6/19/2007	3.0'	1340	28.2	1,368.2	-	-	-	-	-
SP #4 (0-0.5' BEB)	6/19/2007	1.0'	92.9	6.22	99.12	-	-	-	-	-
Stockpile North	6/19/2007	Composite	1,800	42.9	1,842.9	<0.100	<0.100	<0.100	<0.100	<50.0
Stockpile South	6/19/2007	Composite	1,130	88.9	1,218.9	<0.100	<0.100	<0.100	<0.100	<50.0

(-) Not Analyzed, * The Area of SP #1 was not Excavated, (BEB) Below Excavation Bottom

Water Well Data
Average Depth to Groundwater (ft)
Cimarex - J.W. Cooper #7 Tank Battery, Lea County, New Mexico

23 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

23 South 36 East

6	5	4 160	3	2	1
7	8	9	10	11	12
18	17	16 **220**	15 **149**	14	13
19	20	21	22 **400**	23 **143**	24
30	29	28	27	26	25
31 **189**	32	33	34	35	36 **127**

23 South 37 East

6 **102**	5	4	3 **70**	2 **64**	1
7	8	9 **100**	10 **66**	11 **68**	12
18	17	16 **115** **100**	15	14	13
19	20 **108**	21	22	23	24
30	29	28 **117**	27 **88**	26	25
31	32 **106** **97**	33 **87**	34	35	36

24 South 35 East

6	5	4	3	2	1
7	8	9	10 **300**	11	12
18	17	16	15	14	13
19	20 **97**	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South 36 East

6	5	4 **165**	3	2	1
7	8	9	10	11	12
18	17	16	15 **312**	14 **SITE**	13
19	20	21	22	23 **160**	24
30	29	28	27	26	25
31	32	33 **54** **53**	34	35	36

24 South 37 East

6	5 **111**	4	3	2	1
7 **119**	8 **90**	9	10 **120**	11 **64**	12 **18**
18 **124**	17	16 **67**	15	14	13
19	20	21 **69**	22	23 **94**	24 **100**
30	29	28 **70**	27 **41**	26	25 **89** **90**
31	32	33	34 **55**	35	36

25 South 35 East

6	5 **165**	4	3 **108**	2	1
7	8	9	10	11	12
18 **230**	17	16	15	14	13
19	20	21 **218**	22	23	24
30 **80**	29	28	27	26	25
31	32	33	34	35	36

25 South 36 East

6 **295**	5	4	3	2	1
7	8	9	10300 **180**	11	12
18	17	16	15 **120**	14	13
19	20	21	22	23 **53.7**	24 **455**
30	29	28	27	26	25
31	32	33	34	35	36

25 South 37 East

6	5	4	3	2	1 60
7	8	9	10 **50**	11	12
18 **51**	17 62	16	15 **59.2**	14	13 **73** **81**
19 **44** 62	20 65 **34**	21	22 **26**	23	24 **255**
30 Jal	29 **219**	28	27	26 **75**	25 **55**
31	32	33 **86**	34	35 **185**	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: 25S Range: 36E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | iWATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 08/17/2007

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg
CP	25S	36E	33				1	80	80	80

Record Count: 1

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 25S Range: 37E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | iWATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 08/17/2007

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	25S	37E	19				11	27	69	49
CP	25S	37E	20				7	23	70	39
CP	25S	37E	29				5	187	250	219
CP	25S	37E	35				1	185	185	185

Record Count: 24

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 23S Range: 36E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

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AVERAGE DEPTH OF WATER REPORT 08/17/2007

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	23S	36E	15				1	149	149	149
CP	23S	36E	16				1	220	220	220
CP	23S	36E	22				1	400	400	400
CP	23S	36E	31				2	178	200	189
CP	23S	36E	36				5	123	133	127

Record Count: 10

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 24S Range: 36E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

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AVERAGE DEPTH OF WATER REPORT 08/17/2007

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	24S	36E	04				3	155	178	165
CP	24S	36E	15				2	173	450	312
CP	24S	36E	20				1	97	97	97
CP	24S	36E	23				1	160	160	160
CP	24S	36E	33				1	53	53	53

Record Count: 8

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 24S Range: 37E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

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AVERAGE DEPTH OF WATER REPORT 08/17/2007

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	24S	37E	05				1	106	106	106
CP	24S	37E	08				1	90	90	90
CP	24S	37E	12				1	18	18	18
CP	24S	37E	23				1	94	94	94
CP	24S	37E	24				1	100	100	100
CP	24S	37E	25				1	90	90	90
CP	24S	37E	28				1	70	70	70

Record Count: 7

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 24S Range: 35E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

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AVERAGE DEPTH OF WATER REPORT 08/17/2007

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	24S	35E	10				1	300	300	300

Record Count: 1

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 23S Range: 37E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

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AVERAGE DEPTH OF WATER REPORT 08/17/2007

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	23S	37E	09				1	100	100	100
CP	23S	37E	16				1	115	115	115
CP	23S	37E	32				1	106	106	106

Record Count: 3

Summary Report

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

Report Date: April 24, 2007

Work Order: 7041706

Project Location: Lea County, NM
Project Name: Cimarex/J.W.Cooper TB
Project Number: 2983

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
121856	AH-1 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121857	AH-1 (1.0-1.5')	soil	2007-04-11	00:00	2007-04-17
121858	AH-2 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121859	AH-2 (1.0-1.5')	soil	2007-04-11	00:00	2007-04-17
121860	AH-3 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121861	AH-4 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121862	AH-4 (1.0-1.5')	soil	2007-04-11	00:00	2007-04-17
121863	AH-5 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121864	AH-5 (1.0-1.5')	soil	2007-04-11	00:00	2007-04-17
121865	AH-6 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121866	AH-6 (1.0-1.5')	soil	2007-04-11	00:00	2007-04-17
121867	AH-7 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121868	AH-8 (0-0.5')	soil	2007-04-11	00:00	2007-04-17

	BTEX				MTBE	TPH DRO	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
121856 - AH-1 (0-1.0')	<0.0100	**0.0154**	**0.0117**	**0.190**		**10100**	**71.4**
121857 - AH-1 (1.0-1.5')	<0.100	**0.291**	**0.816**	**2.46**		**3270**	**1510**
121858 - AH-2 (0-1.0')						**2900**	**29.1**
121859 - AH-2 (1.0-1.5')	<0.100	<0.100	<0.100	**1.45**		**4580**	**827**
121860 - AH-3 (0-1.0')						**1640**	**17.5**
121861 - AH-4 (0-1.0')						**6970**	**53.1**
121862 - AH-4 (1.0-1.5')						**199**	**7.05**
121863 - AH-5 (0-1.0')						**4680**	**39.5**
121864 - AH-5 (1.0-1.5')						**764**	**5.03**
121865 - AH-6 (0-1.0')						**524**	**2.94**
121866 - AH-6 (1.0-1.5')						**267**	**1.40**
121867 - AH-7 (0-1.0')						**5020**	**5.51**
121868 - AH-8 (0-0.5')						**579**	**1.30**

Sample: 121856 - AH-1 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		**135**	mg/Kg	1.00

Sample: 121857 - AH-1 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		**54.2**	mg/Kg	1.00

Sample: 121858 - AH-2 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		**48.1**	mg/Kg	1.00

Sample: 121859 - AH-2 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		**29.9**	mg/Kg	1.00

Sample: 121860 - AH-3 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		**47.0**	mg/Kg	1.00

Sample: 121861 - AH-4 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		**125**	mg/Kg	1.00

Sample: 121862 - AH-4 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		**60.8**	mg/Kg	1.00

Sample: 121863 - AH-5 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		**222**	mg/Kg	1.00

Sample: 121864 - AH-5 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		**207**	mg/Kg	1.00

Sample: 121865 - AH-6 (0-1.0')

continued ...

sample 121865 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride		**69.1**	mg/Kg	1.00

Sample: 121866 - AH-6 (1.0-1.5')

Param	Flag	Result	Units	RL
Chloride		**82.5**	mg/Kg	1.00

Sample: 121867 - AH-7 (0-1.0')

Param	Flag	Result	Units	RL
Chloride		**101**	mg/Kg	1.00

Sample: 121868 - AH-8 (0-0.5')

Param	Flag	Result	Units	RL
Chloride		**12.9**	mg/Kg	1.00

TRACEANALYSIS, INC.

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Analytical and Quality Control Report

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

Report Date: April 24, 2007

Work Order: 7041706

Project Location: Lea County, NM
Project Name: Cimarex/J.W.Cooper TB
Project Number: 2983

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
121856	AH-1 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121857	AH-1 (1.0-1.5')	soil	2007-04-11	00:00	2007-04-17
121858	AH-2 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121859	AH-2 (1.0-1.5')	soil	2007-04-11	00:00	2007-04-17
121860	AH-3 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121861	AH-4 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121862	AH-4 (1.0-1.5')	soil	2007-04-11	00:00	2007-04-17
121863	AH-5 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121864	AH-5 (1.0-1.5')	soil	2007-04-11	00:00	2007-04-17
121865	AH-6 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121866	AH-6 (1.0-1.5')	soil	2007-04-11	00:00	2007-04-17
121867	AH-7 (0-1.0')	soil	2007-04-11	00:00	2007-04-17
121868	AH-8 (0-0.5')	soil	2007-04-11	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.

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/J.W.Cooper TB' were received by TraceAnalysis, Inc. on 2007-04-17 and assigned to work order 7041706. Samples for work order 7041706 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 occuring, however, it may not pertain to the samples for work order 7041706 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 preformed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 121856 - AH-1 (0-1.0')

Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	36707	Date Analyzed:	2007-04-23	Analyzed By:	AG
Prep Batch:	31842	Sample Preparation:	2007-04-23	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
Benzene		<0.0100		mg/Kg	1	0.0100
Toluene		**0.0154**		mg/Kg	1	0.0100
Ethylbenzene		**0.0117**		mg/Kg	1	0.0100
Xylene		**0.190**		mg/Kg	1	0 0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.858	mg/Kg	1	1.00	86	26 - 117 8
4-Bromofluorobenzene (4-BFB)		1.01	mg/Kg	1	1.00	101	51.1 - 119.1

Sample: 121856 - AH-1 (0-1.0')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	36598	Date Analyzed:	2007-04-18	Analyzed By:	AR
Prep Batch:	31741	Sample Preparation:		Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**135**		mg/Kg	5	1.00

Sample: 121856 - AH-1 (0-1.0')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	36556	Date Analyzed:	2007-04-17	Analyzed By:	AG
Prep Batch:	31708	Sample Preparation:	2007-04-17	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**10100**		mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[1]	2720	mg/Kg	5	150	1813	32.9 - 167

Sample: 121856 - AH-1 (0-1.0')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	36525	Date Analyzed:	2007-04-17	Analyzed By:	ss
Prep Batch:	31685	Sample Preparation:	2007-04-17	Prepared By:	ss

[1] High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**71.4**	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.36	mg/Kg	5	5.00	87	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		6.06	mg/Kg	5	5.00	121	67.5 - 140.3

Sample: 121857 - AH-1 (1.0-1.5')

Analysis:	BTEX	Analytical Method	S 8021B	Prep Method:	S 5035
QC Batch:	36707	Date Analyzed:	2007-04-23	Analyzed By:	AG
Prep Batch:	31842	Sample Preparation:	2007-04-23	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.100	mg/Kg	10	0.0100
Toluene		**0.291**	mg/Kg	10	0.0100
Ethylbenzene		**0.816**	mg/Kg	10	0.0100
Xylene		**2.46**	mg/Kg	10	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		10.1	mg/Kg	10	10.0	101	26 - 117.8
4-Bromofluorobenzene (4-BFB)		7.21	mg/Kg	10	10.0	72	51.1 - 119.1

Sample: 121857 - AH-1 (1.0-1.5')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	36598	Date Analyzed	2007-04-18	Analyzed By:	AR
Prep Batch:	31741	Sample Preparation		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**54.2**	mg/Kg	5	1.00

Sample: 121857 - AH-1 (1.0-1.5')

Analysis:	TPH DRO	Analytical Method:	Mod 8015B	Prep Method:	N/A
QC Batch:	36556	Date Analyzed:	2007-04-17	Analyzed By:	AG
Prep Batch:	31708	Sample Preparation:	2007-04-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**3270**	mg/Kg	1	50.0

continued ...

sample continued . .

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[2]	558	mg/Kg	1	150	372	32.9 - 167

Sample: 121857 - 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		**1510**	mg/Kg	50	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		40.6	mg/Kg	50	50.0	81	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)	[3]	88.3	mg/Kg	50	50.0	177	67.5 - 140.3

Sample: 121858 - AH-2 (0-1.0')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	36598	Date Analyzed:	2007-04-18	Analyzed By:	AR
Prep Batch	31741	Sample Preparation		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**48.1**	mg/Kg	5	1.00

Sample: 121858 - AH-2 (0-1.0')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	36556	Date Analyzed:	2007-04-17	Analyzed By:	AG
Prep Batch:	31708	Sample Preparation:	2007-04-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**2900**	mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[4]	1610	mg/Kg	5	150	1073	32.9 - 167

[2]High surrogate recovery due to peak interference
[3]High surrogate recovery due to peak interference.
[4]High surrogate recovery due to peak interference

Sample: 121858 - AH-2 (0-1.0')

Analysis:	TPH GRO	Analytical Method	S 8015B	Prep Method:	S 5035
QC Batch:	36525	Date Analyzed:	2007-04-17	Analyzed By:	ss
Prep Batch:	31685	Sample Preparation:	2007-04-17	Prepared By:	ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**29.1**	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)		1.34	mg/Kg	1	1.00	134	67.5 - 140.3

Sample: 121859 - AH-2 (1.0-1.5')

Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	36707	Date Analyzed:	2007-04-23	Analyzed By:	AG
Prep Batch:	31842	Sample Preparation:	2007-04-23	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.100	mg/Kg	10	0.0100
Toluene		<0.100	mg/Kg	10	0.0100
Ethylbenzene		<0.100	mg/Kg	10	0.0100
Xylene		**1.45**	mg/Kg	10	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.78	mg/Kg	10	10.0	88	26 - 117.8
4-Bromofluorobenzene (4-BFB)		9.53	mg/Kg	10	10.0	95	51.1 - 119.1

Sample: 121859 - AH-2 (1.0-1.5')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	36598	Date Analyzed:	2007-04-18	Analyzed By:	AR
Prep Batch:	31741	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**29.9**	mg/Kg	5	1.00

Sample: 121859 - AH-2 (1.0-1.5')

Analysis:	TPH DRO	Analytical Method:	Mod 8015B	Prep Method	N/A
QC Batch.	36556	Date Analyzed.	2007-04-17	Analyzed By:	AG
Prep Batch:	31708	Sample Preparation:	2007-04-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**4580**	mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[5]	742	mg/Kg	5	150	495	32.9 - 167

Sample: 121859 - 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		**827**	mg/Kg	50	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		44.4	mg/Kg	50	50.0	89	52 4 - 123.7
4-Bromofluorobenzene (4-BFB)		52.6	mg/Kg	50	50.0	105	67.5 - 140.3

Sample: 121860 - AH-3 (0-1.0')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	36598	Date Analyzed:	2007-04-18	Analyzed By:	AR
Prep Batch:	31741	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**47.0**	mg/Kg	5	1.00

Sample: 121860 - AH-3 (0-1.0')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method	N/A
QC Batch:	36556	Date Analyzed.	2007-04-17	Analyzed By:	AG
Prep Batch:	31708	Sample Preparation:	2007-04-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**1640**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[6]	491	mg/Kg	1	150	327	32.9 - 167

[5]High surrogate recovery due to peak interference
[6]High surrogate recovery due to peak interference.

Sample: 121860 - AH-3 (0-1.0')

Analysis:	TPH GRO	Analytical Method.	S 8015B	Prep Method:	S 5035
QC Batch:	36525	Date Analyzed.	2007-04-17	Analyzed By:	ss
Prep Batch:	31685	Sample Preparation:	2007-04-17	Prepared By.	ss

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		17.5		mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.806	mg/Kg	1	1.00	81	52 4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.19	mg/Kg	1	1.00	119	67.5 - 140.3

Sample: 121861 - AH-4 (0-1.0')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method	N/A
QC Batch:	36598	Date Analyzed:	2007-04-18	Analyzed By:	AR
Prep Batch:	31741	Sample Preparation:		Prepared By:	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		125		mg/Kg	50	1.00

Sample: 121861 - AH-4 (0-1.0')

Analysis:	TPH DRO	Analytical Method:	Mod 8015B	Prep Method	N/A
QC Batch	36556	Date Analyzed:	2007-04-17	Analyzed By:	AG
Prep Batch:	31708	Sample Preparation.	2007-04-17	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		6970		mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[7]	1290	mg/Kg	5	150	860	32.9 - 167

Sample: 121861 - AH-4 (0-1.0')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	36525	Date Analyzed:	2007-04-17	Analyzed By	ss
Prep Batch:	31685	Sample Preparation:	2007-04-17	Prepared By.	ss

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		53.1		mg/Kg	1	1.00

[7]High surrogate recovery due to peak interference

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)	[8]	2.78	mg/Kg	1	1.00	278	67.5 - 140.3

Sample: 121862 - AH-4 (1.0-1.5')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	36598	Date Analyzed:	2007-04-18	Analyzed By:	AR
Prep Batch:	31741	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**60.8**	mg/Kg	5	1.00

Sample: 121862 - AH-4 (1.0-1.5')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	36556	Date Analyzed:	2007-04-17	Analyzed By:	AG
Prep Batch:	31708	Sample Preparation:	2007-04-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**199**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[9]	303	mg/Kg	1	150	202	32.9 - 167

Sample: 121862 - AH-4 (1.0-1.5')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method	S 5035
QC Batch:	36525	Date Analyzed:	2007-04-17	Analyzed By:	ss
Prep Batch:	31685	Sample Preparation:	2007-04-17	Prepared By:	ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**7.05**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.798	mg/Kg	1	1.00	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.19	mg/Kg	1	1.00	119	67.5 - 140.3

Sample: 121863 - AH-5 (0-1.0')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	36598	Date Analyzed:	2007-04-18	Analyzed By:	AR
Prep Batch:	31741	Sample Preparation:		Prepared By	AR

[8]High surrogate recovery due to peak interference.
[9]High surrogate recovery due to peak interference

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**222**		mg/Kg	10	1.00

Sample: 121863 - AH-5 (0-1.0')

Analysis.	TPH DRO	Analytical Method·	Mod 8015B	Prep Method.	N/A
QC Batch·	36556	Date Analyzed·	2007-04-17	Analyzed By·	AG
Prep Batch·	31708	Sample Preparation:	2007-04-17	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**4680**		mg/Kg	5	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[10]	1620	mg/Kg	5	150	1080	32.9 - 167

Sample: 121863 - AH-5 (0-1.0')

Analysis·	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	36525	Date Analyzed:	2007-04-17	Analyzed By:	ss
Prep Batch·	31685	Sample Preparation:	2007-04-17	Prepared By:	ss

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		**39.5**		mg/Kg	1	1 00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.818	mg/Kg	1	1.00	82	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.872	mg/Kg	1	1.00	87	67.5 - 140.3

Sample: 121864 - AH-5 (1.0-1.5')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method	N/A
QC Batch	36598	Date Analyzed:	2007-04-18	Analyzed By:	AR
Prep Batch·	31741	Sample Preparation:		Prepared By.	AR

Parameter	Flag	Result	RL	Units	Dilution	RL
Chloride		**207**		mg/Kg	10	1.00

Sample: 121864 - AH-5 (1.0-1.5')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch·	36556	Date Analyzed	2007-04-17	Analyzed By.	AG
Prep Batch.	31708	Sample Preparation·	2007-04-17	Prepared By:	AG

[10]High surrogate recovery due to peak interference

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		764	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[11]	543	mg/Kg	1	150	362	32.9 - 167

Sample: 121864 - AH-5 (1.0-1.5')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	36525	Date Analyzed:	2007-04-17	Analyzed By:	ss
Prep Batch:	31685	Sample Preparation:	2007-04-17	Prepared By:	ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		5.03	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.794	mg/Kg	1	1.00	79	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.10	mg/Kg	1	1.00	110	67.5 - 140.3

Sample: 121865 - AH-6 (0-1.0')

Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	36598	Date Analyzed:	2007-04-18	Analyzed By:	AR
Prep Batch:	31741	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		69.1	mg/Kg	5	1.00

Sample: 121865 - AH-6 (0-1.0')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	36556	Date Analyzed:	2007-04-17	Analyzed By:	AG
Prep Batch:	31708	Sample Preparation:	2007-04-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		524	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[12]	394	mg/Kg	1	150	263	32.9 - 167

[11] High surrogate recovery due to peak interference.
[12] High surrogate recovery due to peak interference

Sample: 121865 - AH-6 (0-1.0')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	36525	Date Analyzed:	2007-04-17	Analyzed By:	ss
Prep Batch:	31685	Sample Preparation:	2007-04-17	Prepared By:	ss

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		2.94		mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.794	mg/Kg	1	1.00	79	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.06	mg/Kg	1	1.00	106	67.5 - 140.3

Sample: 121866 - AH-6 (1.0-1.5')

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	Result	RL	Units	Dilution	RL
Chloride		82.5		mg/Kg	5	1.00

Sample: 121866 - AH-6 (1.0-1.5')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method	N/A
QC Batch:	36556	Date Analyzed:	2007-04-17	Analyzed By:	AG
Prep Batch:	31708	Sample Preparation:	2007-04-17	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		267		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[13]	294	mg/Kg	1	150	196	32.9 - 167

Sample: 121866 - AH-6 (1.0-1.5')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	36525	Date Analyzed:	2007-04-17	Analyzed By	ss
Prep Batch:	31685	Sample Preparation:	2007-04-17	Prepared By:	ss

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO		1.40		mg/Kg	1	1.00

[13]High surrogate recovery due to peak interference

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.798	mg/Kg	1	1.00	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.06	mg/Kg	1	1.00	106	67.5 - 140.3

Sample: 121867 - AH-7 (0-1.0')

Analysis.	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch·	36600	Date Analyzed.	2007-04-18	Analyzed By:	AR
Prep Batch	31744	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**101**	mg/Kg	50	1.00

Sample: 121867 - AH-7 (0-1.0')

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	36556	Date Analyzed:	2007-04-17	Analyzed By:	AG
Prep Batch·	31708	Sample Preparation.	2007-04-17	Prepared By·	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**5020**	mg/Kg	1	50 0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[14]	1410	mg/Kg	1	150	940	32.9 - 167

Sample: 121867 - AH-7 (0-1.0')

Analysis·	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch·	36525	Date Analyzed:	2007-04-17	Analyzed By·	ss
Prep Batch:	31685	Sample Preparation:	2007-04-17	Prepared By:	ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**5.51**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.799	mg/Kg	1	1.00	80	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.985	mg/Kg	1	1.00	98	67.5 - 140.3

Sample: 121868 - AH-8 (0-0.5')

Analysis·	Chloride (IC)	Analytical Method:	E 300.0	Prep Method·	N/A
QC Batch	36600	Date Analyzed.	2007-04-18	Analyzed By:	AR
Prep Batch:	31744	Sample Preparation:		Prepared By·	AR

[14]High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**12.9**	mg/Kg	5	1.00

Sample: 121868 - AH-8 (0-0.5')

Analysis:	TPH DRO	Analytical Method:	Mod 8015B	Prep Method:	N/A
QC Batch:	36556	Date Analyzed:	2007-04-17	Analyzed By	AG
Prep Batch:	31708	Sample Preparation:	2007-04-17	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**579**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[15]	420	mg/Kg	1	150	280	32.9 - 167

Sample: 121868 - AH-8 (0-0.5')

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	36525	Date Analyzed:	2007-04-17	Analyzed By:	ss
Prep Batch:	31685	Sample Preparation:	2007-04-17	Prepared By:	ss

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**1.30**	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)		1.01	mg/Kg	1	1.00	101	67.5 - 140.3

Method Blank (1) QC Batch: 36525

QC Batch:	36525	Date Analyzed:	2007-04-17	Analyzed By:	ss
Prep Batch:	31685	QC Preparation:	2007-04-17	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)		0.969	mg/Kg	1	1.00	97	67.5 - 140.3

[15] High surrogate recovery due to peak interference

Method Blank (1) QC Batch: 36556

QC Batch:	36556	Date Analyzed:	2007-04-17	Analyzed By:	AG
Prep Batch:	31708	QC Preparation:	2007-04-17	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		136	mg/Kg	1	150	91	44.7 - 133.6

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

Matrix Blank (1) QC Batch: 36598

QC Batch:	36598	Date Analyzed:	2007-04-18	Analyzed By:	AR
Prep Batch	31741	QC Preparation:	2007-04-18	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0222	mg/Kg	1

Matrix Blank (1) QC Batch: 36600

QC Batch:	36600	Date Analyzed	2007-04-18	Analyzed By:	AR
Prep Batch:	31744	QC Preparation:	2007-04-18	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		3.04	mg/Kg	1

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

Method Blank (1) QC Batch: 36707

QC Batch 36707 | Date Analyzed: 2007-04-23 | Analyzed By: AG
Prep Batch. 31842 | QC Preparation: 2007-04-23 | 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)		0.862	mg/Kg	1	1.00	86	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.770	mg/Kg	1	1.00	77	53.9 - 125.1

Laboratory Control Spike (LCS-1)

QC Batch: 36525 | Date Analyzed: 2007-04-17 | Analyzed By: ss
Prep Batch: 31685 | QC Preparation: 2007-04-17 | Prepared By ss

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.12	mg/Kg	1	10.0	<0.739	71	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	7.63	mg/Kg	1	10.0	<0.739	76	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)	0.816	1.02	mg/Kg	1	1.00	82	102	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	1.03	1.01	mg/Kg	1	1.00	103	101	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 36556 | Date Analyzed: 2007-04-17 | Analyzed By: AG
Prep Batch: 31708 | QC Preparation: 2007-04-17 | Prepared By: AG

continued .

control spikes continued .

Param	LCS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec. Limit

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec Limit
DRO	243	mg/Kg	1	250	<14.6	97	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	256	mg/Kg	1	250	<14.6	102	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	LCSD Result	Units	Dil	Spike Amount	LCS Rec	LCSD Rec.	Rec. Limit
n-Triacontane	164	140	mg/Kg	1	150	109	93	57.3 - 131.6

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: 36598 | Date Analyzed: 2007-04-18 | Analyzed By: AR
Prep Batch: 31741 | QC Preparation: 2007-04-18 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec. Limit
Chloride	14.7	mg/Kg	1	12.5	1.8	103	90 - 110

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

continued ...

control spikes continued ...

Param	LCSD Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec. Limit	RPD	RPD Limit

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	14.7	mg/Kg	1	12.5	1.8	103	90 - 110	0	

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: 36600 | Date Analyzed: 2007-04-18 | Analyzed By: AR
Prep Batch: 31744 | QC Preparation: 2007-04-18 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec Limit
Chloride	14.8	mg/Kg	1	12.5	1.77	104	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	14.7	mg/Kg	1	12.5	1.77	104	90 - 110	0	

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

Param	LCS Result	Units	Dil	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	14.9	mg/Kg	1	12.5	1.8	105	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	15.0	mg/Kg	1	12.5	1.8	106	90 - 110	1	

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: 36707 | Date Analyzed: 2007-04-23 | Analyzed By: AG
Prep Batch: 31842 | QC Preparation: 2007-04-23 | Prepared By: AG

Param	LCS Result	Units	Dil	Spike Amount	Matrix Result	Rec.	Rec Limit
Benzene	0.888	mg/Kg	1	1.00	<0.00110	89	68.6 - 123.4
Toluene	0.908	mg/Kg	1	1.00	<0.00150	91	74.6 - 119.3
Ethylbenzene	0.915	mg/Kg	1	1.00	<0.00160	92	72.3 - 126.2

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec Limit
Xylene	2.77	mg/Kg	1	3.00	<0.00410	92	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	0.864	mg/Kg	1	1.00	<0.00110	86	68.6 - 123.4	3	20
Toluene	0.896	mg/Kg	1	1.00	<0.00150	90	74.6 - 119.3	1	20
Ethylbenzene	0.910	mg/Kg	1	1.00	<0.00160	91	72.3 - 126.2	0	20
Xylene	2.76	mg/Kg	1	3.00	<0.00410	92	76.5 - 121.6	0	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)	0.800	0.797	mg/Kg	1	1.00	80	80	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	0.830	0.827	mg/Kg	1	1.00	83	83	68.7 - 125.8

Matrix Spike (MS-1) Spiked Sample: 121858

QC Batch: 36525 | Date Analyzed 2007-04-17 | Analyzed By: ss
Prep Batch: 31685 | QC Preparation: 2007-04-17 | Prepared By: ss

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	[16]	24.3	mg/Kg	1	10.0	24.3	0	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	[17]	21.1	mg/Kg	1	10.0	24.3	0	10 - 141.5	14	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)	0.618	0.659	mg/Kg	1	1	62	66	40 - 125.3
4-Bromofluorobenzene (4-BFB)	1.26	1.24	mg/Kg	1	1	126	124	86.7 - 144.5

Matrix Spike (MS-1) Spiked Sample: 121864

QC Batch: 36556 | Date Analyzed 2007-04-17 | Analyzed By: AG
Prep Batch: 31708 | QC Preparation 2007-04-17 | Prepared By: AG

Param		MS Result	Units	Dil	Spike Amount	Matrix Result	Rec	Rec Limit
DRO	[18]	721	mg/Kg	1	250	721	0	11.7 - 152.3

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

[16]Matrix spike recovery out of control limits due to matrix interference Use LCS/LCSD to demonstrate analysis is under control
[17]Matrix spike recovery out of control limits due to matrix interference Use LCS/LCSD to demonstrate analysis is under control
[18]Matrix spike recovery out of control limits due to peak 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	[19]	1340	mg/Kg	1	250	721	230	11.7 - 152.3	60	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	[20] [21]	290	486	mg/Kg	1	150	193	324	17 - 163.1

Matrix Spike (MS-1) Spiked Sample: 121898

QC Batch: 36562 | 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
GRO	[22]	8.64	mg/Kg	1	10.0	8.64	0	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	[23]	6.81	mg/Kg	1	10.0	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: 121861

QC Batch: 36598 | Date Analyzed: 2007-04-18 | Analyzed By: AR
Prep Batch: 31741 | QC Preparation: 2007-04-18 | Prepared By: AR

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec.	Rec Limit
Chloride	718	mg/Kg	50	625	125.379	95	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	818	mg/Kg	50	625	125.379	110	90 - 110	13	

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

[19] Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control
[20] High surrogate recovery due to peak interference
[21] High surrogate recovery due to peak interference.
[22] Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control
[23] Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control

Matrix Spike (MS-1) Spiked Sample: 121867

QC Batch: 36600 | Date Analyzed: 2007-04-18 | Analyzed By: AR
Prep Batch: 31744 | QC Preparation: 2007-04-18 | Prepared By: AR

Param	MS Result	Units	Dil	Spike Amount	Matrix Result	Rec.	Rec Limit
Chloride [24]	830	mg/Kg	50	625	100.879	117	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	695	mg/Kg	50	625	100.879	95	90 - 110	18	

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

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: 121856

QC Batch: 36707 | Date Analyzed: 2007-04-23 | Analyzed By: AG
Prep Batch: 31842 | QC Preparation: 2007-04-23 | Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec Limit
Benzene	0.858	mg/Kg	1	1.00	<0.00110	86	64.4 - 115.7
Toluene	0.978	mg/Kg	1	1.00	0.0224	96	57.8 - 124.4
Ethylbenzene	0.997	mg/Kg	1	1.00	0.0115	98	64.8 - 125.8
Xylene	3.31	mg/Kg	1	3.00	0.1903	104	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	0.882	mg/Kg	1	1.00	<0.00110	88	64.4 - 115.7	3	20
Toluene	1.01	mg/Kg	1	1.00	0.0224	99	57.8 - 124.4	3	20
Ethylbenzene	1.04	mg/Kg	1	1.00	0.0115	103	64.8 - 125.8	4	20

continued ...

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

matrix spikes continued . .

Param	MSD Result	Units	Dil	Spike Amount	Matrix Result	Rec.	Rec Limit	RPD	RPD Limit
Xylene	3.53	mg/Kg	1	3.00	0.1903	111	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)	0.800	0.796	mg/Kg	1	1	80	80	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	0.900	1.05	mg/Kg	1	1	90	105	66.7 - 131.9

Standard (ICV-1)

QC Batch: 36525 Date Analyzed: 2007-04-17 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	0.868	87	85 - 115	2007-04-17

Standard (CCV-1)

QC Batch: 36525 Date Analyzed: 2007-04-17 Analyzed By: ss

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	2007-04-17

Standard (ICV-1)

QC Batch: 36556 Date Analyzed: 2007-04-17 Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	252	101	85 - 115	2007-04-17

Standard (CCV-1)

QC Batch: 36556 Date Analyzed: 2007-04-17 Analyzed By: AG

Param	Flag	Units	CCVs True Conc	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	228	91	85 - 115	2007-04-17

Standard (CCV-2)

QC Batch: 36556 Date Analyzed: 2007-04-17 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	252	101	85 - 115	2007-04-17

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

Param	Flag	Units	CCVs True Conc	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0 874	87	85 - 115	2007-04-18

Standard (ICV-1)

QC Batch: 36598 Date Analyzed· 2007-04-18 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	12.2	98	90 - 110	2007-04-18

Standard (CCV-1)

QC Batch 36598 Date Analyzed: 2007-04-18 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	98	90 - 110	2007-04-18

Standard (ICV-1)

QC Batch: 36600 Date Analyzed: 2007-04-18 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	12.3	98	90 - 110	2007-04-18

Standard (CCV-1)

QC Batch: 36600 Date Analyzed: 2007-04-18 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	98	90 - 110	2007-04-18

Standard (ICV-1)

QC Batch: 36632 Date Analyzed: 2007-04-19 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 4	99	90 - 110	2007-04-19

Standard (CCV-1)

QC Batch: 36632 Date Analyzed: 2007-04-19 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	12.4	100	90 - 110	2007-04-19

Standard (ICV-1)

QC Batch. 36707 Date Analyzed: 2007-04-23 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 0895	90	85 - 115	2007-04-23
Toluene		mg/Kg	0.100	0.0934	93	85 - 115	2007-04-23
Ethylbenzene		mg/Kg	0.100	0.0947	95	85 - 115	2007-04-23
Xylene		mg/Kg	0.300	0.287	96	85 - 115	2007-04-23

Standard (CCV-1)

QC Batch: 36707 Date Analyzed: 2007-04-23 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	0.0904	90	85 - 115	2007-04-23
Toluene		mg/Kg	0.100	0.0913	91	85 - 115	2007-04-23
Ethylbenzene		mg/Kg	0.100	0.0912	91	85 - 115	2007-04-23
Xylene		mg/Kg	0.300	0.276	92	85 - 115	2007-04-23

7041706

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

PAGE: 2 OF: 2

CLIENT NAME: Cimarex

SITE MANAGER: Ike Tavarez

PROJECT NO.: 2983

PROJECT NAME: Cimarex/D.W. Cooper TB
Lea Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 / 8015 MOD. / TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
121866	4/1/07		S		X	AH-6 (1.0'-1.5')	1				X				X											X			
67	1		S		X	AH-7 (0-1.0')	1				X				X											X			
68	1		S		X	AH-8 (0-0.5')	1				X				X											X			

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) Date: 4/13/07 Time: 9:15
RECEIVED BY: (Signature) Date: 4.1.07 Time: 915
SAMPLED BY: (Print & Sign) Ray Taylor Date: 4/13/07 Time:

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:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0

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.

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Analysis Request and Chain of Custody Record

PAGE: 1 OF: 2

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 Fax (432) 682-3946

CLIENT NAME: Cimarex
SITE MANAGER: Ike Tavarez
PROJECT NO.: 2983
PROJECT NAME: Cimarex/J.W. Cooper TB Lea Co, NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	BTEX 8021B/602	MTBE 8020/602	TPH 418.1 TX1005 8015 MOD.	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
121856	4/11/07		S		X	AH-1 (0-1.0')	1				X				X											X			
57			S		X	AH-1 (1.0'-1.5')	1				X				X											X			
58			S		X	AH-2 (0-1.0')	1				X				X											X			
59			S		X	AH-2 (1.0'-1.5')	1				X				X											X			
60			S		X	AH-3 (0-1.0')	1				X				X											X			
61			S		X	AH-4 (0-1.0')	1				X				X											X			
62			S		X	AH-4 (1.0'-1.5')	1				X				X											X			
63			S		X	AH-5 (0-1.0')	1				X				X											X			
64			S		X	AH-5 (1.0'-1.5')	1				X				X											X			
65			S		X	AH-6 (0-1.0')	1				X				X											X			

RELINQUISHED BY: (Signature) [signature] Date: 4/17/07 Time: 9:15
RECEIVED BY: (Signature) [signature] Date: 4.17.07 Time: 915
SAMPLED BY: (Print & Sign) Ray Taylor [redacted] Date: 4/13/07 Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #
HAND DELIVERED (circled) UPS OTHER:

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

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

HIGHLANDER CONTACT PERSON: Ike B. Tavarez
Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4°
MATRIX: W-Water A-Air SD-Solid S-Soil (circled) SL-Sludge O-Other
REMARKS: Run 3 BTEX on highest TPH
all tests - Midland

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

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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

PAGE: 1 OF: 2

CLIENT NAME: Cimarex

SITE MANAGER: Ike Tavarez

PROJECT NO.: 2983

PROJECT NAME: Cimarex/J.W. Cooper TB
Lea Co, NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B/602	MTBE 8020/602	TPH 418.1	8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/808	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
121856	4/1/07		S		X	AH-1 (0-1.0')	1				X		X		X	X											X			
57			S		X	AH-1 (1.0'-1.5')	1				X		X		X	X											X			
58			S		X	AH-2 (0-1.0')	1				X				X	X											X			
59			S		X	AH-2 (1.0'-1.5')	1				X		X		X	X											X			
60			S		X	AH-3 (0-1.0')	1				X				X	X											X			
61			S		X	AH-4 (0-1.0')	1				X				X	X											X			
62			S		X	AH-4 (1.0'-1.5')	1				X				X	X											X			
63			S		X	AH-5 (0-1.0')	1				X				X	X											X			
64			S		X	AH-5 (1.0'-1.5')	1				X				X	X											X			
65			S		X	AH-6 (0-1.0')	1				X				X	X											X			

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

RECEIVED BY: (Signature) Date: 4.17.07 Time: 915

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

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:

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

HIGHLANDER CONTACT PERSON: Ike B. Tavarez

Results by:

RUSH Charges Authorised: Yes (No)

SAMPLE CONDITION WHEN RECEIVED: 4° / Good / Intact

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

REMARKS: Run 3 BTEX on highest TPH all tests - Midland

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

Add BTEX 121856, 121857, & 121859

4/17/07

7041706

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

PAGE: 2 OF: 2

CLIENT NAME:	SITE MANAGER:
Cimarex	Ike Tavarez

PROJECT NO.:	PROJECT NAME:
2983	Cimarex / J.W. Cooper TB Lea Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B/602	MTBE 8020/602	TX1005 (8015 MOD.) TPH 418.1	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
121866	4/11/07		S		X	AH-6 (1.0'-1.5')	1				X			X	X											X			
67	1		S		X	AH-7 (0-1.0')	1				X			X	X											X			
68	1		S		X	AH-8 (0-0.5')	1				X			X	X											X			

RELINQUISHED BY: (Signature) Rob Hall	Date: 4/12/07 Time: 9:15	RECEIVED BY: (Signature) [illegible]	Date: 4/11/07 Time: 915
SAMPLED BY: (Print & Sign) Ray Taylor	Date: 4/13/07 Time:
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:
RECEIVING LABORATORY: Trace	RECEIVED BY: (Signature)	HIGHLANDER CONTACT PERSON: Ike Tavarez	Results by:
ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE:	DATE: TIME:		RUSH Charges Authorized: Yes (No)

SAMPLE CONDITION WHEN RECEIVED: 40 / Good / Intact

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 Enviromental Corp. – Project Manager retains pink copy – Accounting receives Gold copy.

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

Analytical Report

Prepared for:

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Cimarex/ J.W. Cooper TB

Project Number: 2983

Location: Lea Co., NM

Lab Order Number: 7F18001

Report Date: 06/19/07

Highlander Environmental Corp	Project Cimarex/ J W Cooper TB	Fax (432) 682-3946
1910 N Big Spring St	Project Number 2983	
Midland TX, 79705	Project Manager Ike Tavarez	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP# 1 (0-1 0') Area Of AH-7	7F18001-01	Soil	06/18/07 00 00	06-18-2007 16 57

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp	Project Cimarex/ J W Cooper TB	Fax (432) 682-3946
1910 N Big Spring St	Project Number 2983	
Midland TX, 79705	Project Manager Ike Tavarez	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP# 1 (0-1.0') Area Of AH-7 (7F18001-01) Soil									
Carbon Ranges C6-C12	**55.9**	10.0	mg/kg dry	1	EF71507	06/18/07	06/19/07	EPA 8015M	
Carbon Ranges C12-C28	**1900**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**781**	10.0	"	"	"	"	"	"	
Total Hydrocarbons	**2740**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*110 %*	*70-130*		"	"	"	"	

Highlander Environmental Corp	Project Cimarex/ J W Cooper TB	Fax: (432) 682-3946
1910 N Big Spring St	Project Number 2983	
Midland TX, 79705	Project Manager Ike Tavarez	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP# 1 (0-1.0') Area Of AH-7 (7F18001-01) Soil									
% Moisture	**8.7**	0.1	%	1	EF71901	06/18/07	06/18/07	% calculation	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp	Project Cimarex/ J W Cooper TB	Fax (432) 682-3946
1910 N Big Spring St	Project Number 2983	
Midland TX, 79705	Project Manager Ike Tavarez	

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF71507 - Solvent Extraction (GC)										
Blank (EF71507-BLK1)				Prepared 06/15/07 Analyzed 06/18/07						
Carbon Ranges C6-C12	ND	10 0	mg/kg wet							
Carbon Ranges C12-C28	ND	10 0	"							
Carbon Ranges C28-C35	ND	10 0	"							
Total Hydrocarbons	ND	10 0	"							
Surrogate. 1-Chlorooctane	*43 4*		*mg/kg*	*50 0*		*86 8*	*70-130*			
Surrogate 1-Chlorooctadecane	*39 8*		*"*	*50 0*		*79 6*	*70-130*			
LCS (EF71507-BS1)				Prepared 06/15/07 Analyzed 06/18/07						
Carbon Ranges C6-C12	613	10 0	mg/kg wet	500		123	75-125			
Carbon Ranges C12-C28	544	10 0	"	500		109	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00			75-125			
Total Hydrocarbons	1160	10 0	"	1000		116	75-125			
Surrogate 1-Chlorooctane	*54 7*		*mg/kg*	*50 0*		*109*	*70-130*			
Surrogate 1-Chlorooctadecane	*50 0*		*"*	*50 0*		*100*	*70-130*			
Calibration Check (EF71507-CCV1)				Prepared 06/15/07 Analyzed 06/19/07						
Carbon Ranges C6-C12	255		mg/kg	250		102	80-120			
Carbon Ranges C12-C28	284		"	250		114	80-120			
Total Hydrocarbons	539		"	500		108	80-120			
Surrogate 1-Chlorooctane	*54 6*		*"*	*50 0*		*109*	*70-130*			
Surrogate 1-Chlorooctadecane	*54 7*		*"*	*50 0*		*109*	*70-130*			
Matrix Spike (EF71507-MS1)	**Source: 7F14018-02**			Prepared 06/15/07 Analyzed 06/19/07						
Carbon Ranges C6-C12	700	10 0	mg/kg dry	602	ND	116	75-125			
Carbon Ranges C12-C28	659	10 0	"	602	ND	109	75-125			
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125			
Total Hydrocarbons	1360	10 0	"	1200	ND	113	75-125			
Surrogate 1-Chlorooctane	*46 7*		*mg/kg*	*50 0*		*93 4*	*70-130*			
Surrogate 1-Chlorooctadecane	*40 5*		*"*	*50 0*		*81 0*	*70-130*			

Highlander Environmental Corp
1910 N Big Spring St
Midland TX, 79705

Project: Cimarex/ J W Cooper TB
Project Number: 2983
Project Manager: Ike Tavarez

Fax (432) 682-3946

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF71507 - Solvent Extraction (GC)										
Matrix Spike Dup (EF71507-MSD1)	**Source: 7F14018-02**			Prepared 06/15/07 Analyzed. 06/19/07						
Carbon Ranges C6-C12	655	10 0	mg/kg dry	602	ND	109	75-125	6 22	20	
Carbon Ranges C12-C28	574	10 0	"	602	ND	95 3	75-125	13 4	20	
Carbon Ranges C28-C35	ND	10 0	"	0 00	ND		75-125		20	
Total Hydrocarbons	1230	10 0	"	1200	ND	102	75-125	10 2	20	
Surrogate 1-Chlorooctane	*47 8*		*mg/kg*	*50 0*		*95 6*	*70-130*			
Surrogate 1-Chlorooctadecane	*40 7*		*"*	*50.0*		*81 4*	*70-130*			

Highlander Environmental Corp	Project Cimarex/ J W Cooper TB	Fax (432) 682-3946
1910 N Big Spring St	Project Number 2983	
Midland TX, 79705	Project Manager Ike Tavarez	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF71901 - General Preparation (Prep)										
Blank (EF71901-BLK1)				Prepared & Analyzed 06/18/07						
% Solids	100		%							
Duplicate (EF71901-DUP1)		**Source: 7F15011-01**		Prepared & Analyzed 06/18/07						
% Solids	88 9		%		89 4			0 561	20	
Duplicate (EF71901-DUP2)		**Source: 7F18001-01**		Prepared & Analyzed 06/18/07						
% Solids	90 3		%		91 3			1 10	20	

Highlander Environmental Corp	Project Cimarex/ J W Cooper TB	Fax (432) 682-3946
1910 N. Big Spring St	Project Number 2983	
Midland TX, 79705	Project Manager Ike Tavarez	

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: _____ Date: 6/19/2007

Brent Barron, Laboratory Director/Corp. Technical Director
Celey D. Keene, Org. Tech Director
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer
Jeanne Mc Murrey, Inorg. Tech Director

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

PAGE: 1 OF: 1

CLIENT NAME: Cimarex

SITE MANAGER: Ike Tavarez

PROJECT NO.: 2483

PROJECT NAME: Cimarex / J.W. Cooper TB
Lea Co. NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 (8015 MOD.) TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
01	6/18/07		S		X	SP # 1 (0-1.0') Area of Aft-7	1				X				X														

RELINQUISHED BY: (Signature) Date: 6/18/07 Time: 4:57
RECEIVED BY: (Signature) Date: Time:
SAMPLED BY: (Print & Sign) Ray Taylor / Matt Harrison Date: 6/18/07 Time:

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:

RECEIVING LABORATORY: ELT
ADDRESS:
CITY: Odessa STATE: Texas ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Andrea Fan
DATE: 6.18.07 TIME: 4.57

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:
RUSH Charges Authorized: (Yes) No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: 3.0°C w/labels 4 oz glass 24 hr TAT

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

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Highlander

Date/ Time: 6 18 07 4:57

Lab ID #: 7F18001 / 284472

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	~~Yes~~	No	3 C ° C	
#2	Shipping container in good condition?	~~Yes~~	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	~~Not Present~~	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	~~Not Present~~	
#5	Chain of Custody present?	~~Yes~~	No		
#6	Sample instructions complete of Chain of Custody?	~~Yes~~	No		
#7	Chain of Custody signed when relinquished/ received?	~~Yes~~	No		
#8	Chain of Custody agrees with sample label(s)?	~~Yes~~	No	ID written on Cont / Lid	
#9	Container label(s) legible and intact?	~~Yes~~	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	~~Yes~~	No		
#11	Containers supplied by ELOT?	~~Yes~~	No		
#12	Samples in proper container/ bottle?	~~Yes~~	No	See Below	
#13	Samples properly preserved?	~~Yes~~	No	See Below	
#14	Sample bottles intact?	~~Yes~~	No		
#15	Preservations documented on Chain of Custody?	~~Yes~~	No		
#16	Containers documented on Chain of Custody?	~~Yes~~	No		
#17	Sufficient sample amount for indicated test(s)?	~~Yes~~	No	See Below	
#18	All samples received within sufficient hold time?	~~Yes~~	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	~~Not Applicable~~	
#20	VOC samples have zero headspace?	~~Yes~~	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Summary Report

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

Report Date: July 2, 2007

Work Order: 7062101

Project Location: Lea County, NM
Project Name: Cimarex/J.W.Cooper TB
Project Number: 2983

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
127990	SP#2 (0-0.5') BEB 1.0'	soil	2007-06-19	00:00	2007-06-20
127991	SP#3 (0-0.5') BEB 3.0'	soil	2007-06-19	00:00	2007-06-20
127992	SP#4 (0-0.5') BEB 1.0'	soil	2007-06-19	00:00	2007-06-20
127993	Stockpile North	soil	2007-06-19	00:00	2007-06-20
127994	Stockpile South	soil	2007-06-19	00:00	2007-06-20

	BTEX				MTBE	TPH DRO	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
127990 - SP#2 (0-0.5') BEB 1.0'						**1820**	**72.6**
127991 - SP#3 (0-0.5') BEB 3.0'						**1340**	**28.2**
127992 - SP#4 (0-0.5') BEB 1.0'						**92.9**	**6.22**
127993 - Stockpile North	<0.100	<0.100	<0.100	<0.100		**1800**	**42.9**
127994 - Stockpile South	<0.100	<0.100	<0.100	<0.100		**1130**	**88.9**

Sample: 127993 - Stockpile North

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

Sample: 127994 - Stockpile South

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

TRACEANALYSIS, 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 2, 2007

Work Order: 7062101

Project Location: Lea County, NM
Project Name: Cimarex/J.W.Cooper TB
Project Number: 2983

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
127990	SP#2 (0-0.5') BEB 1.0'	soil	2007-06-19	00:00	2007-06-20
127991	SP#3 (0-0.5') BEB 3.0'	soil	2007-06-19	00:00	2007-06-20
127992	SP#4 (0-0.5') BEB 1.0'	soil	2007-06-19	00:00	2007-06-20
127993	Stockpile North	soil	2007-06-19	00:00	2007-06-20
127994	Stockpile South	soil	2007-06-19	00:00	2007-06-20

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.

Dr. Blair Leftwich, Director

Standard Flags

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

Analytical Report

Sample: 127990 - SP#2 (0-0.5') BEB 1.0'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	38462	Date Analyzed:	2007-06-21	Analyzed By:	AG
Prep Batch:	33285	Sample Preparation:	2007-06-21	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**1820**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[1]	293	mg/Kg	1	150	195	32.9 - 167

Sample: 127990 - SP#2 (0-0.5') BEB 1.0'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38650	Date Analyzed:	2007-06-28	Analyzed By:	JW
Prep Batch:	33455	Sample Preparation:		Prepared By:	JW

Parameter	Flag	Result	RL	Units	Dilution	RL
GRO	*B*	**72.6**		mg/Kg	50	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3.89	mg/Kg	50	5.00	78	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		5.97	mg/Kg	50	5.00	119	67.5 - 140.3

Sample: 127991 - SP#3 (0-0.5') BEB 3.0'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	38462	Date Analyzed:	2007-06-21	Analyzed By:	AG
Prep Batch:	33285	Sample Preparation:	2007-06-21	Prepared By:	AG

Parameter	Flag	Result	RL	Units	Dilution	RL
DRO		**1340**		mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[2]	340	mg/Kg	1	150	227	32.9 - 167

Sample: 127991 - SP#3 (0-0.5') BEB 3.0'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38523	Date Analyzed:	2007-06-25	Analyzed By:	JW
Prep Batch:	33316	Sample Preparation:		Prepared By:	JW

[1] High surrogate recovery due to peak interference.
[2] High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**28.2**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.720	mg/Kg	1	1.00	72	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		1.05	mg/Kg	1	1.00	105	67.5 - 140.3

Sample: 127992 - SP#4 (0-0.5') BEB 1.0'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	38462	Date Analyzed:	2007-06-21	Analyzed By:	AG
Prep Batch:	33285	Sample Preparation:	2007-06-21	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**92.9**	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: 127992 - SP#4 (0-0.5') BEB 1.0'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38523	Date Analyzed:	2007-06-25	Analyzed By:	JW
Prep Batch:	33316	Sample Preparation:		Prepared By:	JW

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	*B*	**6.22**	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.713	mg/Kg	1	1.00	71	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.964	mg/Kg	1	1.00	96	67.5 - 140.3

Sample: 127993 - Stockpile North

Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	38524	Date Analyzed:	2007-06-25	Analyzed By:	JW
Prep Batch:	33317	Sample Preparation:		Prepared By:	JW

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.100	mg/Kg	10	0.0100
Toluene		<0.100	mg/Kg	10	0.0100
Ethylbenzene		<0.100	mg/Kg	10	0.0100
Xylene		<0.100	mg/Kg	10	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		7.80	mg/Kg	10	10.0	78	26 - 117.8
4-Bromofluorobenzene (4-BFB)		8.64	mg/Kg	10	10.0	86	51.1 - 119.1

Sample: 127993 - Stockpile North

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	38502	Date Analyzed:	2007-06-25	Analyzed By:	AR
Prep Batch:	33319	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<50.0	mg/Kg	25	2.00

Sample: 127993 - Stockpile North

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	38462	Date Analyzed:	2007-06-21	Analyzed By:	AG
Prep Batch:	33285	Sample Preparation:	2007-06-21	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**1800**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[3]	452	mg/Kg	1	150	301	32.9 - 167

Sample: 127993 - Stockpile North

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38523	Date Analyzed:	2007-06-25	Analyzed By:	JW
Prep Batch:	33316	Sample Preparation:		Prepared By:	JW

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**42.9**	mg/Kg	10	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		7.16	mg/Kg	10	10.0	72	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		10.2	mg/Kg	10	10.0	102	67.5 - 140.3

Sample: 127994 - Stockpile South

Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	38524	Date Analyzed:	2007-06-25	Analyzed By:	JW
Prep Batch:	33317	Sample Preparation:		Prepared By:	JW

[3]High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.100	mg/Kg	10	0.0100
Toluene		<0.100	mg/Kg	10	0.0100
Ethylbenzene		<0.100	mg/Kg	10	0.0100
Xylene		<0.100	mg/Kg	10	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		7.65	mg/Kg	10	10.0	76	26 - 117.8
4-Bromofluorobenzene (4-BFB)		7.99	mg/Kg	10	10.0	80	51.1 - 119.1

Sample: 127994 - Stockpile South

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	38502	Date Analyzed:	2007-06-25	Analyzed By:	AR
Prep Batch:	33319	Sample Preparation:		Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<50.0	mg/Kg	25	2.00

Sample: 127994 - Stockpile South

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	38462	Date Analyzed:	2007-06-21	Analyzed By:	AG
Prep Batch:	33285	Sample Preparation:	2007-06-21	Prepared By:	AG

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		**1130**	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[4]	306	mg/Kg	1	150	204	32.9 - 167

Sample: 127994 - Stockpile South

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	38523	Date Analyzed:	2007-06-25	Analyzed By:	JW
Prep Batch:	33316	Sample Preparation:		Prepared By:	JW

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		**88.9**	mg/Kg	10	1.00

[4]High surrogate recovery due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		7.41	mg/Kg	10	10.0	74	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		9.55	mg/Kg	10	10.0	96	67.5 - 140.3

Method Blank (1) QC Batch: 38462

QC Batch: 38462 | Date Analyzed: 2007-06-21 | Analyzed By: AG
Prep Batch: 33285 | QC Preparation: 2007-06-21 | 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		200	mg/Kg	1	150	133	44.7 - 133.6

Method Blank (1) QC Batch: 38502

QC Batch: 38502 | Date Analyzed: 2007-06-25 | Analyzed By: AR
Prep Batch: 33319 | QC Preparation: 2007-06-25 | Prepared By: AR

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

Method Blank (1) QC Batch: 38523

QC Batch: 38523 | Date Analyzed: 2007-06-25 | Analyzed By: JW
Prep Batch: 33316 | QC Preparation: 2007-06-25 | Prepared By: JW

Parameter	Flag	MDL Result	Units	RL
GRO		0.781	mg/Kg	1

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)		0.771	mg/Kg	1	1.00	77	67.5 - 140.3

Method Blank (1) QC Batch: 38524

QC Batch: 38524 | Date Analyzed: 2007-06-25 | Analyzed By: JW
Prep Batch: 33317 | QC Preparation: 2007-06-25 | 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)		0.766	mg/Kg	1	1.00	77	62.6 - 117.6
4-Bromofluorobenzene (4-BFB)		0.781	mg/Kg	1	1.00	78	53.9 - 125.1

Method Blank (1) QC Batch: 38650

QC Batch: 38650 | Date Analyzed: 2007-06-28 | Analyzed By: JW
Prep Batch: 33455 | QC Preparation: 2007-06-28 | Prepared By: JW

Parameter	Flag	MDL Result	Units	RL
GRO		0.829	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.770	mg/Kg	1	1.00	77	52.4 - 123.7
4-Bromofluorobenzene (4-BFB)		0.732	mg/Kg	1	1.00	73	67.5 - 140.3

Laboratory Control Spike (LCS-1)

QC Batch: 38462 | Date Analyzed: 2007-06-21 | Analyzed By: AG
Prep Batch: 33285 | QC Preparation: 2007-06-21 | Prepared By:

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	300	mg/Kg	1	250	<14.6	120	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	286	mg/Kg	1	250	<14.6	114	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	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	159	164	mg/Kg	1	150	106	109	57.3 - 131.6

Laboratory Control Spike (LCS-1)

QC Batch: 38502 | Date Analyzed: 2007-06-25 | Analyzed By: AR
Prep Batch: 33319 | QC Preparation: 2007-06-25 | Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	99.2	mg/Kg	1	100	<0.500	99	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	100	mg/Kg	1	100	<0.500	100	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: 38523 | Date Analyzed: 2007-06-25 | Analyzed By: JW
Prep Batch: 33316 | QC Preparation: 2007-06-25 | Prepared By: JW

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.08	mg/Kg	1	10.0	<0.739	71	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	7.25	mg/Kg	1	10.0	<0.739	72	57.7 - 102.5	2	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)	0.717	0.708	mg/Kg	1	1.00	72	71	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.824	0.821	mg/Kg	1	1.00	82	82	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 38524 | Date Analyzed: 2007-06-25 | Analyzed By: JW
Prep Batch: 33317 | QC Preparation: 2007-06-25 | Prepared By: JW

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.894	mg/Kg	1	1.00	<0.00110	89	68.6 - 123.4
Toluene	0.915	mg/Kg	1	1.00	<0.00150	92	74.6 - 119.3
Ethylbenzene	0.891	mg/Kg	1	1.00	<0.00160	89	72.3 - 126.2
Xylene	2.69	mg/Kg	1	3.00	<0.00410	90	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	0.928	mg/Kg	1	1.00	<0.00110	93	68.6 - 123.4	4	20
Toluene	0.957	mg/Kg	1	1.00	<0.00150	96	74.6 - 119.3	4	20
Ethylbenzene	0.929	mg/Kg	1	1.00	<0.00160	93	72.3 - 126.2	4	20
Xylene	2.81	mg/Kg	1	3.00	<0.00410	94	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)	0.653	0.661	mg/Kg	1	1.00	65	66	64.1 - 118.2
4-Bromofluorobenzene (4-BFB)	0.792	0.781	mg/Kg	1	1.00	79	78	68.7 - 125.8

Laboratory Control Spike (LCS-1)

QC Batch: 38650 | Date Analyzed: 2007-06-28 | Analyzed By: JW
Prep Batch: 33455 | QC Preparation: 2007-06-28 | Prepared By: JW

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	6.64	mg/Kg	1	10.0	<0.739	66	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	5.81	mg/Kg	1	10.0	<0.739	58	57.7 - 102.5	13	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)	0.994	0.933	mg/Kg	1	1.00	99	93	36.8 - 152.5
4-Bromofluorobenzene (4-BFB)	0.785	0.765	mg/Kg	1	1.00	78	76	70 - 130

Matrix Spike (MS-1) Spiked Sample: 127992

QC Batch: 38462 | Date Analyzed: 2007-06-21 | Analyzed By: AG
Prep Batch: 33285 | QC Preparation: 2007-06-21 | Prepared By:

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	284	mg/Kg	1	250	92.9	76	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	291	mg/Kg	1	250	92.9	79	11.7 - 152.3	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
n-Triacontane	146	151	mg/Kg	1	150	97	101	17 - 163.1

Matrix Spike (MS-1) Spiked Sample: 128044

QC Batch: 38502 | Date Analyzed: 2007-06-25 | Analyzed By: AR
Prep Batch: 33319 | QC Preparation: 2007-06-25 | Prepared By: AR

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	[5]	5980	mg/Kg	25	2500	3474.7	100	85 - 115

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	6010	mg/Kg	25	2500	3474.7	101	85 - 115	0	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: 128067

QC Batch: 38523 | Date Analyzed: 2007-06-25 | Analyzed By: JW
Prep Batch: 33316 | QC Preparation: 2007-06-25 | Prepared By: JW

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.96	mg/Kg	1	10.0	6.01	20	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	7.41	mg/Kg	1	10.0	6.01	14	10 - 141.5	7	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)	0.633	0.614	mg/Kg	1	1	63	61	40 - 125.3
4-Bromofluorobenzene (4-BFB)	0.947	0.962	mg/Kg	1	1	95	96	86.7 - 144.5

Matrix Spike (MS-1) Spiked Sample: 128067

QC Batch: 38524 | Date Analyzed: 2007-06-25 | Analyzed By: JW
Prep Batch: 33317 | QC Preparation: 2007-06-25 | Prepared By: JW

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	[6]	0.186	mg/Kg	1	1.00	<0.00110	19	64.4 - 115.7
Toluene		1.02	mg/Kg	1	1.00	<0.00150	102	57.8 - 124.4
Ethylbenzene	[7]	0.267	mg/Kg	1	1.00	<0.00160	27	64.8 - 125.8
Xylene	[8]	1.30	mg/Kg	1	3.00	0.0265	42	65.2 - 121.8

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

continued ...

[5]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[6]Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.
[7]Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.
[8]Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.

matrix spikes continued ...

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	[9]	0.115	mg/Kg	1	1.00	<0.00110	12	64.4 - 115.7	47	20
Toluene		0.911	mg/Kg	1	1.00	<0.00150	91	57.8 - 124.4	11	20
Ethylbenzene	[10]	0.203	mg/Kg	1	1.00	<0.00160	20	64.8 - 125.8	27	20
Xylene	[11]	1.10	mg/Kg	1	3.00	0.0265	36	65.2 - 121.8	17	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)	0.701	0.720	mg/Kg	1	1	70	72	52.8 - 121.7
4-Bromofluorobenzene (4-BFB)	0.806	0.829	mg/Kg	1	1	81	83	66.7 - 131.9

Matrix Spike (MS-1) Spiked Sample: 128071

QC Batch: 38650 | Date Analyzed: 2007-06-28 | Analyzed By: JW
Prep Batch: 33455 | QC Preparation: 2007-06-28 | Prepared By: JW

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1890	mg/Kg	50	50.0	1870	40	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	[12]	2020	mg/Kg	50	50.0	1870	300	10 - 141.5	7	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)		29.0	28.8	mg/Kg	50	50	58	58	40 - 125.3
4-Bromofluorobenzene (4-BFB)	[13] [14]	77.1	79.9	mg/Kg	50	50	154	160	86.7 - 144.5

Standard (ICV-1)

QC Batch: 38462 | Date Analyzed: 2007-06-21 | Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	282	113	85 - 115	2007-06-21

[9]Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.
[10]Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.
[11]Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.
[12]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[13]High surrogate recovery due to peak interference.
[14]High surrogate recovery due to peak interference.

Standard (CCV-1)

QC Batch: 38462 Date Analyzed: 2007-06-21 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	287	115	85 - 115	2007-06-21

Standard (CCV-2)

QC Batch: 38462 Date Analyzed: 2007-06-21 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	264	106	85 - 115	2007-06-21

Standard (ICV-1)

QC Batch: 38502 Date Analyzed: 2007-06-25 Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2007-06-25

Standard (CCV-1)

QC Batch: 38502 Date Analyzed: 2007-06-25 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.6	100	85 - 115	2007-06-25

Standard (ICV-1)

QC Batch: 38523 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	1.10	110	85 - 115	2007-06-25

Standard (CCV-1)

QC Batch: 38523 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	1.03	103	85 - 115	2007-06-25

Standard (ICV-1)

QC Batch: 38524 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
Benzene		mg/Kg	0.100	0.0923	92	85 - 115	2007-06-25
Toluene		mg/Kg	0.100	0.0943	94	85 - 115	2007-06-25
Ethylbenzene		mg/Kg	0.100	0.0914	91	85 - 115	2007-06-25
Xylene		mg/Kg	0.300	0.276	92	85 - 115	2007-06-25

Standard (CCV-1)

QC Batch: 38524 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
Benzene		mg/Kg	0.100	0.0849	85	85 - 115	2007-06-25
Toluene		mg/Kg	0.100	0.0914	91	85 - 115	2007-06-25
Ethylbenzene	[15]	mg/Kg	0.100	0.0837	84	85 - 115	2007-06-25
Xylene		mg/Kg	0.300	0.254	85	85 - 115	2007-06-25

Standard (ICV-1)

QC Batch: 38650 Date Analyzed: 2007-06-28 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	0.867	87	85 - 115	2007-06-28

Standard (CCV-1)

QC Batch: 38650 Date Analyzed: 2007-06-28 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	1.13	113	85 - 115	2007-06-28

[15]ETHYLBENZENE outside of control limits on CCV(ICV). CCV(ICV) component average is 0.085 which is within acceptable range. This is acceptable by Method 8000.

W O # 7062101

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

PAGE: 1 OF: 1

CLIENT NAME: Cimarex

SITE MANAGER: Ike Tavarez

PROJECT NO.: 2983

PROJECT NAME: Cimarex / J.W. Cooper TB
Lea County, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST (Circle or Specify Method No.): BTEX 8020/602	MTBE 8020/602	TPH 8015 MOD. TX1005 / 418.1	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
127990	6/19/07		S		X	SP#2 (0-0.5') BEB 1.0'	1				X				X														
991			S		X	SP#3 (0-0.5') BEB 3.0'	1				X				X														
992			S		X	SP#4 (0-0.5') BEB 1.0'	1				X				X														
993			S	X		Stockpile North	1				X		X		X											X			
994			S	X		Stockpile South	1				X		X		X											X			

RELINQUISHED BY: (Signature) Date: 6/21/07 Time: 1705
RECEIVED BY: (Signature) Date: Time:
SAMPLED BY: (Print & Sign) Ray Taylor / Kolt Harrison Date: 6/20/07 Time:

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:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: Texas ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: 6/21/07 TIME: 1705

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: Good / Cool 3.5 °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 Enviromental Corp. – Project Manager retains pink copy – Accounting receives Gold copy.

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 : Cimarex Energy Co. of Colorado	Contact: Hugo Naegele, Jr.
Address: 300 Texas Ave. Box 1237, Eunice, NM	Telephone No.: (505) 394-9394
Facility Name: J.W. Cooper #7	Facility Type: Oil and Gas facility

Surface Owner: Randy Crawford	Mineral Owner:	~~Lease~~ No. 30 025 25927

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	14	24S	36E		NW	1845'	SE	Lea

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 78 barrels	Volume Recovered: 78 barrels
Source of Release: Water tank ran over	Date and Hour of Occurrence 3/11/07	Date and Hour of Discovery 3/11/07 4:00 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD – Gary Wink, voice mail	
By Whom? : Hugo Naegele, Jr.	Date and Hour: 3/16/07 9:53 AM	
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.* (See Attached Initial C-141)

Water tank overflow caused by power failure due to storm. The fluids from the release were immediately pickup and the impacted soil was excavated and placed on plastic onsite.

CHLORIDES ??

Describe Area Affected and Cleanup Action Taken.*
The release impacted the area inside tank battery dike. In addition, an area at the well location and lease road was affected by the release. Spill did not migrate into pasture. The impacted areas were assessed by collected soil samples. Based on the results, the impacted areas exceeding the NMOCD RRAL were excavated to below regulatory levels. A Closure Report was submitted the NMOCD for review.

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: Evan L Waukob	OIL CONSERVATION DIVISION	
Printed Name: Evan L Waukob	Approved by District Supervisor: ENVIRONMENTAL ENGINEER	
Title: Prod. Superintendent	Approval Date: 9.25.07	Expiration Date:
E-mail Address: ewaukob@cimarex.com	Conditions of Approval: CLOSED AS RISK-BASED	Attached ☐
Date: 9/6/07 Phone: 432 571 7848		

* Attach Additional Sheets If Necessary

RP#

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 October 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 Cimarex of Colorado	Contact Hugo Naegele Jr.
Address 300 Texas P.O. Box 1237, Eunice, NM	Telephone No. 505-390-9394
Facility Name JW Cooper #7	Facility Type Oil & Gas Facility

Surface Owner Randy Crawford RRR Ranch	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	14	24S	36E		NW		SE	LEA

Latitude_____ Longitude_____

NATURE OF RELEASE

Type of Release Produce Water	Volume of Release 78 bbls	Volume Recovered 78 bbls
Source of Release WATER TANK RAN OVER	Date and Hour of Occurrence 3/11/07	Date and ~~Hour~~ of Discovery 4AM 3/11/07
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Gary Wink NMOCD (via E-mail)	
By Whom? Hugo Naegele Jr	Date and Hour 3/16/07 9:53 AM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

Received Hobbs OCD

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Power failure due to the storm that went by. Called pumper to check out alarm. Pumper found water tank running over. Power on transfer pump was out, but power to the PC Pump was still on. Called trucking company for vacuum truck to pick up spill & haul wtr. The pumper built up the dike to keep the water in the dike.

Describe Area Affected and Cleanup Action Taken.* The area affected was on the lease road & well location. Didn't notice any damage to pasture. Called for a vacuum truck to pick up spill & haul water. Had gang & backhoe clean up around tanks & build up firewall. It was hard to find any damage to the well location & road due ~~the~~ to the heavy rain that day.

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: Hnaegele J	OIL CONSERVATION DIVISION
Printed Name: Hugo Naegele Jr	Approved by District Supervisor:
Title: Production Foreman	Approval Date: / Expiration Date:
E-mail Address: hnaegele@cimarex.com	Conditions of Approval: / Attached ☐
Date: 3-16-07 Phone: 505 390-9394	

* Attach Additional Sheets If Necessary