

December 15, 2014

# Mr. Tomas Oberding NMOCD District I

AMARILLO 921 North Bivins Amarillo. Texas 79107 Phone 806.467.0607 Fax 806.467.0622

ARTESIA 408 West Texas Ave. Artesia, New Mexico 88210 Phone 575.746.8768 Fax 575.746.8905 1625 N. French Dr. Hobbs, NM 88240

Subject:

Soil Assessment and Remediation Work Plan Devon Energy Tomcat 21 Federal No. 1 API #: 30-025-33356 1RP-7-14-3193

Dear Dr. Oberding:

HOBBS 318 East Taylor Street Hobbs, New Mexico 88240 Phone 575.393.4261 Fax 575.393.4658

> MIDLAND 290I State Hwy 349 Midland, Texas 79706 Phone 432.522.2133 Fax 432.522.2180

OKLAHOMA CITY 7700 North Hudson Avenue Suite 10 Oklahoma City, Oklahoma 73116 Phone 405.486.7030 Fax 806.467.0622

> SAN ANTONIO 13111 Lookout Way San Antonio, Texas 78233 Phone 210.265.8025 Fax 210.568.2191

Devon Energy has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

# **Incident Date**

October 24, 2014

# **Background Information**

The Tomcat 21 Federal No. 1 is located approximately thirty-one (31) miles northwest of Jal in Lea County, New Mexico. The legal location for this site is Section 21, Township 23 South, and Range 32 East. More specifically the latitude and longitude for the release are 32.2916866 North and -103.6816595 West. A site plan is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Pyote and Maljamar fine sands. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Holocene to middle Pleistocene in age and is comprised of eolian sands and piedmont deposits. Drainage courses in this area are normally dry. The New Mexico State Engineer web site indicates the nearest ground water data to be in S21-T23S-R34E. The ground water in Section 21 is reported to be at depth of 400' below ground surface (bgs). See Appendix II for the referenced groundwater data.

The ranking for this site is **0** based on the following:

ENVIRONMENTAL CONSULTING ENGINEERING DRILLING CONSTRUCTION SPILL MANAGEMENT	Depth to ground water Wellhead Protection Area Distance to surface water body	>100' >1000' >1000'
GENERAL CONTRACTING		Page 1 of 3

# **Incident Description**

On July 23, 2014 an 11-inch transfer line between the Tomcat 21 and Diamondtail SWD split causing a release of 70 barrels of produced water. The wells flowing into the SWD were shut-in until repairs were completed. A vac truck was immediately called to the location and recovered 40 barrels of fluid. The area affected is located west of the battery in the pasture, measuring 85-feet long by 50-feet wide. See site plan in Appendix I.

# **Actions Taken**

On December 5, 2014 Talon mobilized personnel to begin the site assessment and soil sampling activities for the construction of a work plan. Grab soil samples were collected utilizing a hand auger to a depth of 4-feet below ground surface.

All soil samples were collected by Talon personnel wearing clean nitrile gloves. The soil samples were placed in laboratory provided sample containers, iced and transported to Cardinal Laboratories in Hobbs, New Mexico for analysis. The samples were tested for TPH (Total Petroleum Hydrocarbons) using EPA Method 8015M, and volatile organics (BTEX) using EPA Method 8021B. The chloride samples were analyzed per Method SM4500Cl-B.

# Laboratory Results

See Appendix III for complete report of laboratory results.

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0'	< 0.300	32	<10	40.9
	1'	< 0.300	<16	<10	<10
	2'	< 0.300	112	<10	<10
	3'	< 0.300	320	<10	<10
S-2	0'	< 0.300	352	<10	<10
Refusal	0.5'	< 0.300	1470	<10	<10
S-3	0'	< 0.300	12900	<10	<10
	1'	< 0.300	208	<10	<10
	2'	< 0.300	400	<10	<10
	3'	< 0.300	512	<10	<10
S-4	0'	< 0.300	32	<10	<10
	1'	< 0.300	112	<10	<10
	2'	< 0.300	208	<10	<10
	3'	< 0.300	784	<10	<10

December 9, 2014

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-5	0'	< 0.300	192	<10	96.3
	1'	< 0.300	3000	<10	<10
	2'	< 0.300	1800	<10	<10
	3'	< 0.300	1920	<10	<10
S-6	0'	< 0.300	9730	<50	4110
	1'	< 0.300	7680	<50	795
	2'	< 0.300	5760	<10	15.3
	3'	< 0.300	8240	<10	<10
	4'	< 0.300	12700	<10	<10

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL's) are 50 mg/kg for BTEX, 10 mg for Benzene, and 5,000 mg/kg for TPH. The chloride remediation standard is considered to be 1,000 mg/kg based upon a water table depth greater than 100-feet deep.

# **Proposed Remedial Actions**

- The impacted area in the vicinity of sample point S-2 will be excavated to a depth of 1-foot deep. The impacted area at sample point S-3 will be excavated to a depth of 0.5-feet deep.
- The impacted area in the vicinity of sample point S-5 will be excavated to a depth of 4-feet deep.
- The area in the vicinity of sample point S-6 will be excavated to a depth of 4-feet deep and a 20 mil liner will be installed into the bottom of the excavation.
- All the contaminated soil will be transported to an approved disposal facility.
- The excavated areas will be backfilled with locally obtained backfill/sand and seeded with the recommended BLM seed mixture.
- A final closure report documenting all remedial actions and analytical results will be provided to the NMOCD Hobbs Office and the BLM along with a Final C-141 Form.

Should you have any questions or if further information is required, please do not hesitate to contact our office at (575)-746-8768

Respectfully submitted,

imberly M. Wilson

Kimberly M. Wilson Project Manager

David J. Adkins District Manager

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# APPENDIX I

# SITE MAP



# **APPENDIX II**

# **GROUNDWATER DATA**



(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replaced O=orphaned, C=the file is closed)	(						2=NE 3 st to lar	3=SW 4: gest)		) AD83 UTM in me	eters)	(	In feet)	
POD Number	POD Sub- Code basin (	County		Q 16			Tws	Rng		x	Y	Distance			Water Column
<u>C 02216</u>	CUB	LE	2	2	4	21	23S	32E	6250	35	3573261* 🌍	1350	585	400	185
C 03529 POD1	С	LE	2	4	3	29	23S	32E	6226	51	3571212 🌍	2880	550		
											Avera	ge Depth to	Water:	400	feet
												Minimum	Depth:	400	feet
												Maximum	Depth:	400	feet
Record Count: 2			-		-								hand work were pr		nong toong kanan tanan ang

# UTMNAD83 Radius Search (in meters):

Easting (X): 623818

Northing (Y): 3573846

Radius: 3000

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

# **APPENDIX III**

# LABORATORY RESULTS



December 09, 2014

KIMBERLY WILSON TALON LPE 408 W. TEXAS AVE. ARTESIA, NM 88210

RE: TOM CAT 21 FED #1

Enclosed are the results of analyses for samples received by the laboratory on 12/08/14 11:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab\_accred\_certif.html">www.tceq.texas.gov/field/qa/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celeg D. Keine

Celey D. Keene Lab Director/Quality Manager



TALON LPE KIMBERLY WILSON 408 W. TEXAS AVE. ARTESIA NM, 88210 Fax To: (575) 745-8905

Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

## Sample ID: S-1 0' (H403731-01)

BTEX 8021B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID 102 % 61-154

Chloride, SM4500CI-B	mg,	mg/kg		d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	40.9	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	92.0	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	105	% 52.1-17	6						

#### **Cardinal Laboratories**

#### \*=Accredited Analyte

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Celey Di Keene

Celey D. Keene, Lab Director/Quality Manager



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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-1 1' (H403731-02)

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BTEX 8021	.В	mg,	kg	Analyze	d By: CK					
	Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*		<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*		<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenze	ene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylen	nes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	< compared with the second sec	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 102 % 61-154

Chloride, SM4500CI-B	mg	mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg,	mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	91.1	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 99.9 % 52.1-176

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#### \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

#### Sample ID: S-1 2' (H403731-03)

BTEX 8021B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 102 % 61-154

Chloride, SM4500CI-B	mg,	'kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	90.6	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 97.7 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-1 3' (H403731-04)

BTEX 8021B	mg	mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID 102 % 61-154

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	91.2	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 99.1 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

#### Sample ID: S-2 0' (H403731-05)

BTEX 8021B	mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92,7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2,00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE 103 % 61-154

Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	92.8	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 101 % 52.1-176

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\*=Accredited Analyte

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

#### Sample ID: S-2 0.5' REFUSAL (H403731-06)

BTEX 8021B mg/kg Analyzed By: CK Analyte Result Reporting Limit Analyzed Method Blank BS True Value QC RPD % Recovery Qualifier Benzene\* < 0.050 0.050 12/08/2014 ND 1.85 92.7 2.00 5.80 Toluene\* < 0.050 0.050 12/08/2014 ND 1.83 91.5 2.00 5.71 Ethylbenzene\* <0.050 0.050 12/08/2014 ND 1.74 87.1 2.00 6.71 Total Xylenes\* <0.150 0.150 12/08/2014 ND 5.38 89.6 6.00 6.19 Total BTEX < 0.300 0.300 12/08/2014 ND

Surrogate: 4-Bromofluorobenzene (PIL 101 % 61-154

103 %

52.1-176

Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1470	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	93.0	% 47.2-15	7						

#### **Cardinal Laboratories**

Surrogate: 1-Chlorooctadecane

\*=Accredited Analyte

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Celeg Di Keine

Celey D. Keene, Lab Director/Quality Manager



TALON LPE KIMBERLY WILSON 408 W. TEXAS AVE. ARTESIA NM, 88210 Fax To: (575) 745-8905

Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-3 0' (H403731-07)

BTEX 8021B	mg,	/kg	Analyze	d By: CK				-	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 102 % 61-154

Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12900	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	85.4	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 93.1 % 52.1-176

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#### \*=Accredited Analyte

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TALON LPE KIMBERLY WILSON 408 W. TEXAS AVE. ARTESIA NM, 88210 Fax To: (575) 745-8905

Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-3 1' (H403731-08)

BTEX 8021B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1,74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 103 % 61-154

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	90.8	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 98.7 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-3 2' (H403731-09)

BTEX 8021B	mg,	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 103 % 61-154

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	87.2	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 94.7% 52.1-176

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Celey D. Keene, Lab Director/Quality Manager



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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-3 3' (H403731-10)

BTEX 8021B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 102 % 61-154

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	91.0	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 99.4 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-4 0' (H403731-11)

BTEX 8021B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE 104 % 61-154

Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	81.9	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 89.9 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-4 1' (H403731-12)

BTEX 8021B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE 103 % 61-154

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP			ŝ		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/09/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	82.9	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 89.8 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-4 2' (H403731-13)

BTEX 8021B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 104 % 61-154

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/09/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	87.9	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 95.4 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-4 3' (H403731-14)

BTEX 8021B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 102 % 61-154

Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/09/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	87.8	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 94.3 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-5 0' (H403731-15)

BTEX 8021B	mg,	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 101% 61-154

108 %

52.1-176

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2014	ND	206	103	200	2.40	
DRO >C10-C28	96.3	10.0	12/09/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	90.1	% 47.2-15	7						

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Surrogate: 1-Chlorooctadecane

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

#### Sample ID: S-5 1' (H403731-16)

BTEX 8021B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 103 % 61-154

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3000	16.0	12/08/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/09/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	84.7	% 47.2-15	7				i.		
Surrogate: 1-Chlorooctadecane	92.6	% 52.1-17	6						

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TALON LPE KIMBERLY WILSON 408 W. TEXAS AVE. ARTESIA NM, 88210 Fax To: (575) 745-8905

Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

## Sample ID: S-5 2' (H403731-17)

BTEX 8021B	mg,	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91,5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 100 % 61-154

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1800	16.0	12/09/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/09/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	75.9	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 82.9 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

## Sample ID: S-5 3' (H403731-18)

BTEX 8021B	mg,	'kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 101 % 61-154

Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1920	16.0	12/09/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2014	ND	206	103	200	2.40	
DRO >C10-C28	<10.0	10.0	12/09/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	82.5	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	89.5	% 52.1-17	6						

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

## Sample ID: S-6 0' (H403731-19)

DTEV 0004 D

BIEX 8021B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/08/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/08/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/08/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/08/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 102 % 61-154

Chloride, SM4500Cl-B	mg,	mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9730	16.0	12/09/2014	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	12/09/2014	ND	206	103	200	2.40	
DRO >C10-C28	4110	50.0	12/09/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	90.8	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	162	% 52.1-17	6						

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

## Sample ID: S-6 1' (H403731-20)

BTEX 8021B	mg/kg		Analyze	Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2014	ND	1.85	92.7	2.00	5.80	
Toluene*	<0.050	0.050	12/09/2014	ND	1.83	91.5	2.00	5.71	
Ethylbenzene*	<0.050	0.050	12/09/2014	ND	1.74	87.1	2.00	6.71	
Total Xylenes*	<0.150	0.150	12/09/2014	ND	5.38	89.6	6.00	6.19	
Total BTEX	<0.300	0.300	12/09/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 101 % 61-154

Chloride, SM4500CI-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7680	16.0	12/09/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	12/09/2014	ND	206	103	200	2.40	
DRO >C10-C28	795	50.0	12/09/2014	ND	190	95.2	200	0.388	
Surrogate: 1-Chlorooctane	88.9	% 47.2-15	7						

Surrogate: 1-Chlorooctadecane 129 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

## Sample ID: S-6 2' (H403731-21)

BTEX 8021B	mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2014	ND	1.93	96.3	2.00	2.53	
Toluene*	<0.050	0.050	12/09/2014	ND	1.91	95.6	2.00	2.30	
Ethylbenzene*	<0.050	0.050	12/09/2014	ND	1.84	92.0	2.00	2.10	
Total Xylenes*	<0.150	0.150	12/09/2014	ND	5.66	94.4	6.00	1.89	
Total BTEX	<0.300	0.300	12/09/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID 102 % 61-154

155 %

52.1-176

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP		/				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5760	16.0	12/09/2014	ND	416	104	400	3.92		
TPH 8015M	mg,	'kg	Analyze	d By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/08/2014	ND	198	99.1	200	0.392		
DRO >C10-C28	15.3	10.0	12/08/2014	ND	200	99.8	200	2.79		
Surrogate: 1-Chlorooctane	139 9	% 47.2-15	7							

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Surrogate: 1-Chlorooctadecane

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-6 3' (H403731-22)

BTEX 8021B	mg,	mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2014	ND	1.93	96.3	2.00	2.53	
Toluene*	<0.050	0.050	12/09/2014	ND	1.91	95.6	2.00	2.30	
Ethylbenzene*	<0.050	0.050	12/09/2014	ND	1.84	92.0	2.00	2.10	
Total Xylenes*	<0.150	0.150	12/09/2014	ND	5.66	94.4	6.00	1.89	
Total BTEX	<0.300	0.300	12/09/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 102 % 61-154

Chloride, SM4500CI-B	mg/	mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8240	16.0	12/09/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	198	99.1	200	0.392	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	200	99.8	200	2.79	
Surrogate: 1-Chlorooctane	133 9	6 47.2-15	7						

Surrogate: 1-Chlorooctadecane 149 % 52.1-176

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Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/09/2014	Sampling Type:	Soil
Project Name:	TOM CAT 21 FED #1	Sampling Condition:	Cool & Intact
Project Number:	700794.138.01	Sample Received By:	Jodi Henson
Project Location:	F-21-23-32		

# Sample ID: S-6 4' (H403731-23)

BTEX 8021B	mg/kg		Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2014	ND	1.93	96.3	2.00	2.53	
Toluene*	<0.050	0.050	12/09/2014	ND	1.91	95.6	2.00	2.30	
Ethylbenzene*	<0.050	0.050	12/09/2014	ND	1.84	92.0	2.00	2.10	
Total Xylenes*	<0.150	0.150	12/09/2014	ND	5.66	94.4	6.00	1.89	
Total BTEX	<0.300	0.300	12/09/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	102 9	61-154							
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12700	16.0	12/09/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/08/2014	ND	198	99.1	200	0.392	
DRO >C10-C28	<10.0	10.0	12/08/2014	ND	200	99.8	200	2.79	

Surrogate: 1-Chlorooctane130 %47.2-157Surrogate: 1-Chlorooctadecane144 %52.1-176

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# **Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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† Cardinal cannot accept verbal ch	Delivered By: (Circle One) Sampler - UPS - Bus - Other:	And the second s	15 July	alliates or successors atiging out of or related to the performance of Relingatished By:	PLEASE NOTE: Lability and Damages. Cardinaits lability and slients occlusive remedy for any claim arising whether based analyses. All dating including topse for negligence and any other exame whethere with the detect which unless made in environ in an environment including topse for conjugate and any other exame whethere with the detect of the structure of th	10 5-3 31	D	8 5-3 1.	7 5.2 01	2 2 2 0 2 2	5-1-2	2 5-1 1	15-1 0'	Lab I.D. Sample I.D.	FOR LAB USE ONLY	Sampler Name: Gahl Bac	Project Location: F-21-23-3	ine: Somlat 21:3	Project #: 700794.138.01	-746-8768	city: Artesia	Address: 408 W. Texas Ave.	Project Manager: Kim Wilso	Company Name: Talon/LPE	101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476		
Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326	5.22 Eres Free (Initials)	Time:	Aundon	strainings, inclusing visions, immanity, knows in take, or uses or paors and interest arguments are vision hereinder by confident, regarding in characteristic dation is based upon any of the above straters are in and the confident of the confidence of the confidence of the convertigence of the convert	in contract or tort, shall be limited to the amount paid writing and received by Cardinal within 30 days after writing and received by Cardinal within 50 days after	G 1 1 1 1 1 W 11:57				refuend C / / / ////		6 / / / //	6 / / /2/5/14/11:30	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER : DATE IME	MATRIX PRESERVI SAMPLING	Fax #:	Phone #:	,	Project Owner: Ceuton City:	Fax # 575-746-8905 Address:	State: NM Zip: 88210 Attn:	Company: Jalen.	つ P.O. 共		bs, NM 88240 75) 393-2476		
		ENSH-11	U Yes U No	anner, ar unseanner, anner otherwise.   Phone Result: :: Yes: :: No:   Add:   Phone #:	ent for the applicable	7///					2//	32 // /	0///	■										ANALYSIS REQUEST	fage 10f3	CHAIN-OF-CUSTODY AND ANALYSIS REQUEST	

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† Cardinal cannot accept verbal changes. Please fax written changes to /575) 399/2396	Sampler - UPS - Bus - Other: Sampler - Other: Sampler - Other: Sampler - Other: Sampler - Ot	Time:	Redeived By:	Timps, EZ /INA MARAN REMARKS: Yes No	aned By Dair: 101 Received By: Phone Result: Yes No	service, in no event shall Cardina bibble for induced an angee, including without initiation, business interroptions, loss of use, or loss of profile busines for the applicable of the applicab	19 5.6 O' GI / V 12:55 / / /	- Jan	18 2-3 31 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	J S-5 2' 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 5.5 1' 6 1 1 12:33 / /	2-5 0'	14 2-4 3. 6 1 1 12:25 1 1	1 1 12 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5	J-4 0.	Children Contraction of the second se	MATRIX PRESERV. SAMPLING	E Geby Baesa Fax#	Project Location: F-2/-23-32 Phone #:	Project Name: Jern (at 3/ Jea/ #/ State: Zip:	Project #: 700 794, 138, 0/ Project Owner: City:	Phone #: 575-746-8768 Fax #: 575-746-8905 Address:		P.O. #		01 East Marland, Hobbs, NM 88240	CHAIN-OF-CUSTODY AND A
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fax written changes to (575) 393-2326	2° Sample Condition CHECKED BY: Cool Antact (Initials) No No No	Received By:	REMARKS:	Yes I No	analyzes. All claims including those for negligence and any other cause whatapever shall be deemed walved unless made were work your were yound up to an any other cause whatapever shall be beened walved unless made work of wards a white of any date or the applicable service. In no event shall be able to includential or consequental damages, including without limitation, business interruptions, base of use, or loss of profits incurred by client, its subdidicties, and the service is not service.				6 1 1 1 1 107 / /	6 1 1 1 1 103 / /	6 1 1 1/5/14/2:58 / 1	# CO GRO WAS SOIL OIL SLUE OTHE ACID OTHE DATE TIME	DGE ER : /BASE: COOL	S ER R	Fax #:	Phone 弗	State: Zip:	r. City:		Zip: 88210 Attn:	Company: John	P.O. #:			CHAIN-OF-CUSTODY	<u>.</u>	
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