

# HUNGRY HORSE, LLC

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3709 S. Eunice HWY  
P.O. Box 1058  
Hobbs, NM 88241  
Office: 575-393-3386  
Fax: 575-391-4585  
[info@hungry-horse.com](mailto:info@hungry-horse.com)

DIRT WORK \* ON-SITE REMEDIATION  
SOIL TESTING \* EXCAVATION \* ELECTRICAL

22Feb16

To: Heather Patterson, New Mexico Oil Conservation Division, District 2  
Jim Amos, Bureau of Land Management  
Reference: Remediation Work Plan  
Operator: Devon Energy Production Company  
Location: Ross Ranch 10 Fed #1 SWD  
API: 30-015-29605  
Legals: UL. H, Sec. 10, T26S, R31E, Eddy County  
GPS: 32.0592, -103.7590  
NM OCD: 2RP 2342

## Site information

This location is on the south side of Pipe Line Road five miles west of the intersection of Pipe Line Road and CR 1/Orla Highway. The area around the site is relatively flat with a heavy concentration of mesquite and creosote bushes. Based upon the Eddy County Depth to Groundwater Map, depth to groundwater is 275'. The New Mexico Office of the State Engineer's website list no groundwater data for this area.

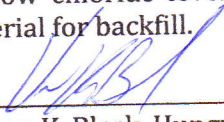
The impacted area is on the south side of the battery at the edge of the pad and is approximately 15' x 20'. The release is the result of a failed fitting.

## Work Conducted to Date

A delineation using a hand auger was attempted which resulted in auger refusal at 7' BGS. Soil samples were field tested for chlorides with the surface and one foot samples being selected for lab analysis. Further delineation was conducted the following week with a backhoe. Soil samples at 9' and 11' BGS were field tested for chlorides and field test indicated levels below closure limits. These samples were selected for lab analysis and the lab results supported the field test. (See attached analytical summary and lab analysis.)

## Proposal

I propose to excavate the impacted area, approximately 15' x20', to a depth of 3' BGS and install a synthetic liner in order to prevent the downward migration of the Chlorides. Due to the low chloride level between the surface and 3' BGS, I propose to use the excavated material for backfill.

  
Vernon K. Black, Hungry Horse, LLC



District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

**Release Notification and Corrective Action**

*nHMP1416429096*

<b>OPERATOR</b> <input checked="" type="checkbox"/> Initial Report <input type="checkbox"/> Final Report	
Name of Company Devon Energy Production <i>6137</i>	Contact Tracy Kidd -Production Foreman
Address PO Box 250 Artesia, NM 88210	Telephone No. 575.513.0628
Facility Name Ross Ranch 10 Fed 1 SWD	Facility Type Salt Water Disposal
Surface Owner Federal	Mineral Owner Federal
API No. 30-015-29605	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	10	26S	31E	1980	North	660	East	Eddy

Latitude: 32.059235486

Longitude: -103.75905787

**NATURE OF RELEASE**

Type of Release Spill Produced Water	Volume of Release 1300BBLS in lined containment- 4BBLS on ground	Volume Recovered 1303BBLS
Source of Release hole in lined containment	Date and Hour of Occurrence 6/9/2014 10:29AM	Date and Hour of Discovery 6/9/2014 10:29AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jim Amos-BLM & Thomas Oberding-OCD	
By Whom? Lynn Smith; Assistant Production Foreman	Date and Hour 6/10/2014 10:00AM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

**Describe Cause of Problem and Remedial Action Taken.\***

A pin hole in the lined containment formed causing the spill that escaped containment. After the produced water was recovered it was discovered that the 6" fiberglass fill line had come apart at a tee on the bottom section causing the spill into the lined containment. Containment will be repaired. Braces will be built on fill line. Spill occurred on the south side of the pad affecting approximately 28'x160'.

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

**Describe Area Affected and Cleanup Action Taken.\***

Equipment will be steam cleaned and affected soil will be removed and replaced with fresh soil.

JUN 12 2014

**RECEIVED**

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

Signature: <i>Sandra Farley</i>		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Sandra Farley		Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Field Admin Support		Approval Date: <i>6/13/14</i>	Expiration Date: <i>NA</i>
E-mail Address: Sandy.Farley@dvn.com		Conditions of Approval: remediation per OGD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION	
Date: June 10, 2014		Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary

PROPOSAL NO LATER THAN:

*7/13/14*

*2RP-2342*





# *New Mexico Office of the State Engineer* **Water Column/Average Depth to Water**

No records found.

**PLSS Search:**

Section(s): 10

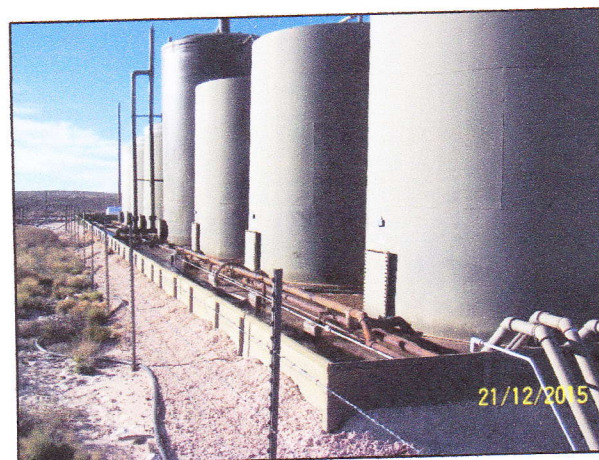
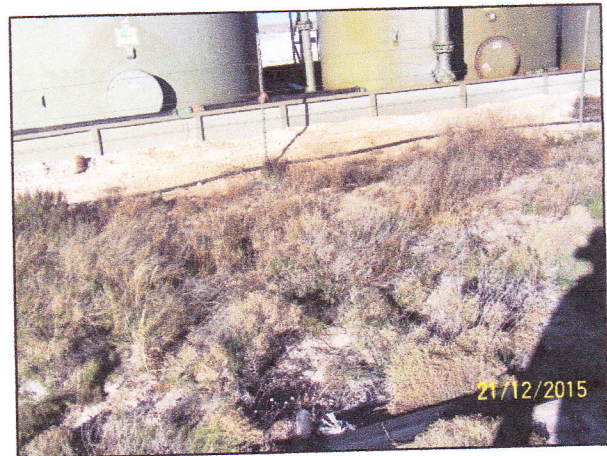
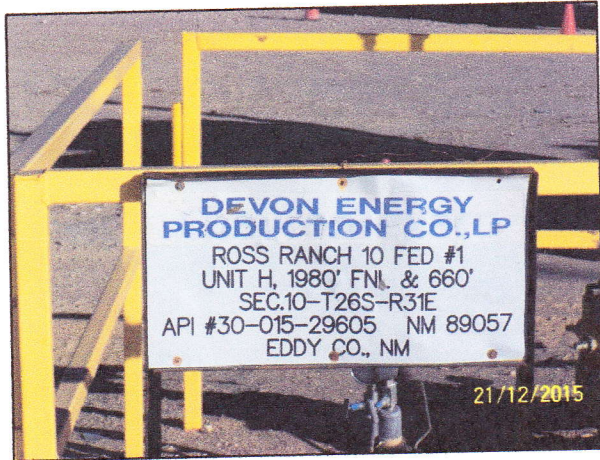
Township: 26S

Range: 31E

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.



Devon Energy Production Company-Ross Ranch 10 Fed #1





Devon Energy Production Company-Ross Ranch 10 Fed #1



Impacted area is approximately 15' x 20' .



# Analytical Summary

Operator: Devon Energy Production Company

Location: Ross Ranch 10 Fedf #1

Summary of Remediation Sampling Analytical Results as Parts Per Million (PPM)

## BTEX

Sample Point	Depth	LAB
SP #1	Surface	ND
	1' BGS	ND
	9' BGS	ND
	11' BGS	ND

## Chlorides

Sample Point	Depth	LAB	Field Test
SP #1	Surface	ND	ND
	1' BGS	80	ND
	3' BGS		642
	5' BGS		1458
	7' BGS		1587
	9' BGS	96	78
	11' BGS	48	ND

Encounter hard rock/hand auger refusal at 7' BGS

## TPH

Sample Point	Depth	LAB
SP #1	Surface	553
	1' BGS	14
	9' BGS	ND
	11' BGS	ND



January 21, 2016

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: ROSS RANCH 10 FED #1

Enclosed are the results of analyses for samples received by the laboratory on 01/18/16 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

 Hungry Horse Environmental  
 VERNON BLACK  
 P.O. Box 1058  
 Hobbs NM, 88240  
 Fax To: (505) 391-4585

 Received: 01/18/2016  
 Reported: 01/21/2016  
 Project Name: ROSS RANCH 10 FED #1  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 01/18/2016  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: SP #1 SURFACE (H600099-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/20/2016	ND	1.77	88.3	2.00	1.48	
Toluene*	<0.050	0.050	01/20/2016	ND	1.75	87.7	2.00	0.520	
Ethylbenzene*	<0.050	0.050	01/20/2016	ND	1.61	80.4	2.00	1.16	
Total Xylenes*	<0.150	0.150	01/20/2016	ND	4.99	83.2	6.00	1.16	
Total BTEX	<0.300	0.300	01/20/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/20/2016	ND	432	108	400	0.00	

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	01/19/2016	ND	194	96.9	200	3.69	
DRO >C10-C28	553	10.0	01/19/2016	ND	179	89.5	200	4.37	

Surrogate: 1-Chlorooctane 91.6 % 35-147

Surrogate: 1-Chlorooctadecane 93.6 % 28-171

\*=Accredited Analyte

**Cardinal Laboratories**

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 Hungry Horse Environmental  
 VERNON BLACK  
 P.O. Box 1058  
 Hobbs NM, 88240  
 Fax To: (505) 391-4585

 Received: 01/18/2016  
 Reported: 01/21/2016  
 Project Name: ROSS RANCH 10 FED #1  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 01/18/2016  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: SP #1 1' BGS (H600099-02)**

BTEX 8021B			mg/kg							Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Benzene*	<0.050	0.050	01/20/2016	ND	1.77	88.3	2.00	1.48			
Toluene*	<0.050	0.050	01/20/2016	ND	1.75	87.7	2.00	0.520			
Ethylbenzene*	<0.050	0.050	01/20/2016	ND	1.61	80.4	2.00	1.16			
Total Xylenes*	<0.150	0.150	01/20/2016	ND	4.99	83.2	6.00	1.16			
Total BTEX	<0.300	0.300	01/20/2016	ND							

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 73.6-140

Chloride, SM4500Cl-B			mg/kg									Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier				
Chloride	80.0	16.0	01/20/2016	ND	432	108	400	0.00					

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	01/19/2016	ND	194	96.9	200	3.69					
DRO >C10-C28	13.8	10.0	01/19/2016	ND	179	89.5	200	4.37					

Surrogate: 1-Chlorooctane 87.0 % 35-147

Surrogate: 1-Chlorooctadecane 94.5 % 28-171

\*=Accredited Analyte

**Cardinal Laboratories**

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Celey D. Keene, Lab Director/Quality Manager



**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 SM4500Cl-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 Laboratories**

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

BILL TO										ANALYSIS REQUEST																																																																					
<b>Company Name:</b> Hungry Horse, LLC <b>Project Manager:</b> Vernon K. Black <b>Address:</b> PO Box 1058 <b>City:</b> Hobbs <b>State:</b> NM <b>Zip:</b> 88241 <b>Phone #:</b> 575-631-2253 <b>Fax #:</b> 575-391-4585 <b>Project #:</b> <b>Project Owner:</b> Devan <b>Project Name:</b> Ross Ranch 1058 Add'l <b>Project Location:</b> Locality Eddy County <b>Sampler Name:</b> Vernon K. Black					<b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>MATRIX</th> <th>PRESERV</th> <th>SAMPLING</th> <th>DATE</th> <th>TIME</th> </tr> <tr> <td>GROUNDWATER</td> <td></td> <td></td> <td>18 Jan</td> <td>1430</td> </tr> <tr> <td>WASTEWATER</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SOIL</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SLUDGE</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>OTHER:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ACID/BASE</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ICE / COOL</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>OTHER:</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										MATRIX	PRESERV	SAMPLING	DATE	TIME	GROUNDWATER			18 Jan	1430	WASTEWATER					SOIL					SLUDGE					OTHER:					ACID/BASE					ICE / COOL					OTHER:																			
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<b>Delivered By:</b> (Circle One) Sampler - UPS - Bus - Other:										<b>Checked By:</b> <i>[Signature]</i> Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																																																					
<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>REMARKS:</b> Samples Bought + Straight from Field										<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>REMARKS:</b>																																																																					

Comments cannot accept verbal changes. Please fax written changes to 505-393-2076



January 29, 2016

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: ROSS RANCH 10 FED #1

Enclosed are the results of analyses for samples received by the laboratory on 01/26/16 11:06.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. 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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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,



Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

Hungry Horse Environmental  
VERNON BLACK  
P.O. Box 1058  
Hobbs NM, 88240  
Fax To: (505) 391-4585

Received: 01/26/2016  
Reported: 01/29/2016  
Project Name: ROSS RANCH 10 FED #1  
Project Number: NONE GIVEN  
Project Location: EDDY COUNTY, NM

Sampling Date: 01/25/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP-2 9' (H600178-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/27/2016	ND	1.89	94.6	2.00	7.17	
Toluene*	<0.050	0.050	01/27/2016	ND	1.86	93.0	2.00	7.21	
Ethylbenzene*	<0.050	0.050	01/27/2016	ND	1.69	84.4	2.00	7.83	
Total Xylenes*	<0.150	0.150	01/27/2016	ND	5.21	86.8	6.00	7.67	
Total BTEX	<0.300	0.300	01/27/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	01/27/2016	ND	400	100	400	0.00		

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	01/27/2016	ND	199	99.3	200	3.47		
DRO >C10-C28	<10.0	10.0	01/27/2016	ND	190	95.0	200	4.27		

Surrogate: 1-Chlorooctane 70.2 % 35-147

Surrogate: 1-Chlorooctadecane 70.0 % 28-171

\*=Accredited Analyte

**Cardinal Laboratories**

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 Hungry Horse Environmental  
 VERNON BLACK  
 P.O. Box 1058  
 Hobbs NM, 88240  
 Fax To: (505) 391-4585

 Received: 01/26/2016  
 Reported: 01/29/2016  
 Project Name: ROSS RANCH 10 FED #1  
 Project Number: NONE GIVEN  
 Project Location: EDDY COUNTY, NM

 Sampling Date: 01/25/2016  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 11' (H600178-02)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/27/2016	ND	1.89	94.6	2.00	7.17	
Toluene*	<0.050	0.050	01/27/2016	ND	1.86	93.0	2.00	7.21	
Ethylbenzene*	<0.050	0.050	01/27/2016	ND	1.69	84.4	2.00	7.83	
Total Xylenes*	<0.150	0.150	01/27/2016	ND	5.21	86.8	6.00	7.67	
Total BTEX	<0.300	0.300	01/27/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 105 % 73.6-140

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	48.0	16.0	01/27/2016	ND	400	100	400	0.00			

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	01/27/2016	ND	199	99.3	200	3.47			
DRO >C10-C28	<10.0	10.0	01/27/2016	ND	190	95.0	200	4.27			

Surrogate: 1-Chlorooctane 62.8 % 35-147

Surrogate: 1-Chlorooctadecane 61.0 % 28-171

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**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 SM4500Cl-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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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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