

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

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Enterprise Crude Oil	Contact	Christopher A Spore, P.G.
Address	4211 S Telephone Road Hobbs, NM	Telephone No.	432-221-7746
Facility Name	Devon Ironhouse 19	Facility Type	Tank Battery
Surface Owner	Mineral Owner	API No. 30-025-40676	

LOCATION OF RELEASE

Unit Letter	Section S19	Township T18S	Range R35E	Feet from the 200	North/South Line SL	Feet from the 1800	East/West Line WL	County Lea
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Latitude 32.726676° Longitude -103.499699°

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	154.1 bbl	Volume Recovered	60 bbl
Source of Release	Crude Oil Transport Truck	Date and Hour of Occurrence	12/13/17 1520	Date and Hour of Discovery	12/13/17 1742
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required				
By Whom?	Christopher A Spore	If YES, To Whom?	*After hours call to Mark Whitaker @ 575-370-3186		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If YES, Volume Impacting the Watercourse.					

If a Watercourse was Impacted, Describe Fully.*

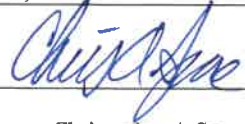

Describe Cause of Problem and Remedial Action Taken.*

Crude oil transport driver was loading from tank battery and overfilled tank trailer. Upon discovery, the LACT unit was turned off, stopping the flow of crude oil.

Describe Area Affected and Cleanup Action Taken.*

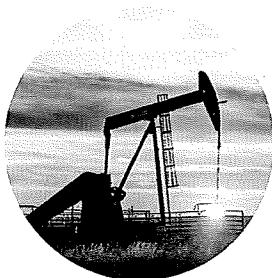
Vacuum truck was immediately dispatched. All free crude oil was recovered and returned to the producers tank. Environmental contractor was dispatched to continue response work. During emergency response activities, impacted caliche was excavated and hauled to Lea Land. Samples were collected during excavation activities to demonstrate delineation and complete contaminant removal. Clean material was purchased to backfill excavation.

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: 	OIL CONSERVATION DIVISION		
Printed Name: Christopher A Spore, P.G.	Approved by Environmental Specialist: 		
Title: Lead Field Environmental Scientist	Approval Date: 4/10/2023	Expiration Date: N/A	
E-mail Address: caspore@eprod.com	Conditions of Approval:		Attached <input checked="" type="checkbox"/>
Date: 02/14/2018 Phone: 432-221-7746	None		

* Attach Additional Sheets If Necessary

talonlpe.com • 866.742.0742



Remediation and Closure Report:

Devon Ironhouse 19 State Com #1H
30-025-40676 * 1RP-4895
Talon Project No. 700348.418.01

Prepared For:

Enterprise Crude Oil
4211 S. Telephone Road
Hobbs, New Mexico 88240

Prepared By:

TALON/LPE
408 W. Texas Avenue
Artesia, New Mexico 88210

February 14, 2018

Ms. Olivia Yu
NMOCD District 1
1625 N. French Dr.
Hobbs, NM 88240

Subject: **Remediation and Closure Report**
Devon Ironhouse 19 State Com #1H
30-025-40676 * 1RP-4895

Dear Ms. Yu,

Enterprise Crude Oil has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The incident description, soil sampling results, remediation activities and closure request are submitted herein.

Site Information

The Ironhouse 19 State Com #1H is located approximately twenty-three (23) miles west of Hobbs, New Mexico. The legal location for this release is Unit Letter N, Section 19, Township 18 South and Range 35 East in Lea County, New Mexico. More specifically the latitude and longitude for the release are 32.726676 North and -103.499699 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 Kimbrough-Lea complex with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Pleistocene in age and is comprised of eolian deposits. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

The New Mexico State Engineer web site indicates that the nearest ground water is 117' below ground surface in Section 25, Township 18 South and Range 34 East. See Appendix II for the referenced groundwater data in the area.

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

Depth to ground water	>100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 5,000 mg/kg for TPH. The recommended guideline for Total Chlorides is 600 mg/kg.

Incident Description

On December 13, 2017, a crude oil transport truck was loading from the tank battery and overfilled the tank trailer. Upon discovery, the LACT unit was immediately shut down stopping the flow of crude. A vacuum truck was dispatched to the location recovering 60 barrels of the 154 barrels of crude oil released. A site plan is presented in Appendix I which illustrates the impacted area.

Remedial Actions Taken

Due to this location being a high truck traffic battery, immediate remedial actions were taken. The client and facility owner did not want the trucks spreading the release further on location. The NMOCD was verbally notified that remedial activities were being initiated.

Four (4) loads of caliche were brought in and spread over the release to soak up the remaining standing fluids. This was done because wet soil cannot be transported and Lea Land does not accept liquids for disposal.

The visually impacted areas were excavated to the horizontal extent shown on the attached site plan. Delineation and confirmation samples were conducted concurrently with excavation activities. Excavation depths are noted on the site plan and the analytical data is summarized in the following data table. It should be noted that historical chlorides were indicated on the laboratory analysis in two (2) locations beyond the Enterprise area of impact. These areas were also excavated to the depths shown on the site plan.

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO	TPH (mg/kg) EXT DRO
S-1	0.0	<0.300	512	<10	<10	<10
	1.0	<0.300	<16	<10	<10	<10
S-2	1.0	13.0	208	124	1940	600
S-3	1.0	0.471	288	<10	107	18.6
S-4	0.0	<0.300	1600	<10	<10	<10
	0.5	<0.300	352	<10	<10	<10
S-5	1.0	3.52	1720	24.5	419	71.4
	2.0	--	1520	--	--	--
	2.5	--	256	--	--	--
S-6	1.0	<0.300	368	<10	<10	<10
S-7	1.0	237	48	612	2170	344
	2.0	3.33	--			
S-8	1.0	2.36	144	19.7	291	70.7
S-9	1.0	6.26	560	35.2	402	38.4

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO	TPH (mg/kg) EXT DRO
S-10	0.0	<0.300	528	<10	<10	<10
	0.5	<0.300	112	<10	<10	<10
S-11	0.0	<0.300	1800	<10	58.8	10.5
	2.0	--	720	--	--	--
	2.5	--	32	--	--	--

--Analyte Not Tested

All impacted soil was transported to Lea Land, LLC, an approved NMOCD disposal facility (Permit No. WM-01-035). The excavated areas were backfilled with clean caliche and machine compacted to match the surrounding location.

Closure

On behalf of Enterprise Crude Oil, we respectfully request that no further actions be required and that closure with respect to this release be granted. A Final C-141 is also attached. See Appendix III.

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,

TALON/LPE

Jacob Laird
Environmental Scientist

Kimberly M. Wilson
Project Manager

Attachments:

- Appendix I Site Map
- Appendix II Groundwater Data
- Appendix III Laboratory Results
- Appendix IV Final C-141

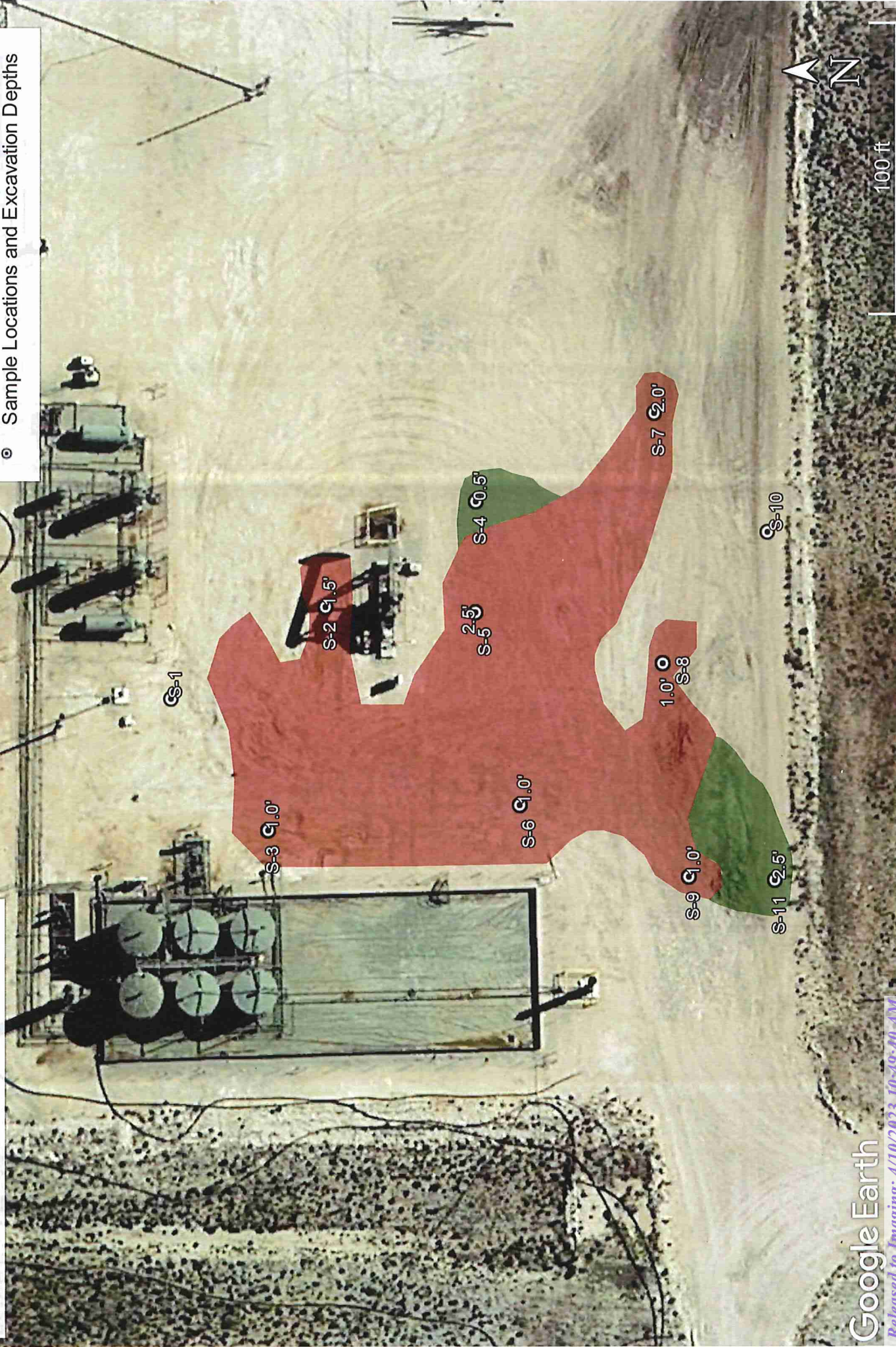
APPENDIX I
SITE MAP

Ironhouse 19 St. Com. 1H

Enterprise Crude Oil
Lea County, NM

Legend

- Excavated Area Due to Chlorides
- Excavated Area Due to Crude Release
- Sample Locations and Excavation Depths



APPENDIX II

GROUNDWATER DATA



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

(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)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q	Q	Q	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
L 07928		L	LE	4	4	1	19	18S	35E	640639	3622915	954	175		
L 12926 POD1		L	LE	2	2	3	25	18S	34E	639839	3621631	1041	182	117	65
Average Depth to Water:														117 feet	
Minimum Depth:														117 feet	
Maximum Depth:														117 feet	

Record Count:2

UTMNAD83 Radius Search (in meters):

Easting (X): 640821.35

Northing (Y): 3621978.25

Radius: 1050

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.

2/15/18 7:47 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

APPENDIX III
LABORATORY RESULTS



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

December 21, 2017

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: IRON HOUSE 19 STATE COM #1H

Enclosed are the results of analyses for samples received by the laboratory on 12/20/17 11:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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.

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:**

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

Received: 12/20/2017
Reported: 12/21/2017
Project Name: IRON HOUSE 19 STATE COM #1H
Project Number: 701839.415.01
Project Location: LEA COUNTY, NM

Sampling Date: 12/19/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S-1 0' (H703530-01)

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	12/20/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	0.072	0.050	12/20/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	0.057	0.050	12/20/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	<0.150	0.150	12/20/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	<0.300	0.300	12/20/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 92.6 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	12/21/2017	ND	432	108	400	3.77	

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	12/20/2017	ND	237	119	200	3.35	
DRO >C10-C28*	<10.0	10.0	12/20/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	12/20/2017	ND					

Surrogate: 1-Chlorooctane 64.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 66.0 % 34.7-157

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	12/20/2017	Sampling Date:	12/19/2017
Reported:	12/21/2017	Sampling Type:	Soil
Project Name:	IRON HOUSE 19 STATE COM #1H	Sampling Condition:	Cool & Intact
Project Number:	701839.415.01	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: S-1 0.5' (H703530-02)

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	12/20/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	<0.050	0.050	12/20/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	<0.050	0.050	12/20/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	<0.150	0.150	12/20/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	<0.300	0.300	12/20/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/21/2017	ND	432	108	400	3.77	

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	12/20/2017	ND	237	119	200	3.35	
DRO >C10-C28*	<10.0	10.0	12/20/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	12/20/2017	ND					

Surrogate: 1-Chlorooctane 84.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 84.3 % 34.7-157

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	12/20/2017	Sampling Date:	12/19/2017
Reported:	12/21/2017	Sampling Type:	Soil
Project Name:	IRON HOUSE 19 STATE COM #1H	Sampling Condition:	Cool & Intact
Project Number:	701839.415.01	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: S-2 1.0' (H703530-03)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	12/20/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	3.57	0.500	12/20/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	3.96	0.500	12/20/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	5.44	1.50	12/20/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	13.0	3.00	12/20/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.5 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	12/21/2017	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	124	50.0	12/20/2017	ND	237	119	200	3.35	
DRO >C10-C28*	1940	50.0	12/20/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	600	50.0	12/20/2017	ND					

Surrogate: 1-Chlorooctane 106 % 28.3-164

Surrogate: 1-Chlorooctadecane 116 % 34.7-157

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Received: 12/20/2017
 Reported: 12/21/2017
 Project Name: IRON HOUSE 19 STATE COM #1H
 Project Number: 701839.415.01
 Project Location: LEA COUNTY, NM

Sampling Date: 12/19/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S-3 1.0' (H703530-04)

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	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	0.112	0.050	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	0.143	0.050	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	0.216	0.150	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	0.471	0.300	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 96.5 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	12/21/2017	ND	432	108	400	3.77	

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	12/20/2017	ND	237	119	200	3.35	
DRO >C10-C28*	107	10.0	12/20/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	18.6	10.0	12/20/2017	ND					

Surrogate: 1-Chlorooctane 89.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 91.5 % 34.7-157

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 12/20/2017
 Reported: 12/21/2017
 Project Name: IRON HOUSE 19 STATE COM #1H
 Project Number: 701839.415.01
 Project Location: LEA COUNTY, NM

Sampling Date: 12/19/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S-4 0' (H703530-05)

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	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	<0.050	0.050	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	<0.050	0.050	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	<0.150	0.150	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	<0.300	0.300	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1600	16.0	12/21/2017	ND	432	108	400	3.77	

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	12/20/2017	ND	237	119	200	3.35	
DRO >C10-C28*	<10.0	10.0	12/20/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	12/20/2017	ND					

Surrogate: 1-Chlorooctane 86.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 85.9 % 34.7-157

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Analytical Results For:

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

Received:	12/20/2017	Sampling Date:	12/19/2017
Reported:	12/21/2017	Sampling Type:	Soil
Project Name:	IRON HOUSE 19 STATE COM #1H	Sampling Condition:	Cool & Intact
Project Number:	701839.415.01	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: S-4 0.5' (H703530-06)

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	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	<0.050	0.050	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	<0.050	0.050	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	<0.150	0.150	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	<0.300	0.300	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 94.1 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	12/21/2017	ND	432	108	400	3.77	

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	12/20/2017	ND	237	119	200	3.35	
DRO >C10-C28*	<10.0	10.0	12/20/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	12/20/2017	ND					

Surrogate: 1-Chlorooctane 84.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 84.6 % 34.7-157

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Analytical Results For:

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

Received:	12/20/2017	Sampling Date:	12/19/2017
Reported:	12/21/2017	Sampling Type:	Soil
Project Name:	IRON HOUSE 19 STATE COM #1H	Sampling Condition:	Cool & Intact
Project Number:	701839.415.01	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: S-5 1.0' (H703530-07)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.068	0.050	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	0.703	0.050	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	1.13	0.050	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	1.62	0.150	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	3.52	0.300	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIB) 98.0 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1720	16.0	12/21/2017	ND	416	104	400	3.92	QM-07

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	24.5	10.0	12/20/2017	ND	237	119	200	3.35	
DRO >C10-C28*	419	10.0	12/20/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	71.4	10.0	12/20/2017	ND					

Surrogate: 1-Chlorooctane 81.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 82.4 % 34.7-157

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Analytical Results For:

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

Received:	12/20/2017	Sampling Date:	12/19/2017
Reported:	12/21/2017	Sampling Type:	Soil
Project Name:	IRON HOUSE 19 STATE COM #1H	Sampling Condition:	Cool & Intact
Project Number:	701839.415.01	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: S-6 1.0' (H703530-08)

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	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	<0.050	0.050	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	<0.050	0.050	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	<0.150	0.150	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	<0.300	0.300	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 92.8 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	12/21/2017	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	12/20/2017	ND	237	119	200	3.35	
DRO >C10-C28*	<10.0	10.0	12/20/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	12/20/2017	ND					

Surrogate: 1-Chlorooctane 81.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 80.5 % 34.7-157

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**Analytical Results For:**

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

Received: 12/20/2017
Reported: 12/21/2017
Project Name: IRON HOUSE 19 STATE COM #1H
Project Number: 701839.415.01
Project Location: LEA COUNTY, NM

Sampling Date: 12/19/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S-7 1.0' (H703530-09)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	8.14	0.500	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	70.5	0.500	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	69.1	0.500	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	89.2	1.50	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	237	3.00	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 111 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/21/2017	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*	612	10.0	12/21/2017	ND	237	119	200	3.35	
DRO >C10-C28*	2170	10.0	12/21/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	344	10.0	12/21/2017	ND					

Surrogate: 1-Chlorooctane 125 % 28.3-164

Surrogate: 1-Chlorooctadecane 114 % 34.7-157

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Analytical Results For:

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

Received: 12/20/2017
 Reported: 12/21/2017
 Project Name: IRON HOUSE 19 STATE COM #1H
 Project Number: 701839.415.01
 Project Location: LEA COUNTY, NM

Sampling Date: 12/19/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S-8 1.0' (H703530-10)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.073	0.050	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	0.478	0.050	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	0.729	0.050	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	1.08	0.150	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	2.36	0.300	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 99.5 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	12/21/2017	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*	19.7	10.0	12/21/2017	ND	237	119	200	3.35	
DRO >C10-C28*	291	10.0	12/21/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	70.7	10.0	12/21/2017	ND					

Surrogate: 1-Chlorooctane 83.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 89.1 % 34.7-157

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Analytical Results For:

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

Received: 12/20/2017
 Reported: 12/21/2017
 Project Name: IRON HOUSE 19 STATE COM #1H
 Project Number: 701839.415.01
 Project Location: LEA COUNTY, NM

Sampling Date: 12/19/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S-9 1.0' (H703530-11)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	1.78	0.500	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	1.94	0.500	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	2.54	1.50	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	6.26	3.00	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 94.7 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	12/21/2017	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*	35.2	10.0	12/21/2017	ND	237	119	200	3.35	
DRO >C10-C28*	402	10.0	12/21/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	68.4	10.0	12/21/2017	ND					

Surrogate: 1-Chlorooctane 92.9 % 28.3-164

Surrogate: 1-Chlorooctadecane 91.5 % 34.7-157

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Analytical Results For:

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

Received:	12/20/2017	Sampling Date:	12/19/2017
Reported:	12/21/2017	Sampling Type:	Soil
Project Name:	IRON HOUSE 19 STATE COM #1H	Sampling Condition:	Cool & Intact
Project Number:	701839.415.01	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: S-10 0' (H703530-12)

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	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	<0.050	0.050	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	<0.050	0.050	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	<0.150	0.150	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	<0.300	0.300	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.1 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	12/21/2017	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	12/21/2017	ND	237	119	200	3.35	
DRO >C10-C28*	<10.0	10.0	12/21/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	12/21/2017	ND					

Surrogate: 1-Chlorooctane 87.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 84.3 % 34.7-157

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Analytical Results For:

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

Received:	12/20/2017	Sampling Date:	12/19/2017
Reported:	12/21/2017	Sampling Type:	Soil
Project Name:	IRON HOUSE 19 STATE COM #1H	Sampling Condition:	Cool & Intact
Project Number:	701839.415.01	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM		

Sample ID: S-10 0.5' (H703530-13)

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	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	<0.050	0.050	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	<0.050	0.050	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	<0.150	0.150	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	<0.300	0.300	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 93.7 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	12/21/2017	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	12/21/2017	ND	237	119	200	3.35	
DRO >C10-C28*	<10.0	10.0	12/21/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	12/21/2017	ND					

Surrogate: 1-Chlorooctane 74.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 73.0 % 34.7-157

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Analytical Results For:

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

Received: 12/20/2017
Reported: 12/21/2017
Project Name: IRON HOUSE 19 STATE COM #1H
Project Number: 701839.415.01
Project Location: LEA COUNTY, NM

Sampling Date: 12/19/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S-11 0' (H703530-14)

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	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	0.077	0.050	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	0.074	0.050	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	<0.150	0.150	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	<0.300	0.300	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.4 % 72-148

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1800	16.0	12/21/2017	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	12/21/2017	ND	237	119	200	3.35	
DRO >C10-C28*	58.8	10.0	12/21/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	10.5	10.0	12/21/2017	ND					

Surrogate: 1-Chlorooctane 81.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 81.1 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

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

Received: 12/20/2017
 Reported: 12/21/2017
 Project Name: IRON HOUSE 19 STATE COM #1H
 Project Number: 701839.415.01
 Project Location: LEA COUNTY, NM

Sampling Date: 12/19/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S-11 0.5' (H703530-15)

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	12/21/2017	ND	1.73	86.6	2.00	0.549	
Toluene*	<0.050	0.050	12/21/2017	ND	1.68	84.1	2.00	1.21	
Ethylbenzene*	<0.050	0.050	12/21/2017	ND	1.68	84.2	2.00	0.554	
Total Xylenes*	<0.150	0.150	12/21/2017	ND	5.18	86.3	6.00	0.664	
Total BTEX	<0.300	0.300	12/21/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 93.8 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	12/21/2017	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	12/21/2017	ND	237	119	200	3.35	
DRO >C10-C28*	<10.0	10.0	12/21/2017	ND	234	117	200	13.0	
EXT DRO >C28-C36	<10.0	10.0	12/21/2017	ND					

Surrogate: 1-Chlorooctane 77.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 76.1 % 34.7-157

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

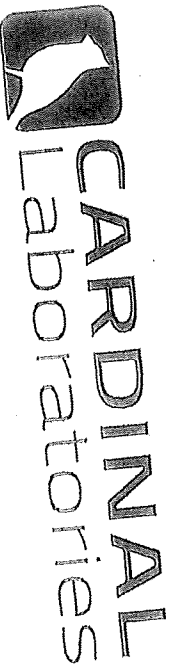
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

P.O. #: 7683941501

ANALYSIS REQUEST

Company Name: Talon/LPE
Project Manager: Kim Wilson
Address: 408 W. Texas Ave.
City: Artesia
Phone #: 575-746-8768
Project #: 761839.415.01
Project Name: IRON HOUSE 19
Project Location: Lea County, NM
Sample Name: C. Tarwillo

Company: Talon/LPE
Attn: K. Wilson
Address:
City:
State: Zip:
Phone #:
Fax #:

State: NM Zip: 88210
Fax #: 575-746-8905
City: Artesia
State: Zip:
Phone #:
Fax #:

FOR LAB USE ONLY
Lab I.D. Sample I.D.
H703530
S-1 0.5'
S-2 1.0'
S-3 1.0'
S-4 0.5'
S-5 1.0'
S-6 1.0'
S-7 1.0'
S-8 1.0'

(G)RAB OR (C)OMP.
CONTAINERS
GROUNDWATER
WASTEWATER
SOIL
OIL
SLUDGE
OTHER:
ACID/BASE:
ICE / COOL
OTHER:

MATRIX
PRESERV
SAMPLING
DATE
TIME

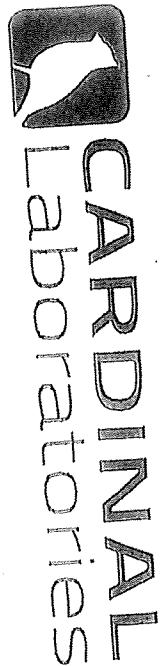
12/19/11 136P
140P
145P
229P
150P
155P
300P
305P
242P
247P

TPH 8015M
BTEX 8021B
TOTAL CHLORIDES

Relinquished By: [Signature]
Date: 12/20/11
Time: 11:30
Received By: [Signature]
Date: 12/20/11
Time: 11:30

Relinquished By: [Signature]
Date: 12/20/11
Time: 11:30
Received By: [Signature]
Date: 12/20/11
Time: 11:30

Delivered By: (Circle One) # 15
Sampler - UPS - Bus - Other: 4, 5, 6, 4, 3, 2
Sample Condition: Cool Intact Yes Yes No No
Checked By: [Signature]



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name: Talon/LPE

Project Manager: Kim Wilson

Address: 408 W. Texas Ave. State: NM zip: 88210

City: Artesia Phone #: 575-746-8768 Fax #: 575-746-8905

Project #: 761839.41501 Project Owner: Enterprise

Project Name: PRON HOUSE 19

Project Location: Lea County, NM

Sampler Name: C. Tawmillo

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H703530

11 S-9 1.0' 5-10 0.5' 13 S-10 0.5' 14 S-11 0.5' 15 S-11 0.5'

(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE /COOL OTHER:

DATE TIME

12/19/17 2529

2009 2059 2089 2109

TPH 8015 M BTAX 8021 B TOTAL CHLORIDES

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Relinquished By: Date: 12/20/17 Time: 11:20 Received By: Signature

Relinquished By: Signature

Date: Time:

Sample Condition Cool Intact Yes No

CHECKED BY: (Initials)

Delivered By: (Circle One) #75 4:55c 4:30

Sampler - UPS - Bus - Other:

REMARKS: Phone Result: Yes No Add'l Phone #: Fax Result: Yes No Add'l Fax #:

RUST P 2 of 2



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

January 02, 2018

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: IRON HOUSE 19

Enclosed are the results of analyses for samples received by the laboratory on 12/28/17 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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.

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:**

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

Received: 12/28/2017
Reported: 01/02/2018
Project Name: IRON HOUSE 19
Project Number: 700348415.01
Project Location: LEA COUNTY, NM

Sampling Date: 12/28/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S-11 2'R (H703619-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	12/29/2017	ND	400	100	400	14.8	

Sample ID: S-5 2'R (H703619-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1520	16.0	12/29/2017	ND	400	100	400	14.8	

Sample ID: S-7 2'R (H703619-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.060	0.050	01/02/2018	ND	1.68	83.9	2.00	2.04	
Toluene*	0.740	0.050	01/02/2018	ND	1.65	82.4	2.00	5.06	
Ethylbenzene*	1.03	0.050	01/02/2018	ND	1.74	86.8	2.00	4.36	
Total Xylenes*	1.50	0.150	01/02/2018	ND	5.18	86.3	6.00	3.02	
Total BTX	3.33	0.300	01/02/2018	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 110 % 72-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

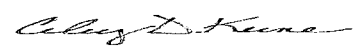
Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- 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

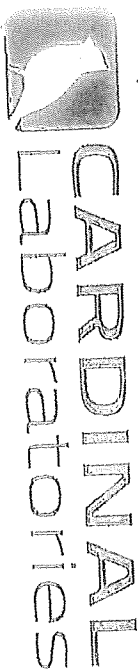
Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Talon/PE

Project Manager: K. W. L. son

Address: 408 W. Texas Ave.

City: Atesia

Phone #: 575-746-8768

Project #: 700348415.01

Project Name: Ironhouse 19

Project Location: Lea County

Sample Name: S. Laid

State: NM **Zip:** 88210

Fax #: 575-746-8905

Project Owner: Nelson

Phone #:

Fax #:

FOR LAB USE ONLY

Lab ID:

Sample ID:

P.O. #:

Company: Talon/PE

Attn:

Address:

City:

State:

Zip:

Lab ID	Sample ID	(G) GRAB OR (C) COMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:			
HT0349-	5-11. 2' R	G	1							12/28/17	1030	BT.FX Chlorides
-2	5-5. 2' R										1300	
-3	5-4. 2' R										1330	

Relinquished By: [Signature]

Relinquished By: [Signature]

Received By: [Signature]

Received By: [Signature]

Delivered By: (Circle One)

Sample - UPS - Bus - Other:

Sample Condition:

Checked By:

REMARKS:

Phone Result: ☐ Yes ☐ No ☐ Add'l Phone #:

Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #:



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

January 16, 2018

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: IRON HOUSE

Enclosed are the results of analyses for samples received by the laboratory on 01/09/18 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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.

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



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

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

Received: 01/09/2018
 Reported: 01/16/2018
 Project Name: IRON HOUSE
 Project Number: 700348.415.01
 Project Location: LEA COUNTY, NM

Sampling Date: 01/09/2018
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S-5 2.5' (H800086-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	01/10/2018	ND	448	112	400	3.64	

Sample ID: S-11 2.5' (H800086-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/10/2018	ND	448	112	400	3.64	

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E, MARLAND ° HOBBS, NM 88240

Notes and Definitions

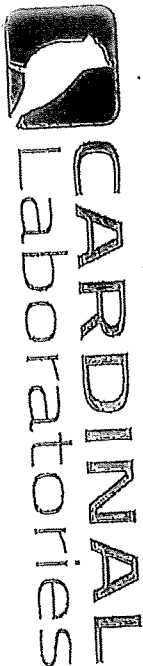
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]

APPENDIX IV

FINAL C-141

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

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Enterprise Crude Oil	Contact	Christopher A Spore, P.G.
Address	4211 S Telephone Road Hobbs, NM	Telephone No.	432-221-7746
Facility Name	Devon Ironhouse 19	Facility Type	Tank Battery
Surface Owner	State	Mineral Owner	State
		API No. 30-025-40676	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	S19	T18S	R35E	200	SL	1800	WL	Lea

Latitude 32.726676° Longitude -103.499699°

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	154.1 bbl	Volume Recovered	60 bbl
Source of Release	Crude Oil Transport Truck	Date and Hour of Occurrence	12/13/17 1520	Date and Hour of Discovery	12/13/17 1742
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required If YES, To Whom? *After hours call to Mark Whitaker @ 575-370-3186				
By Whom?	Christopher A Spore	Date and Hour	12/13/17 1757		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If YES, Volume Impacting the Watercourse.				

If a Watercourse was Impacted, Describe Fully.*

RECEIVED

By Olivia Yu at 11:23 am, Dec 18, 2017


Describe Cause of Problem and Remedial Action Taken.*

Crude oil transport driver was loading from tank battery and overfilled tank trailer. Upon discovery, the LACT unit was turned off, stopping the flow of crude oil.

Describe Area Affected and Cleanup Action Taken.*

Vacuum truck was immediately dispatched. All free crude oil was recovered and returned to the producers tank. Environmental contractor was dispatched to continue response work. Impacted caliche will be excavated and hauled to Lea Land. Samples will be collected to demonstrate delineation and complete contaminant removal.

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:		OIL CONSERVATION DIVISION	
Printed Name: Christopher A Spore, P.G.		Approved by Environmental Specialist: 	
Title: Lead Field Environmental Scientist		Approval Date: 12/18/2017	Expiration Date:
E-mail Address: caspore@eprod.com		Conditions of Approval:	Attached <input checked="" type="checkbox"/>
Date: 12/14/17 Phone: 432-221-7746		see attached directive	

* Attach Additional Sheets If Necessary

1RP-4895

nOY1735241593

pOY1735242234

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _12/14/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-4895_ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs__ on or before _1/18/2018_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.


Jim Griswold


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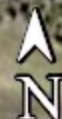


Legend

 Flowpath

 T17-127 ECO Dvn Ironhouse 19

 T17-127 ECO Dvn Ironhouse 19



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 203564

CONDITIONS

Operator: Franklin Mountain Energy 3, LLC 44 Cook Street Denver, CO 80206	OGRID: 331595
	Action Number: 203564
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	4/10/2023