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## **Soil Assessment and Remediation Work Plan**

Shugart 25 Fed Com #001  
Eddy County, NM  
API# 30-015-31454  
\*2RP-2474, \*2RP-5454, \*2RP-1031, \*1RP-3245

### **Prepared For:**

Devon Energy Corporation  
6488 Seven Rivers Highway  
Artesia, NM 88210

### **Prepared By:**

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

**March 25, 2020**

Mr. Jim Amos  
**BLM Carlsbad Field Office**  
620 East Greene Street  
Carlsbad, NM 88220

Mr. Mike Bratcher  
**NMOCD District 2**  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210

Subject: **Soil Assessment and Remediation Work Plan**  
Shugart 25 Fed Com #001  
Eddy County, NM  
API# 30-015-31454

Dear Mr. Amos & Mr. Bratcher,

Devon Energy Corporation (Devon) has contracted Talon/LPE (Talon) to perform soil assessment and a remediation work plan for the above-referenced location. The results of our soil assessment and proposed remediation activities are contained herein.

### Site Information

The Shugart 25 Fed Com #1 is located approximately forty (40) miles southeast of Artesia, New Mexico. The legal location for this release is Unit Letter K, Section 25, Township 18 South, and Range 31 East in Eddy County, New Mexico. More specifically, the latitude and longitude for the release are 32.7167778 North and -103.8251343 West. A site map 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 Kermit-Berino fine sands, 0 to 3 percent slopes. See [Appendix II](#) for the referenced soil survey. 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 alluvium and eolian sand deposits. Drainage courses in this area are well drained.

### Ground Water and Site Characterization

The New Mexico Office of the State Engineer Database indicates the nearest reported depth to groundwater is 430-feet below ground surface (BGS). See [Appendix II](#) for the referenced groundwater depth. This site is located within a low potential Karst area.



If a release occurs within the following areas, the responsible party must treat the release as if it occurred less than 50 feet to the groundwater in Table I, New Mexico Oil Conservation Division (NMOCD) Rule 19.15.29 NMAC.

<b>Approximate Depth to Groundwater</b>	<b>430 Feet/BGS</b>
---	---------------------

- |   |   |
|---|---|
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 300 feet of any continuously flowing watercourse or any other significant watercourse  |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 200 feet of any lakebed, sinkhole or playa lake  |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 300 feet from an occupied permanent residence, school, hospital, institution or church   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 500 feet of a spring or a private, domestic freshwater well used by less than five households for domestic or stock watering purposes                                  |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 1000 feet of any freshwater well or spring   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within incorporated municipal boundaries or within a defined municipal freshwater well field covered under a municipal ordinance adopted pursuant to Section 3-2703 NMSA 1978 |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 300 feet of a wetland  |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within the area overlying a subsurface mine   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within an unstable area   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within a 100-year floodplain  |

Because the release did not occur in any of these areas and the depth to groundwater is greater than 100-feet in-depth, based on the site characterization data, the cleanup criteria for this site are as follows.

Table I Closure Criteria for Soils Impacted by a Release			
Depth below horizontal extents of release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
>100 feet	Total Chlorides***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

### Incident Descriptions

\*2RP-1031. On February 2, 2012, the lease operator, upon arriving onto location, discovered a tank running over. An estimated 35 barrels (bbls) of oil and 20 bbls of produced water were released into the steel-lined containment. The 55 bbls of mixed fluids were recovered by a vac truck that had been dispatched.

\*1RP-3245 & \*2RP-2474 (Same Leak). On August 8, 2014, a leak occurred on a 3" ball valve on a poly transfer line causing an estimated 7 bbls of produced water to be released outside the containment of the tank battery. There was no produced water recovered and the line was repaired.

\*2RP-5454. On May 13, 2019, a lovejoy on the water transfer pump failed to causing multiple leaks resulting in a total release of 106.6 bbls of produced water. 105 bbls of fluid were released inside the lined containment and were recovered. 1.6 bbls of fluid were released onto the location.

On November 27, 2019, a transfer pump failed causing a water tank to overflow. An estimated 400 bbls of produced water were released with the vac truck being able to recover the 400 bbls. All fluids were contained and retrieved within the steel-lined containment.

The initial C-141's are attached in [Appendix III](#).

### Soil Sampling

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	DRO + GRO combined = 1000 mg/kg			2500 mg/kg	20,000 mg/kg
W. Composite	2/26/2020	0	ND	ND	ND	314	62.1	375.1	14900
N. Composite	2/26/2020	0	ND	ND	ND	42.9	ND	42.9	7600
E. Composite	2/26/2020	0	ND	ND	ND	401	157	558	6530
S. Composite	2/26/2020	0	ND	ND	ND	ND	ND	ND	47600
S-1	2/26/2020	0-1	ND	ND	ND	ND	ND	ND	9730
		2	ND	ND	ND	ND	ND	ND	432
		3	ND	ND	ND	ND	ND	ND	192
		4	ND	ND	ND	ND	ND	ND	96
S-2	2/26/2020	0-1	ND	ND	ND	ND	ND	ND	1260
		2- R	ND	ND	ND	ND	ND	ND	368
S-3	2/26/2020	0-1	ND	ND	ND	ND	ND	ND	7330
		2	ND	ND	ND	ND	ND	ND	160
		3	ND	ND	ND	ND	ND	ND	80
		4	ND	ND	ND	ND	ND	ND	32
S-4	2/26/2020	0-1	ND	ND	ND	ND	ND	ND	4160
		2- R	ND	ND	ND	ND	ND	ND	112
S-5	2/26/2020	0-1	ND	ND	ND	ND	ND	ND	2000
		2	ND	ND	ND	ND	ND	ND	64
		3	ND	ND	ND	ND	ND	ND	48

**ND-Analyte Not Detected**



### **Proposed Remedial Actions**

- The impacted area labeled S-Composite, which is comprised of a five-point composite sample taken from the south side of the containment wall, will be excavated to a depth of 1.0-feet deep.
- The bottom and sidewalls of the excavations will be advanced until field titration results for total chlorides are below Table 1 Closure Criteria 19.15.29 NMAC. Five-point composite samples will then be collected from the bottom and each side wall of the excavation. The samples will be laboratory analyzed for total chlorides via EPA Method 300.0 to verify field results before the excavation is backfilled.
- All of the excavated material will be hauled to Lea Land, LLC, a NMOCD approved solid waste disposal facility.
- The NMOCD will be notified via an email to be given the opportunity to be present for the liner inspection before this project is completed.
- A final closure report documenting the remedial actions and a Final C-141 will be provided to the NMOCD District II Artesia Office.

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



Chris Jones  
Project Manager



David J. Adkins  
District Manager

Attachments:

- Appendix I Site Map, Karst Map, TOPO Map & Location Map
- Appendix II Groundwater Data, Soil Survey & FEMA Flood Zone
- Appendix III Initial C-141's
- Appendix IV Laboratory Data



# **APPENDIX I**

**SITE MAP**

**KARST MAP**

**TOPO MAP**

**LOCATION MAP**



# Shugart 25 Fed Com #1

Devon Energy Production Company  
Eddy County, NM  
API 30-015-31454  
Karst Map

**Legend**

- High
- Low
- Medium

Bermuda Rd

529

Shugart 25 Fed 1

Bluestem Rd

Google Earth

2020 Google  
Image Landsat / Copernicus

360

7 mi





# Shugart 25 Fed Com #1

Devon Energy Production Company  
Eddy County, NM  
API 30-015-31454  
TOPO Map



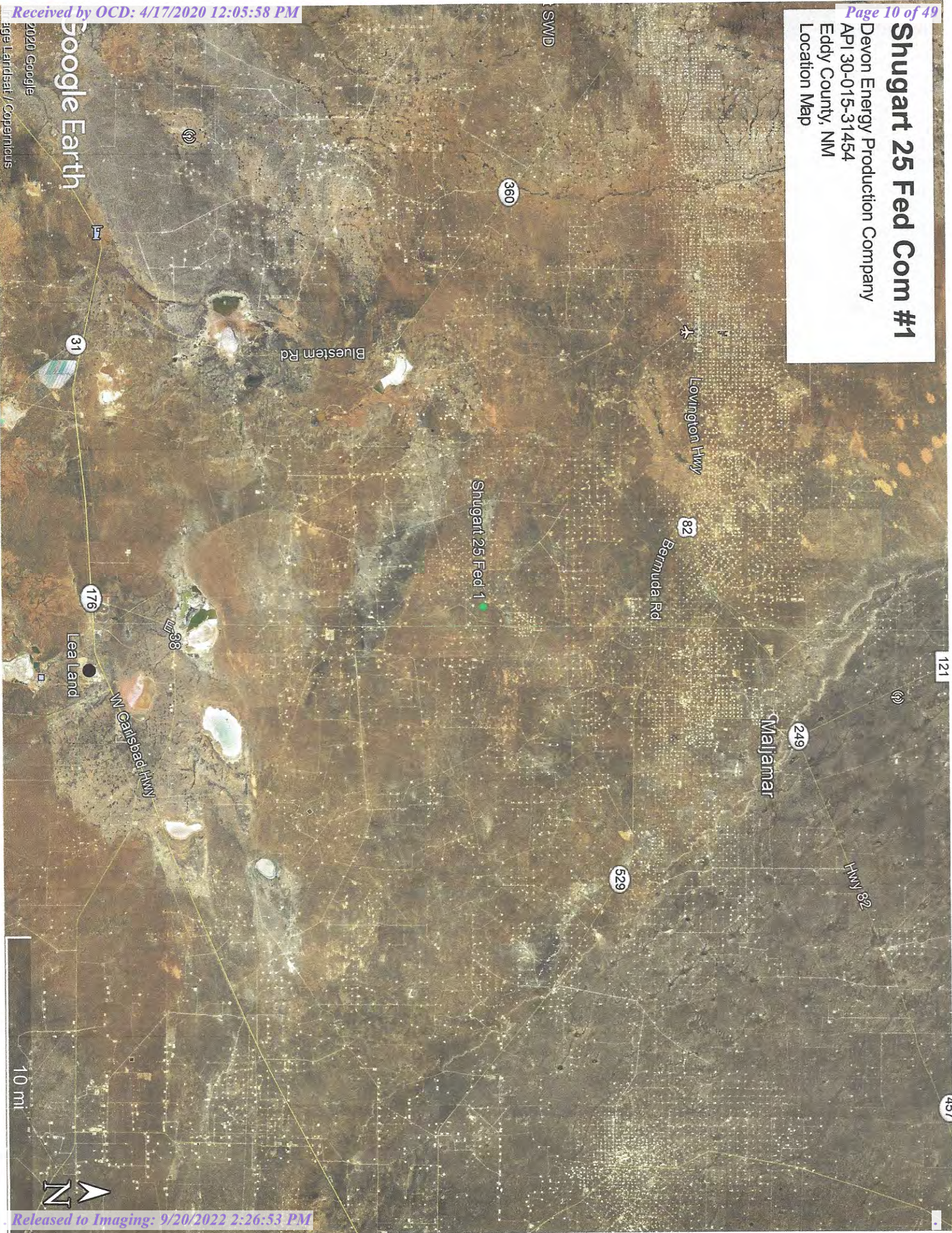


# Shugart 25 Fed Com #1

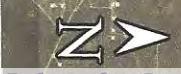
Devon Energy Production Company  
API 30-015-31454  
Eddy County, NM  
Location Map

Received by OCD: 4/17/2020 12:05:58 PM

Google Earth  
2020 Google  
Image Landsat / Copernicus



10 mi



Released to Imaging: 9/20/2022 2:26:53 PM





## **APPENDIX II**

# **GROUNDWATER DATA**

# **SOIL SURVEY**

# **FEMA FLOOD ZONE**



*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 64	Q 16	Q 4	Q Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column		
<a href="#">CP 00849 POD1</a>	O	CP	LE	3	1	3	35	18S	31E	608012	3618757*		2722	300			
<a href="#">CP 00672</a>		CP	LE		4	4	07	18S	32E	612475	3624947*		5040	524	430	94	
<a href="#">CP 00672 CLW475398</a>		CP	LE		4	4	07	18S	32E	612475	3624947*		5040	540	460	80	
<a href="#">CP 00814 POD1</a>		CP	LE		2	2	08	18S	32E	614074	3626168*		6920	480			
<a href="#">CP 00563 POD1</a>		CP	LE		1	1	2	19	19S	32E	612118	3613376*		7402	300		
<a href="#">CP 01656 POD2</a>		CP	LE		3	4	3	17	19S	32E	613364	3613648		7586	70		
<a href="#">CP 01656 POD1</a>		CP	LE		3	4	3	17	19S	32E	613368	3613646		7590	70		
<a href="#">CP 00829 POD1</a>		CP	LE			2	4	16	19S	31E	606165	3614009*		7592	120		
<a href="#">CP 01656 POD3</a>		CP	LE		3	4	3	17	19S	32E	613374	3613633		7604	30		
<a href="#">CP 00640 POD1</a>		CP	LE			2	2	19	19S	32E	612621	3613280*		7645	260	102	158
<a href="#">CP 00677</a>	CP	LE			1	1	26	18S	32E	617750	3621373*		7695	700			
<a href="#">CP 01554 POD1</a>	CP	LE		2	2	1	22	19S	31E	607166	3613354		7725	400			
<a href="#">CP 01554 POD2</a>	CP	LE		2	2	1	22	19S	31E	607165	3613322		7755	400			

Average Depth to Water: 330 feet

Minimum Depth: 102 feet

Maximum Depth: 460 feet

Record 13

Count:

**UTMNAD83 Radius Search (in meters):**

Easting (X): 610104.484

**Northing (Y):** 3620499.205

Radius: 8000

\*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.

1/23/20 11:07 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



Map Unit Description: Kermit-Berino fine sands, 0 to 3 percent slopes—Eddy Area, New Mexico

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## Eddy Area, New Mexico

### KM—Kermit-Berino fine sands, 0 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1w4q  
*Elevation:* 3,100 to 4,200 feet  
*Mean annual precipitation:* 10 to 14 inches  
*Mean annual air temperature:* 60 to 64 degrees F  
*Frost-free period:* 190 to 230 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Kermit and similar soils:* 50 percent  
*Berino and similar soils:* 35 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Kermit

##### Setting

*Landform:* Plains, alluvial fans  
*Landform position (three-dimensional):* Talf, rise  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium and/or eolian sands

##### Typical profile

*H1 - 0 to 7 inches:* fine sand  
*H2 - 7 to 60 inches:* fine sand

##### Properties and qualities

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Excessively drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Very high (20.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Salinity, maximum in profile:* Nonsaline (0.0 to 1.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 1.0  
*Available water storage in profile:* Low (about 3.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* A  
*Ecological site:* Deep Sand (R042XC005NM)  
*Hydric soil rating:* No



Map Unit Description: Kermit-Berino fine sands, 0 to 3 percent slopes---Eddy Area, New Mexico

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## Description of Berino

### Setting

*Landform:* Fan piedmonts, plains  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium and/or eolian sands

### Typical profile

*H1 - 0 to 17 inches:* fine sand  
*H2 - 17 to 50 inches:* fine sandy loam  
*H3 - 50 to 58 inches:* loamy sand

### Properties and qualities

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):*  
Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 40 percent  
*Salinity, maximum in profile:* Very slightly saline to slightly saline  
(2.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 1.0  
*Available water storage in profile:* Moderate (about 7.2 inches)

### Interpretive groups

*Land capability classification (irrigated):* 4e  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* B  
*Ecological site:* Loamy Sand (R042XC003NM)  
*Hydric soil rating:* No

## Minor Components

### Active dune land

*Percent of map unit:* 15 percent  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Eddy Area, New Mexico  
Survey Area Data: Version 15, Sep 15, 2019

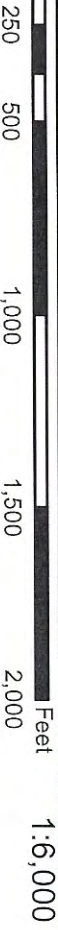




# National Flood Hazard Layer FIRMette



43°15.54'N



USGS The National Map: Orthoimagery Data refreshed April, 2019.

32°42'45.27"N

103°49'11.76"W

## Legend

SEE THIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, AE, AH, VE, AR With BFE or Depth Zone AE, AO, AH, VE, AR Regulatory Floodway
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OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with draining areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levee. See Notes, Zone X Area with Flood Risk due to Levee Zone D
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OTHER AREAS GENERAL STRUCTURES	NO SCREEN Effective LOMRs Area of Minimal Flood Hazard Zone X Area of Undetermined Flood Hazard Zone Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall
--------------------------------	--

OTHER FEATURES	20.2 17.5 Base Flood Elevation Base Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary Coastal Transsect Baseline Profile Baseline Hydrographic Feature
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MAP PANELS	Digital Data Available No Digital Data Available Unmapped
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The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/23/2020 at 1:4:55 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and undemonstrated areas cannot be used for regulatory purposes.





## APPENDIX III

### INITIAL C-141's



District I  
1625 N French Dr., Hobbs, NM 88240  
District II  
1301 W Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141  
Revised March 17, 1999

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

30-015- 31454

## Release Notification and Corrective Action

nmlb1204749715

## OPERATOR

☒ Initial Report ☒ Final Report

Name of Company Devon Energy 6/37	Contact Roger Hernandez
Address P. O. Box 250 Artesia, NM 88211	Telephone No. 575-748-5238
Facility Name Shugart 25 Fed #1	Facility Type Oil Well

Surface Owner	Mineral Owner	Lease No.
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## LOCATION OF RELEASE

Unit Letter	Section 25	Township T18S	Range 31E	Feet from the 1980	North/South Line South	Feet from the 1980	East/West Line West	County Eddy
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## NATURE OF RELEASE

Type of Release 35 oil & 20 PW	Volume of Release 55bbls	Volume Recovered 55bbls
Source of Release Tank Overflow	Date and Hour of Occurrence 2/2/12, 8:19 AM	Date and Hour of Discovery 2/2/12, 8:19AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Justin Frye, BLM - Eddy County & Mike Bratcher, OCD	
By Whom?	Date and Hour 2/3/12, 8:05 AM	
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.\*

N/A

**RECEIVED**  
FEB 08 2012  
NMOCD ARTESIA

Describe Cause of Problem and Remedial Action Taken.\*

Upon arrival at the Shugart 25-1, the lease operator discovered a tank running over resulting in a 55 bbls spill that was kept within the containment, recovering 35 bbls of Oil and 20 bbls of water. Vacuum truck was contacted for clean up.

Describe Area Affected and Cleanup Action Taken.\*

25x70, All Fluid was contained inside steel line containment.

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: Gracie Bustamante		OIL CONSERVATION DIVISION	
Printed Name: Gracie Bustamante		Approved by District Supervisor <i>Mike Bratcher</i>	
Title: Contract Field Tech		Approval Date: FEB 16 2012	Expiration Date: N/A
Date: 2/2/12 Phone: (575) 746-5559		Conditions of Approval: N/A Final	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

2RP-1031



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

**HOBBS OCD** State of New Mexico  
Energy Minerals and Natural Resources  
**AUG 15 2014** Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505  
**RECEIVED**

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 <b>Devon Energy</b>	Contact <b>Rudy Zuniga</b>
Address <b>PO Box 250 Artesia, NM 88211</b>	Telephone No. <b>575-390-5435</b>
Facility Name <b>Shugart 25 Federal Com 1</b>	Facility Type <b>Gas</b>

Surface Owner: <b>Federal</b>	Mineral Owner	API No. <b>30-015-31454</b>
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### LOCATION OF RELEASE

Unit Letter <b>K</b>	Section <b>25</b>	Township <b>18S</b>	Range <b>31E</b>	Feet from the <b>1980</b>	North/South Line <b>SOUTH</b>	Feet from the <b>1980</b>	East/West Line <b>WEST</b>	County <b>EDDY</b>
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Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

### NATURE OF RELEASE

Type of Release <b>Ball valve to load line left open</b>	Volume of Release: <b>7 bbls</b>	Volume Recovered: <b>0</b>
Source of Release: <b>Produced Water</b>	Date and Hour of Occurrence <b>08/08/14 3:30 AM</b>	Date and Hour of Discovery <b>08/08/14 3:30 AM</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>Rudy Zuniga-Foreman/Hubert Perry-Night Foreman/Randy Gladden-Assistant Foreman/Amancio Cruz-EHS/Roy White-Senior Production Foreman/Mike Bratcher-OCD/Jeff Robertson-BLM</b>	
By Whom? <b>Freddy Ramirez/Jason Anderson - Night lease operators</b>	Date and Hour: <b>08/08/14 3:30 AM</b>	
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.\*

**On August 8, 2014 at the Shugart 25 Federal #1, a leak occurred on a 3" ball valve on poly transfer line causing an estimated 7 bbls of produced water to be released outside the facility. There was no produced water recovered. Banta was called to repair the poly line.**

Describe Area Affected and Cleanup Action Taken.\*

**The area affected outside the facility was 7 feet wide by 12 feet long. Diversified was contacted to perform the site assessment and soil sampling activities.**

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.

### OIL CONSERVATION DIVISION

Signature: <i>Shammy Ingram</i>	Approved By Environmental Specialist:	
Printed Name: <b>Shammy Ingram</b>	Approval Date: <b>8-15-14</b>	Expiration Date: <b>10-17-14</b>
Title: <b>Field Admin Support</b>	Conditions of Approval: <i>Site sample required. Reliant &amp; ranch area on per NMOCD guidelines. Submit final C-141 by 10-17-14</i>	
E-mail Address: <b>Shammy.Ingram@dvn.com</b>	Attached <input type="checkbox"/> <b>1RP-3245</b>	
Date: <b>August 15, 2014</b> Phone: <b>575-748-0174</b>	<i>Ogird 6137 N701422 75130 P 701422</i>	

\* Attach Additional Sheets If Necessary

**AUG 15 2014**



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

## NM OIL CONSERVATION

ARTESIA DISTRICT Form C-141  
Revised August 8, 2011

SEP 08 2014  
Submit to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

## Release Notification and Corrective Action

NAB1425241401

## OPERATOR

☒ Initial Report ☐ Final Report

Name of Company <b>Devon Energy</b>	Contact <b>Rudy Zuniga</b>
Address <b>PO Box 250 Artesia, NM 88211</b>	Telephone No. <b>575-390-5435</b>
Facility Name <b>Shugart 25 Federal Com 1</b>	Facility Type <b>Gas</b>
Surface Owner: <b>Federal</b>	Mineral Owner
API No. <b>30-015-31454</b>	

## LOCATION OF RELEASE

Unit Letter <b>K</b>	Section <b>25</b>	Township <b>18S</b>	Range <b>31E</b>	Feet from the <b>1980</b>	North/South Line <b>SOUTH</b>	Feet from the <b>1980</b>	East/West Line <b>WEST</b>	County <b>EDDY</b>
-------------------------	----------------------	------------------------	---------------------	------------------------------	----------------------------------	------------------------------	-------------------------------	-----------------------

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

## NATURE OF RELEASE

Type of Release <b>Ball valve to load line left open</b>	Volume of Release: <b>7 bbls</b>	Volume Recovered: <b>0</b>
Source of Release: <b>Produced Water</b>	Date and Hour of Occurrence <b>08/08/14 3:30 AM</b>	Date and Hour of Discovery <b>08/08/14 3:30 AM</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>Rudy Zuniga-Foreman/Hubert Perry-Night Foreman/Randy Gladden-Assistant Foreman/Amancio Cruz-EHS/Roy White-Senior Production Foreman/Mike Bratcher-OCD/Jeff Robertson-BLM</b>	
By Whom? <b>Freddy Ramirez/Jason Anderson - Night lease operators</b>	Date and Hour: <b>08/08/14 3:30 AM</b>	
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.\*

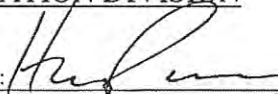
On August 8, 2014 at the Shugart 25 Federal #1, a leak occurred on a 3" ball valve on poly transfer line causing an estimated 7 bbls of produced water to be released outside the facility. There was no produced water recovered. Banta was called to repair the poly line.

Describe Area Affected and Cleanup Action Taken.\*

The area affected outside the facility was 7 feet wide by 12 feet long. Diversified was contacted to perform the site assessment and soil sampling activities.

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.

## OIL CONSERVATION DIVISION

Signature: <b>Shammy Ingram</b>	Approved by Environmental Specialist: 	
Printed Name: <b>Shammy Ingram</b>	Approval Date: <b>9/9/14</b>	Expiration Date: <b>NA</b>
Title: <b>Field Admin Support</b>	Conditions of Approval: Remediation per OCD Rule & Guidelines.	
E-mail Address: <b>Shammy.Ingram@dmn.com</b>	Attached <input type="checkbox"/>	
Date: <b>August 15, 2014</b> Phone: <b>575-748-0174</b>	SUBMIT REMEDIATION PROPOSAL NO LATER THAN: <b>10/9/14</b>	

\* Attach Additional Sheets If Necessary

2BP-2474



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 Department

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	NAB1914957336
District RP	2RP-5454
Facility ID	
Application ID	pAB1914956037

## Release Notification

### Responsible Party

Responsible Party Devon Energy Production Company	OGRID 6137
Contact Name Amanda T. Davis	Contact Telephone 575-748-0176
Contact email amanda.davis@dvn.com	Incident # (assigned by OCD) NAB1914957336
Contact mailing address 6488 Seven Rivers HWY	

### Location of Release Source

Latitude 32.7167778 Longitude -103.8251343  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Shugart 25 Fed Com #001	Site Type Gas
Date Release Discovered 5/13/2019	API# (if applicable) 30-015-31454

Unit Letter	Section	Township	Range	County
K	25	18S	31E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 106.6	Volume Recovered (bbls) 105
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Water transfer pump was leaking from lovejoy and caused it to leak from multiple spots on the pump. Affected area inside containment 30'x60'x5". Affected area outside of containment 25'x10'x3/4". All fluid stayed on the pad.



Form C-141

State of New Mexico

Oil Conservation Division

Page 2

Incident ID	NAB1914957336
District RP	2RP-5454
Facility ID	
Application ID	pAB1914956037

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? This is considered a major spill because it is over 25 BBLS.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Email notification sent to Debhorah Mckinne, Crystal Weaver, Robert Hamlet, Victoria Venegas, Mike Bratcher and Jim Griswold from Wesley Mathews on 5/13/19.	

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:   	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
Printed Name: <u>Kendra DeHoyos</u> Signature: <u>Kendra DeHoyos</u> email: <u>kendra.dehoyos@dvn.com</u>	Title: <u>EHS Associate</u> Date: <u>5/21/2019</u> Telephone: <u>575-748-3371</u>
<b><u>OCD Only</u></b> Received by: <u>Amalia Bustamante</u> Date: <u>5/29/2019</u>	



District I  
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State of New Mexico  
Energy Minerals and Natural  
Resources Department

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party Devon Energy Production Company	OGRID 6137
Contact Name Amanda T. Davis	Contact Telephone 575-748-0176
Contact email amanda.davis@dvn.com	Incident # (assigned by OCD)
Contact mailing address 6488 Seven Rivers HWY	

### Location of Release Source

Latitude 32.71680 Longitude -103.82510  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Shugart 25 Federal #1	Site Type Oil
Date Release Discovered 11/27/2019	API# (if applicable)

Unit Letter	Section	Township	Range	County
K	25	18S	31E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 400	Volume Recovered (bbls) 400
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Water tank over flowed due to transfer pump failure. Fluid stayed within containment.



Form C-141

State of New Mexico  
Oil Conservation Division

Page 2

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? This is considered a major release because it is over 25 BBLS.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Email notification sent to blm_nm_cfo_spill@blm.gov, Robert Hamlet, Jim Griswold, Victoria Venegas and Mike Bratcher from Amanda Davis on 11/27/2019.	

**Initial Response**

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Kendra DeHoyos Title: EHS Associate  
 Signature: Kendra DeHoyos Date: 12/4/2019  
 email: kendra.dehoyos@dvn.com Telephone: 575-748-3371

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_





## APPENDIX IV

# LABORATORY DATA





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

March 05, 2020

CHRIS JONES

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: SHUGART 25 FED 1

Enclosed are the results of analyses for samples received by the laboratory on 03/02/20 14:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. 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





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

**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: W. COMP (H000660-01)**

BTX 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	03/03/2020	ND	1.89	94.6	2.00	3.00	
Toluene*	<0.050	0.050	03/03/2020	ND	1.90	94.9	2.00	2.81	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.91	95.4	2.00	2.84	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.52	92.0	6.00	2.81	
Total BTX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 97.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	14900	16.0	03/03/2020	ND	432	108	400	0.00	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*	<10.0	10.0	03/03/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	314	10.0	03/03/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	62.1	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 86.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 100 % 42.2-156

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





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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: N. COMP (H000660-02)**

BTX 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	03/03/2020	ND	1.89	94.6	2.00	3.00	
Toluene*	<0.050	0.050	03/03/2020	ND	1.90	94.9	2.00	2.81	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.91	95.4	2.00	2.84	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.52	92.0	6.00	2.81	
Total BTX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7600	16.0	03/03/2020	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	03/03/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	42.9	10.0	03/03/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 88.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 92.8 % 42.2-156

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: E. COMP (H000660-03)**

BTX 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	03/03/2020	ND	1.89	94.6	2.00	3.00	
Toluene*	<0.050	0.050	03/03/2020	ND	1.90	94.9	2.00	2.81	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.91	95.4	2.00	2.84	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.52	92.0	6.00	2.81	
Total BTX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 99.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6530	16.0	03/03/2020	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	03/03/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	401	10.0	03/03/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	157	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 87.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 103 % 42.2-156

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S. COMP (H000660-04)**

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	03/03/2020	ND	1.89	94.6	2.00	3.00	
Toluene*	<0.050	0.050	03/03/2020	ND	1.90	94.9	2.00	2.81	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.91	95.4	2.00	2.84	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.52	92.0	6.00	2.81	
Total BTEX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 98.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	47600	16.0	03/03/2020	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	03/03/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/03/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 87.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 90.1 % 42.2-156

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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  
CHRIS JONES  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 1 0-1' (H000660-05)**

BTX 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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9730	16.0	03/03/2020	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	03/03/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/03/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 91.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.4 % 42.2-156

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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  
CHRIS JONES  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 1 2' (H000660-06)**

BTX 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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	03/03/2020	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	03/03/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/03/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 85.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 87.9 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 1 3' (H000660-07)**

BTX 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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 98.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	03/03/2020	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	03/03/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/03/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 92.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.1 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 1 4' (H000660-08)**

BTX 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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 99.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	03/03/2020	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	03/03/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/03/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 91.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.1 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 2 0-1' (H000660-09)**

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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTEX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 99.3 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1260	16.0	03/03/2020	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	03/03/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/03/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/03/2020	ND					

Surrogate: 1-Chlorooctane 87.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 88.4 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 2 2' R (H000660-10)**

BTX 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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.6 % 73.3-129

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	03/03/2020	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	03/04/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/04/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/04/2020	ND					

Surrogate: 1-Chlorooctane 90.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 92.4 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 3 0-1' (H000660-11)**

BTX 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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 99.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7330	16.0	03/03/2020	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	03/04/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/04/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/04/2020	ND					

Surrogate: 1-Chlorooctane 87.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 89.1 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 3 2' (H000660-12)**

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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTEX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 99.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/03/2020	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	03/04/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/04/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/04/2020	ND					

Surrogate: 1-Chlorooctane 89.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 91.1 % 42.2-156

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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 3 3' (H000660-13)**

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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTEX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 98.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/03/2020	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	03/04/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/04/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/04/2020	ND					

Surrogate: 1-Chlorooctane 84.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 85.6 % 42.2-156

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 3 4' (H000660-14)**

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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTEX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.8 % 73.3-129

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	03/03/2020	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	03/04/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/04/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/04/2020	ND					

Surrogate: 1-Chlorooctane 83.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 85.8 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 4 0-1' (H000660-15)**

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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTEX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 98.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4160	16.0	03/03/2020	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	03/04/2020	ND	181	90.6	200	0.385	
DRO >C10-C28*	<10.0	10.0	03/04/2020	ND	192	96.0	200	1.25	
EXT DRO >C28-C36	<10.0	10.0	03/04/2020	ND					

Surrogate: 1-Chlorooctane 84.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 87.2 % 42.2-156

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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  
CHRIS JONES  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 4 2' R (H000660-16)**

BTX 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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/03/2020	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	03/04/2020	ND	171	85.7	200	3.17	
DRO >C10-C28*	<10.0	10.0	03/04/2020	ND	182	90.8	200	3.96	
EXT DRO >C28-C36	<10.0	10.0	03/04/2020	ND					

Surrogate: 1-Chlorooctane 74.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 80.4 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 5 0-1' (H000660-17)**

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	03/03/2020	ND	1.92	95.9	2.00	1.68		
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45		
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78		
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14		
Total BTEx	<0.300	0.300	03/03/2020	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	03/03/2020	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	03/04/2020	ND	177	88.5	200	0.342	
DRO >C10-C28*	<10.0	10.0	03/04/2020	ND	166	82.8	200	2.68	
EXT DRO >C28-C36	<10.0	10.0	03/04/2020	ND					

Surrogate: 1-Chlorooctane 82.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 84.6 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 5 2' (H000660-18)**

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	03/03/2020	ND	1.92	95.9	2.00	1.68	
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45	
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78	
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14	
Total BTEX	<0.300	0.300	03/03/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/03/2020	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	03/04/2020	ND	177	88.5	200	0.342	
DRO >C10-C28*	<10.0	10.0	03/04/2020	ND	166	82.8	200	2.68	
EXT DRO >C28-C36	<10.0	10.0	03/04/2020	ND					

Surrogate: 1-Chlorooctane 85.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 88.0 % 42.2-156

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Coley D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 03/02/2020  
Reported: 03/05/2020  
Project Name: SHUGART 25 FED 1  
Project Number: 700794.304.01  
Project Location: DEVON - LEA CO NM

Sampling Date: 02/26/2020  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: S - 5 3' (H000660-19)**

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	03/03/2020	ND	1.92	95.9	2.00	1.68		
Toluene*	<0.050	0.050	03/03/2020	ND	1.92	96.1	2.00	1.45		
Ethylbenzene*	<0.050	0.050	03/03/2020	ND	1.95	97.7	2.00	1.78		
Total Xylenes*	<0.150	0.150	03/03/2020	ND	5.63	93.8	6.00	2.14		
Total BTEX	<0.300	0.300	03/03/2020	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 98.7 % 73.3-129

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	03/03/2020	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	03/04/2020	ND	177	88.5	200	0.342		
DRO >C10-C28*	<10.0	10.0	03/04/2020	ND	166	82.8	200	2.68		
EXT DRO >C28-C36	<10.0	10.0	03/04/2020	ND						

Surrogate: 1-Chlorooctane 87.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 91.1 % 42.2-156

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\*—Accredited Analyte

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**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

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Celey D. Keene, Lab Director/Quality Manager

## Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 2003045

Date Reported: 3/5/2020

CLIENT: Talon Artesia

Client Sample ID: S-8 0'

Project: Devon State Jr I

Collection Date: 2/28/2020 10:10:00 AM

Lab ID: 2003045-008

Matrix: SOIL

Received Date: 3/3/2020 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CJS
Chloride	ND	60		mg/Kg	20	3/3/2020 12:39:19 PM	50837
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	29000	950		mg/Kg	100	3/3/2020 2:19:33 PM	50823
Motor Oil Range Organics (MRO)	15000	4800		mg/Kg	100	3/3/2020 2:19:33 PM	50823
Surr: DNOP	0	55.1-146	S	%Rec	100	3/3/2020 2:19:33 PM	50823
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	460	20		mg/Kg	5	3/3/2020 10:58:47 AM	G66977
Surr: BFB	621	66.6-105	S	%Rec	5	3/3/2020 10:58:47 AM	G66977
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	0.11	0.099		mg/Kg	5	3/3/2020 10:58:47 AM	B66977
Toluene	1.1	0.20		mg/Kg	5	3/3/2020 10:58:47 AM	B66977
Ethylbenzene	1.8	0.20		mg/Kg	5	3/3/2020 10:58:47 AM	B66977
Xylenes, Total	12	0.40		mg/Kg	5	3/3/2020 10:58:47 AM	B66977
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	5	3/3/2020 10:58:47 AM	B66977

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Page 8 of 20



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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

*. Released to Imaging: 9/20/2022 2:26:53 PM*



101 East Marlton, Hobbs, NM 88240  
(575) 395-2326 FAX (575) 393-2476

*. Released to Imaging: 9/20/2022 2:26:53 PM*



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

CONDITIONS  
  
Action 5031

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 5031
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	6/9/2022