

PRELIMINARY RESULTS

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Soil Assessment and Remediation Work Plan

Outland State Unit 2
API # 30-025-34971 * 1RP-4708-0
Talon Project No. 700794.243.01

Prepared For:

Devon Energy Production
6488 Seven Rivers Hwy
Artesia, New Mexico 88210

Prepared By:

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

February 5, 2018

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

Subject: **Soil Assessment and Remediation Work Plan**
Outland State Unit 2
API # 30-025-34971 * 1RP-4708-0

Dear Ms. Yu,

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

Site Information

The Outland State Unit 2 is located approximately thirty-five (35) miles southwest of Hobbs, New Mexico. The legal location for this release is Unit Letter E, Section 12, Township 21 South and Range 34 East in Lea County, New Mexico. More specifically the latitude and longitude for the release are 32.7565918 North and -103.6573715 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 Berino-Cacique loamy fine sands with 0-3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is middle Pleistocene in age made up of sandy eolian deposits derived from sedimentary rock over calcareous sandy alluvium derived from sedimentary rock.

Ground Water and Site Ranking

The New Mexico State Engineer web site indicates the nearest ground water is 165' below ground surface (BGS). See [Appendix III](#) for the referenced groundwater data.

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 and 5,000 mg/kg for TPH. The recommended guideline for Total Chlorides is 600 mg/kg.

Incident Description and Initial Remedial Actions

On May 22, 2017, a fiberglass produced water tank at the Outland State Unit 2 was struck by lightning resulting in a release of 102 barrels of fluid with 0 barrels recovered. A portion of the fluids evaporated due to the fire. All fluids were contained within the earthen berm on the location. The battery was immediately shut-in. A site plan is presented in [Appendix I](#) which illustrates the impacted area. See initial C-141 in [Appendix II](#).

On December 8, 2017, Talon mobilized personnel to begin the site assessment and soil sampling activities for the construction of a work plan. Grab soil samples were collected from around the tank battery utilizing a hand auger.

See [Appendix IV](#) for complete report of laboratory results.

Sample ID	Depth (feet)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH EXT (mg/kg)	BTEX (mg/kg)	Chlorides (mg/kg)
BG	0'	-	-	-	-	<16.0
S-1	0'	<10.0	<10.0	<10.0	<0.300	16
	1'	<10.0	<10.0	<10.0	<0.300	32
	2'	-	-	-	-	<16.0
	3'	-	-	-	-	<16.0
	4'	-	-	-	-	16
S-2	0'	<10.0	<10.0	<10.0	1.18	<16.0
	1'	<10.0	<10.0	<10.0	<0.300	<16.0
S-3	0'	<10.0	<10.0	<10.0	<0.300	<16.0
	1'	<10.0	<10.0	<10.0	<0.300	<16.0
	2'	-	-	-	-	<16.0
	3'	-	-	-	-	32.0
S-4	0'	<10.0	<10.0	<10.0	<0.300	16
	1'	<10.0	<10.0	<10.0	<0.300	80
	2'	<10.0	<10.0	23.2	<0.300	80
	3'	-	-	-	-	144
S-5	0'	<10.0	<10.0	<10.0	<0.300	1400
	1'	-	-	-	-	256
S-6	0'	<10.0	<10.0	<10.0	<0.300	1600
	1'	-	-	-	-	304
S-7	0'	<10.0	<10.0	<10.0	<0.300	32
	1'	-	-	-	-	16
	2'	-	-	-	-	<16.0
	3'	-	-	-	-	208
S-8	0'	<10.0	<10.0	<10.0	<0.300	<16.0
	1'					<16.0
	2'					<16.0
S-8	3'	-	-	-	-	<16.0

--Analyte Not Tested

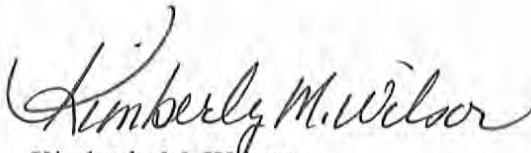
Proposed Remedial Actions

- The impacted area in the vicinity of S-5 and S-6 will be excavated to a depth of 0.5-feet deep.
- All of the excavated material will be transported to Lea Land LLC, a NMOCD approved disposal facility.
- The excavated area will be backfilled with new caliche. Once the backfilling activities are complete, the work area will be contoured to match the surrounding location.
- A final closure report documenting all remedial actions will be provided to the NMOCD Hobbs District I Office along with a Final C-141 Form.

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

Respectfully submitted,

TALON/LPE



Kimberly M. Wilson
Project Manager



David J. Adkins
District Manager

Attachments:

- Appendix I Site Plan
- Appendix II Initial C-141
- Appendix III Groundwater Data
- Appendix IV Laboratory Results

APPENDIX I

SITE PLAN

Outland State Unit #2

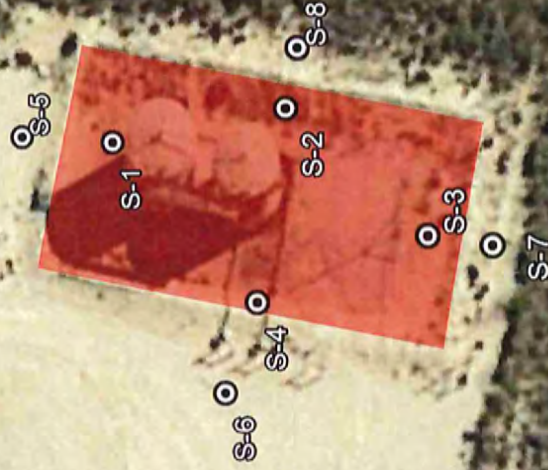
Site assessment sample points

Legend

- Impacted area
- Outland State Unit 2
- Sample locations

BG

Outland State Unit 2



N

100 ft

APPENDIX II

INITAL 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	Devon Energy Production Company	Contact	Danny Velo, Production Foreman
Address	6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No.	575-703-3360
Facility Name	Outland State Unit 2	Facility Type	Gas

Surface Owner State	Mineral Owner State	API No	30-025-34971
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	12	21S	34E	1330'	FNL	660'	FWL	Lea

Latitude: 32.4971466

Longitude: -103.429924

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 102bbbs	Volume Recovered 0bbbs
Source of Release Produced water tank	Date and Hour of Occurrence May 22, 2017 @ 5:30 PM	Date and Hour of Discovery May 22, 2017 @ 5:30 PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Shelly Tucker, BLM Olivia Yu, OCD	
By Whom? Ky Scott, Asst. Production Foreman	Date and Hour Shelly Tucker, BLM May 22, 2017 @ 8:15 PM Olivia Yu, OCD May 22, 2017 @ 8:20 PM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*

Lightning struck a 500bbl fiberglass produced water tank causing it to catch on fire and structurally compromising it. The well was immediately shut in and 911 was contacted. The fire department assisted in extinguishing the fire.

Describe Area Affected and Cleanup Action Taken.*

Approximately 102bbbs of produced water was in the tank when the lightning struck. 0bbbs produced water was recovered. A portion of the released fluids evaporated due to the fire while the remaining fluid was absorbed into the soil. All fluids stayed inside the earthen berm containment and on location. An environmental contractor will be contacted to assist with delineation and remediation.

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

Signature: <i>Sheila Fisher</i>	OIL CONSERVATION DIVISION	
Printed Name: Sheila Fisher	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Field Admin Support	Approval Date: 5/30/2017	Expiration Date:
E-mail Address: Sheila.fisher@dmn.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>
Date: 5/24/17 Phone: 575.748.1829		

* Attach Additional Sheets If Necessary

nOY1715039165

1RP-4708

pOY1715039510

APPENDIX III
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
CP 00590 POD1		CP	LE				01	21S	34E	648099	3597829*	1307	79		
CP 00089	O	CP	LE	2	1	13	21S	34E	647840	3594615		2152	235		
CP 00939 POD1		CP	LE	4	1	2	07	21S	35E	649974	3596760*	2573	400	165	235
CP 00940 POD1		CP	LE	4	1	2	07	21S	35E	649974	3596760*	2573	400	165	235

Average Depth to Water: 165 feet

Minimum Depth: 165 feet

Maximum Depth: 165 feet

Record Count:4

UTM NAD83 Radius Search (in meters):

Easting (X): 647401

Northing (Y): 3596723

Radius: 3000

*UTM location was derived from PLSS - see Help

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

11/20/17 9:41 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

APPENDIX IV
LABORATORY DATA

December 15, 2017

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: OUTLAND STATE UNIT #2

Enclosed are the results of analyses for samples received by the laboratory on 12/08/17 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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
DAVID ADKINS
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	12/08/2017	Sampling Date:	12/05/2017
Reported:	12/15/2017	Sampling Type:	Soil
Project Name:	OUTLAND STATE UNIT #2	Sampling Condition:	Cool & Intact
Project Number:	700794.243.01	Sample Received By:	Jodi Henson
Project Location:	DEVON - LEA CO NM		

Sample ID: BG 0' (H703415-01)

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	12/13/2017	ND	432	108	400	3.64	

Sample ID: S-1 0' (H703415-02)

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	12/12/2017	ND	1.90	95.2	2.00	1.62	
Toluene*	<0.050	0.050	12/12/2017	ND	1.93	96.4	2.00	2.72	
Ethylbenzene*	<0.050	0.050	12/12/2017	ND	1.98	98.9	2.00	2.54	
Total Xylenes*	<0.150	0.150	12/12/2017	ND	5.75	95.9	6.00	2.08	
Total BTX	<0.300	0.300	12/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 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	12/13/2017	ND	432	108	400	3.64	

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 91.6 % 28.3-164

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 12/08/2017
Reported: 12/15/2017
Project Name: OUTLAND STATE UNIT #2
Project Number: 700794.243.01
Project Location: DEVON - LEA CO NM

Sampling Date: 12/05/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-1 0' (H703415-02)

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Surrogate: 1-Chlorooctadecane	97.0 %	34.7-157							

Cardinal Laboratories

*=Accredited Analyte

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 Fax To: (575) 745-8905

 Received: 12/08/2017
 Reported: 12/15/2017
 Project Name: OUTLAND STATE UNIT #2
 Project Number: 700794.243.01
 Project Location: DEVON - LEA CO NM

 Sampling Date: 12/05/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-1 1' (H703415-03)

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	12/12/2017	ND	1.90	95.2	2.00	1.62	
Toluene*	<0.050	0.050	12/12/2017	ND	1.93	96.4	2.00	2.72	
Ethylbenzene*	<0.050	0.050	12/12/2017	ND	1.98	98.9	2.00	2.54	
Total Xylenes*	<0.150	0.150	12/12/2017	ND	5.75	95.9	6.00	2.08	
Total BTEX	<0.300	0.300	12/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 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	32.0	16.0	12/13/2017	ND	432	108	400	3.64	

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 87.9 % 28.3-164

Surrogate: 1-Chlorooctadecane 91.3 % 34.7-157

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Received: 12/08/2017
Reported: 12/15/2017
Project Name: OUTLAND STATE UNIT #2
Project Number: 700794.243.01
Project Location: DEVON - LEA CO NM

Sampling Date: 12/05/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-1 2' (H703415-04)

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	12/13/2017	ND	432	108	400	3.64		

Sample ID: S-1 3' (H703415-05)

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	12/13/2017	ND	432	108	400	3.64		

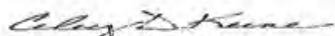
Sample ID: S-1 4' (H703415-06)

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	12/13/2017	ND	432	108	400	3.64		

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*=Accredited Analyte

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 Received: 12/08/2017
 Reported: 12/15/2017
 Project Name: OUTLAND STATE UNIT #2
 Project Number: 700794.243.01
 Project Location: DEVON - LEA CO NM

 Sampling Date: 12/05/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-2 0' (H703415-07)

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	12/12/2017	ND	1.90	95.2	2.00	1.62	
Toluene*	<0.050	0.050	12/12/2017	ND	1.93	96.4	2.00	2.72	
Ethylbenzene*	<0.050	0.050	12/12/2017	ND	1.98	98.9	2.00	2.54	
Total Xylenes*	1.18	0.150	12/12/2017	ND	5.75	95.9	6.00	2.08	
Total BTEX	1.18	0.300	12/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 129 % 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	12/13/2017	ND	432	108	400	3.64	

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 118 % 28.3-164

Surrogate: 1-Chlorooctadecane 124 % 34.7-157

Cardinal Laboratories

* = Accredited Analyte

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Fax To: (575) 745-8905

Received: 12/08/2017
Reported: 12/15/2017
Project Name: OUTLAND STATE UNIT #2
Project Number: 700794.243.01
Project Location: DEVON - LEA CO NM

Sampling Date: 12/05/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-2 1' REFUSAL (H703415-08)

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	12/12/2017	ND	1.90	95.2	2.00	1.62	
Toluene*	<0.050	0.050	12/12/2017	ND	1.93	96.4	2.00	2.72	
Ethylbenzene*	<0.050	0.050	12/12/2017	ND	1.98	98.9	2.00	2.54	
Total Xylenes*	<0.150	0.150	12/12/2017	ND	5.75	95.9	6.00	2.08	
Total BTX	<0.300	0.300	12/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 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	12/13/2017	ND	432	108	400	3.64	

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 100 % 28.3-164

Surrogate: 1-Chlorooctadecane 104 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	12/08/2017	Sampling Date:	12/05/2017
Reported:	12/15/2017	Sampling Type:	Soil
Project Name:	OUTLAND STATE UNIT #2	Sampling Condition:	Cool & Intact
Project Number:	700794.243.01	Sample Received By:	Jodi Henson
Project Location:	DEVON - LEA CO NM		

Sample ID: S-3 0' (H703415-09)

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	12/12/2017	ND	1.90	95.2	2.00	1.62		
Toluene*	<0.050	0.050	12/12/2017	ND	1.93	96.4	2.00	2.72		
Ethylbenzene*	<0.050	0.050	12/12/2017	ND	1.98	98.9	2.00	2.54		
Total Xylenes*	<0.150	0.150	12/12/2017	ND	5.75	95.9	6.00	2.08		
Total BTX	<0.300	0.300	12/12/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 108 % 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	12/13/2017	ND	432	108	400	3.64		

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 82.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 89.8 % 34.7-157

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Analytical Results For:

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

Received:	12/08/2017	Sampling Date:	12/05/2017
Reported:	12/15/2017	Sampling Type:	Soil
Project Name:	OUTLAND STATE UNIT #2	Sampling Condition:	Cool & Intact
Project Number:	700794.243.01	Sample Received By:	Jodi Henson
Project Location:	DEVON - LEA CO NM		

Sample ID: S-3 1' (H703415-10)

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	12/12/2017	ND	1.91	95.4	2.00	0.0610		
Toluene*	<0.050	0.050	12/12/2017	ND	1.87	93.6	2.00	0.236		
Ethylbenzene*	<0.050	0.050	12/12/2017	ND	1.83	91.5	2.00	0.467		
Total Xylenes*	<0.150	0.150	12/12/2017	ND	5.65	94.2	6.00	0.131		
Total BTEX	<0.300	0.300	12/12/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 96.2 % 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	12/13/2017	ND	432	108	400	3.64		

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 114 % 28.3-164

Surrogate: 1-Chlorooctadecane 116 % 34.7-157

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Analytical Results For:

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

Received:	12/08/2017	Sampling Date:	12/05/2017
Reported:	12/15/2017	Sampling Type:	Soil
Project Name:	OUTLAND STATE UNIT #2	Sampling Condition:	Cool & Intact
Project Number:	700794.243.01	Sample Received By:	Jodi Henson
Project Location:	DEVON - LEA CO NM		

Sample ID: S-3 2' (H703415-11)

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	12/13/2017	ND	432	108	400	3.64		

Sample ID: S-3 3' REFUSAL (H703415-12)

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	12/13/2017	ND	432	108	400	3.64		

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Analytical Results For:

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

Received:	12/08/2017	Sampling Date:	12/05/2017
Reported:	12/15/2017	Sampling Type:	Soil
Project Name:	OUTLAND STATE UNIT #2	Sampling Condition:	Cool & Intact
Project Number:	700794.243.01	Sample Received By:	Jodi Henson
Project Location:	DEVON - LEA CO NM		

Sample ID: S-4 1' (H703415-13)

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	12/12/2017	ND	1.91	95.4	2.00	0.0610	
Toluene*	<0.050	0.050	12/12/2017	ND	1.87	93.6	2.00	0.236	
Ethylbenzene*	<0.050	0.050	12/12/2017	ND	1.83	91.5	2.00	0.467	
Total Xylenes*	<0.150	0.150	12/12/2017	ND	5.65	94.2	6.00	0.131	
Total BTX	<0.300	0.300	12/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 95.2 % 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	80.0	16.0	12/13/2017	ND	432	108	400	3.64	

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 107 % 28.3-164

Surrogate: 1-Chlorooctadecane 112 % 34.7-157

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Analytical Results For:

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

Received: 12/08/2017
Reported: 12/15/2017
Project Name: OUTLAND STATE UNIT #2
Project Number: 700794.243.01
Project Location: DEVON - LEA CO NM

Sampling Date: 12/05/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-4 2' (H703415-14)

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	12/12/2017	ND	1.91	95.4	2.00	0.0610	
Toluene*	<0.050	0.050	12/12/2017	ND	1.87	93.6	2.00	0.236	
Ethylbenzene*	<0.050	0.050	12/12/2017	ND	1.83	91.5	2.00	0.467	
Total Xylenes*	<0.150	0.150	12/12/2017	ND	5.65	94.2	6.00	0.131	
Total BTEX	<0.300	0.300	12/12/2017	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	80.0	16.0	12/13/2017	ND	432	108	400	3.64	

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	23.2	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						


Surrogate: 1-Chlorooctane 103 % 28.3-164

Surrogate: 1-Chlorooctadecane 110 % 34.7-157

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Analytical Results For:

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

Received: 12/08/2017
Reported: 12/15/2017
Project Name: OUTLAND STATE UNIT #2
Project Number: 700794.243.01
Project Location: DEVON - LEA CO NM

Sampling Date: 12/05/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

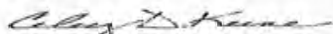
Sample ID: S-4 3' REFUSAL (H703415-15)

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	12/13/2017	ND	432	108	400	3.64	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 12/08/2017
Reported: 12/15/2017
Project Name: OUTLAND STATE UNIT #2
Project Number: 700794.243.01
Project Location: DEVON - LEA CO NM

Sampling Date: 12/05/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-5 0' (H703415-16)

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	12/12/2017	ND	1.91	95.4	2.00	0.0610	
Toluene*	<0.050	0.050	12/12/2017	ND	1.87	93.6	2.00	0.236	
Ethylbenzene*	<0.050	0.050	12/12/2017	ND	1.83	91.5	2.00	0.467	
Total Xylenes*	<0.150	0.150	12/12/2017	ND	5.65	94.2	6.00	0.131	
Total BTEX	<0.300	0.300	12/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 94.0 % 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	1400	16.0	12/13/2017	ND	432	108	400	3.64	

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 102 % 28.3-164

Surrogate: 1-Chlorooctadecane 105 % 34.7-157

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Analytical Results For:

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

Received: 12/08/2017
Reported: 12/15/2017
Project Name: OUTLAND STATE UNIT #2
Project Number: 700794.243.01
Project Location: DEVON - LEA CO NM

Sampling Date: 12/05/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-5 1' REFUSAL (H703415-17)

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	12/13/2017	ND	432	108	400	3.64	

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Analytical Results For:

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

 Received: 12/08/2017
 Reported: 12/15/2017
 Project Name: OUTLAND STATE UNIT #2
 Project Number: 700794.243.01
 Project Location: DEVON - LEA CO NM

 Sampling Date: 12/05/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-6 0' (H703415-18)

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	12/12/2017	ND	1.91	95.4	2.00	0.0610	
Toluene*	<0.050	0.050	12/12/2017	ND	1.87	93.6	2.00	0.236	
Ethylbenzene*	<0.050	0.050	12/12/2017	ND	1.83	91.5	2.00	0.467	
Total Xylenes*	<0.150	0.150	12/12/2017	ND	5.65	94.2	6.00	0.131	
Total BTX	<0.300	0.300	12/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.3 % 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	12/13/2017	ND	432	108	400	3.64	

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	21.7	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	20.5	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 100 % 28.3-164

Surrogate: 1-Chlorooctadecane 135 % 34.7-157

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Analytical Results For:

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

Received: 12/08/2017
Reported: 12/15/2017
Project Name: OUTLAND STATE UNIT #2
Project Number: 700794.243.01
Project Location: DEVON - LEA CO NM

Sampling Date: 12/05/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-6 1' REFUSAL (H703415-19)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	12/13/2017	ND	432	108	400	3.64	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 12/08/2017
Reported: 12/15/2017
Project Name: OUTLAND STATE UNIT #2
Project Number: 700794.243.01
Project Location: DEVON - LEA CO NM

Sampling Date: 12/05/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S-7 0' (H703415-20)

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	12/13/2017	ND	1.91	95.4	2.00	0.0610	
Toluene*	<0.050	0.050	12/13/2017	ND	1.87	93.6	2.00	0.236	
Ethylbenzene*	<0.050	0.050	12/13/2017	ND	1.83	91.5	2.00	0.467	
Total Xylenes*	<0.150	0.150	12/13/2017	ND	5.65	94.2	6.00	0.131	
Total BTX	<0.300	0.300	12/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 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	32.0	16.0	12/13/2017	ND	432	108	400	3.64	

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 89.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 94.7 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	12/08/2017	Sampling Date:	12/05/2017
Reported:	12/15/2017	Sampling Type:	Soil
Project Name:	OUTLAND STATE UNIT #2	Sampling Condition:	Cool & Intact
Project Number:	700794.243.01	Sample Received By:	Jodi Henson
Project Location:	DEVON - LEA CO NM		

Sample ID: S-7 1' (H703415-21)

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	12/13/2017	ND	432	108	400	3.64	

Sample ID: S-7 2' (H703415-22)

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	12/13/2017	ND	432	108	400	3.64	

Sample ID: S-7 3' REFUSAL (H703415-23)

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	12/13/2017	ND	432	108	400	3.64	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 12/08/2017
 Reported: 12/15/2017
 Project Name: OUTLAND STATE UNIT #2
 Project Number: 700794.243.01
 Project Location: DEVON - LEA CO NM

 Sampling Date: 12/05/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-8 0' (H703415-24)

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	12/13/2017	ND	1.91	95.4	2.00	0.0610	
Toluene*	<0.050	0.050	12/13/2017	ND	1.87	93.6	2.00	0.236	
Ethylbenzene*	<0.050	0.050	12/13/2017	ND	1.83	91.5	2.00	0.467	
Total Xylenes*	<0.150	0.150	12/13/2017	ND	5.65	94.2	6.00	0.131	
Total BTX	<0.300	0.300	12/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 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	<16.0	16.0	12/13/2017	ND	432	108	400	3.64	

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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 70.7 % 28.3-164

Surrogate: 1-Chlorooctadecane 75.4 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 12/08/2017
 Reported: 12/15/2017
 Project Name: OUTLAND STATE UNIT #2
 Project Number: 700794.243.01
 Project Location: DEVON - LEA CO NM

 Sampling Date: 12/05/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-8 1' (H703415-25)

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	12/13/2017	ND	432	108	400	3.64	

Sample ID: S-8 2' (H703415-26)

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	12/13/2017	ND	432	108	400	3.64	

Sample ID: S-8 3' REFUSAL (H703415-27)

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	12/13/2017	ND	432	108	400	3.64	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 12/08/2017
 Reported: 12/15/2017
 Project Name: OUTLAND STATE UNIT #2
 Project Number: 700794.243.01
 Project Location: DEVON - LEA CO NM

 Sampling Date: 12/05/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: S-4 0' (H703415-28)

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	12/13/2017	ND	1.90	94.8	2.00	0.338	
Toluene*	<0.050	0.050	12/13/2017	ND	1.89	94.4	2.00	0.138	
Ethylbenzene*	<0.050	0.050	12/13/2017	ND	1.86	93.1	2.00	0.259	
Total Xylenes*	<0.150	0.150	12/13/2017	ND	5.76	96.0	6.00	0.129	
Total BTEX	<0.300	0.300	12/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 95.9 % 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	12/14/2017	ND	416	104	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	12/15/2017	ND	234	117	200	4.01	
DRO >C10-C28	<10.0	10.0	12/15/2017	ND	247	123	200	7.77	
EXT DRO >C28-C36	<10.0	10.0	12/15/2017						

Surrogate: 1-Chlorooctane 79.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 79.7 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

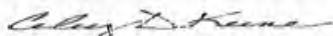
Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager



1 of 3
CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

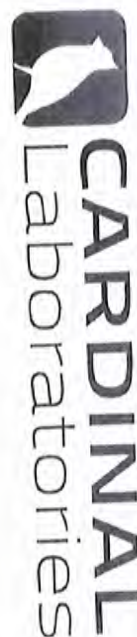
101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

Company Name: <u>Telson LPE</u>		P.O. #:		
Project Manager: <u>N. Adkins</u>		Company: <u>Telson LPE</u>		
Address: <u>408 West Texas Ave</u>		Attn:		
City: <u>Artesia</u>		State: <u>NM</u>	Zip: <u>88210</u>	
Phone #: <u>575-746-8768</u>		Fax #: <u>575-746-8905</u>		
Project #: <u>700794.213.01</u>		Project Owner: <u>Devco</u>		
Project Name: <u>Portland State Univ. B2</u>		City:	State:	Zip:
Project Location: <u>Ken Copart</u>		Phone #:		
Sample Name: <u>S. Soil</u>		Fax #:		
FOR LAB USE ONLY		MATRIX	PRESERV	SAMPLING
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER
				WASTEWATER
				SOIL
				OIL
				SLUDGE
				OTHER :
				ACID/BASE:
				ICE / COOL
				OTHER :
				DATE
				TIME
H103415	AG 0'	1		12.5.17
1	AG 0'	1		14/09
2	AG 0'	1		14/12
3	AG 0'	1		14/15
4	AG 0'	1		14/18
5	AG 0'	1		14/21
6	AG 0'	1		14/24
7	AG 0'	1		14/27
8	AG 0'	1		14/30
9	AG 0'	1		14/33
10	AG 0'	1		14/33
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Relinquished By: <u>[Signature]</u>		Date: <u>12.5.17</u>	Received By: <u>[Signature]</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No
Relinquished By: <u>[Signature]</u>		Date: <u>4.00</u>	Received By: <u>[Signature]</u>	Add'l Phone #: <u>7.250</u>
Delivered By: (Circle One) <u>#75</u>		Sample Condition	CHECKED BY: <u>[Signature]</u>	
Cool <input type="checkbox"/> Intact <input type="checkbox"/>				
Yes <input type="checkbox"/> No <input type="checkbox"/>				
Sampler - UPS - Bus - Other: <u>UPS</u>				

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2 of 3
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: <u>Taylor LPE</u>		P.O. #:																							
Project Manager: <u>A. Adkins</u>		Company: <u>Taylor LPE</u>																							
Address: <u>408 West Texas Ave</u>		Attn:																							
City: <u>Artesia</u>		Address:																							
State: <u>NM</u> Zip: <u>88210</u>		City:																							
Phone #: <u>575-346-8168</u> Fax #: <u>575-346-8905</u>		State:																							
Project #: <u>740794.243.01</u> Project Owner: <u>Debor</u>		Zip:																							
Project Name: <u>Marland Santa Ana's PZ</u>		Phone #:																							
Project Location: <u>San Juan County</u>		Fax #:																							
Sampler Name: <u>J. Adkins</u>		PRESERV																							
FOR LAB USE ONLY		SAMPLING																							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME											
<u>H703415</u>	<u>5.3 2'</u>	<u>6</u>	<u>1</u>										<u>12.5.14</u>	<u>1436</u>	<u>✓</u>										
<u>11</u>	<u>5.3 2'</u>												<u>1439</u>	<u>1445</u>	<u>✓</u>										
<u>12</u>	<u>5.3 3' Refusal</u>												<u>1445</u>	<u>1448</u>	<u>✓</u>										
<u>13</u>	<u>5.4 1'</u>												<u>1448</u>	<u>1451</u>	<u>✓</u>										
<u>14</u>	<u>5.4 2'</u>												<u>1451</u>	<u>1454</u>	<u>✓</u>										
<u>15</u>	<u>5.4 3' Refusal</u>												<u>1454</u>	<u>1459</u>	<u>✓</u>										
<u>16</u>	<u>5.5 0'</u>												<u>1459</u>	<u>1502</u>	<u>✓</u>										
<u>17</u>	<u>5.5 1' Refusal</u>												<u>1502</u>	<u>1505</u>	<u>✓</u>										
<u>18</u>	<u>5.6 0'</u>												<u>1505</u>	<u>1508</u>	<u>✓</u>										
<u>19</u>	<u>5.6 1' Refusal</u>												<u>1508</u>	<u>1508</u>	<u>✓</u>										
<u>20</u>	<u>5.7 0'</u>												<u>1508</u>	<u>1508</u>	<u>✓</u>										
<small>PLEASE NOTE: Liability and Damages: Cardinal's liability and damage coverage is limited to the amount paid by the client for the analysis. All claims involving these services must be filed with Cardinal within 30 days after completion of the analysis. If no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of data, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal. Inquiries of whether such claim is covered upon any of the above stated conditions of coverage.</small>																									
Relinquished By: <u>Paul Adkins</u>		Date: <u>12.5.14</u>		Received By: <u>Debor</u>		Time: <u>4:00</u>		Sample Condition: <u>Cool</u> Intact: <u>Yes</u>		CHECKED BY: <u>(initials)</u>		Phone Result: <u>Yes</u> <u>No</u> Add'l Phone #:													
Relinquished By: <u>Paul Adkins</u>		Date: <u>12.5.14</u>		Received By: <u>Debor</u>		Time: <u>4:00</u>		Sample Condition: <u>Cool</u> Intact: <u>Yes</u>		CHECKED BY: <u>(initials)</u>		Fax Result: <u>Yes</u> <u>No</u> Add'l Fax #:													
Delivered By: (Circle One) <u>#75</u>		4.35p		4.1p		Cool Intact: <u>Yes</u>		CHECKED BY: <u>(initials)</u>		Phone Result: <u>Yes</u> <u>No</u> Add'l Phone #:		Fax Result: <u>Yes</u> <u>No</u> Add'l Fax #:													
Sampler - UPS - Bus - Other: <u>#75</u>		4.35p		4.1p		Cool Intact: <u>Yes</u>		CHECKED BY: <u>(initials)</u>		Phone Result: <u>Yes</u> <u>No</u> Add'l Phone #:		Fax Result: <u>Yes</u> <u>No</u> Add'l Fax #:													

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Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

3063

BILL TO

ANALYSIS REQUEST

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Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7c

Hydrologic Soil Group: B

Ecological site: Loamy Sand (R042XC003NM)

Hydric soil rating: No

Description of Cacique

Setting

Landform: Plains

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Calcareous eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 12 inches: loamy fine sand

Bt - 12 to 28 inches: sandy clay loam

Bkm - 28 to 38 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 20 to 40 inches to petrocalcic

Natural drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Gypsum, maximum in profile: 1 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 2.0

Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7c

Hydrologic Soil Group: C

Ecological site: Sandy (R042XC004NM)

Hydric soil rating: No

Minor Components

Maljamar

Percent of map unit: 6 percent

Ecological site: Limy Upland 16-21" PZ (R077CY028TX)

Hydric soil rating: No

Lea County, New Mexico

BE—Berino-Cacique loamy fine sands association

Map Unit Setting

National map unit symbol: dmpd

Elevation: 3,000 to 3,900 feet

Mean annual precipitation: 10 to 13 inches

Mean annual air temperature: 60 to 62 degrees F

Frost-free period: 190 to 205 days

Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 50 percent

Cacique and similar soils: 40 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Plains

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy eolian deposits derived from sedimentary rock over calcareous sandy alluvium derived from sedimentary rock

Typical profile

A - 0 to 6 inches: loamy fine sand

Btk - 6 to 60 inches: sandy clay loam

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

Gypsum, maximum in profile: 1 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 2.0

Available water storage in profile: Moderate (about 8.7 inches)

Palomas

Percent of map unit: 4 percent

Ecological site: Loamy Sand (R042XC003NM)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico

Survey Area Data: Version 14, Sep 10, 2017

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 5/25/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 1R-4708 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 6/30/2017. 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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