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Soil Assessment and Remediation Work Plan

W Shugart 30 Federal #1 * 30-015-29166 * 2RP-3991

Prepared For:

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

Prepared By:

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

May 9, 2017

Mr. Mike Bratcher
NMOCD District 2
Artesia, NM 88210

Subject: **Soil Assessment and Remediation Work Plan**
West Shugart 30 Federal #1 – 30-015-29166 * 2RP-3991

Dear Mr. Bratcher,

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 West Shugart 30 Federal #1 is located approximately thirty-two (32) miles east of Artesia, New Mexico. The legal location for this release is Unit Letter F, Section 30, Township 18 South and Range 31 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.7202911 North and 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 loamy fine sands complex with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Quaternary in age and is comprised of eolian sands and piedmont deposits which include silty soils underlain with a sandy clay loam and hard caliche. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

The New Mexico State Engineer web site indicates that there is no known ground water in the area. See [Appendix II](#) 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 clean up criteria for total chlorides is considered to be 1,000 mg/kg.

Incident Description and Initial Remedial Actions

On November 3, 2016 the fiberglass water tank was struck by lightning resulting in a release of 140 barrels of fluid into the unlined containment. The fluid breached the west side berm causing fluids to flow into the pasture. No fluids were recovered. 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 May 2, 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 utilizing a hand auger.

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

March 13, 2017

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0'	<0.300	4720	<50	15600
Refusal	1'	<0.300	1220	<10	396
S-2	0'	<0.300	7040	<50	30700
	1'	<0.300	112	<10	13.8
	2'	--	128	--	--
	3'	--	336	--	--
Refusal	3.5'	--	768	--	--
S-3	0'	<0.300	224	<50	3540
	1'	<0.300	32	<10	<10
	2'	--	944	--	--
Refusal	3'	--	112	--	--
S-4	0'	<0.300	800	<10	<10
	1'	<0.300	608	<10	<10
	2'	--	144	--	--
Refusal	4'	--	144	--	--

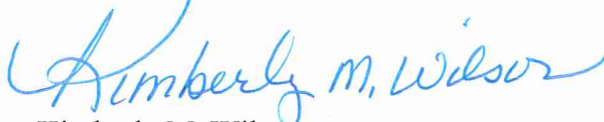
Proposed Remedial Actions

- The impacted areas in the battery surrounding S-1 and S-2 will be excavated to a depth of 1-foot deep.
- The areas in the pasture are under the Recommended Remedial Action Levels (RRAL's), therefore no further action is required.
- All contaminated soil will be transported to Lea Land, LLC, a NMOCD approved disposal facility.
- The excavated area will be backfilled with new caliche. Once the backfill activities are complete the work area will be compacted.
- A final closure report documenting all remedial actions will be provided to the NMOCD Artesia 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

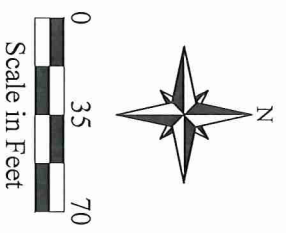


David J. Adkins
District Manager


Attachments:


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

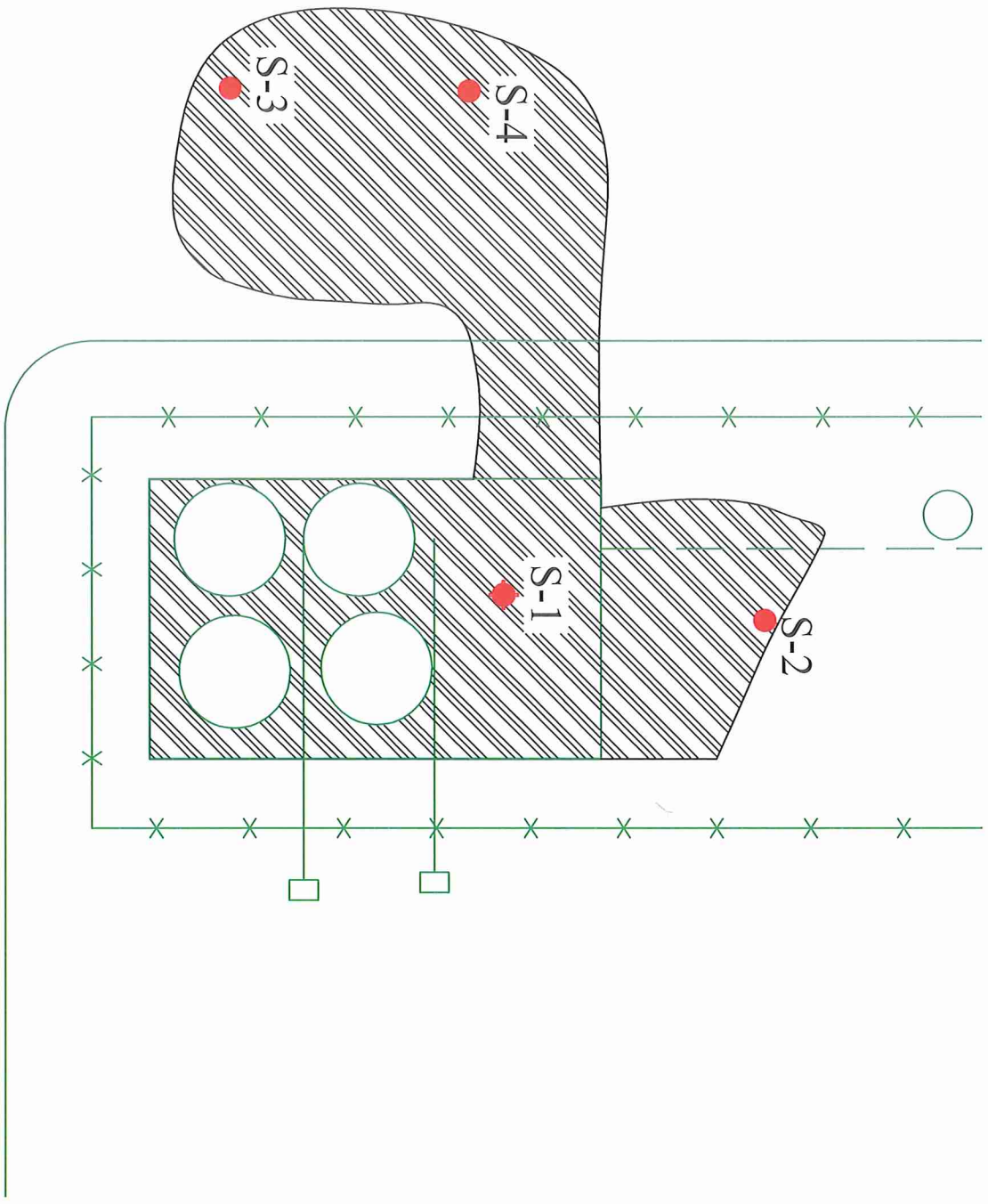
APPENDIX I
SITE MAP



Legend

 - Sample Location

 - Impacted Area



Date: 05/22/2017
Scale: 1"=70'
Drawn By: JIM

West Shugart 30 Fed. No. 1
Devon Energy Corporation
Artesia, New Mexico
Figure 1 - Site Plan

APPENDIX II
GROUNDWATER DATA
INITIAL C-141



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	Sec	Tws	Rng	X	Y	Distance	Depth	Well	Depth	Water	Column
CP 00818 POD1		CP	LE	1	4	26	18S	30E		599289	3620364*	2561	240				
CP 00767 POD1		CP	ED	3	2	35	18S	30E		599300	3619158*	2607	500				

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count:2

UTM NAD83 Radius Search (in meters):

Easting (X): 601805

Northing (Y): 3619883

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.

5/9/17 12:52 PM

WATER COLUMN/ AVERAGE
DEPTH TO WATER

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

NOV 10 2016
Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

NAB1031955174 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company	Devon Energy Production Company <u>1037</u>	Contact	Danny Velo, Production Foreman
Address	6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No.	575.703.3360
Facility Name	West Shugart 30 Fed 1	Facility Type	Gas

Surface Owner	Federal	Mineral Owner	Federal	API No	30-015-29166
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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
F	30	18S	31E	1980	North	1980	West	Eddy

Latitude: 32.7202911

Longitude: 103.9105072

NATURE OF RELEASE

Type of Release Produced Water (PW)	Volume of Release 140BBLS	Volume Recovered 0BBLS
Source of Release Water Tank	Date and Hour of Occurrence 11/3/2016 @4:24PM	Date and Hour of Discovery 11/3/2016@4:24PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? OCD-Mike Bratcher BLM-Shelly Tucker	
By Whom? Jesse Armendariz, Assistant Production Foreman	Date and Hour OCD-11/3/2016 @11:00AM BLM-11/3/2016@11:56AM	
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.* No		
Describe Cause of Problem and Remedial Action Taken. Produced water tank was struck by lightning resulting in a produced water release. All the wells were shut in to prevent further release. Repairs are planned.		
Describe Area Affected and Cleanup Action Taken. Fiberglass water tank was struck by lightning during storm releasing 140 BBLS of pw into the surrounding earthen bermed containment. 0 BBLS pw was recovered. The released fluid flowed in a southwestern direction leaving both containment and the pad mixing with rainwater. The approximate area affected on pad is 30ft by 75ft. The total affected area off pad is 75 yards by 30 yards on the southwest side of pad. An environmental agency will be contacted for 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: <u>Dana DeLaRosa</u>	OIL CONSERVATION DIVISION	
Printed Name: Dana DeLaRosa	Signed By <u>Mike Bratcher</u> Approved by Environmental Specialist:	
Title: <u>Field Admin Support</u>	Approval Date: <u>11/14/16</u>	Expiration Date: <u>N/A</u>
E-mail Address: <u>Dana.Delarosa@dvn.com</u>	Conditions of Approval:	Attached <input checked="" type="checkbox"/>
Date: 11/10/2016 Phone: 575.746.5594		

* Attach Additional Sheets If Necessary

2RD-3441

APPENDIX III
LABORATORY RESULTS



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

May 09, 2017

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

RE: WEST SHUGART 30 FED. NO. 1

Enclosed are the results of analyses for samples received by the laboratory on 05/03/17 11:50.

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

Received:	05/03/2017	Sampling Date:	05/02/2017
Reported:	05/09/2017	Sampling Type:	Soil
Project Name:	WEST SHUGART 30 FED. NO. 1	Sampling Condition:	Cool & Intact
Project Number:	700794.450.01	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: S-1 0' (H701185-01)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/06/2017	ND	1.86	93.1	2.00	0.758		
Toluene*	<0.050	0.050	05/06/2017	ND	1.72	85.8	2.00	0.799		
Ethylbenzene*	<0.050	0.050	05/06/2017	ND	1.69	84.6	2.00	0.614		
Total Xylenes*	<0.150	0.150	05/06/2017	ND	4.78	79.7	6.00	0.759		
Total BTEx	<0.300	0.300	05/06/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 92.9 % 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	4720	16.0	05/04/2017	ND	432	108	400	7.14		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	05/04/2017	ND	180	89.9	200	4.56	
DRO >C10-C28	15600	50.0	05/04/2017	ND	201	101	200	3.13	

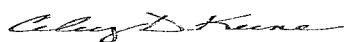
Surrogate: 1-Chlorooctane 84.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 765 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 05/03/2017
Reported: 05/09/2017
Project Name: WEST SHUGART 30 FED. NO. 1
Project Number: 700794.450.01
Project Location: EDDY COUNTY, NM

Sampling Date: 05/02/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S-1 1' R (H701185-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/05/2017	ND	1.86	93.1	2.00	0.758		
Toluene*	<0.050	0.050	05/05/2017	ND	1.72	85.8	2.00	0.799		
Ethylbenzene*	<0.050	0.050	05/05/2017	ND	1.69	84.6	2.00	0.614		
Total Xylenes*	<0.150	0.150	05/05/2017	ND	4.78	79.7	6.00	0.759		
Total BTEx	<0.300	0.300	05/05/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 95.5 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1220	16.0	05/04/2017	ND	432	108	400	7.14		

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	05/04/2017	ND	180	89.9	200	4.56	
DRO >C10-C28	396	10.0	05/04/2017	ND	201	101	200	3.13	

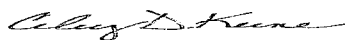
Surrogate: 1-Chlorooctane 96.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 123 % 34.7-157

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Received:	05/03/2017	Sampling Date:	05/02/2017
Reported:	05/09/2017	Sampling Type:	Soil
Project Name:	WEST SHUGART 30 FED. NO. 1	Sampling Condition:	Cool & Intact
Project Number:	700794.450.01	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: S-2 0' (H701185-03)

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	05/05/2017	ND	1.86	93.1	2.00	0.758		
Toluene*	<0.050	0.050	05/05/2017	ND	1.72	85.8	2.00	0.799		
Ethylbenzene*	<0.050	0.050	05/05/2017	ND	1.69	84.6	2.00	0.614		
Total Xylenes*	<0.150	0.150	05/05/2017	ND	4.78	79.7	6.00	0.759		
Total BTEx	<0.300	0.300	05/05/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 98.8 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7040	16.0	05/04/2017	ND	432	108	400	7.14		

TPH 8015M		mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<50.0	50.0	05/04/2017	ND	180	89.9	200	4.56		
DRO >C10-C28	30700	50.0	05/04/2017	ND	201	101	200	3.13		

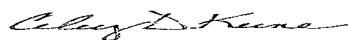
Surrogate: 1-Chlorooctane 87.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 1550 % 34.7-157

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* = Accredited Analyte

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

Received:	05/03/2017	Sampling Date:	05/02/2017
Reported:	05/09/2017	Sampling Type:	Soil
Project Name:	WEST SHUGART 30 FED. NO. 1	Sampling Condition:	Cool & Intact
Project Number:	700794.450.01	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: S-2 1' (H701185-04)

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	05/05/2017	ND	1.86	93.1	2.00	0.758		
Toluene*	<0.050	0.050	05/05/2017	ND	1.72	85.8	2.00	0.799		
Ethylbenzene*	<0.050	0.050	05/05/2017	ND	1.69	84.6	2.00	0.614		
Total Xylenes*	<0.150	0.150	05/05/2017	ND	4.78	79.7	6.00	0.759		
Total BTEx	<0.300	0.300	05/05/2017	ND						

Surrogate: 4-Bromofluorobenzene (PIB) 97.1 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	05/04/2017	ND	432	108	400	7.14		

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	05/04/2017	ND	180	89.9	200	4.56	
DRO >C10-C28	13.8	10.0	05/04/2017	ND	201	101	200	3.13	

Surrogate: 1-Chlorooctane 85.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 101 % 34.7-157

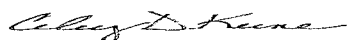
Sample ID: S-2 2' (H701185-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	05/04/2017	ND	432	108	400	7.14		

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 ARTESIA NM, 88210
 Fax To: (575) 745-8905

Received:	05/03/2017	Sampling Date:	05/02/2017
Reported:	05/09/2017	Sampling Type:	Soil
Project Name:	WEST SHUGART 30 FED. NO. 1	Sampling Condition:	Cool & Intact
Project Number:	700794.450.01	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: S-2 3' (H701185-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	05/04/2017	ND	432	108	400	7.14	

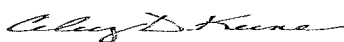
Sample ID: S-2 3.5' R (H701185-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	768	16.0	05/04/2017	ND	432	108	400	3.64	QM-07	

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	05/03/2017	Sampling Date:	05/02/2017
Reported:	05/09/2017	Sampling Type:	Soil
Project Name:	WEST SHUGART 30 FED. NO. 1	Sampling Condition:	Cool & Intact
Project Number:	700794.450.01	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: S-3 0' (H701185-08)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/05/2017	ND	1.86	93.1	2.00	0.758		
Toluene*	<0.050	0.050	05/05/2017	ND	1.72	85.8	2.00	0.799		
Ethylbenzene*	<0.050	0.050	05/05/2017	ND	1.69	84.6	2.00	0.614		
Total Xylenes*	<0.150	0.150	05/05/2017	ND	4.78	79.7	6.00	0.759		
Total BTEX	<0.300	0.300	05/05/2017	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	05/04/2017	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	05/04/2017	ND	180	89.9	200	4.56	
DRO >C10-C28	3540	50.0	05/04/2017	ND	201	101	200	3.13	

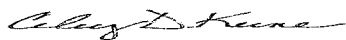
Surrogate: 1-Chlorooctane 61.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 193 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	05/03/2017	Sampling Date:	05/02/2017
Reported:	05/09/2017	Sampling Type:	Soil
Project Name:	WEST SHUGART 30 FED. NO. 1	Sampling Condition:	Cool & Intact
Project Number:	700794.450.01	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: S-3 1' (H701185-09)

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	05/05/2017	ND	1.86	93.1	2.00	0.758		
Toluene*	<0.050	0.050	05/05/2017	ND	1.72	85.8	2.00	0.799		
Ethylbenzene*	<0.050	0.050	05/05/2017	ND	1.69	84.6	2.00	0.614		
Total Xylenes*	<0.150	0.150	05/05/2017	ND	4.78	79.7	6.00	0.759		
Total BTEX	<0.300	0.300	05/05/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 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	05/04/2017	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	05/04/2017	ND	180	89.9	200	4.56	
DRO >C10-C28	<10.0	10.0	05/04/2017	ND	201	101	200	3.13	

Surrogate: 1-Chlorooctane 73.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 82.3 % 34.7-157

Sample ID: S-3 2' (H701185-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	944	16.0	05/04/2017	ND	432	108	400	3.64	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	05/03/2017	Sampling Date:	05/02/2017
Reported:	05/09/2017	Sampling Type:	Soil
Project Name:	WEST SHUGART 30 FED. NO. 1	Sampling Condition:	Cool & Intact
Project Number:	700794.450.01	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: S-3 3' R (H701185-11)

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	05/04/2017	ND	432	108	400	3.64				

Sample ID: S-4 0' (H701185-12)

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	05/05/2017	ND	1.86	93.1	2.00	0.758					
Toluene*	0.054	0.050	05/05/2017	ND	1.72	85.8	2.00	0.799					
Ethylbenzene*	<0.050	0.050	05/05/2017	ND	1.69	84.6	2.00	0.614					
Total Xylenes*	<0.150	0.150	05/05/2017	ND	4.78	79.7	6.00	0.759					
Total BTEx	<0.300	0.300	05/05/2017	ND									

Surrogate: 4-Bromofluorobenzene (PII) 96.8 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	800	16.0	05/04/2017	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	05/04/2017	ND	180	89.9	200	4.56	
DRO >C10-C28	<10.0	10.0	05/04/2017	ND	201	101	200	3.13	

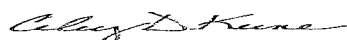
Surrogate: 1-Chlorooctane 95.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 101 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	05/03/2017	Sampling Date:	05/02/2017
Reported:	05/09/2017	Sampling Type:	Soil
Project Name:	WEST SHUGART 30 FED. NO. 1	Sampling Condition:	Cool & Intact
Project Number:	700794.450.01	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: S-4 1' (H701185-13)

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	05/05/2017	ND	1.86	93.1	2.00	0.758		
Toluene*	<0.050	0.050	05/05/2017	ND	1.72	85.8	2.00	0.799		
Ethylbenzene*	<0.050	0.050	05/05/2017	ND	1.69	84.6	2.00	0.614		
Total Xylenes*	<0.150	0.150	05/05/2017	ND	4.78	79.7	6.00	0.759		
Total BTEX	<0.300	0.300	05/05/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	608	16.0	05/04/2017	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	05/04/2017	ND	180	89.9	200	4.56	
DRO >C10-C28	<10.0	10.0	05/04/2017	ND	201	101	200	3.13	

Surrogate: 1-Chlorooctane 82.7 % 28.3-164

Surrogate: 1-Chlorooctadecane 101 % 34.7-157

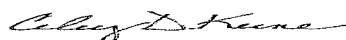
Sample ID: S-4 2' (H701185-14)

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	05/04/2017	ND	432	108	400	3.64		

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Analytical Results For:

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

 Received: 05/03/2017
 Reported: 05/09/2017
 Project Name: WEST SHUGART 30 FED. NO. 1
 Project Number: 700794.450.01
 Project Location: EDDY COUNTY, NM

 Sampling Date: 05/02/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

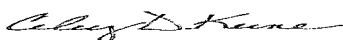
Sample ID: S-4 4' R (H701185-15)

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	05/04/2017	ND	432	108	400	3.64	

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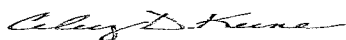
Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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

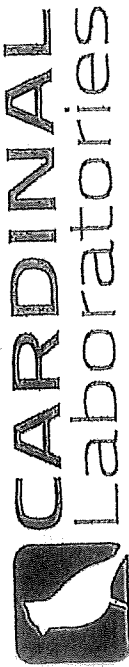
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Laboratories

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

Page 1 of 2
CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO										ANALYSIS REQUEST									
Company Name: Talon/LPE										P.O. #:									
Project Manager: Kimberly Wilson										Company: Talon/LPE									
Address: 408 W. Texas Ave.										Attn:									
City: Artesia										State: NM Zip: 88210									
Phone #: 575-746-8768										Fax #: 575-746-8905									
Project #:										Project Owner: Devon									
Project Name: W Shugart 30 Fed #1										City:									
Project Location: Eddy Cty										State:									
Sampler Name: Kim Wilson										Phone #:									
Fax #:										Matrix									
FOR LAB USE ONLY										PRESERV									
Lab I.D.										DATE									
Sample I.D.										TIME									
H7D1185										5/2/17 10:15									
1 S-1 0'										1									
2 1' R										1									
3 S-2 0										1									
4 1										1									
5 2										1									
6 3 5' R										1									
7 3 5' R										1									
8 S-3 0										1									
9 1										1									
10 2										1									

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Relinquished By: Kim Wilson Date: 5/2/17 Time: 12:00

Received By: Kim Wilson Date: 5-3-17 Time: 11:50

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition: Cool ☒ Yes ☐ No Intact ☒ Yes ☐ No

Temperature: 18°C

Checked By: Kim Wilson Initials: TD-#75

Remarks: BTEX TPH Chlorides

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

Fax Result: ☐ Yes ☐ No Add'l Fax #:



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

ANALYSIS REQUEST									
Company Name: Talon/LPE Project Manager: Kimberly Wilson Address: 408 W. Texas Ave. City: Artesia Phone #: 575-746-8768 State: NM Zip: 88210 Project #: Project Name: W Shugart 30 Fed # 1 Project Location: Eddy Cty Sampler Name: Kim Wilson					P.O. #: Company: Talon/LPE Attn: Address: City: State: Phone #: Fax #:				
<div style="display: flex; justify-content: space-between;"> <div> FOR LAB USE ONLY </div> <div> Matrix # CONTAINERS (C) RAB OR (C) CMP GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE ICE/COOL OTHER: </div> <div> PRESERV DATE TIME </div> <div> SAMPLING </div> </div>									
Lab I.D.	Sample I.D.								
HTD(185)									
11 S-3 3' R									
12 S-4 0' R									
13 1' R									
14 2' R									
15 4' R									
<div style="display: flex; justify-content: space-between;"> <div> Requisitioned By: Kim Wilson Received By: [Signature] </div> <div> Date: 3/3/17 Time: 12:00 </div> </div>									
<div style="display: flex; justify-content: space-between;"> <div> Requisitioned By: [Signature] </div> <div> Date: 3-3-17 Time: 11:50 </div> </div>									
Delivered By: (Circle One) Sampler - UPS - Bus - Other:									
Temperature: 18°C									
Remarks:									