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TALON LPE

Remediation Work Plan
Devon Energy: Burton Flat Deep Unit #008
|30-015-20959|2RP-3570|

October 17, 2016

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

Prepared For:
Devon Energy Corporation
6488 Seven Rivers Hwy. Artesia, NM 88210

Ms. Heather Patterson
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Soil Assessment and Work Plan**
Devon Energy Production Company, LP
Burton Flat Deep Unit #008
|30-015-20959|2RP-3570|

Dear Ms. Patterson,

Devon Energy Production Company, LP (Devon) has contracted Talon/LPE (Talon) to perform initial spill response, soil sampling 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 Burton Flat Deep Unit #008 is located approximately thirty-three (33) miles southeast of Artesia, New Mexico. The legal location for this facility is Unit Letter O, Section 27, Township 20 South and Range 28 East in Eddy County, New Mexico. More specifically the latitude and longitude are 32.5390663 North and -104.1635818 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 (NRCS), the soil in this area is made up of Reeves-gypsum land complex with 0 to 3 percent slopes. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

According to the New Mexico Office of the State Engineer the ground water in this area is approximately 70-feet below ground surface (BGS). Therefore the ranking for this site is a **10** based on the following:

Depth to ground water	50-100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

Based upon the site ranking of **10,** NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 1,000 mg/kg for TPH and 1,000 mg/kg for total chlorides.

Incident Description and Initial Remedial Actions

On February 25, 2016, a ½-inch ball valve was left open resulting in the release of approximately 10bbls of produced water. The ball valve was closed immediately upon discovery and a vacuum truck was dispatched to the site to recover standing fluids. Approximately 5bbls of fluid were recovered. All of the fluid remained on location. Talon mobilized personnel to conduct soil sampling within the impacted area at sample locations S-1 through S-3. At sample location S-3 only a surface sample was taken because underground lines prohibited further vertical delineation. See the site map in Appendix I for sample locations. The analytical results from the soil sampling event are summarized in the table below.

Laboratory Results

See Appendix IV for complete report of laboratory results.

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0	--	13700	--	--
S-1	1	--	3840	--	--
S-1	2	--	6160	--	--
S-1	3	--	9600	--	--
S-1	4	--	9460	--	--
S-1	5	--	600	--	--
S-1	6	--	90	--	--
S-2	0	--	18000	--	--
S-2	1	--	3320	--	--
S-2	2	--	1140	--	--
S-2	3	--	1020	--	--
S-2	4	--	285	--	--
S-2	5	--	206	--	--
S-2	6	--	258	--	--
S-3	0	--	2440	--	--

(--) Analyte Not Tested
(ND) Analyte Not Detected

Based upon the site ranking of **10**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 1,000 mg/kg for TPH and 1,000 mg/kg for chlorides.

Proposed Remedial Actions

- The impacted area in the vicinity of sample location S-1 will be excavated to a depth of 5-feet BGS.
- The impacted area in the vicinity of sample location S-2 will be excavated to a depth of 3-feet BGS.
- The impacted area in the vicinity of S-3 will be hand excavated due to the underground lines in this area. Field chloride titrations will be used to guide the depth of the excavation. Once field data indicates that all of the impacted soil above NMOCD's RRAL of 1,000 mg/kg for total chlorides has been achieved, the field data will be forwarded to NMOCD and BLM for approval to backfill this portion of the excavation.
- All of the excavated material will be hauled to a NMOCD approved solid waste disposal facility.
- Upon completion of excavation and receiving permission to backfill, the work area will be backfilled with caliche and contoured to match the surrounding location.

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

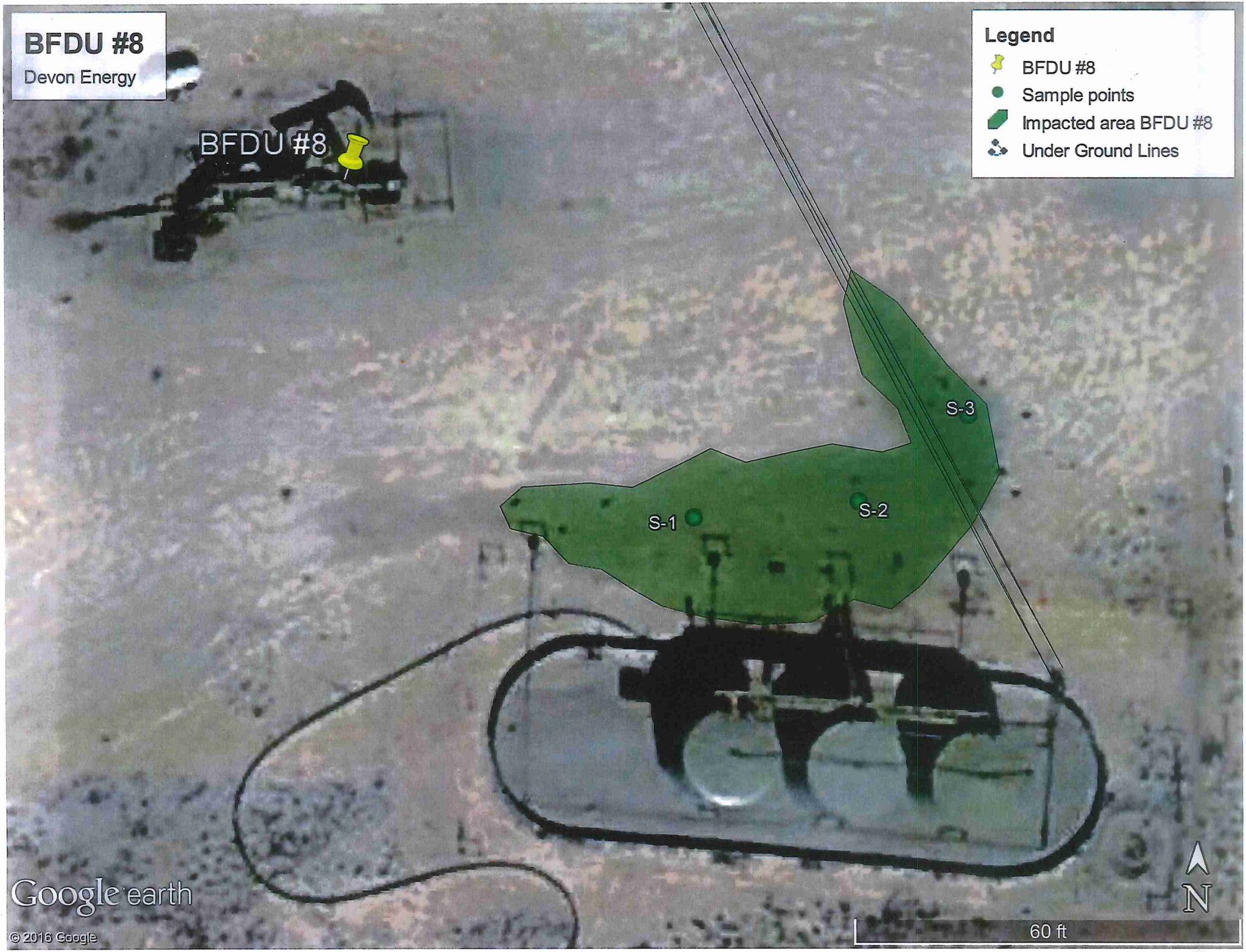
David J. Adkins
District Manager

Attachments

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

APPENDIX I

SITE PLAN


BFDU #8
Devon Energy
BFDU #8
Legend
BFDU #8
Sample points
Impacted area BFDU #8
Under Ground Lines
S-1
S-2
S-3
Google earth
© 2016 Google
60 ft
N

APPENDIX II

GROUNDWATER DATA

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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

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

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 01589 POD1	CP	ED	1	2	1	35	20S	28E	579674	3600121	873	109	70	39

Average Depth to Water: **70 feet**

Minimum Depth: **70 feet**

Maximum Depth: **70 feet**

Record Count: 1

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 578844 **Northing (Y):** 3600396 **Radius:** 1000

APPENDIX III

INITIAL 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

NM OIL CONSERVATION
ARTESIA DISTRICT
FEB 29 2016
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

nAB1606055123 6137 **OPERATOR** ☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production Company	**Contact** Enrique Campos, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	**Telephone No.** 575-513-1933
Facility Name Burton Flat Deep Unit #8	**Facility Type** Oil

Surface Owner Federal	**Mineral Owner** Federal	**API No** 30-015-20959

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	27	20S	28E	660	South	1980	East	Eddy

Latitude: N 32.5390663 **Longitude:** W 104.1635818

NATURE OF RELEASE

Type of Release Produced water	**Volume of Release** 10 BBLS	**Volume Recovered** 5 BBLS
Source of Release ½ inch ball valve	**Date and Hour of Occurrence** 2/25/2016 @ 10:50am	**Date and Hour of Discovery** 2/25/2016 @ 10:50am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** OCD-Mike Bratcher BLM-Jim Amos	
By Whom, Gilbert Sanchez, Assistant Production Foreman	**Date and Hour** OCD- 2/25/2016 @ 2:47pm BLM- 2/25/2016 @ 2:51pm	
Was a Watercourse Reached? ☐ Yes ☒ 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.*
½ inch ball valve on produced water load line was left open resulting in a release of 10 BBLS of produced water. Ball valve was immediately closed to prevent further release.

Describe Area Affected and Cleanup Action Taken.*
10 BBLS of produced water was released from the ½ inch ball valve on the water load line on the water tank located on the West side. All 10 BBLS produced water released remained on location. Vacuum truck recovered approximately 5 BBLS of the released produced water. The released produced water flowed in an Easterly direction affecting an area approximately 50 feet by 15 feet. 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: Dana DeLaRosa	OIL CONSERVATION DIVISION
Printed Name: Dana DeLaRosa	Approved by Environmental Specialist:
Title: Field Admin Support	Approval Date: 2/29/16 Expiration Date: N/A
E-mail Address: Dana.Delarosa@dvn.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 3/31/16 Attached ☐
Date:2/29/2016 Phone: 575.746.5594	

* Attach Additional Sheets If Necessary

2RP-3570

APPENDIX IV

LABORATORY RESULTS

CARDINAL Laboratories

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

June 16, 2016

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: BURTON FLAT DEEP #8

Enclosed are the results of analyses for samples received by the laboratory on 06/10/16 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/10/2016	Sampling Date:	06/07/2016
Reported:	06/16/2016	Sampling Type:	Soil
Project Name:	BURTON FLAT DEEP #8	Sampling Condition:	Cool & Intact
Project Number:	700794.190.01	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-1 0' (H601278-01)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**13700**	16.0	06/13/2016	ND	432	108	400	3.77	

Sample ID: S-1 1' (H601278-02)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3840**	16.0	06/13/2016	ND	432	108	400	3.77	

Sample ID: S-1 2' (H601278-03)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6160**	16.0	06/13/2016	ND	432	108	400	3.77	

Sample ID: S-1 3' (H601278-04)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9600**	16.0	06/13/2016	ND	432	108	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/10/2016	Sampling Date:	06/07/2016
Reported:	06/16/2016	Sampling Type:	Soil
Project Name:	BURTON FLAT DEEP #8	Sampling Condition:	Cool & Intact
Project Number:	700794.190.01	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-1 4' (H601278-05)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9460**	16.0	06/13/2016	ND	432	108	400	3.77	

Sample ID: S-2 0' (H601278-06)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**18000**	16.0	06/13/2016	ND	432	108	400	3.77	

Sample ID: S-2 1' (H601278-07)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3320**	16.0	06/13/2016	ND	432	108	400	3.77	

Sample ID: S-2 2' (H601278-08)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1140**	16.0	06/13/2016	ND	432	108	400	3.77	

Sample ID: S-2 3' REFUSAL (H601278-09)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1020**	16.0	06/13/2016	ND	432	108	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/10/2016	Sampling Date:	06/07/2016
Reported:	06/16/2016	Sampling Type:	Soil
Project Name:	BURTON FLAT DEEP #8	Sampling Condition:	Cool & Intact
Project Number:	700794.190.01	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-3 0' REFUSAL (H601278-10)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2440**	16.0	06/13/2016	ND	432	108	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Talon/LPE	BILL TO
Project Manager: Kimberly Wilson	P.O. #:
Address: 408 W. Texas Ave.	Company: Talon/LPE
City: Artesia State: NM Zip: 88210	Attn:
Phone #: 575-746-8768 Fax #: 575-746-8905	Address:
Project #: 700794.190.01 Project Owner: Devon	City:
Project Name: Burton Flat Deep #8	State: Zip:
Project Location: Eddy Cty	Phone #:
Sampler Name: Kim Wilson	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chlorides												
H601278															ANALYSIS REQUEST												
1	S-1 0'	G	1			X						X	6/7/16		X												
2	S-1 1'	G	1			X						X			X												
3	S-1 2'	G	1			X						X			X												
4	S-1 3'	G	1			X						X			X												
5	S-1 4'	G	1			X						X			X												
6	S-2 0'	G	1			X						X			X												
7	S-2 1'	G	1			X						X			X												
8	S-2 2'	G	1			X						X			X												
9	S-2 3' Refusal	G	1			X						X			X												
10	S-3 0' Refusal	G	1			X						X			X												

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 the client for the 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Kim Wilson	Date: 6/6/16 Time: 12:00	Received By: Sheldon Hern	
Relinquished By: Sheldon Hern	Date: 6/10/16 Time: 7:45	Received By: Jodi Henson	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 4.7°C	Sample Condition: Cool: ☑ Yes ☐ No; Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	

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

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

#45

David Adkins

From: David Adkins
Sent: Monday, October 17, 2016 12:10 PM
To: 'Megan.Zettlemoyer@pilotthomas.com'
Subject: sampling in Artesia, NM

Hello Megan,

I'm responding to your request for soil sampling and reporting to NMED for your project here in Artesia. The following estimate is based upon my understanding of your project requirements. Please don't hesitate to let me know if your scope of work is different than what was transmitted to me.

- Geoprobe Rig, one 20' boring, mobilization, etc...$2,200.00
- Project manager, field sampling, lab delivery of samples and NMED reporting...12 hr@ $95.00/hr...$1,140.00
- Lab analysis of sample $210.00

Estimated project total $3,550.00

Please let me know if you have any questions. Thank you.

Respectfully,

David J. Adkins
District Manager Artesia
Office: 575.746.8768
Direct: 575.616.4022
Cell: 575.441.4835
Fax: 575.746.8905
Emergency: 866.742.0742
Web: **www.talonlpe.com**

Analytical Report 538316

for

Talon LPE

Project Manager: Kimberly Wilson

Burton Flat Deep #8

700794.190.01

11-OCT-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

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11-OCT-16

Project Manager: **Kimberly Wilson**
Talon LPE
408 W. Texas St.
Artesia, NM 88210

Reference: XENCO Report No(s): **538316**
Burton Flat Deep #8
Project Address: Burton Flat Deep #8

Kimberly Wilson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 538316. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 538316 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 538316

Talon LPE, Artesia, NM

Burton Flat Deep #8

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-1	S	09-30-16 00:00	5 ft	538316-001
S-1	S	09-30-16 00:00	6 ft	538316-002
S-1	S	09-30-16 00:00	7 ft	538316-003
S-2	S	09-30-16 00:00	4 ft	538316-004
S-2	S	09-30-16 00:00	5 ft	538316-005
S-2	S	09-30-16 00:00	6 ft	538316-006

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 538316

Talon LPE, Artesia, NM

Project Name: Burton Flat Deep #8

Project Id: 700794.190.01
Contact: Kimberly Wilson
Project Location: Burton Flat Deep #8

Date Received in Lab: Fri Oct-07-16 02:45 pm
Report Date: 11-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	538316-001		538316-002		538316-003		538316-004		538316-005		538316-006	
	Field Id:	S-1		S-1		S-1		S-2		S-2		S-2	
	Depth:	5- ft		6- ft		7- ft		4- ft		5- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-30-16 00:00		Sep-30-16 00:00		Sep-30-16 00:00		Sep-30-16 00:00		Sep-30-16 00:00		Sep-30-16 00:00	
Inorganic Anions by EPA 300/300.1	*Extracted:*	Oct-10-16 09:35		Oct-10-16 09:35		Oct-10-16 09:35		Oct-10-16 09:35		Oct-10-16 09:35		Oct-10-16 09:35	
	Analyzed:	Oct-10-16 17:48		Oct-10-16 17:55		Oct-10-16 18:02		Oct-10-16 18:09		Oct-10-16 18:16		Oct-10-16 18:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		600	50.0	90.9	5.00	215	25.0	285	50.0	206	25.0	258	5.00

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

\+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

BS / BSD Recoveries

Project Name: Burton Flat Deep #8

Work Order #: 538316 **Project ID:** 700794.190.01

Analyst: MNR **Date Prepared:** 10/10/2016 **Date Analyzed:** 10/10/2016

Lab Batch ID: 3001741 **Sample:** 714723-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Inorganic Anions by EPA 300/300.1 **Analytes**	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
Chloride	<5.00	250	250	100	250	262	105	5	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Burton Flat Deep #8

Work Order # : 538316 **Project ID:** 700794.190.01

Lab Batch ID: 3001741 **QC- Sample ID:** 538189-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/10/2016 **Date Prepared:** 10/10/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	1720	250	1980	104	250	1970	100	1	90-110	20	

Lab Batch ID: 3001741 **QC- Sample ID:** 538316-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/10/2016 **Date Prepared:** 10/10/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	258	250	501	97	250	493	94	2	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

XENCO LABORATORIES

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Stafford, Texas (281-240-4200)

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Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

CHAIN OF CUSTODY

Page 1 of 1

Xenco Quote #:

Xenco Job #: 538316

Client / Reporting Information

Company Name / Branch: Talon/LPE

Company Address: 408 W Texas Artesia 88210

Email: Kwilson@talonlpe.com

Phone No: 575-602-3826

Project Contact: Kimberly Wilson

Samplers's Name: Kim Wilson

Project Information

Project Name/Number: 700794.190.01

Project Location: Burton Flat Deep #8

Invoice To: Talon/LPE

PO Number:

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides										Field Comments
1	S-1	5	9/30		S	1								/	/										
2	S-1	6	↓		S	1								/	/										
3	S-1	7	↓		S	1								/	/										
4	S-2	4	↓		S	1								/	/										
5	S-2	5	↓		S	1								/	/										
6	S-2	6	↓		S	1								/	/										
7																									
8																									
9																									
10																									

Analytical Information

Matrix Codes

A = Air
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW = Waste Water
W = Wipe
O = Oil

WW = Waste Water

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Kim Wilson	10/7 11:57	1 [signature]	2 [signature]	10/7/16 245	2 [signature] Mail Services
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time: 10-8-16 10:00	Received By: 4 Julian Martinez
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice ✓

Temp: IR ID:R-8

C/F: 0 4.5

Corrected Temp: 4.5

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless pr

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Talon LPE

Date/ Time Received: 10/07/2016 02:45:00 PM

Work Order #: 538316

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.5
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 10/10/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 10/10/2016