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TALON LPE

Remediation Work Plan (REVISED)
Devon Energy: Remuda Basin SWD #001
|30-015-29549|2RP-3743|

January 24, 2017

Prepared By:

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

Prepared For:

Devon Energy

Mr. Mike Bratcher
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Soil Assessment and Work Plan**
Devon Energy Production Company, LP
Remuda Basin SWD #001
|30-015-29549|2RP-3743|

Dear Mr. Bratcher,

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 Remuda Basin SWD #1 is located approximately twenty-seven (27) miles southeast of Carlsbad, New Mexico. The legal location for this facility is Unit Letter D, Section 20, Township 23 South and Range 30 East in Eddy County, New Mexico. More specifically the latitude and longitude are 32.2968178 North and -103.9101791 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 Simona-Bippus complex with 0 to 5 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 105-feet below ground surface (BGS). Therefore the ranking for this site is a **0** based on the following:

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

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 5,000 mg/kg for TPH and 1,000 mg/kg for total chlorides.

Incident Description and Initial Remedial Actions

On June 12, 2016, the injection pump at this site failed resulting in a tank overflow and the release of approximately 500bbls of produced water. The produced water flowed across the location, breached the berm on the west side of the location, and flowed down gradient into the pasture for approximately 408-feet as shown on the attached site plan.

In February 2014, a previous release (2RP-2195) covered nearly an identical footprint on the well pad as the current June 2016 incident. Due to the presence of shallow rock on the location, the New Mexico Oil Conservation Division (NMOCD) District 2 and the Bureau of Land Management (BLM) Carlsbad Field Office gave permission for a 0.5-foot excavation on the well pad and issued a deferral of further remedial actions on the well pad and battery area until closure of the facility.

After reviewing the initial work plan NMOCD requested that a single soil boring be drilled east of sample location S-3. This location was chosen because it was determined to be the area of greatest concern in regards to vertical soil impacts.

On January 17, 2017, Talon mobilized an air rotary drill rig to vertically delineate the area described above. The results of our soil sampling activities are summarized in the tables below.

Laboratory Results

See Appendix IV for complete report of laboratory results.

July 28, 2016

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0	--	60800	--	--
S-1	1	--	16800	--	--
S-1	2	--	16800	--	--
S-1 REFUSAL	3	--	9800	--	--
S-2	0	ND	56800	ND	ND
S-2	1	--	6930	--	--
S-2	2	--	7600	--	--
S-2 REFUSAL	3	--	4800	--	--
S-3	0	--	44800	--	--
S-3	1	--	12800	--	--
S-3	2	--	20800	--	--
S-3 REFUSAL	3	--	15200	--	--
S-4	0	--	13200	--	--
S-4	1	--	9200	--	--
S-4	2	--	15000	--	--
S-4 REFUSAL	3	--	11000	--	--
S-5	0	--	4800	--	--
S-5	1	--	8800	--	--
S-5 REFUSAL	2	--	6800	--	--
S-6	0	--	12400	--	--
S-6	1	--	3320	--	--
S-6	2	--	1550	--	--
S-6	3	--	2560	--	--
S-6	4	--	2480	--	--
S-6 REFUSAL	5	--	2760	--	--

January 17, 2017

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
BH-1	5	--	2820	--	--
BH-1	10	--	191	--	--
BH-1	15	--	135	--	--

Proposed Remedial Actions

- The impacted area on the well pad in the vicinity of sample locations S-1 through S-3 will be excavated to a depth 0.5-bgs. The excavation will be backfilled with caliche. The remaining chloride impacts will be remediated at the closure of the facility, per NMOCD and BLM guidance on 2RP-2195.

- The impacted area in the pasture in the vicinity of sample locations S-4 through S-6 will be excavated to the top of rock (refusal).

- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.

- Prior to backfilling areas S-4 through S-6, 0.5-feet of machine compacted caliche will be placed in the bottom of the excavation to act as additional capping material.

- The remaining vertical depth of the excavation will be backfilled with top soil, contoured to match the surrounding terrain and seeded with BLM #2 seed mixture.

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

Sheldon L. Hitchcock
Project Manager

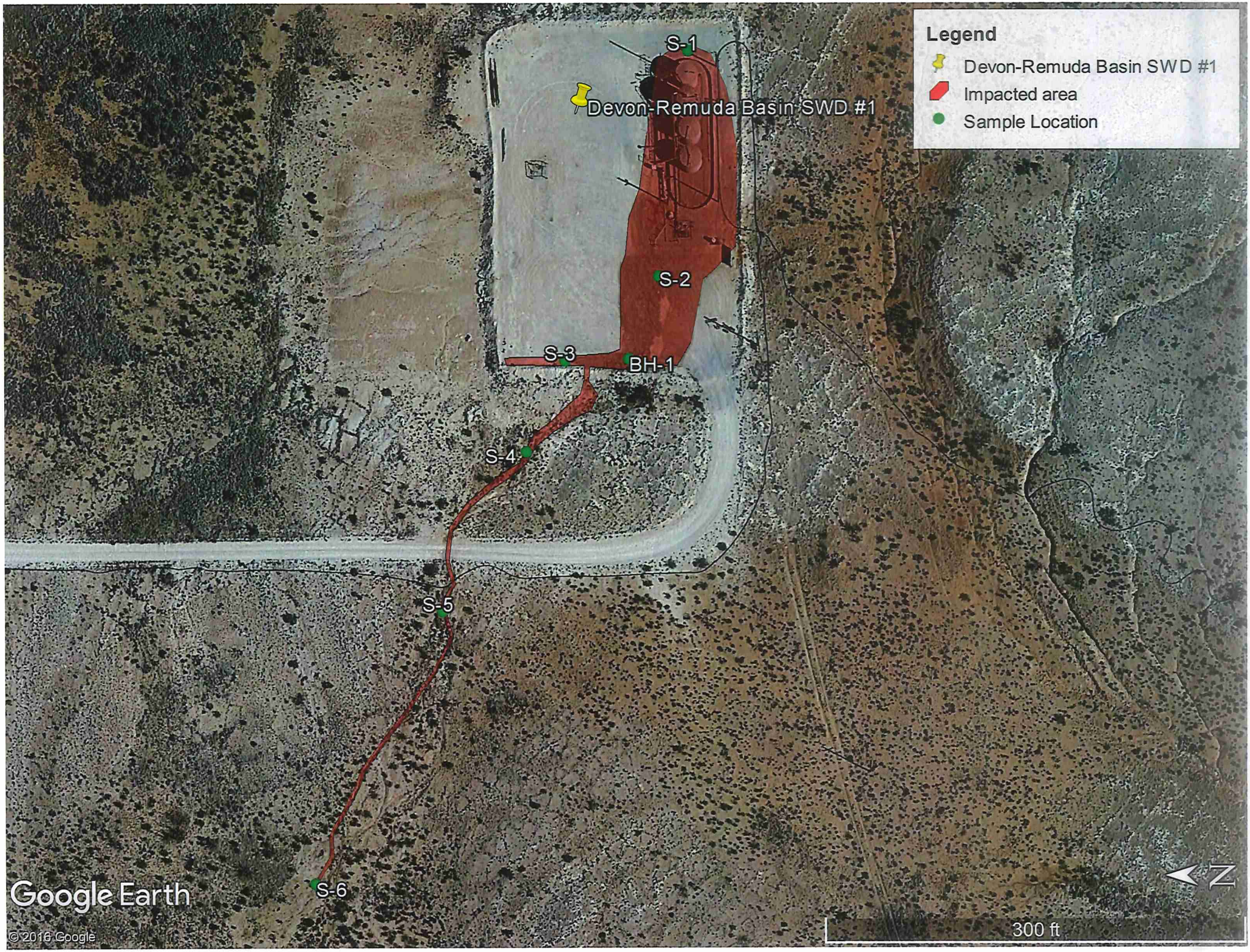
David J. Adkins
District Manager

Attachments

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

APPENDIX I

SITE PLAN


Legend
Devon-Remuda Basin SWD #1
Impacted area
Sample Location
S-1
Devon-Remuda Basin SWD #1
S-2
S-3
BH-1
S-4
S-5
S-6
Google Earth
© 2016 Google
300 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
C 02486	C	ED	3	2	3	19	23S	30E	601304	3572832*	1603	350		
C 03478 POD1	C	ED	3	2	1	21	23S	30E	604638	3573670	2022	230	105	125

Average Depth to Water: **105 feet**

Minimum Depth: **105 feet**

Maximum Depth: **105 feet**

Record Count: 2

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 602617 **Northing (Y):** 3573752 **Radius:** 5000

***UTM location was derived from PLSS - see Help**

APPENDIX III

INITIAL C-141

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 14 2016
RECEIVED

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

nAB1601607403O9

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Devon Energy Production Company 6137	**Contact** Matt Nettles, Production Foreman
Address 6488 Seven Rivers Hwy Artesia, NM 88210	**Telephone No.** 575.513.5767
Facility Name Remuda Basin SWD 1	**Facility Type** Salt Water Disposal

Surface Owner Federal	**Mineral Owner** Federal	**API No** 30-015-29549

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	20	23S	30E	330	FNL	660	FWL	Eddy

Latitude: 32.2966716 **Longitude:** -103.90964

NATURE OF RELEASE

Type of Release Produced Water	**Volume of Release** 500BBLS	**Volume Recovered** 480BBLS
Source of Release Injection Pump	**Date and Hour of Occurrence** 6/12/2016 @ 2:30PM	**Date and Hour of Discovery** 6/12/2016 @ 2:30PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** BLM-Shelly Tucker OCD-Mike Bratcher	
By Whom? Jeremy Porras, Assistant Production Foreman	**Date and Hour** BLM-6/12/2016 @ 2:33PM OCD-6/12/2016 @ 2:35PM	
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.*
As a result of mechanical failure injection pump failed to kick on and alarms were not activated resulting in 500BBLS of PW overflowing from the tanks. Produced water was also diverted another water disposal to prevent further release. Communication problem has been resolved.

Describe Area Affected and Cleanup Action Taken.*
500BBLS of pw was released as a result of the tanks overflowing. The release flowed in a southwestern direction and did reach the pasture. 480BBLS pw was recovered via vacuum truck. The approximate size of the total affected area was a 500ft by 500ft. An environmental company 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

Printed Name: Dana DeLaRosa

Title: Field Admin Support

E-mail Address: dana.delarosa@dvn.com

Date: 6/13/2016 Phone: 575.746.5594

OIL CONSERVATION DIVISION

Signed By: Mike Bratcher

Approved by Environmental Specialist:

Approval Date: 10/14/16 Expiration Date: N/A

Conditions of Approval:
Remediation per O.C.D. Rules & Guidelines
~~SUBMIT REMEDIATION PROPOSAL NO~~
LATER THAN: 7/15/17

Attached ☐

2RP-3743

* Attach Additional Sheets If Necessary

APPENDIX IV

LABORATORY RESULTS

CARDINAL Laboratories

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

July 29, 2016

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: REMUDA SWD

Enclosed are the results of analyses for samples received by the laboratory on 07/28/16 16:15.

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 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,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	07/28/2016	Sampling Date:	07/28/2016
Reported:	07/29/2016	Sampling Type:	Soil
Project Name:	REMUDA SWD	Sampling Condition:	Cool & Intact
Project Number:	700794.198.01	Sample Received By:	Jodi Henson
Project Location:	DEVON		

Sample ID: S-1 0' (H601693-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**60800**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-1 1' (H601693-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16800**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-1 2' (H601693-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16800**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-1 3' REFUSAL (H601693-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9800**	16.0	07/29/2016	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	07/28/2016	Sampling Date:	07/28/2016
Reported:	07/29/2016	Sampling Type:	Soil
Project Name:	REMUDA SWD	Sampling Condition:	Cool & Intact
Project Number:	700794.198.01	Sample Received By:	Jodi Henson
Project Location:	DEVON		

Sample ID: S-2 0' (H601693-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/29/2016	ND	2.32	116	2.00	0.836	
Toluene*	<0.050	0.050	07/29/2016	ND	2.36	118	2.00	0.985	
Ethylbenzene*	<0.050	0.050	07/29/2016	ND	2.27	113	2.00	1.15	
Total Xylenes*	<0.150	0.150	07/29/2016	ND	6.81	114	6.00	1.08	
Total BTEX	<0.300	0.300	07/29/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.6-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**56800**	16.0	07/29/2016	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	07/28/2016	ND	196	98.0	200	1.79	
DRO >C10-C28	<10.0	10.0	07/28/2016	ND	214	107	200	2.98	

Surrogate: 1-Chlorooctane *76.8 %* *35-147*

Surrogate: 1-Chlorooctadecane *84.6 %* *28-171*

Sample ID: S-2 1' (H601693-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6930**	16.0	07/29/2016	ND	416	104	400	0.00	

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*=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	07/28/2016	Sampling Date:	07/28/2016
Reported:	07/29/2016	Sampling Type:	Soil
Project Name:	REMUDA SWD	Sampling Condition:	Cool & Intact
Project Number:	700794.198.01	Sample Received By:	Jodi Henson
Project Location:	DEVON		

Sample ID: S-2 2' (H601693-07)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7600**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-2 3' REFUSAL (H601693-08)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4800**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-3 0' (H601693-09)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**44800**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-3 1' (H601693-10)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**12800**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-3 2' (H601693-11)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**20800**	16.0	07/29/2016	ND	416	104	400	0.00	

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*=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	07/28/2016	Sampling Date:	07/28/2016
Reported:	07/29/2016	Sampling Type:	Soil
Project Name:	REMUDA SWD	Sampling Condition:	Cool & Intact
Project Number:	700794.198.01	Sample Received By:	Jodi Henson
Project Location:	DEVON		

Sample ID: S-3 3' REFUSAL (H601693-12)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**15200**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-4 0' (H601693-13)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**13200**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-4 1' (H601693-14)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9200**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-4 2' (H601693-15)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**15000**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-4 3' REFUSAL (H601693-16)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11000**	16.0	07/29/2016	ND	416	104	400	0.00	

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	07/28/2016	Sampling Date:	07/28/2016
Reported:	07/29/2016	Sampling Type:	Soil
Project Name:	REMUDA SWD	Sampling Condition:	Cool & Intact
Project Number:	700794.198.01	Sample Received By:	Jodi Henson
Project Location:	DEVON		

Sample ID: S-5 0' (H601693-17)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4800**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-5 1' (H601693-18)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**8800**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-5 2' REFUSAL (H601693-19)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6800**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-6 0' (H601693-20)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**12400**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-6 1' (H601693-21)

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	07/29/2016	ND	416	104	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	07/28/2016	Sampling Date:	07/28/2016
Reported:	07/29/2016	Sampling Type:	Soil
Project Name:	REMUDA SWD	Sampling Condition:	Cool & Intact
Project Number:	700794.198.01	Sample Received By:	Jodi Henson
Project Location:	DEVON		

Sample ID: S-6 2' (H601693-22)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1550**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-6 3' (H601693-23)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2560**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-6 4' (H601693-24)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2480**	16.0	07/29/2016	ND	416	104	400	0.00	

Sample ID: S-6 5' REFUSAL (H601693-25)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2760**	16.0	07/29/2016	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

Mike Snyder For 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: DAVID ADKINS	P.O. #: 700794198O1
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 #: 700794.198.01 Project Owner: Devon	City:
Project Name: Remuda SWD	State: Zip:
Project Location:	Phone #:
Sampler Name: Carlos Jarmillo	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	ANALYSIS REQUEST: TOTAL CHLORIDES	TPH	BTEX
H601693-1	S-1 0'	G	1			✓							7/28/16		✓		
-2	S-1 1'														✓		
-3	S-1 2'														✓		
-4	S-1 3' refusal										✓				✓	–	–
-5	S-2 0'														✓		
-6	S-2 1'														✓		
-7	S-2 2'														✓		
-8	S-2 3' refusal														✓		
-9	S-3 0'																
-10	S-3 1'																

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:	Date: 7/28/16	Received By: Jodi Henson	
Relinquished By:	Time: 4:15	Received By:	
	Date:		
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other: 4.7°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) CHK

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

P: 1 of 3

* Rush results please.

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

#74

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

		BILL TO	
Company Name:	Talon/LPE	P.O. #:	700794.19801
Project Manager:	DAVID ADKINS	Company:	Talon/LPE
Address:	408 W. Texas Ave.	Attn:	
City:	Artesia	State: NM Zip: 88210	Address:
Phone #:	575-746-8768	Fax #: 575-746-8905	City:
Project #:	700794.198.01	Project Owner: DEVON	State: Zip:
Project Name:	Remuda SWD		Phone #:
Project Location:			Fax #:
Sampler Name:	Carlos Jarmillo		

ANALYSIS REQUEST

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	SAMPLING TIME	TOTAL CHLORIDES
H601693																
11	S-3	2'	G	1			X							7/28/16		X
12	S-3	3' Refusal														X
13	S-4	0'														X
14	S-4	1'														X
15	S-4	2'														X
16	S-4	3' Refusal														X
17	S-5	0'														X
18	S-5	1'														X
19	S-5	2' Refusal														X

Relinquished By:	Date: 7/28/16	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 4:15		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: P. 2 of 3
	Time:		Rush

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 4.7°C

Sample Condition: Cool ☑ Yes ☐ No / Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

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

#79

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: DAVID ADKINS	P.O. #: 700794.198.01
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 #: 700794.198.01 Project Owner: DEVON	City:
Project Name: Remuda SWD	State: Zip:
Project Location:	Phone #:
Sampler Name: Carlos Jarmillo	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	ANALYSIS REQUEST: TOTAL CHLORIDES
H601693															
20	S-6 0'	G	1			1							7/28/16		1
21	S-6 1'														1
22	S-6 2'														1
23	S-6 3'														1
24	S-6 4'														1
25	S-6 5' Refusal														

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:	Date: 7/29/16	Received By: Jodi Henson	
Relinquished By:	Time: 4:15	Received By:	
	Date:		
	Time:		

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: P. 3 of 3

Rush

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 4.7°C

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

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

#76

Analytical Report 544312

for

Talon LPE

Project Manager: Sheldon Hitckcock

Remuda Basin SWD #1

70794.198.01

24-JAN-17

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)

Table of Contents

24-JAN-17

Project Manager: **Sheldon Hitckcock**
Talon LPE
408 W. Texas St.
Artesia, NM 88210

Reference: XENCO Report No(s): **544312**
Remuda Basin SWD #1
Project Address:

Sheldon Hitckcock:

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) 544312. 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. 544312 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 544312

Talon LPE, Artesia, NM

Remuda Basin SWD #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1 5'	S	01-17-17 12:45		544312-001
BH-1 10'	S	01-17-17 12:55		544312-002
BH-1 15'	S	01-17-17 13:05		544312-003

Client Name: Talon LPE

Project Name: Remuda Basin SWD #1

Project ID: *70794.198.01*
Work Order Number(s): *544312*

Report Date: *24-JAN-17*
Date Received: *01/18/2017*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Talon LPE, Artesia, NM

Remuda Basin SWD #1

Sample Id: **BH-1 5'** Matrix: Soil Sample Depth:

Lab Sample Id: 544312-001 Date Collected: 01.17.17 12.45 Date Received: 01.18.17 09.56

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: MNR % Moist: Tech: MNR

Seq Number: 3008172 Date Prep: 01.23.17 09.00

Prep seq: 718858

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**2820**	50.0	8.58	mg/kg	01.23.17 14:54		10

Sample Id: **BH-1 10'** Matrix: Soil Sample Depth:

Lab Sample Id: 544312-002 Date Collected: 01.17.17 12.55 Date Received: 01.18.17 09.56

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: MNR % Moist: Tech: MNR

Seq Number: 3008172 Date Prep: 01.23.17 09.00

Prep seq: 718858

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**191**	50.0	8.58	mg/kg	01.23.17 15:01		10

Sample Id: **BH-1 15'** Matrix: Soil Sample Depth:

Lab Sample Id: 544312-003 Date Collected: 01.17.17 13.05 Date Received: 01.18.17 09.56

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: MNR % Moist: Tech: MNR

Seq Number: 3008172 Date Prep: 01.23.17 09.00

Prep seq: 718858

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**135**	50.0	8.58	mg/kg	01.23.17 15:08		10

Certificate of Analytical Results
544312

Talon LPE, Artesia, NM
Remuda Basin SWD #1

Sample Id: **718858-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 718858-1-BLK Date Collected: Date Received:

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: MNR % Moist: Tech: MNR

Seq Number: 3008172 Date Prep: 01.23.17 09.00

Prep seq: 718858

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	01.23.17 10:57	U	1

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: Remuda Basin SWD #1

Work Order #: 544312 **Project ID:** 70794.198.01

Analyst: MNR **Date Prepared:** 01/23/2017 **Date Analyzed:** 01/23/2017

Lab Batch ID: 3008172 **Sample:** 718858-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 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	<0.858	250	250	100	250	252	101	1	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: Remuda Basin SWD #1

Work Order # : 544312 **Project ID:** 70794.198.01

Lab Batch ID: 3008172 **QC- Sample ID:** 544401-009 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 01/23/2017 **Date Prepared:** 01/23/2017 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 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	571	250	766	78	250	778	83	2	90-110	20	X

Lab Batch ID: 3008172 **QC- Sample ID:** 544669-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 01/23/2017 **Date Prepared:** 01/23/2017 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 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	459	250	698	96	250	703	98	1	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

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.

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200) | Odessa, Texas (432-563-1800) | Lakeland, Florida (863-646-8526)

Dallas, Texas (214-902-0300) | Norcross, Georgia (770-449-8800) | Tampa, Florida (813-620-2000)

Service Center - San Antonio, Texas (210-509-3334) | www.xenco.com

Xenco Quote # | Xenco Job # 544312

Client / Reporting Information

Company Name / Branch: Talon Artesia

Company Address: 408 W. Texas Ave Artesia, NM 88210

Email: slwitchcock@talonlpe.com | Phone No:

Project Contact: Sheldon Hitchcock

Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Remuda Basin SWD#1

Project Location:

Invoice To: S. Hitchcock

PO Number: 70794.198.01

Analytical Information

Total Chlorides

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Total Chlorides	Field Comments
1	BH-1 5'	5'	1/12/17	12:45	S	1								X	X	
2	BH-1 10'	10'	1/12/17	12:55	S	1								X	X	
3	BH-1 15'	15'	1/12/17	1:05	S	1								X	X	
4																
5																
6																
7																
8																
9																
10																

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] 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 III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

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	Sheldon Hitchcock		1 Brianne Walker	2		2 Kramer 1.18.17 950
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. Thermo Corr. Factor

Temp: IR ID:R-8

CF:+ 0.1 3 7

Corrected Temp: 3.8

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 previous

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Talon LPE

Date/ Time Received: 01/18/2017 09:56:00 AM

Work Order #: 544312

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)?	3.8	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seal present on shipping container/ cooler?	Yes	
#5 *Custody Seals intact on shipping container/ cooler?	Yes	
#6 Custody Seals intact on sample bottles?	Yes	
#7 *Custody Seals Signed and dated?	Yes	
#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: 01/18/2017

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 01/18/2017