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## Soil Assessment and Remediation Work Plan

Myrtle Myra No. 8 \* 30-015-43372 \* 1572 Talon Project No. 701771.002.01

## **Prepared For:**

Endurance Resources PO Box 1466 Artesia, NM 88211

## Prepared By:

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

September 20, 2016

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

Subject:

Soil Assessment and Remediation Work Plan

Myrtle Myra No. 8

API#: 30-015-43372 \* 2RP-1572

Dear Mr. Bratcher,

Endurance Resources 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 Myrtle Myra No. 8 is located approximately thirty-eight (38) miles south east of Artesia, New Mexico. The legal location for this release is Unit Letter B, Section 16, Township 21 South and Range 27 East in Lea County, New Mexico. More specifically the latitude and longitude for the release are 32.4855843 North and -104.1928024 West. A site plan is presented in Appendix I

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services (NRSC) the soil in this area is made up of Simona-Bippus land complex soils with 0 to 5 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology, Quaternary Age sedimentary deposits, is comprised of alluvium and eolian sands which includes silty soils under lain by dense caliche layers. Drainage courses in this area are normally dry.

### **Ground Water and Site Ranking**

The New Mexico State Engineer web site indicates the nearest ground water data to be in S9-T21S-R27E. The ground water in Section 9 is reported to be at depth of 120' below ground surface (BGS). 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, 1,000 mg/kg for TPH and 1,000 mg/kg for total chlorides.

### **Incident Description and Initial Remedial Actions**

On March 3, 2013 the casing failed at the wellhead casing a release of 40 barrels of produced water. The flow path measured approximately 10 to 15-feet wide by 300-feet long off the northwest side of the pad continuing down the draw at that time. See initial C-141 in Appendix III. Subsequently, surface water run-off during the past three years has spread the impacted area to the current aerial extent shown on the attached site plan.

A site assessment and soil sampling activities for the construction of a work plan was performed. Initial soil samples were collected utilizing a hand auger to a depth of 1-feet BGS where refusal was encountered.

On July 13, 2016 a backhoe was mobilized for further vertical delineation of the impacted area. However, due to the shallow rock layers encountered the vertical impacts could not be fully investigated. Following a meeting with the New Mexico Oil Conservation Division (NMOCD), on June 15, 2016, Talon personnel returned to the location to obtain additional samples at greater depths utilizing an air rotary drill rig as directed by the NMOCD.

Boreholes were advanced inside of the impacted area at sample locations S-1 and S-5 per NMOCD. The results of all the sampling events at this location are summarized in the data tables 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	ND	38800	ND	832
S-1	0.5	ND	6000	ND	13.7
S-1	1		3960		
S-1R	2		4120		
S-2	0		3600		
S-2	1		1840		
S-2	3		2720		'
S-2	5		2960		
S-2	7		2680		
S-2	9		3120		
S-2	11		2120		
S-3	0		15600		
S-3	1		816		
S-3	3		1260		
S-3	5		576		
S-3	7		48		

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-4	0	ND	20600	ND	27.2
S-4	0.5	ND	4800	ND	ND
S-4	1		4800	,	
S-4R	3		6240		
S-5	0		20000		
S-5	0.5		6800		
S-5	1		4240		
S-5	3		3960		
S-5	5		3520		
S-5	3		3960		
S-5	5		3520		200 300
S-5	7		3120		
S-5	9		3440		
S-5	11		3600		
S-6	0		11200		
S-6	0.5		6130		
S-6	1		4160		
S-6R	1.5		4480		
S-7	0		3120		
S-7R	1		1880		
S-8	0		128		<del></del>
S-9	0		2880		
S-9	0.25		1720		
S-9	1		4240		
S-9R	1.5		2720		
S-10	0		208		
S-10R	0.5		388		

(R) Refusal/Top of Rock

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

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	5'		207		
S-1	10'		2320		
S-1	15'		1980		
S-1	20'		649		
S-5	15'		3440		
S-5	25'		278		
S-5	30'		305		
S-5	35'		301		
S-5	40'		126		

(--) Analyte Not Tested

### **Proposed Remedial actions**

- The impacted areas in the vicinity of sample locations S-1, S-2, S-4, S-5 and S-6 will be excavated to a depth of 4-feet deep or to the extent possible where refusal with an excavator is encountered at top of rock. A 20 mil liner will be laid within the excavated area at this location. Pictures will be taken at depths and areas will be documented where 4-foot depths cannot be achieved due to top of rock.
- The area around sample location S-3 will be scraped to a depth of 0.5-foot deep. The impacted area in the vicinity of sample location S-7 will be excavated to 1-feet deep and the area around S-9 will be excavated to the depth 1.5-feet deep where refusal was encountered.
- All of the excavated material will be hauled to Lea Land LLC, a NMOCD approved disposal facility.
- The backfilled area will be contoured to match the surrounding terrain and left in a "rough" condition to approximate natural surface deviations, control erosion, and promote revegetation.
- Erosion control berms, water bars and diversion berms will be constructed to prevent storm water washout.
- Immediately following preparation of the site, a Culti-Pack Seed Drill will be utilized to plant 2 acre of 50% of BLM #3 & #4 seed mixture for shallow/rocky environments following manufacture recommended application rates. The site will be monitored by Endurance Resources personnel to insure proper revegetation. Should revegetation not take place then further amendments will be applied.
- During Talon's site assessment no obvious noxious or undesirable weeds such as African rue, Russian thistle, etc. were noted. All equipment to be used at this location will be washed prior to mobilization to prevent potential spread of noxious weeds to this site. Should noxious weeds develop during the revegetation process, BLM will be notified and a strategy for weed removal will be developed (herbicide, mechanical removal, etc.) depending on the plant type and extent of infestation.
- A final closure report documenting all remedial actions, analytical results, a final C-141 and seeding labels will be provided to the NMOCD District II Artesia Office and BLM.

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 MAP



# 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)

1 4 09 21S 27E

(NAD83 UTM in meters)

(In feet)

POD Sub-

QQQ

Distance

Depth Depth Water Well Water Column

**POD Number** C 01339

Code basin County 64 16 4 Sec Tws Rng ED

575842 3595353\*

810 425 120

120 feet

305

Average Depth to Water:

Minimum Depth: Maximum Depth: 120 feet 120 feet

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 575844

Northing (Y): 3594543

Radius: 820

\*UTM location was derived from PLSS - see Help

# 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**

Form C-141 Revised August 8, 2011

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

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

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MMLa	13064	135875	5	2703 eces 240	329	OPERAT	OR /		☑ Initia	l Report	☐ Final Report
Name of Co	mpany En	DULANCE	REDU	eces Lic	10	Contact /	NOALL HARA				
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Facility Nar	ne Myrr	GE MYRA I	48	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u> </u> F	acility Typ	e SWN				
Surface Ow	ner <i>5</i> 7	7992		Mineral O	wner	STATE			API No	30-015	-21650
				LOCA	MOIT.	OF REI	EASE				
Unit Letter	Section	Township	Range	Feet from the	North/S	South Line	Feet from the	East/V	West Line	County	
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# APPENDIX IV LABORATORY RESULTS



June 21, 2016

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: MYRTLE MYRA #8

Enclosed are the results of analyses for samples received by the laboratory on 06/16/16 13:35.

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 <a href="https://www.tceq.texas.qov/field/qa/lab">www.tceq.texas.qov/field/qa/lab</a> 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.

Celeg D. Keine

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



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

Received:

06/16/2016

Reported:

06/21/2016

Project Name:

MYRTLE MYRA #8

Project Number: Project Location:

NONE GIVEN EDDY COUNTY, NM Sampling Date:

06/15/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

### Sample ID: S-1 0' (H601329-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS				2	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2016	ND	1.88	94.2	2.00	0.942	
Toluene*	<0.050	0.050	06/20/2016	ND	1.95	97.3	2.00	1.52	
Ethylbenzene*	<0.050	0.050	06/20/2016	ND	1.80	90.1	2.00	1.39	
Total Xylenes*	<0.150	0.150	06/20/2016	ND	5.72	95.3	6.00	0.620	
Total BTEX	<0.300	0.300	06/20/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	104 9	% 73.6-14	0						
Chloride, SM4500CI-B	mg/	kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	38800	16.0	06/20/2016	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/18/2016	ND	182	91.2	200	0.0713	
DRO >C10-C28	832	10.0	06/18/2016	ND	198	98.9	200	7.68	
Surrogate: 1-Chlorooctane	79.6	% 35-147	a.						
Surrogate: 1-Chlorooctadecane	101 9	% 28-171							

### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene



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

Received:

06/16/2016

Reported:

06/21/2016

Project Name: Project Number: MYRTLE MYRA #8

Project Location:

NONE GIVEN EDDY COUNTY, NM Sampling Date:

06/15/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S-1 0.5' (H601329-02)

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	06/20/2016	ND	1.88	94.2	2.00	0.942	
Toluene*	<0.050	0.050	06/20/2016	ND	1.95	97.3	2.00	1.52	
Ethylbenzene*	<0.050	0.050	06/20/2016	ND	1.80	90.1	2.00	1.39	
Total Xylenes*	<0.150	0.150	06/20/2016	ND	5.72	95.3	6.00	0.620	
Total BTEX	<0.300	0.300	06/20/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	103 9	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
, many co	resure	reporting Limit	rilaryzea						
,	6000	16.0	06/20/2016	ND	416	104	400	3.77	
,		16.0	06/20/2016			104	400	3.77	
Chloride	6000	16.0	06/20/2016	ND		104 % Recovery	400 True Value QC	3.77 RPD	Qualifier
Chloride TPH 8015M	6000 mg/	16.0 kg	06/20/2016 Analyze	ND d By: MS	416				Qualifier
Chloride TPH 8015M Analyte	6000 mg/ Result	16.0  kg  Reporting Limit	06/20/2016 Analyze Analyzed	ND d By: MS  Method Blank	416 BS	% Recovery	True Value QC	RPD	Qualifier
Chloride TPH 8015M  Analyte GRO C6-C10	6000 mg/ Result <10.0	16.0 kg  Reporting Limit 10.0 10.0	06/20/2016  Analyze  Analyzed  06/18/2016  06/18/2016	ND d By: MS  Method Blank  ND	8S 182	% Recovery 91.2	True Value QC 200	RPD 0.0713	Qualifier

### Sample ID: S-2 0' (H601329-03)

Chloride, SM4500Cl-B		mg/kg Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3600	16.0	06/20/2016	ND	416	104	400	3.77	

### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene



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

Received:

Reported:

06/21/2016

Project Name: Project Number: MYRTLE MYRA #8 NONE GIVEN

EDDY COUNTY, NM

Project Location:

06/16/2016

Sampling Date:

06/15/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S-3 0' (H601329-04)

Chloride, SM4500Cl-B

Chloride

mg/kg

Analyzed By: AP

Analyte

Result 15600 Reporting Limit 16.0

Analyzed 06/20/2016 Method Blank ND

BS % Recovery 416

104

True Value QC

400

**RPD** 3.77 Qualifier

Sample ID: S-4 0' (H601329-05)

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	06/20/2016	ND	1.88	94.2	2.00	0.942	
Toluene*	<0.050	0.050	06/20/2016	ND	1.95	97.3	2.00	1.52	
Ethylbenzene*	<0.050	0.050	06/20/2016	ND	1.80	90.1	2.00	1.39	
Total Xylenes*	<0.150	0.150	06/20/2016	ND	5.72	95.3	6.00	0.620	
Total BTEX	<0.300	0.300	06/20/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	103 9	% 73.6-14	0					· ·	

Chloride, SM4500Cl-B	mg,	mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	20600	16.0	06/20/2016	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/18/2016	ND	182	91.2	200	0.0713	

06/18/2016

ND

198

98.9

200

Surrogate: 1-Chlorooctane 78.4 % 35-147 76.5 % 28-171 Surrogate: 1-Chlorooctadecane

27.2

10.0

Cardinal Laboratories

DRO >C10-C28

\*=Accredited Analyte

7.68

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Celeg to treens



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

Received:

06/16/2016

06/21/2016

Reported: Project Name:

MYRTLE MYRA #8

Project Number:

NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

06/15/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S-4 0.5' (H601329-06)

BTEX 8021B	mg/kg		Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/20/2016	ND	1.88	94.2	2.00	0.942	
Toluene*	<0.050	0.050	06/20/2016	ND	1.95	97.3	2.00	1.52	
Ethylbenzene*	<0.050	0.050	06/20/2016	ND	1.80	90.1	2.00	1.39	
Total Xylenes*	<0.150	0.150	06/20/2016	ND	5.72	95.3	6.00	0.620	
Total BTEX	<0.300	0.300	06/20/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	105 %	% 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	06/20/2016	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	06/18/2016	ND	182	91.2	200	0.0713	
DRO >C10-C28	<10.0	10.0	06/18/2016	ND	198	98.9	200	7.68	
Surrogate: 1-Chlorooctane	83.1	% 35-147	7						
Surrogate: 1-Chlorooctadecane	86.9	% 28-171	ř						

### Sample ID: S-5 0' (H601329-07)

Chloride, SM4500Cl-B mg/kg		/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	20000	16.0	06/20/2016	ND	416	104	400	3.77	

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\*=Accredited Analyte

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Celey D. Keine



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

Received:

06/16/2016

Reported:

06/21/2016

Project Name: Project Number: MYRTLE MYRA #8 NONE GIVEN

Project Location:

EDDY COUNTY, NM

Result

4240

Reporting Limit

16.0

Sampling Date:

06/15/2016

Sampling Type:

BS

416

% Recovery

104

Soil

True Value QC

400

Sampling Condition:

Cool & Intact

RPD

3.77

Qualifier

Qualifier

Sample Received By:

Jodi Henson

### Sample ID: S-5 0.5' (H601329-08)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD
Chloride	6800	16.0	06/20/2016	ND	416	104	400	3.77
Sample ID: S-5 1.0' (H6	01329-09)							
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP				

Analyzed

06/20/2016

 	 (11604000	401

Analyte

Chloride

Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11200	16.0	06/20/2016	ND	416	104	400	3.77	

Method Blank

ND

### Sample ID: S-6 0.5' (H601329-11)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6130	16.0	06/20/2016	ND	416	104	400	3.77	

### Sample ID: S-7 0' (H601329-12)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	06/20/2016	ND	416	104	400	3.77	

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Received: Reported: 06/16/2016

06/21/2016

Project Name:

MYRTLE MYRA #8

Project Number: Project Location: NONE GIVEN

EDDY COUNTY, NM

Sampling Date:

Sampling Type:

06/15/2016 Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

### Sample ID: S-8 0' (H601329-13)

Chloride, SM	4500CI-B
--------------	----------

mg/kg

Analyzed By: AP

Analyte

128

Reporting Limit 16.0

Reporting Limit

Analyzed 06/20/2016

Analyzed

Method Blank ND

BS 416 % Recovery 104

True Value QC

Qualifier

RPD

3.77

Analyzed By: AP

400

Sample ID: S-9 0' (H601329-14)

Analyte

Analyte

Analyte

Chloride,	SM4500CI-B
-----------	------------

mg/kg

Method Blank

% Recovery

True Value QC

Qualifier

Chloride

Chloride

Result 2880

16.0 06/20/2016 ND

BS 416

104

400

3.77

RPD

Sample ID: S-9 0.25' (H601329-15)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Method Blank

BS

% Recovery

True Value QC

RPD

Qualifier

Chloride

Chloride

Chloride

Result 1720

Result

208

Result

288

16.0

Reporting Limit

Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 06/20/2016

Analyzed

06/20/2016

Analyzed

06/20/2016

ND

416

104

400

3.77

Sample ID: S-10 0' (H601329-16)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Method Blank

BS

416

BS

416

% Recovery

True Value QC

RPD

Qualifier

Sample ID: S-10 0.5' (H601329-17)

Chloride, SM4500CI-B

Analyzed By: AP

Method Blank

ND

ND

104

% Recovery

104

400

3.77

mg/kg

True Value QC

400

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Analyte

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Qualifier

**RPD** 

3.77

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Fax To:

(575) 745-8905

Received: Reported: 06/16/2016

06/21/2016

Project Name: Project Number: MYRTLE MYRA #8 NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

Sampling Type:

06/15/2016

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

### Sample ID: S-10 1.0' (H601329-18)

Chloride, SM4500CI-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5440	16.0	06/20/2016	ND	400	100	400	7.69	QM-07

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Celley D. Keene



### **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 SM4500CI-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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Delivered By: (Circle One)  Sample Condition CHECKED BY:  Cool Infact:  MYes Description (patitals)  Sampler - UPS - Bus - Other:  Sampler - UPS - Bus - Other:	Relindus of the late of helped and procedural and the late of the	GROUNDWATER WASTEWATER	101 East Marland, Hobbs, NM 88240 1575) 393-2326 FAX (575) 393-2476
	P. 166 2	TOTAL CHLURIDES  TP H  BTOX	ANALYSIS REQUEST

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



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



July 20, 2016

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: MYRTLE MYRA #8

Enclosed are the results of analyses for samples received by the laboratory on 07/14/16 9:50.

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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> 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.

Celeg D. Keens

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



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

Received:

07/14/2016

Reported:

07/20/2016

Project Name:

MYRTLE MYRA #8

Project Number:

NONE GIVEN

Sampling Date:

07/13/2016 Soil

Sampling Type:

Sampling Condition: Sample Received By:

\*\* (See Notes) Jodi Henson

Project Location:

EDDY COUNTY, NM

Sample ID: S-1 1' (H601583-01)

Chloride, SM4500CI-B

Chloride

Chloride

Chloride

mg/kg

Analyzed By: AP

Analyte

Result 3960

Result

4120

Reporting Limit 16.0

Reporting Limit

16.0

16.0

Analyzed 07/15/2016

Analyzed

07/15/2016

Method Blank ND

Method Blank

ND

BS 416 % Recovery 104

True Value QC 400

RPD 3.92 Qualifier

Sample ID: S-1 2' REFUSAL (H601583-02)

Chloride, SM4500Cl-B

Analyte

Analyzed By: AP

BS

416

BS

416

% Recovery

104

True Value QC

400

**RPD** 

Qualifier

Sample ID: S-2 1' (H601583-03)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte

Result 1840 Reporting Limit

Analyzed

07/15/2016

Method Blank ND

% Recovery

104

True Value QC

400

**RPD** 3.92

3.92

Qualifier

Sample ID: S-2 3' (H601583-04)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte Chloride

Result

2720

Reporting Limit 16.0

Analyzed 07/15/2016 Method Blank ND

BS 416 % Recovery 104

True Value QC 400

RPD 3.92 Qualifier

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Received:

07/14/2016

Reported:

07/20/2016

Project Name:

MYRTLE MYRA #8

Project Number:

Project Location:

NONE GIVEN

EDDY COUNTY, NM

Sampling Date:

07/13/2016

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

### Sample ID: S-2 5' (H601583-05)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	2960	16.0	07/15/2016	ND	416	104	400	3.92				
Sample ID: S-2 7' (H60158	3-06)											
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	2680	16.0	07/15/2016	ND	416	104	400	3.92				
Sample ID: S-2 9' (H60158 Chloride, SM4500Cl-B	3-07) mg	/ka	Analyze	d By: AP								
						91 U						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	3120	16.0	07/15/2016	ND	416	104	400	3.92				
Sample ID: S-2 11' (H6015	83-08)											
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	2120	16.0	07/15/2016	ND	416	104	400	3.92				
Sample ID: S-3 1' (H60158	3-09)											
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	816	16.0	07/15/2016	ND	416	104	400	3.92				

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\*=Accredited Analyte

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

Received: Reported: 07/14/2016

07/20/2016

Project Name: Project Number: MYRTLE MYRA #8 NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

07/13/2016

Sampling Type: Soil

Sampling Condition: Sample Received By: \*\* (See Notes)

Jodi Henson

Sample ID: S-3 3' (H601583-10)

Chloride,	SM4500CI-B
-----------	------------

Chloride

Chloride

Chloride

Chloride

mg/kg

Analyzed By: AP

Analyte

Result

1260

Result

576

48.0

Result

4800

Reporting Limit 16.0

Reporting Limit

16.0

Reporting Limit

16.0

Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 07/15/2016 Method Blank ND

BS 416

BS

416

BS

416

% Recovery 104

400

True Value QC

**RPD** 3.92 Qualifier

Sample ID: S-3 5' (H601583-11)

Analyte

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Method Blank

ND

% Recovery

104

True Value QC

400

RPD

Qualifier

Sample ID: S-3 7' (H601583-12)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte Result

Analyzed 07/15/2016

Analyzed

07/15/2016

Method Blank ND

% Recovery

True Value OC

400

RPD

3.92

3.92

Qualifier

Sample ID: S-4 1' (H601583-15)

Chloride, SM4500Cl-B

Analyte

mg/kg

Analyzed By: AP

Analyzed

07/18/2016

Method Blank ND

BS 416

BS

416

% Recovery 104

104

True Value QC

400

Qualifier **RPD** 

0.00

Sample ID: S-4 3' REFUSAL (H601583-16)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte Chloride

Result

6240

Analyzed 07/18/2016 Method Blank ND

% Recovery 104

True Value QC

400

RPD Qualifier

0.00

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

Fax

Received:

07/14/2016

Reported:

07/20/2016 MYRTLE MYRA #8

Project Name: Project Number:

NONE GIVEN

Project Location:

EDDY COUNTY, NM

Sampling Date:

Date:

07/13/2016 Soil

Sampling Type: Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

Sample ID: S-5 1' (H601583-17)

Chloride, SM4500CI-B

Chloride

Chloride

Chloride

Chloride

Chloride

mg/kg

Analyzed By: AP

Analyte

Result Reporting Limit

4800

Result

3960

IIIL

16.0

Reporting Limit

16.0

16.0

Reporting Limit

16.0

Analyzed 07/18/2016

Method Blank ND BS 416

BS

416

BS

416

% Recovery

104

% Recovery

104

True Value QC 400

0.00

0.00

0.00

0.00

Qualifier

Sample ID: S-5 3' (H601583-18)

Chloride, SM4500CI-B

Analyte

mg/kg

Analyzed By: AP

Andryzec

Analyzed

07/18/2016

Method Blank

ND

True Value QC

400

RPD O

Qualifier

Sample ID: S-5 5' (H601583-19)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte Result Reporting Limit

Analyzed 07/18/2016

Method Blank

% Recovery

104

True Value QC 400

RPD Q

Qualifier

Sample ID: S-5 7' (H601583-20)

Analyte

Analyte

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Result

Result

3440

3520

Reporting Limit Analyzed

16.0 07/18/2016

Method Blank

BS

416

% Recovery

True Value QC 400 RPD Qua

Qualifier

Sample ID: S-5 9' (H601583-21)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyzed by: AP

Analyzed

07/18/2016

Method Blank

ND

BS % Recovery 416 104

True Value QC 400 RPD (

0.00

Qualifier

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Fax To:

(575) 745-8905

Received:

07/14/2016

Sampling Date:

07/13/2016

Reported:

07/20/2016

Sampling Type:

Soil

Project Name:

MYRTLE MYRA #8

Sampling Condition:

\*\* (See Notes)

Project Number:

Sample Received By:

Jodi Henson

Project Location:

NONE GIVEN

EDDY COUNTY, NM

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AP

Analyte

Result 3600 Reporting Limit

Analyzed

Method Blank

BS

% Recovery

True Value QC

RPD 0.00 Qualifier

Chloride

16.0

07/18/2016

Analyzed

ND

416

104

400

Sample ID: S-6 1' (H601583-23)

Analyte

Analyte

Analyte

Sample ID: S-5 11' (H601583-22)

Chloride, SM4500CI-B

mg/kg

Reporting Limit

Analyzed By: AP

Qualifier

Chloride

Result 4160

07/18/2016 16.0

Method Blank ND

BS 416 % Recovery 104

True Value QC 400

Sample ID: S-6 1.5' REFUSAL (H601583-24)

Chloride, SM4500Cl-B

Analyzed By: AP

**RPD** 

RPD

0.00

Qualifier

Chloride

Chloride

Chloride

Result 4480

Result

1880

Result

4240

16.0

Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 07/18/2016 Method Blank ND

BS 416 % Recovery 104

True Value QC

07/18/2016

Analyzed By: AP

ND

400

0.00

Sample ID: S-7 1' REFUSAL (H601583-25)

Chloride, SM4500CI-B

mg/kg

Reporting Limit Analyzed Method Blank

BS

% Recovery

True Value QC

**RPD** 

Qualifier

Analyzed By: AP

416

104

400

0.00

Sample ID: S-9 1' (H601583-26)

Chloride, SM4500Cl-B

mg/kg

Analyzed

07/18/2016

Method Blank

ND

BS

416

% Recovery

104

True Value QC

400

**RPD** 0.00

Qualifier

Cardinal Laboratories

Analyte

\*=Accredited Analyte

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

Received:

07/14/2016

Reported:

07/20/2016

Project Name:

MYRTLE MYRA #8

Project Number: Project Location:

NONE GIVEN
EDDY COUNTY, NM

Sampling Date:

07/13/2016

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

### Sample ID: S-9 1.5' REFUSAL (H601583-27)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte Reporting Limit Method Blank Result Analyzed BS % Recovery True Value QC **RPD** Qualifier Chloride 2720 16.0 07/18/2016 ND 416 104 400 0.00

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed varied unless made in writing and received by Cardinal within thirty (30) days after completion of the applicables service. In no event shall Cardinal be liable for incidental or consequential damages, including, whose limitation, subsiness interruptions, loss of use, or loss of profits incurred by client, its authority of related to the performance of the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Sampler - UPS - Bus - Other:  29.10  Continue Co	Regeived By:	Idnished by	service. In no event shall Catchial be labore for incurrence or exercises hereunder by Cardinal regardless of whether such claim is based upon any of the above stated administer or justifications 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 administer or justification and the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated administer or justification and the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated and in the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated and in the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated and in the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated and the performance of services hereunder by Cardinal regardless of whether such claims is based upon any of the above stated and the performance of services hereunder by Cardinal regardless of whether such claims is based upon any of the above stated and the performance of services here and the performance of the performanc	PLEASE NOTE: Library and Damages. Customat's liability and client's exclusive remedy for any claim arising whether based in command runs, name or minimum and days after completion of the applicable analyses. All claims including those for negligence and any other cause whatsoever that be detended without unless made in writing and received by Caloffial within 30 days after completion of the applicable analyses. All claims including those for negligence and any other cause whatsoever that is extended including those to use, or loss of profits incurred by client, its substitution, analyses. All claims including those for negligence and any other cause whatsoever that the determinance and the completion of the applicable.	0 5-33'	06.211	7 5-29	7	n'e	2 2-2 1	2 verison	5-11	# CON GROU WAST SOIL OIL SLUD OTHE ACIDA ICE /	GE FR:	ATER ER	- INDALL OF	 Phone #:	M V ng # 9 State:	Project #: 75   77   , 002, 01 Project Owner: Endurance City:	-746-8768 F	N. Texas Ave. Company:	Or Adrins	And the second s	0/0) 337-244 1 376 (0.0)
(initialis)	1000 Stop CI IF 5 250 mg/kg	1	Phone Result: Yes No Add'l Phone #:	within 30 days after completion of the applicable	to the amount paid by the client for the							13/16	TIME		orio	SAMPLING		Zip:			Talon/LPE			ANALYSIS REQUEST



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

(575) 393-2325 FAX (010) 333-2710			ANALYSIS REQUEST
Company Name: Talon/LPE	de contra de con	BILLIO	
Project Manager: D, AKinS	P.O. #:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
/e.		Company:  alon/LPE	
State: NM	zip: 88210 Attn:		
-746-8768		Address:	
Ö	Project Owner: Plad wayce City:		
Project Name: Mynthe Myra #8	State:	e: Zip:	
Project Location:	Phor	Phone #:	
Sampler Name: R. De Ross	Fau		
	MATRIX	PRESERV. SAMPLING	
FUR DISCORNA	ERS /ATER TER		
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y: (Circle One)			
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† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-3926

Page 10 of 11



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Company Name: Talon/LPE  Project Manager: \( \), \\ \phi \rack{\text{Ring}} \rack{\text{Project Manager:}} \), \\ \phi \rack{\text{Ring}} \rack{\text{Ring}} \rack{\text{NM Zip: 88210}} \)  Address: 408 W. Texas Ave.  State: NM Zip: 88210 Attn:  City: Artesia Fax #: 575-746-8905 Address:  Phone #: 575-746-8768 Fax #: 575-746-8905 Address:  Project #: 70   \( \text{Project Owner:} \) \( \text{Project Owner:} \) \( \text{City:} \)  Project Name: \( \lambda \rack{\text{VYF}} \rack{\text{City:}} \)  Phone #: 2ip:  Phone #: 2ip:	
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PLEASE NO IC. Lawny and unimper and any other cause whatboever shall be deemed valved unless made in writing and rectived by Cardinal writin as upper analyses. All claims including those for negligence and any other cause whatboever shall be deemed valved unless made in writing and rectived by claims is caused as the cause of the same of the second colories. Including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, and the cause of the same of the same of otherwise.	
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## **Analytical Report 535768**

## for Talon LPE

Project Manager: David Adkins

Myrtle Myra 8

01-SEP-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)

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Sample Receipt Conformance Report	15





01-SEP-16

Project Manager: David Adkins

**Talon LPE** 408 W. Texas St. Artesia, NM 88210

Reference: XENCO Report No(s): 535768

Myrtle Myra 8

Project Address: Eddy Co NM

### David Adkins:

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) 535768. 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. 535768 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

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### **Sample Cross Reference 535768**



### Talon LPE, Artesia, NM

Myrtle Myra 8

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
S-1 5'	S	08-25-16 09:30	- 5 ft	535768-001
S-1 10'	S	08-25-16 09:40	- 10 ft	535768-002
S-1 15'	S	08-25-16 09:50	- 15 ft	535768-003
S-1 20'	S	08-25-16 10:00	- 20 ft	535768-004
S-5 15'	S	08-25-16 11:00	- 15 ft	535768-005
S-5 25'	S	08-25-16 11:15	- 25 ft	535768-006
S-5 30'	S	08-25-16 11:30	- 30 ft	535768-007
S-5 35'	S	08-25-16 11:45	- 35 ft	535768-008
S-5 40'	S	08-25-16 12:00	- 40 ft	535768-009



### CASE NARRATIVE



Client Name: Talon LPE Project Name: Myrtle Myra 8

Project ID:

Work Order Number(s): 535768

Report Date: 01-SEP-16 Date Received: 08/26/2016

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



David Adkins Eddy Co NM

Project Location:

Project Id: Contact:

# Certificate of Analysis Summary 535768

Talon LPE, Artesia, NM

Project Name: Myrtle Myra 8

Date Received in Lab: Fri Aug-26-16 10:05 am

Report Date: 01-SEP-16

Project Manager: Kelsey Brooks

	Lab Id:	535768-001	535768-002	535768-003	535768-004	535768-005	535768-006
	Field Id:	S-1 5'	S-1 10'	S-1 15'	S-1 20'	S-5 15'	S-5 25'
Analysis Requestea	Depth:	5 ft	10 ft	15 ft	20 ft	15 ft	25 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Aug-25-16 09:30	Aug-25-16 09:40	Aug-25-16 09:50	Aug-25-16 10:00	Aug-25-16 11:00	Aug-25-16 11:15
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-30-16 11:00					
	Analyzed:	Aug-30-16 13:36	Aug-30-16 14:43	Aug-31-16 13:48	Aug-30-16 18:30	Aug-30-16 18:38	Aug-30-16 19:02
	Units/RL:	mg/kg RL					
Chloride		207 10.0	2320 50.0	1980 50.0	649 10.0	3440 50.0	278 10.0

Murs Maan

Kelsey Brooks Project Manager

Page 6 of 15

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This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.

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Final 1.000



David Adkins Eddy Co NM

Project Location:

Contact:

# Certificate of Analysis Summary 535768

Talon LPE, Artesia, NM

Project Name: Myrtle Myra 8

Date Received in Lab: Fri Aug-26-16 10:05 am

Project Manager: Kelsey Brooks

Date Received III Lab:	FII Aug-20-10 10.03 all
Report Date:	01-SEP-16

	Lab Id:	535768-007	535768-008	535768-009	
Section Description	Field Id:	S-5 30'	S-5 35'	S-5 40'	
Analysis nequesieu	Depth:	30 ft	35 ft	40 ft	4
	Matrix:	SOIL	SOIL	SOIL	
	Sampled:	Aug-25-16 11:30	Aug-25-16 11:45	Aug-25-16 12:00	
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-30-16 11:00	Aug-30-16 11:00	Aug-30-16 11:00	
	Analyzed:	Aug-30-16 19:09	Aug-30-16 19:17	Aug-30-16 19:25	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		305 10.0	301 10.0	126 10.0	

Project Manager Kelsey Brooks

Final 1.000

Page 7 of 15

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### 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

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### BS / BSD Recoveries



Project Name: Myrtle Myra 8

Work Order #: 535768

MNR Analyst: Lab Batch ID: 1000928

Sample: 713201-1-BKS

**Date Prepared:** 08/30/2016

Project ID:

Date Analyzed: 08/30/2016

Matrix: Solid Batch #: 1

	Flag		
)Y	Control Limits %RPD		20
ERY STUI	Control Limits %R		90-110
RECOVI	RPD %		7
CICATE	Blk. Spk Dup. %R	5	100
PIKE DUP	Blank Spike Duplicate	Result [F]	249
SLANK S	Spike Added	[3]	250
SPIKE / E	Blank Spike %R	[[]	101
BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	Blank Spike Result	[6]	253
	Spike Added	[g]	250
	Blank Sample Result [A]		<10.0
Units: mg/kg	Inorganic Anions by EPA 300/300.1	Analytes	Chloride

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: Myrtle Myra 8



535768 Work Order #: 1000928 Lab Batch ID:

08/31/2016 Date Analyzed:

QC-Sample ID: 535768-001 S

Project ID:

Batch #:

Matrix: Soil

Analyst: MNR Date Prepared: 08/30/2016

Reporting Units: mg/kg		Z	ATRIX SPIKI	E/MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E RECC	VERY S	TUDY		
Inorganic Anions by EPA 300/300.1	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control	Flag
Analytes	Kesun [A]	Added [B]	<u>5</u>	[D]	Added [E]	Kesult [F]	[G]	%	%K	%KPD	
Chloride	207	250	467	104	250	459	101	2	90-110	20	
Lab Batch ID: 1000928	QC-Sample ID: 535810-001 S	535810	-001 S	Ba	Batch #:	1 Matrix: Soil	: Soil				

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY mg/kg Reporting Units:

Date Prepared: 08/30/2016

08/30/2016

Date Analyzed:

Analyst: MNR

) )											
Incurrente Autone hay DDA 200/200 1	Parent		Spiked Sample	Spiked		Duplicate	Spiked		Control	Control	
morganic Anions by El A 300/300.1	Sample	Spike	Result	Sample	Spike	Spiked Sample	Dup.	RPD	Limits	Limits	Flag
	Result	Added	<u>D</u>	%R	Added	Result [F]	%R	%	%R	%RPD	į.
Analytes	[ <u>¥</u> ]	<u>B</u>		<u>a</u>	<u>(a</u>		<u>[5]</u>				
Chloride	2990	1250	4200	76	1250	4210	86	0	90-110	20	



Stafford, Texas (281-240-4200)

Odessa, Texas (432-563-1800)

Lakeland, Florida (863-646-8526

voltes: Signature of this document and relinquistiment of comples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's etendand terms and conditions of sen りのタフーで多くインク No. Samplers's Name: Project Contact: Client / Reporting Information
Company Name / Branch: つんしゃ /しりに 3 Day EMERGENCY 2 Day EMERGENCY Company Address: Same Day TAT Darking & talon 190,000 Service Center - San Antonio, Texas (210-509-3324) Dallas, Texas (214-902-0300) TAT Starts Day received by Lab, if received by 3:00 pm 5~5 Next Day EMERGENCY 2-5 40 5-525 5-120 5-530 5-115 -8 Ņ 5-536 Turnaround Time ( Business days) 2 רט Field ID / Point of Collection Mari Vallie Helpins REKIN Contract TAT 7 Day TAT 5 Day TAT Artasia, NM - キアナルン Date Time: 8/25 Date Time: Date Time: 5 20 5 10 5 A Market Collections 8 PO Number: Project Name Number He My Va Invoice To: Project Location 0950 1200 0940 0930 1000 1100 1/30 **/**ナン TROS/1PB 70177/002.0 Level 3 (CLP Forms) Level III Std QC+ Forms TRRP Checklist Level II Std QC Project Information each time samples change po 101 мими хепсо-сол bolties of ころ HC) NaOH/Zn 1.002.0 Acelate воин Level IV (Full Data Pkg fraw data) Custody Seal # Relinquished By: UST/RG-411 TREP Level IV 12804 00 laOH NaHSO4 MEOH NONE Chlorides Norcross, Georgia (770-449-8800) Preserved where applicable Date Time: FED-EX/UPS: Tracking # # doL caneX 800 Tampa, Florida (813-620-2000) Femp: Field Comments S=Soil/Sed/Soild
GW=Ground Water
DW=Drinking Water
P=Product
SW=Surface water W = Wipe O = Oii SL = Sludge WW= Waste Water ww= waste Water Matrix Codes F.R.ID;R-8 ť

Corrected Temp: 2,





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Dallas, Texas (214-902-0500)

## CHAIN OF CUSTOD

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Tampa, Florida (813-620-2000)

Project Localism   TAVON   LPS	On 196 Cooler Temp. Thereme Chirt. Factor	Preserved where applicable	Browled By. Bulle Trenion	Soul Mories (186 )
Colors   Properting information	0 25 beggg		1/2/1/	Date Tir
Collect Representation   Collections   Col	SECULAR DAY:	e Time:		Date Tire
Colors   Proporting Information	2020年時期	192		SAMPLE CUSTODY MUST BE DO
Control Paper Hammon   Project Name Polymon		FED-EX/UPS		IT Starts Day received by Lab, If received by 3:00 pm
Collect Proporting Information   Project I			TRRP Checklist	Day Emergency
Collect Appointmin Information   Project American Project Information   Project Inform				
College / Reporting Information   Project Name Management   Project Name Management   Project Name Management   Project Name Management   Project Name Name   Project Name Name Name Name   Project Name Name Name Name Name Name Name Name				
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5 Signature of this document and relinquistment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affliates, subcontractors and assigns XENCO's standard terms and conditions of sarvier





### **XENCO Laboratories**

### Prelogin/Nonconformance Report- Sample Log-In



Client: Talon LPE

Date/ Time Received: 08/26/2016 10:05:00 AM

Work Order #: 535768

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

Temperature Measuring device used: r8

Sample Recei	pt Checklist	Comments
#1 *Temperature of cooler(s)?	2.1	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seal present on shipping container/ cooler?	No	
#5 *Custody Seals intact on shipping container/ cooler?	N/A	
#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)?	No	
#21 VOC samples have zero headspace (less than 1/4 inch b	oubble)? N/A	
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? E samples for the analysis of HEM or HEM-SGT which are verificable to		
analysts. #23 >10 for all samples preserved with NaAsO2+NaOH, ZnA	c+NaOH? N/A	

Analyst:		PH Device/Lot#:	
	Checklist completed by:	Jessica Warmer  Jessica Kramer	Date: <u>08/26/2016</u>
	Checklist reviewed by:	Knis froak	Date: <u>08/26/2016</u>

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