

Soil Assessment and Remediation Work Plan

Arabian 30-19 Federal Com #2H API # 30-025-43773 * **1RP-4854** Talon Project No. 702072.002.01

Prepared For:

SwiftWater Energy 2401 North County Rd. 1287 Midland, TX 79707

Prepared By:

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

January 4, 2018

APPROVED

By Olivia Yu at 9:07 am, Feb 15, 2018

NMOCD approves of the proposed additional delineation for 1RP-4854. See email correspondence for clarifications about proposed remedial activities.

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

Subject:

Soil Assessment and Remediation Work Plan

Arabian 30-19 Federal Com #2H API # 30-025-43773 * 1RP-4854

Dear Ms. Yu,

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

Site Information

The Arabian 30-19 Federal Com #2H is located approximately sixty-two (62) miles east of Carlsbad, New Mexico. The legal location for this location is Unit Letter M, Section 2, Township 26S South and Range 31 East in Eddy County, New Mexico. More specifically the latitude and longitude of the release point are 32.067261 North and -103.757277 West. A site plan illustrating the work area is attached in Appendix 1.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of the Pajarito loamy fine sand with 0 to 3 percent slopes, eroded. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is comprised of Holocene to middle Pleistocene Eolian deposits. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

According to the New Mexico Office of the State Engineer database, the ground water in this area is approximately 365-feet below ground surface (BGS). The referenced ground water data is presented in Appendix II. 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's) are 50 mg/kg for BTEX, 10 mg/kg for Benzene and 5,000 mg/kg for TPH. The NMOCD recommended guideline for Total Chlorides is 600 mg/kg.

Incident Description and Initial Remedial Actions

While transferring treated water from the Terrapin Frac Pond to the Arabian 30-19 Federal Com #2H, the booster pump over pressured and the lay flat transfer line ruptured causing 281 barrels of treated water to be released. A vac truck was called to the location and recovered 145 barrels of fluids. A site plan is presented in Appendix I which illustrates the impacted area.

On November 7, 2017, Talon mobilized personnel to conduct initial site assessment and soil sampling activities for the construction of a work plan. Grab soil samples were collected utilizing a hand auger to depths at which refusal was encountered. The laboratory data from the above referenced sampling activities are presented in the table below and Appendix III contains the complete laboratory analytical results.

Laboratory Results

See Appendix III for complete report of laboratory results.

Sample ID		Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO	TPH (mg/kg) EXT DRO	Total TPH (mg/kg)
S-1	Refusal	0.0	- 45	16		7		
S-2		0.0	< 0.300	32	<10	<10	<10	<10
	Refusal	1.0	< 0.300	736	<10	<10	<10	<10
S-3	Refusal	0.0		80			44	
S-4		0.0		22800		4-	94	22
	Refusal	1.0		4000			142	
S-5	Refusal	0.0		40400			46	
S-6	Refusal	0.0		112			4-	
S-7		0.0	44	80				
		1.0		32			144	
		2.0		16		-	49	(##)
		3.0		32		- +-	24	
		4.0		<16			44	44
S-8		0.0		29200	+-			
		1.0		3920	44	22		
		2.0	94	208	22			77
		3.0	44	416	66			
		4.0		160	77	. 88		
S-9	Refusal	0.0		80		44		
S-10		0.0	< 0.300	96	<10	<10	<10	<10
		1.0	< 0.300	16	<10	<10	<10	<10
		2.0	< 0.300	32	<10	<10	<10	<10
		3.0		16	44	44	22	22
		4.0	44	32	22			
S-11	Refusal	0.0	44	32				

Sample ID		Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO	TPH (mg/kg) EXT DRO	Total TPH (mg/kg)
S-12		0.0	< 0.300	224	<10	<10	<10	<10
		1.0	< 0.300	16	<10	<10	<10	<10
	Refusal	2.0	< 0.300	48	<10	<10	<10	<10
S-13	Refusal	0.0	mm.	32				70
S-14		0.0	< 0.300	160	<10	<10	<10	<10
		1.0		48		25	100	22
	Refusal	2.0		192	++	44		
S-15	Refusal	0.0		14400				

(--) Analyte Not Tested

Proposed Remedial Actions

- At the beginning of the project test pits will be excavated at sample locations S-4, S-5 and S-15 for further vertical delineation purposes. Field titration screening results for chlorides will be utilized to guide the excavation horizontally and vertically and will be followed up with laboratory confirmation sample analysis. The results will be immediately forwarded to NMOCD District II for approval of excavation depths in these areas.
- The impacted area in the vicinity of S-2 and S-8 will be excavated to a depth of 2.0' deep.
 A confirmation soil sample will also be collected from the bottom of the excavation at sample S-2.
- Sidewall soil samples will be collected from the excavated areas to verify that all the impacted soil has been removed.
- All contaminated soil will be transported to Lea Land, LLC, a NMOCD approved disposal facility.
- The excavated areas will be backfilled with new top soil obtained from a local borrow pit.
 Once the backfilling activities are complete the work area will be contoured to match the surrounding terrain and seeded using the recommended BLM seed mixture for the area.
- A final closure report documenting all remedial actions will be provided to the NMOCD Artesia Office along with a Final C-141 Form.

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

Respectfully submitted,

TALON/LPE

Kimberly M. Wilson

Kimberly M. Wilson David J. Adkins Project Manager District Manager

Attachments

Appendix I Site Plan

Appendix II Groundwater Data & Initial C-141

Appendix III Laboratory Results

APPENDIX I SITE MAP





APPENDIX II GROUNDWATER DATA INITIAL C-141



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

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

POD Number

C 03639 POD1

(R=POD has been replaced, O=orphaned,

C=the file is closed)

Code

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

(quarters are smallest to

largest)

3 4 2 01

(NAD83 UTM in meters)

(In feet)

POD

CUB

Sub- QQQ

ED

basin County 6416 4 Sec Tws Rng

26S 31E

X Y 620168 3549279

Water DistanceDepthWellDepthWater Column

2917 700 365 335

© 02090 ED 4 4 01 26S 31E 620329 3548533* 2943 350 335 15

Average Depth to Water:

350 feet

Minimum Depth:

335 feet

Maximum Depth:

365 feet

Record Count:2

UTMNAD83 Radius Search (in meters):

Easting (X): 617389

Northing (Y): 3548393

Radius: 3000

*UTM location was derived from PLSS - see Help

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

11/20/17 12:37 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised April 3, 2017

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.

Release Notification and Corrective Action **OPERATOR** Final Report Stephen Richards, Devon Completions Foreman Name of Company Devon Energy Production Co LP Contact Address PO BOX 250, Artesia, NM 88211 Telephone No. (575) 252-3717 Facility Name: Transfer line from Terrapin Frac Pond to Facility Type Oil well Arabian 30-19 Fed Com 2H API No. 30-025-43773 Surface Owner: State / Federal Mineral Owner: State / Federal LOCATION OF RELEASE Unit Letter Township Feet from the North/South Line Feet from the East/West Line County Section Range LEA NORTH 46 WEST M 2 26S 31E. Latitude 32.067261 N Longitude -103.757277 W NAD83 NATURE OF RELEASE Volume of Release: 281 bbls Volume Recovered: 145 bbls Type of Release: Treated Produced Water Source of Release: Lay Flat Transfer Line Date and Hour of Occurrence: Date and Hour of Discovery 10/10/2017, 9:45 AM 10/10/2017, 9:45 AM If YES, To Whom? Was Immediate Notice Given? OCD: Olivia Yu, Dist. 1 BLM: Shelly Tucker Date and Hour: By Whom? OCD: 10/11/17, 9:15 AM Mike Shoemaker, EHS Professional BLM: 10/11/17, 9:45 AM If YES. Volume Impacting the Watercourse. Was a Watercourse Reached? ☐ Yes ☒ No RECEIVED NA If a Watercourse was Impacted, Describe Fully.* By Olivia Yu at 3:45 pm, Oct 27, 2017 Describe Cause of Problem and Remedial Action Taken.* While transferring treated produced water from the Terrapin Frac Pond to the Arabian 30-19 Fed Com #2H, the booster pump over pressured and the lay flat hose ruptured, releasing produced water on the ground. The pump was shut down and the hose was repaired. Describe Area Affected and Cleanup Action Taken.* The spill affected approximately 10,244 square feet (1711 cubic feet) running south then east of the rupture point located approximately at 32.067261 N, -103.757277 W and is approximately 3.3 miles southwest from the Arabian 30-19 Fed Com 2H well pad. An estimated 281 barrels of treated produced water was spilled and 145 barrels were recovered. A remediation contractor will be contacted to assist with the delineation and remediation efforts. 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. OIL CONSERVATION DIVISION Signature: Denise Menoud Approved by Environmental Specialist: Printed Name: Denise Menoud 10/27/2017

* Attach Additional Sheets If Necessary

E-mail Address: denise.menoud@dvn.com

Title: Admin Field Support

Date: 10/13/2017

1RP-4854

Approval Date:

Conditions of Approval:

see attached directive

nOY1730057049

Expiration Date:

pOY1730057379

Attached [

Phone: (575)746-5544

APPENDIX III LABORATORY RESULTS



November 17, 2017

DAVID ADKINS

TALON LPE

408 W, TEXAS AVE.

ARTESIA, NM 88210

RE: ARABIAN 30-19 FED COM 2H

Enclosed are the results of analyses for samples received by the laboratory on 11/13/17 16:45.

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.

Celeg & Keene

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

Analyzed By: AC

Method Blank

Analyzed

Received:

11/13/2017

Reported:

Chloride, SM4500Cl-B

11/17/2017

Project Name:

ARABIAN 30-19 FED COM 2H

Reporting Limit

Project Number:

702072.002.01

Project Location:

Analyte

LEA COUNTY, NM

mg/kg

76.4%

28.3-164

Result

Sampling Date:

11/07/2017

Sampling Type:

BS

Soil

True Value QC

Sampling Condition:

Cool & Intact

RPD

Qualifier

Sample Received By:

% Recovery

Tamara Oldaker

Sample ID: S-1 0' (H703161-01)

Chloride	16.0	16.0	11/14/2017	ND	416	104	400	3.77	
Sample ID: S-2 0' (H703161-0	2)								
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	11/15/2017	ND	1.88	94.0	2.00	0.846	
Toluene*	<0.050	0.050	11/15/2017	ND	1.89	94.3	2.00	0.528	
Ethylbenzene*	<0.050	0.050	11/15/2017	ND	1.85	92.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	11/15/2017	ND	5.87	97.8	6.00	0.967	
Total BTEX	<0.300	0.300	11/15/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	105 %	% 72-148)						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/14/2017	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	11/16/2017	ND	226	113	200	1.36	
DRO >C10-C28	<10.0	10.0	11/16/2017	ND	212	106	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	11/16/2017	ND					

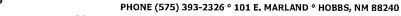
Cardinal Laboratories

Surrogate: 1-Chlorooctane

*=Accredited Analyte

PLEASE NOTE: Uability 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 waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or corsequential 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 the services hereunder by Cardinal, regardless of whether such daim 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.

Celeg Ditrene





TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received: Reported: 11/13/2017

11/17/2017

Project Name: Project Number: ARABIAN 30-19 FED COM 2H

Project Location:

702072,002,01 LEA COUNTY, NM Sampling Date:

Sampling Type: Soil

Sampling Condition: Sample Received By: Cool & Intact

11/07/2017

Tamara Oldaker

Sample ID: S-2 0' (H703161-02)

TPH 8015M

mg/kg

Analyzed By: MS

Analyzed

Method Blank

% Recovery

True Value QC

Qualifier

Analyte Surrogate: 1-Chlorooctadecane

75.8 %

Result

34.7-157

Reporting Limit

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, any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim 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,

Celeg & Kreene

Celey D. Keene, Lab Director/Quality Manager



TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received:

11/13/2017

Sampling Date:

11/07/2017

Reported:

11/17/2017

Sampling Type:

Soil

Project Name:

ARABIAN 30-19 FED COM 2H

Sampling Condition:

Cool & Intact

Project Number:

702072.002.01

Sample Received By:

Tamara Oldaker

Project Location:

LEA COUNTY, NM

Sample ID: S-2 1' REFUSAL (H703161-03)

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	11/15/2017	ND	1.88	94.0	2.00	0.846	
Toluene*	<0.050	0.050	11/15/2017	ND	1.89	94.3	2.00	0.528	
Ethylbenzene*	<0.050	0.050	11/15/2017	ND	1.85	92.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	11/15/2017	ND	5.87	97.8	6.00	0.967	
Total BTEX	<0.300	0.300	11/15/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	108	% 72-148)						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	11/14/2017	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	11/16/2017	ND	226	113	200	1.36	
DRO >C10-C28	<10.0	10.0	11/16/2017	ND	212	106	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	11/16/2017	ND					
Surrogate: 1-Chlorooctane	84.4	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	85.4	% 34.7-15	7						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Uability 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 whistoever shall be deemed waived urbss made in writing and received by Cardinal within thirty (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 incomed by dient, subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim 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.

Celley D. Keine



TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

(575) 745-8905 Fax To:

Received:

11/13/2017

Sampling Date:

11/07/2017

Reported:

Sampling Type:

11/17/2017

Soil

Project Name:

ARABIAN 30-19 FED COM 2H

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number:

702072.002.01

Project Location:

LEA COUNTY, NM

Sample ID: S-3 0' (H703161-04)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/14/2017	ND	416	104	400	3.77	
Sample ID: S-4 0' (H70316:	1-05)								
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	22800	16.0	11/14/2017	ND	416	104	400	3.77	
Sample ID: S-4 1' REFUSAL	(H703161-	06)							
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4000	16.0	11/14/2017	ND	416	104	400	3.77	
Chloride Sample ID: S-5 0' (H70316)		16.0	11/14/2017	ND	416	104	400	3.77	
Sample ID: S-5 0' (H70316:				ND d By: AC	416	104	400	3.77	
Sample ID: S-5 0' (H70316:	1-07)				416 BS	104 % Recovery	400 True Value QC	3.77 RPD	Qualifier
Sample ID: S-5 0' (H70316: Chloride, SM4500CI-B Analyte	1-07) mg	/kg	Analyze	d By: AC					Qualifier
Sample ID: S-5 0' (H70316: Chloride, SM4500Cl-B	1-07) mg Result 40400	/kg Reporting Limit	Analyze Analyzed	d By: AC Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sample ID: S-5 0' (H70316: Chloride, SM4500Cl-B Analyte Chloride	1-07) mg Result 40400	/kg Reporting Limit 16.0	Analyze Analyzed 11/14/2017	d By: AC Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Sample ID: S-5 0' (H70316: Chloride, SM4500Cl-B Analyte Chloride Sample ID: S-6 0' (H70316:	1-07) mg Result 40400 1-08)	/kg Reporting Limit 16.0	Analyze Analyzed 11/14/2017	d By: AC Method Blank ND	BS	% Recovery	True Value QC	RPD	Qualifier

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 walved unless made in writing and received by Cardinal within thirty (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 use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such daim 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.

Celeg to treme-



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

Fax To:

Received:

11/13/2017

Reported:

11/17/2017

Project Name: Project Number: ARABIAN 30-19 FED COM 2H

Project Location:

702072,002,01

LEA COUNTY, NM

80.0

Result

32.0

Result

16.0

Result

32.0

Result

<16.0

Sampling Date:

11/07/2017

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: S-7 0' (H703161-09)

Chloride.	SM4500CI-R

mg/kg

Analyzed By: AC

Analyte

Result

Reporting Limit 16.0

Reporting Limit

16.0

Reporting Limit

16.0

Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 11/14/2017 Method Blank ND

BS 416 % Recovery 104

True Value QC 400

RPD 3.77 Qualifier

Chloride

Sample ID: S-7 1' (H703161-10)

Chloride,	SM4500CI-B	
		_

Analyte

Analyte

mg/	'kg	

Analyzed By: AC

BS

% Recovery

RPD True Value QC

Chloride

Analyzed 11/14/2017

Analyzed

11/14/2017

Analyzed

11/14/2017

Analyzed

11/14/2017

Method Blank ND

416

104

% Recovery

104

% Recovery

104

104

400

Qualifier 3.77

Sample ID: S-7 2' (H703161-11)

Chlorida	SM4500CI-B

mg/kg

Analyzed By: AC

Method Blank

ND

BS

416

True Value QC

RPD

Qualifier

Chloride

Sample ID: S-7 3' (H703161-12)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

400

400

400

3.77

Analyte

Method Blank

ND

ND

BS

416

True Value QC RPD

Qualifier

Chloride

Chloride

Sample ID: S-7 4' (H703161-13) Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Method Blank BS

416

% Recovery True Value QC

RPD

0.00

3.77

Oualifier

Cardinal Laboratories

Analyte

*=Accredited Analyte

All claims, including those for negligence and 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. any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such daim 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.

Celly Theme



TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To: (575) 745-8905

Received: Reported: 11/13/2017

11/17/2017

Project Name: Project Number: ARABIAN 30-19 FED COM 2H

Project Location:

702072.002.01

LEA COUNTY, NM

Sampling Date:

11/07/2017 Soil

Sampling Type:

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: S-8 0' (H703161-14)

Chlorida	SM4500CLB	

Chloride

Chloride

Chloride

Chloride

mg/kg

Analyzed By: AC

Analyte Result

29200

Result

3920

Reporting Limit 16.0

Reporting Limit

16.0

Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 11/14/2017

Analyzed

11/14/2017

Analyzed

11/14/2017

Analyzed

11/14/2017

Analyzed

11/14/2017

Method Blank ND

ND

ND

ND

ND

BS 416 % Recovery 104

True Value QC 400

RPD 0.00 Qualifier

Qualifier

Sample ID: S-8 1' (H703161-15)

Chloride, SM4500Cl-B	
----------------------	--

Analyte

mg/k	g
------	---

Analyzed By: AC

Method Blank

% Recovery

104

104

True Value QC

400

RPD 0.00

Sample ID: S-8 2' (H703161-16)

Chloride, SM4500Cl-B

	и.	
ma	/Ka	

Analyzed By: AC

Analyte	Result	Reporting Limit
	208	16.0

Method Blank

BS

416

416

416

% Recovery True Value QC

RPD

0.00

Qualifier

Sample ID: S-8 3' (H703161-17)

Analyte

Chloride, SM4500Cl-B

mg/kg

Result

416

Result

160

Analyzed By: AC

Method Blank BS

% Recovery

104

104

True Value QC

400

400

RPD 0.00 Qualifier

Sample ID: S-8 4' (H703161-18)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Chloride		

Analyte

Method Blank

BS % Recovery

416

True Value QC 400

RPD 0.00 Qualifier

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 any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such dalm 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.

Celeg D. Kreene



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

11/13/2017 Reported: 11/17/2017

ARABIAN 30-19 FED COM 2H Project Name: Project Number:

702072.002.01

Project Location: LEA COUNTY, NM Sampling Date:

Sampling Condition:

11/07/2017

Sampling Type: Soil

Cool & Intact

Sample Received By: Tamara Oldaker

Sample ID: S-9 0' (H703161-19)

Received:

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/14/2017	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and clernt'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 PLEASE ROTTE: Labelly and Damages. Cardinals aboutly and create excussive renew for any other cause whatsoever shall be deemed waived unders made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be lable 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 the services hereunder by Cardinal, regardless of whether such dalm 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.

Celeg & Keens



TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To: (575) 745-8905

Received:

11/13/2017

Sampling Date:

11/07/2017

Reported:

Sampling Type:

Soil

11/17/2017

Cool & Intact

Project Name:

ARABIAN 30-19 FED COM 2H

Sampling Condition: Sample Received By:

Tamara Oldaker

Project Number:

702072.002.01

Project Location:

LEA COUNTY, NM

Sample ID: S-10 0' (H703161-20)

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	11/15/2017	ND	1.88	94.0	2.00	0.846	
Toluene*	<0.050	0.050	11/15/2017	ND	1.89	94.3	2.00	0.528	
Ethylbenzene*	<0.050	0.050	11/15/2017	ND	1.85	92.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	11/15/2017	ND	5.87	97.8	6.00	0.967	
Total BTEX	<0.300	0.300	11/15/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	105 %	% 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC		·			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/14/2017	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/16/2017	ND	226	113	200	1.36	
DRO >C10-C28	<10.0	10.0	11/16/2017	ND	212	106	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	11/16/2017	ND					
Surrogate: 1-Chlorooctane	89.1	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	85.0	% 34.7-15	7						

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 waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such dalm 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.

aleg to Kenne



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

Fax To:

11/07/2017

Received: Reported: 11/13/2017

Sampling Date: Sampling Type:

Soil

11/17/2017

Sampling Condition:

Cool & Intact

Project Name: Project Number: ARABIAN 30-19 FED COM 2H 702072.002.01

Sample Received By:

Tamara Oldaker

Project Location:

LEA COUNTY, NM

Sample ID: S-10 1' (H703161-21)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True V alue QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2017	ND	1.88	94.0	2.00	0.846	
Toluene*	<0.050	0.050	11/15/2017	ND	1.89	94.3	2.00	0.528	
Ethylbenzene*	<0.050	0.050	11/15/2017	ND	1.85	92.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	11/15/2017	ND	5,87	97.8	6.00	0.967	
Total BTEX	<0.300	0.300	11/15/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	108 %	6 72-148	}						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/14/2017	ND	416	104	400	0.00	
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	11/16/2017	ND	226	113	200	1.36	
DRO >C10-C28	<10.0	10.0	11/16/2017	ND	212	106	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	11/16/2017	ND					
Surrogate: 1-Chlorooctane	86.4	% 28.3-16	54						
Surrogate: 1-Chlorooctadecane	86.2	% 34.7-15	7						

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 PLEASE NOTE: Leading and Landages. Corrores aboutly and Leafunges. Corrores aboutly and Leafun claim 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.

Clay & Kenne



TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Analyzed By: AC

Received: Reported:

Chloride, SM4500CI-B

11/13/2017

11/17/2017

11/1//201

Project Name: Project Number: ARABIAN 30-19 FED COM 2H

Project Location:

702072.002.01 LEA COUNTY, NM

ma/ka

Sampling Date:

ling Date:

11/07/2017

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: S-10 2' (H703161-22)

Chioride, SM4500CI-B	ing	/ ky	Allalyze	u by. AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/14/2017	ND	416	104	400	0.00	
Sample ID: S-10 3' (H70	3161-23)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/14/2017	ND	416	104	400	0.00	
Sample ID: S-10 4' (H70 Chloride, SM4500CI-B	•	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/14/2017	ND	416	104	400	0.00	
Sample ID: S-11 0' (H70	3161-25)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32,0	16.0	11/14/2017	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's flability 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 waived urless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim 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.

Celeg & Keene



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

Received: Reported: 11/13/2017

11/17/2017

Project Name:

ARABIAN 30-19 FED COM 2H

Project Number:

702072.002.01

Project Location:

LEA COUNTY, NM

Sampling Date:

11/07/2017

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: S-12 0' (H703161-26)

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	11/15/2017	ND	1.88	94.0	2.00	0.846	
Toluene*	<0.050	0.050	11/15/2017	ND	1.89	94.3	2.00	0.528	
Ethylbenzene*	<0.050	0.050	11/15/2017	ND	1.85	92.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	11/15/2017	ND	5.87	97.8	6.00	0.967	
Total BTEX	<0.300	0,300	11/15/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	108 9	% 72-148	}						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	11/14/2017	ND	416	104	400	0.00	
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	11/16/2017	ND	226	113	200	1.36	
DRO >C10-C28	<10.0	10.0	11/16/2017	ND	212	106	200	1.07	
EXT DRO > C28-C36	<10.0	10.0	11/16/2017	ND					
Surrogate: 1-Chlorooctane	74.2	% 28.3-16	<i>i</i> 4						
Surrogate: 1-Chlorooctadecane	75. I	% 34.7-15	7						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Ulability and Demages. 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 waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim 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.

Celeg & Keene



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

Received: Reported: 11/13/2017

11/17/2017

Project Name: Project Number: ARABIAN 30-19 FED COM 2H

Project Location:

702072.002.01 LEA COUNTY, NM Sampling Date:

11/07/2017

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: S-12 1' (H703161-27)

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	11/15/2017	ND	1.88	94.0	2.00	0.846	
Toluene*	<0.050	0.050	11/15/2017	ND	1.89	94.3	2.00	0.528	
Ethylbenzene*	<0.050	0,050	11/15/2017	ND	1,85	92.4	2,00	0.735	
Total Xylenes*	<0.150	0.150	11/15/2017	ND	5.87	97.8	6.00	0.967	
Total BTEX	<0.300	0.300	11/15/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107 %	6 72-148	1						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/14/2017	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS	IV IV TANDANIE				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/16/2017	ND	226	113	200	1.36	
DRO >C10-C28	<10.0	10.0	11/16/2017	ND	212	106	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	11/16/2017	ND					
Surrogate: 1-Chlorooctane	72.5	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	73.3	% 34.7-15	7						

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 PLEASE NOTE: Leading and Danages. Cardinals islantly and clients excussive renewly for client any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such dalm 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.

aleg to Keene



TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received:

11/13/2017

Sampling Date:

11/07/2017

Reported:

11/17/2017

Sampling Type:

Soil

Project Name:

ARABIAN 30-19 FED COM 2H

Sampling Condition:

Cool & Intact

Project Number:

702072.002.01

Sample Received By:

Tamara Oldaker

Project Location:

LEA COUNTY, NM

Sample ID: S-12 2' REFUSAL (H703161-28)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True V alue QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2017	ND	1.88	94.0	2.00	0.846	
Toluene*	<0.050	0.050	11/15/2017	ND	1.89	94.3	2.00	0.528	
Ethylbenzene*	<0.050	0.050	11/15/2017	ND	1.85	92.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	11/15/2017	ND	5.87	97.8	6.00	0.967	
Total BTEX	<0.300	0.300	11/15/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	103 9	6 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/14/2017	ND	416	104	400	0.00	
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	11/16/2017	ND	226	113	200	1,36	
DRO >C10-C28	<10.0	10.0	11/16/2017	ND	212	106	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	11/16/2017	ND					
Surrogate: 1-Chlorooctane	74.1	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	76.0	% 34.7-15	7						

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 waived unless made in writing and received by Cardinal within thirty (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 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.

Celeg & Keena



TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received:

11/13/2017

11/17/2017

Reported: Project Name:

ARABIAN 30-19 FED COM 2H

Project Number: Project Location:

702072.002.01 LEA COUNTY, NM Sampling Date:

11/07/2017

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: S-13 0' (H703161-29)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/14/2017	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Uability and Demages. 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 walved unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such dalm 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 (aboratories.

Celeg & Keine



TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received:

11/13/2017

Sampling Date:

11/07/2017

Reported:

11/17/2017

Sampling Type:

Soil

Project Name:

ARABIAN 30-19 FED COM 2H

Sampling Condition:

Cool & Intact

Project Number:

702072.002.01

Sample Received By:

Tamara Oldaker

Project Location:

LEA COUNTY, NM

Sample ID: S-14 0' (H703161-30)

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	11/15/2017	ND	1.88	94.0	2.00	0.846	
Toluene*	<0.050	0.050	11/15/2017	ND	1.89	94.3	2.00	0.528	
Ethylbenzene*	<0.050	0.050	11/15/2017	ND	1.85	92.4	2.00	0.735	
Total Xylenes*	<0.150	0.150	11/15/2017	ND	5.87	97.8	6.00	0.967	
Total BTEX	<0.300	0.300	11/15/2017	ND					
Surrogate: 4-Bromofluorobenzene (PIL	106 %	6 72-148	}						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/14/2017	ND	416	104	400	0.00	
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	11/16/2017	ND	226	113	200	1.36	
DRO >C10-C28	<10.0	10.0	11/16/2017	ND	212	106	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	11/16/2017	ND					
Surrogate: 1-Chlorooctane	92.0 9	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	85.5 9	% 34.7-15	7						

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 waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such claim 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.

Celeg & Keene



TALON LPE DAVID ADKINS 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received: Reported: 11/13/2017

11/17/2017

Project Name: Project Number: ARABIAN 30-19 FED COM 2H

Reporting Limit

16.0

Reporting Limit

702072.002.01

Project Location:

Analyte

Analyte

LEA COUNTY, NM

Sampling Date:

11/07/2017

Soil

Sampling Type:

Sample Received By:

Sampling Condition:

Cool & Intact

Tamara Oldaker

Sample ID: S-14 1' (H703161-31)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyzed

11/14/2017

Analyzed

Method Blank

ND

BS % Recovery True Value QC 400

RPD

0.00

0.00

Qualifier

Qualifier

Sample ID: S-14 2' REFUSAL (H703161-32)

Chloride, SM4500Cl-B

Analyzed By: AC

BS

416

% Recovery

104

True Value QC

Qualifier

Chloride

Chloride

Result 192

Result

48.0

11/14/2017 16.0

Method Blank ND

Method Blank

416

BS

104

400

RPD

Sample ID: S-15 0' (H703161-33)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed
Chloride	14400	16.0	11/14/2017

ND 416

% Recovery 104

True Value QC 400

RPD 3.77

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 waived unless made in writing and received by Cardinal within thirty (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 the services hereunder by Cardinal, regardless of whether such daim 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,

Celeg Di Kreene



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

PLEASE NOTE: Ulability 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 whetsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (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 or loss incomment by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim 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 Liaboratories.

Celeg & Keine



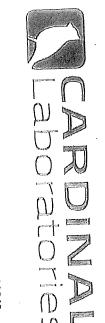
Project Manager: Company Name: Talon/LPE Phone #: 575-746-8768 Address: 408 W Project #: city: Artesia Project Location: Sampler Name: Project Name: analyses. All claims including those for negligence and any other cause whatsoever, service, in no event shall Cardinal be finale for insidental or consequental damages. Relinquished By: FOR LAB USE ONLY Delivered By: (Circle One) 702072.002 101 East Warland, Hobbs, NW 88240 (575) 393-2326 FAX (575) 393-2476 ハーン S ろった Texas Ave bias 8 Sample I.D. イヴスことい TIVED 30-19 0 arka 0 0 0 Ô O 0 Project Owner: Swift water Fax #: 575-746-8905 State: NM Time: retuse Fed Com C Z zip: 88210 (G)RAB OR (C)OMP. Received By Received By: # CONTAINERS GROUNDWATER Whether based in contrast or tort, shall be limited to the amount paid by the client for the united made in withing and received by Corollan within 30 days after completion of the applicable of made in withing and received by Corollan within 30 days after completion of the applicable of, business interruptions, loss of use, or loss of profits incurred by client, is existifiation, on, business of profits incurred by client, is existifiation. WASTEWATER Sample Condition
Cool Infact
Cool Infact
Yes Tarres
No No MATRIX SOIL OIL SLUDGE P.O. 排 City: Attn: company: Talon/LPE State: Address: Phone #: Fax供 OTHER: ACID/BASE: 911.110 ICE/COOL 702072.002.01 CHECKED BY: OTHER: Zip: 11/1/17 SAMPLING DATE 1038 1000 1035. 1033 1023 記る 1058 1110 TIME CHURIDES EXT. TPH BTEX 9 ZZ ANALYSIS REQUEST

Sampler - UPS - Bus - Other:

er.

6

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



Project Manager: Company Name: Talon/LPE city: Artesia Address: 408 W Phones: 575-746-8768 Sampler Name: Project Location: Project # 702 672,001-0 Project Name: PLEASE NOTE: LIAMBY AND CHARGES. Curdicular facility and clients remark for any old ministing whether based in contractor that shall be limited to the amount paid by the client for the applicable analyses. All californ including those for replication and any other cases with support of any old lies made in which is supported in order applicable of the applicable analyses. All californ including those for replication and any other cases with supported of the support o FOR LAB USE ONLY Relinquished By 19910 Ü 101 East Warland, Hobbs, NW 88240 (575) 393-2326 FAX (575) 393-2476 3 (Circle One) S 00-100 N Texas Ave D. 40KWS Sample I.D. 10 K. 0 30-19 Comment ハチで Project Owner: Fax #: 575-746-8905 State: NM E Time: たか ひと 7 Zip: 88210 (G)RAB OR (C)OMP. Swift will by city: # CONTAINERS アオ GROUNDWATER WASTEWATER Sample Condition Cool Intact Cool Intact Yes 4 Yes MATRIX SOIL OIL SLUDGE State: Attn: Company: P.O.# 70~072 Fax#: Address: Phone #: OTHER: PRESERV ACID/BASE: ICE / COOL BILL TO CHECKED BY: Christals) OTHER: Talon/LPE Zip: 1-7-17 DATE SAMPLING B 11114 1130 1138 1124 TIME O CHLORIBES B ٢ BTOX Z ANALYSIS REQUEST

Sampler - UPS -Delivered By:

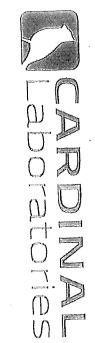
Bus - Other:



Company Name: Talon/LPE Project Wanager: Phone #: 575-746-8768 city: Artesia Project Location: Sampler Name: Project Name: Project #: Address: 408 W PLEASE NOTE: Liability and Damages. Condend's liability and ellent's scalusive namety for any pain raising whether based in contract or last, shall be limited to the amount past by the cleant for the analyses. All olding including those for negligence and any other came whatesows that walved unless made in willing and teached by Condend within 30 days after completion of the applicable cannot walve and carding in the contract of the contract of the contract whater the cannot walve in the cannot be cardinated by discrete by death, is established. In no event chall Condend be finish for incidental or concentrated and analysis of the cannot be cardinated by Condend (equations of whether such claim is based upon any of the above stated measure of changes. Relinquished By: FOR USE ONLY Delivered By: (Circle One) 702072 101 East Warland, Hobbs, NW 88246 (575) 393-2326 FAX (575) 393-2476 And Dian 5-10 5-12 5-100 5-10 5-10 クニュ Texas Ave.) O Sample I.D. H 100 002.01 Project Owner: Swift water \mathcal{O} 2 Ğ 化で 30-19 San K へんびい 50 Fax #: 575-746-8905 State: NM Zip: 88210 Time: retugel 2 200 (G)RAB OR (C)OMP. #CONTAINERS 72 **GROUNDWATER** Sample Condition
Cool Infact
Government
Gyes G-Yes
No No WASTEWATER MATRIX SOIL OIL SLUDGE P,O, 共 City: State: Attn: Company: Phone 些 Address: Fax# OTHER: PRESER ACID/BASE: ICE/COOL 702072 BILL 70 CHECKED BY: OTHER: Talon/LPE Zip: 11-7-17 DATE SAMPLING 002.01 Phone Result Fax Result REMARKS: H311 1149 1206 1208 11/53 1151 1208 1214 2511 1156 TIME CHLURIDES 701746 <u>~0</u> TPH Ŵ SeX es Z BTEX T, 8 8 ANALYSIS REQUEST

Sampler - UPS - Bus - Other:

~1



Project Manager: Company Name: Phone #: 575-746-8768 city: Artesia Project# 707077 Address: 408 W Sampler Name: Project Location: Project Name: TEASE NOTE: Unbity and Danages. Continuts Jobilly and elects excitave names for any elect action whether seed in contract or on that to limited to the ansure red by the cleant fer the names. All other names for resignment and elects excitave names of any elect cause whatever shall be decimed walved unless made in white and reserved by Continut which 30 days after completion of the applicable continue of a shall be incidental or concentrabil demands, handled white the intention, less these of the of these of the of the other shall be and the other shall be incidental or concentrabil demands, handled white it incidents, less these of the other shall be o Relinquished By YING EST BYT YOU 101 East Warland, Hobbs, NW 88240 (575) 393-2326 FAX (575) 393-2476 Talon/LPE Are bi en 5-14 5-15 Texas Ave. 5/1 D. 40/20 002.01 Sample I.D. Ter 30-19 O \mathcal{G} Project Owner, Swiftwitty Fax #: 575-746-8905 retusa State: NM Date: Times Et からのい ک ک Zip: 88210 (G)RAB OR (C)OMP. W Received By: # CONTAINERS GROUNDWATER Sample Condition
Cool Intact
Tyes Tyes
No No WASTEWATER L I SOIL OIL SLUDGE City: P.O.# 702072-002-0 State: Attn: Fax #: Phone 些 Company: Address: OTHER: PRESERV. ACID/BASE: ICE / COOL 811.70 CHECKED BY: OTHER: Talon/LPE Zip: 11-7-17 DATE SAMPLING 1220 1222 1225 工器匠 TOTAL CHLURIUSS EXT TPH Ó. BTZX ANALYSIS REQUEST

Sampler - UPS -

Delivered By:

(Circle One) Bus - Other: