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Soil Assessment, Remediation and Closure Report

Logan Transfer Line API # 30-015-32179 Talon Project No. 701307.110.01

Prepared For:

Lime Rock Resources II-A, L.P. 1111 Bagby St Suite 4600 Houston, TX 77002

Prepared By:

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

July 19, 2018

Received by OCD: 5/15/2020 8:49:00 AM

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

Subject:

Soil Assessment and Remediation Work Plan

Logan Transfer Line API # 30-015-32179

Dear Mr. Bratcher,

Lime Rock Resources has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The results of our soil assessment, remediation activities and closure request are submitted herein.

Site Information

The Logan Transfer Line is located approximately 10 miles E of Artesia, New Mexico. The legal location for this release is Unit Letter G, Section 2, Township 18 South and Range 27 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.7824554 North and -104.2548904 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, the soil in this area is made up of Reeves Gypsum complex with 0 to 3 percent slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is loam and comprised of clay loam and gypsiferous formations. These are made up of loamy soils under lain by hard weathered gypsum rock and caliches. Drainage courses in this area are well drained.

Ground Water and Site Ranking

The New Mexico State Engineer web site indicates the nearest groundwater is 50' below ground surface (BGS). See Appendix II for the referenced groundwater data.

Therefore the ranking for this site is a 10 based on the following:

Depth to ground water 50-99'
Wellhead Protection Area >1000'
Distance to surface water body >1000'

Based upon the site ranking of 10, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene and 1,000 mg/kg for TPH. The recommended guidelines for total chlorides are 600 mg/kg.

Incident Description and Initial Remedial Actions

On May 5, 2018, the 4-inch poly produced water transfer line split resulting in a release of mixed fluids, estimating 35 bbls of PW and 2 bbls oil. The pump was shut down and a repair clamp was installed to stop the leak. A vac truck was dispatched to pick up standing fluids but no fluids were recovered. Talon mobilized personnel to the location for the initial site assessment and soil sample collection. A site plan is presented in Appendix I which illustrates the impacted area. The initial and final C-141 is provided in Appendix II.

On June 5, 2018, Talon personnel and equipment mobilized to the site to carry out an initial site assessment. Soil samples were collected and field titrated for total chlorides. A backhoe was used to push up and stockpile contaminated soil that was transported to Lea Land, LLC, a NMOCD approved solid waste facility.

On June 20, 2018, Talon personnel mobilized to the site to carry out additional soil sampling. Soil samples were collected utilizing a hand auger to depths at which refusal (rock) was encountered. Refusal was encountered at depths of 1.0 foot BGS at all sample locations. Based on the laboratory results, further delineation was completed vertically and horizontally utilizing a backhoe. Aerial pictures of the excavated site are provided in Appendix III.

On July 17, 2018, Talon personnel mobilized to the site to carry out confirmation soil sampling upon completion of remedial actions. Soil samples were collected utilizing a hand auger. Analytical results for all soil samples collected are presented in the following data tables.

See Appendix IV for complete report of laboratory results.

June 20, 2018 San	nples			
Sample ID	Depth (feet)	Chlorides (mg/kg)	BTEX (mg/kg)	TPH (mg/kg)
S-1	1.0	32		
N. Sidewall	0	48		
S. Sidewall	0	1200		
S-2	1.0	48		
N. Sidewall	0			
S. Sidewall	0	80		
S-3	1.0	23,200	C R Ly Ave Lynn	
S. Sidewall	0	8,960		
	1.0	2 400		
S-4	1.0	2,400		
N. Sidewall	0	9,200		

S-5	1.0	368	
N. Sidewall	0	6,720	
S. Sidewall	0	14,500	
BG-1	0		
BG-2	0	48	
BG-3	0	32	
DO-S		32	
BG-4	0	48	
BG-5	0	32	

June 17, 2018 Co.	nfirmation Soil S	amples		
Sample ID	Depth (feet)	Chlorides (mg/kg)	BTEX (mg/kg)	TPH (mg/kg)
S-1 South Sidewall	1.0	176		
S-3 South Sidewall	1.0	32		
S-3	1.5	32		
S-4	1.5	48		
S-4 North Sidewall	1.5	144		
S-5 South Sidewall	1.0	112		
S-5 North Sidewall	1.0	416		

⁻⁻Analyte Not Tested

Remedial Actions Taken:

- The impacted soil from the area of S-1 to S-5 was initially excavated to a depth of 1.0 foot BGS.
- Once the initial lab data was analyzed, further delineation was needed vertically and horizontally.
- The impacted areas at S-3 and S-4 were subsequently excavated to a depth of 1.5 feet BGS.
- Horizontal sidewall excavation continued until all sample analysis was below NMOCD RRAL's.
- All of the excavated material was hauled to Lea Land LLC, a NMOCD approved disposal facility.
- The excavated areas were backfilled with new sand, contoured to match the surrounding terrain and will be seeded with BLM seed mixture #4.

Closure

On behalf of Lime Rock Resources we respectfully request that no further actions be required at this site and that closure with regard to this incident be granted.

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

Chris Jones

Project Manager

David J. Adkins District Manager

Attachments:

Appendix I

Site Plan

Appendix II Groundwater Data & Initial C-141

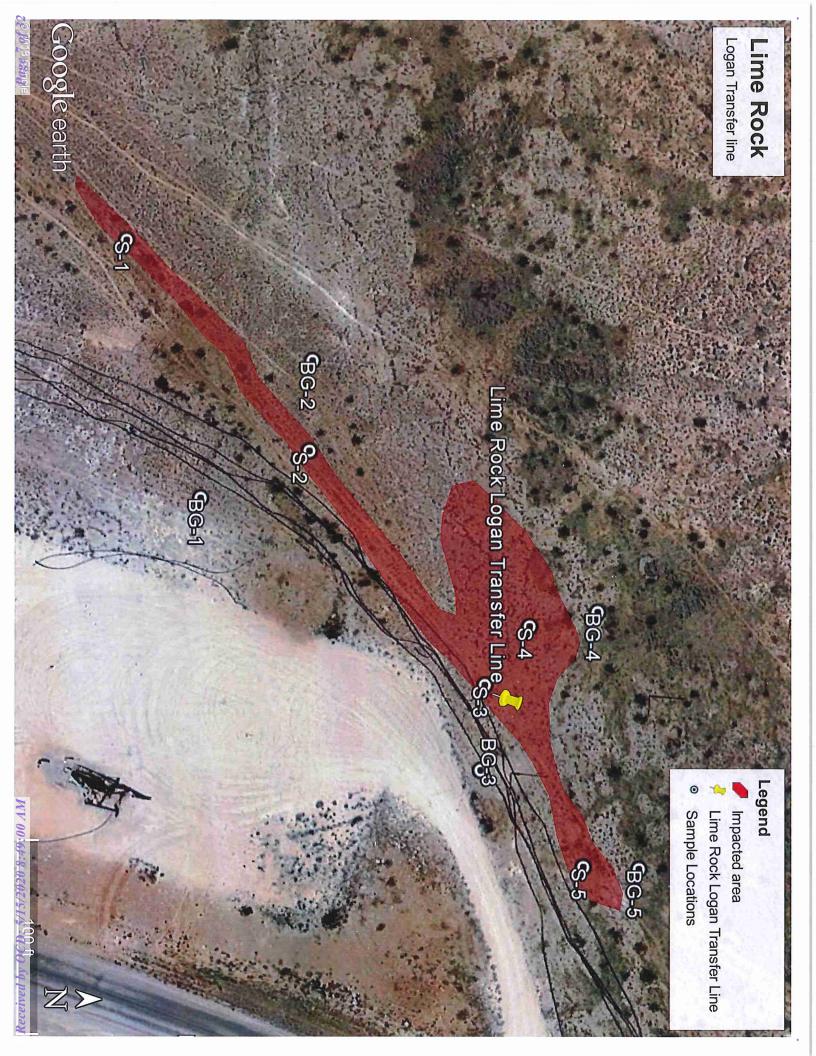
Appendix III

Aerial Photos

Appendix IV Laboratory Results

APPENDIX I

SITE PLAN



Received by OCD: 5/15/2020 8:49:00 AM

APPENDIX II

GROUNDWATER DATA

C-141





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

569019

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

3625660* 🥌

(In feet)

POD

Sub-Code

basin County 64 16 4 Sec Tws Rng

4 1 2 10 18S

 \mathbf{X}

DistanceDepthWellDepthWater Column

1911 130

Average Depth to Water:

50 feet

Minimum Depth:

50 feet

Maximum Depth:

50 feet

Record Count: 1

POD Number

RA 03917

UTMNAD83 Radius Search (in meters):

Easting (X): 569776.32

Northing (Y): 3627414.8

Radius: 2500

*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.

7/9/18 12:35 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Received by OCD: 5/15/2020 8:49:00 AM

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised April 3, 2017

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

			Rele	ease Notific	cation	and Co	orrective A	ction				
						OPERA'	ГOR			al Report		Final Report
Name of Co	ompany: Li	me Rock Re	sources	II-A, L.P.		Contact: Mi						
				ouston, TX, 770			No. 575-365-972					
Facility Na	me: Logan	35 Water Tr	ansfer L	ine		Facility Typ	e: Transfer Lin	e				
Surface Ow	ner: BLM			Mineral C)wner:	Federal			API No	. 30-015-		
				LOCA	ATIO	OF RE	LEASE					
Unit Letter G	Section 2	Township 18S	Range 27E	Feet from the	North	South Line	Feet from the	East/W	Vest Line	County Eddy		
				32.7824554	Lo	ngitude	104.2548904	NA	AD83			
						OF REL						
Type of Rele	ase: Produce	ed Water					Release: 35 bbls			Recovered: 2		
Source of Re						Date and F 5/30/2018	Hour of Occurrence	e		Hour of Dis (a) 4:00 pm		y:
Was Immedi	ate Notice G					If YES, To						
		_	-	No Not R	equired	Mike Brate	cher-NMOCD					
By Whom? I	Kimberly M.	Wilson -Talo	n/LPE			Date and H	lour:					
Was a Water	course Reac	hed?		- Landau rannanan an		5/31/2018 If YES, Vo	olume Impacting t	he Wate	rcourse.			
was a water	course reac		Yes 🗵	No		N/A	Jume Impuemig					
If a Watercon	urse was Imp	pacted, Descri	be Fully.	* N/A								
Describe Cau	ise of Proble	em and Remed	dial Actio	n Taken.* A 4-ind	ch poly l	ine split nortl	h of Apache MJ S	tate #2 I	ocation in	the pasture.	The	pump to the
Logan Trans	fer line was: Talon/LPI	shut down and E was contrac	d the poly ted to do	line was repaired site assessment, re	l. A vac emediati	truck was im on and sampl	mediately called thing activities.	to the lo	cation but	due to high	temps	s the spray
Describe Are	a Affected a	and Cleanup A	Action Tal	ken.*□At the rele	ase poin	t the impacte	d area measures a re in progress and	pproxim	ately 60' x	50' feet. To	the	west and east
I hereby cert	fy that the in	nformation gi	ven above	e is true and comp	lete to t	he best of my	knowledge and u	nderstan	nd that purs	suant to NM	OCD	rules and
regulations a	ll operators	are required to	report a	nd/or file certain r	elease n	otifications a	nd perform correct	tive acti	ons for rele	eases which	may	endanger
public health	or the envir	onment. The	acceptan	ce of a C-141 repo	ort by th	e NMOCD m	arked as "Final Rion that pose a thre	eport" de	oes not reli	eve the oper	rator ter h	of liability
or the enviro	operations na nment. In ac	ddition. NMO	CD accer	otance of a C-141	report d	oes not reliev	e the operator of	responsi	bility for co	ompliance v	vith a	ny other
federal, state	or local lav	vs and/or regu	lations	, , , , , , , , , , , , , , , , , , ,			-					
		11					OIL CON	SERV	ATION	DIVISIO	<u>N</u> (
Signature:	M	al.	Bai	5								
						Approved by	Environmental S	pecialist	:			
Printed Name	e: Mike Barı	rett						<u>.</u>				
Title: Produc	tion Superin	ntendent				Approval Da	te:	I	Expiration :	Date:		
E-mail Addre	ess: mbarrett	@limerockre	sources.ce	om		Conditions o	f Approval:			Attached		
Data: 6/7/10				75 265 0724						Attached	Ц	

* Attach Additional Sheets If Necessary

Received by OCD: 5/15/2020 8:49:00 AM

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

State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 Revised April 3, 2017

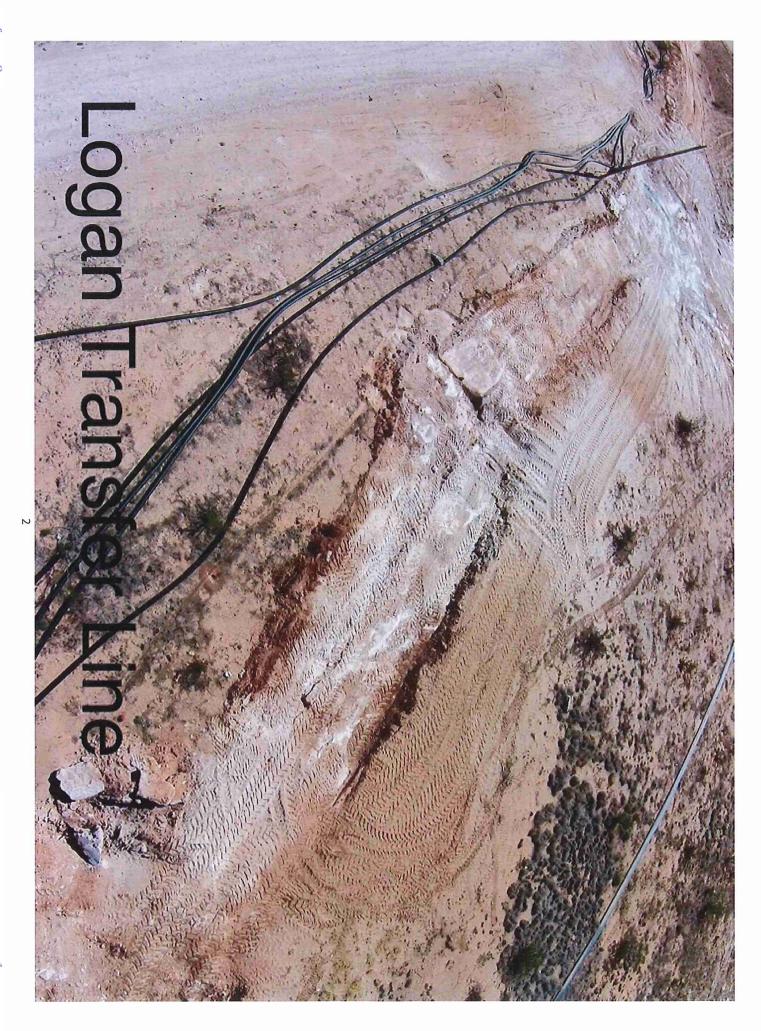
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

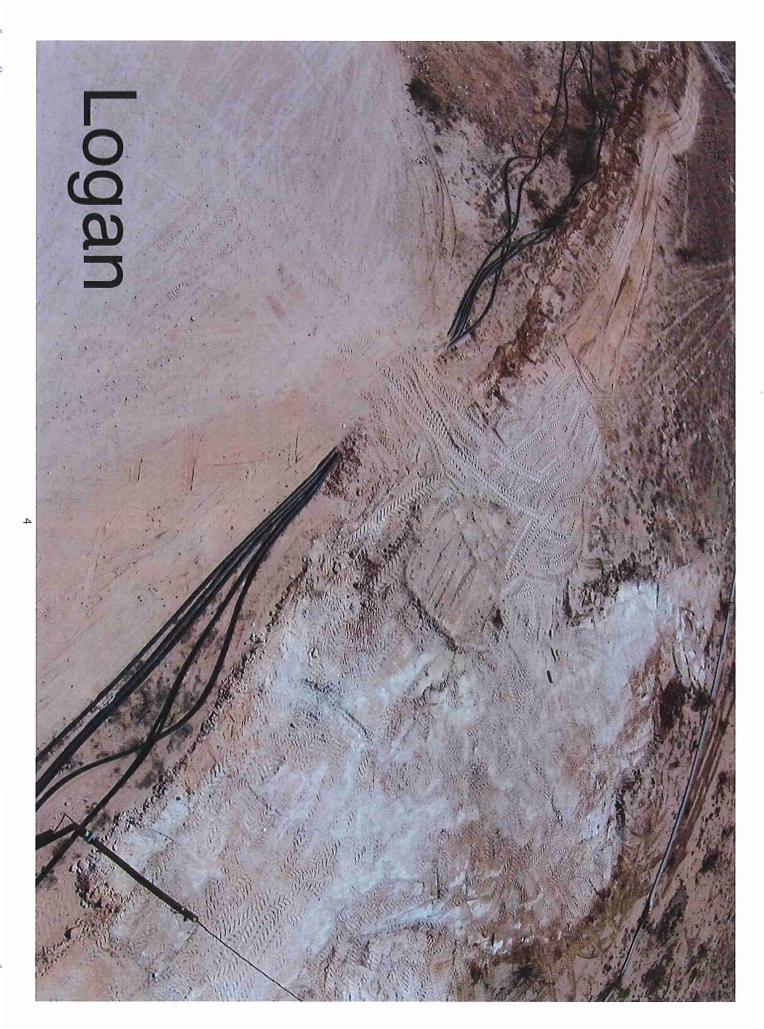
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			Rel	ease Notific	catio	n and C	orrective A	ction	1			
						OPERA	TOR		☐ Initi	al Report	\boxtimes	Final Report
		ime Rock Ro				Contact: M	ike Barrett					•
				ouston, TX, 770	02	Telephone 1	No. 575-365-972	24				
Facility Na	me: Logan	35 Water T	ransfer L	ine		Facility Typ	oe: Transfer Lin	1e				
Surface Ow	ner: Priva	te		Mineral C)wner	Federal			ADING	. 30-015-3	2170	
241140 011				Williorar	7 11101.	Touciai			ATING	. 30-013-3	2179	
						N OF RE	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North	/South Line	Feet from the	East/	West Line	County		
G	2	18S	27E				L	-		Eddy		
		La	atitude_	_32.7824554_	L	ongitude	104.2548904	N	AD83			
Type of Rele	are: Produc	od Woter		NAI	UKE	OF REL	Release: 35 bbls		77.1			
Source of Re							Hour of Occurrence			Recovered: 2 Hour of Dis		
		ory mile opin				5/30/2018	iour or occurrenc	.0		3 @ 4:00 pm		
Was Immedia	ate Notice (If YES, To				(y p		
		\boxtimes	Yes _	No 🗌 Not Re	equired	Mike Brate	cher-NMOCD					
By Whom? K	imberly M	Wilson -Tale	n/I PF			Date and H	Iour:					
Dy whomen	innoonly m	. Tribon Tuic	WIDT D			5/31/2018	iour.					
Was a Water	course Read		_				olume Impacting t	he Wate	ercourse.			
			Yes 🛚	No		N/A						
If a Watercou	rse was Im	pacted, Descri	be Fully.*	N/A							-	
			-									
Describe Cau	se of Proble	em and Remed	lial Action	Taken.* A 4-inc	h poly	line split north	of Apache MJ Si	tate #2	ocation in	he pasture (API# a	bove). The
the spray drie	d anickly	No fluids reco	nut down wered Ta	and the poly line valon/LPE was con	was rep tracted	to do site asse	truck was immedi essment and remed	ately ca	lled to the	ocation but	due to l	high temps
Describe Are	a Affected a	and Cleanup A	ction Tak	en.* At the relea	se poir	nt the impacted	d area measures ar	pproxim	ately 60' x	50' feet. To	the we	est and east
the fluid ran of	lown a cow	trail measurir	ng 1' x 90	on each side. Ex	cavatio	on activities ar	e completed and o	confirm	ation botton	n and sidew	all sam	nles are in
compliance w incident.	ith NMOC	D RRAL's. A	A formal s	ite characterizatio	on and o	closure report	is attached. Lime	Rock is	s respectful	ly requesting	g closui	re for this
I hereby certi	fy that the i	nformation give	ven ahove	is true and compl	ete to t	he hest of my	knowledge and u	ndorator	d that mina	uant to ND40)(D)	11
regulations al	l operators :	are required to	report an	d/or file certain re	elease n	otifications ar	nd perform correct	tive acti	ons for rele	ases which	mav en	danger
public health	or the envir	onment. The	acceptanc	e of a C-141 repo	rt by th	e NMOCD m	arked as "Final Re	eport" d	oes not reli	eve the oper	ator of	liability
should their o	perations h	ave failed to a	dequately	investigate and re	emediat	e contaminati	on that pose a three	eat to gr	ound water	, surface wa	ter, hun	nan health
federal, state,	ment. In ac or local lay	ddition, MMO vs and/or regu	CD accep	rance of a C-141 i	report o	loes not reliev	e the operator of r	esponsi	bility for co	ompliance w	ith any	other
rodorai, stato,	or rocur iui	/s and/or rega	<u> </u>		Т		OIL CONS	SEDV	ATION	DIMIGIO	NI	
	"11	1, \$	3/		1		OIL COIN	OLIC V	ATION	DIVIO	14	
Signature:	n Ch	1	9									
Printed Name	· Mike Ran	ett.				Approved by	Environmental Sp	pecialist	:			
I IIIIcu Ivailic	, wine Dall	Oll										
Title: Product	ion Superin	tendent		-		Approval Dat	e:	1	Expiration I	Date:		
D !! A 11		01.		300								
E-mail Addre	ss: <u>mbarrett</u>	(a)Imerockres	sources.co	<u>m</u>		Conditions of	Approval:			Attached		
Date: 7/19/18			Phone: 5	75-365-9724								

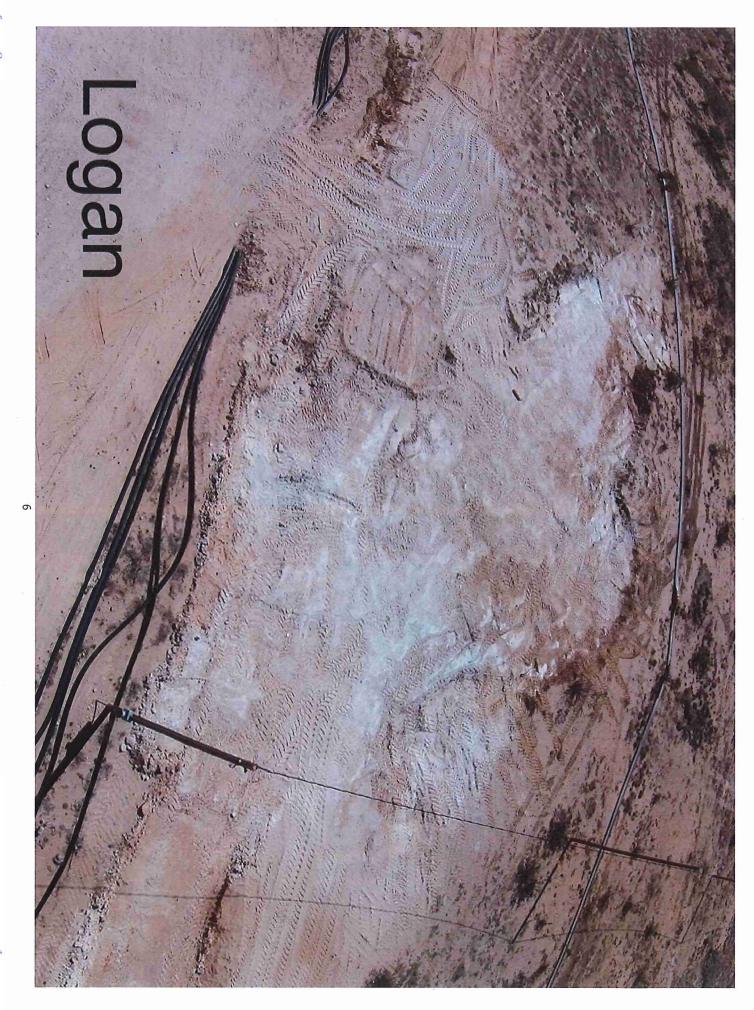
* Attach Additional Sheets If Necessary

APPENDIX III

Aerial Pictures of Excavation









APPENDIX IV

LABORATORY DATA



June 27, 2018

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: LOGAN TRANSFER LINE

Enclosed are the results of analyses for samples received by the laboratory on 06/20/18 11:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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/ga/lab accredited 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.

Celey 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



Analytical Results For:

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

Received:

06/20/2018

06/19/2018

Reported:

06/27/2018

Sampling Date: Sampling Type:

Soil

Project Name:

LOGAN TRANSFER LINE

Sampling Condition:

Cool & Intact

Project Number:

701307.110.01

Sample Received By:

Tamara Oldaker

Project Location:

LIMEROCK - EDDY CO NM

Sample ID: S- 1 1' (H801686-01)

Chloride, SM4500CI-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	06/21/2018	ND	400	100	400	3.92	
Sample ID: S- 1 NORTH	SIDEWALL (H	801686-02)							
Chloride, SM4500CI-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	06/21/2018	ND	400	100	400	3.92	
Sample ID: S- 1 SOUTH	STDEWALL (H	801686-03)							
Chloride, SM4500CI-B		/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1200	16.0	06/21/2018	ND	400	100	400	3.92	
Sample ID: S- 2 1' (H80	1686-04)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/21/2018	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

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Analytical Results For:

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

Received: Reported: 06/20/2018

Project Name:

LOGAN TRANSFER LINE

Project Number:

Project Location:

06/27/2018

701307.110.01

LIMEROCK - EDDY CO NM

Sampling Date:

Sampling Type:

Sampling Condition: Sample Received By:

Cool & Intact

06/19/2018

Soil

Tamara Oldaker

Sample ID: S- 2 NORTH SIDEWALL (H801686-05)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Analyte

Analyte

Result Reporting Limit Analyzed

Method Blank

BS 400 % Recovery 100

True Value QC 400

RPD

Chloride

Chloride

<16.0

Result

80.0

16.0

Reporting Limit

16.0

06/21/2018

ND

3.92

Qualifier

Sample ID: S- 2 SOUTH SIDEWALL (H801686-06)

Chloride, SM4500CI-B

Analyzed By: AC

Analyzed

06/21/2018

Method Blank

ND

BS 400 % Recovery 100

True Value QC 400

RPD

3.92

Qualifier

Cardinal Laboratories

*=Accredited Analyte

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Celeg to treene



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Received:

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06/27/2018

Project Name:

LOGAN TRANSFER LINE

LIMEROCK - EDDY CO NM

Project Number: Project Location:

701307.110.01

Sampling Date:

Sampling Type:

Soil Sampling Condition:

Sample Received By:

Cool & Intact

06/19/2018

Tamara Oldaker

Sample ID: S- 3 1' (H801686-07)

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	06/22/2018	ND	1.83	91.6	2.00	4.05	
Toluene*	<0.050	0.050	06/22/2018	ND	1.83	91.3	2.00	3.38	
Ethylbenzene*	<0.050	0.050	06/22/2018	ND	1.81	90.6	2.00	3.64	
Total Xylenes*	<0.150	0.150	06/22/2018	ND	5.66	94.3	6.00	3.06	
Total BTEX	<0.300	0.300	06/22/2018	ND					
Surrogate: 4-Bromofluorobenzene (PIL	117 9	69.8-14	2						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	23200	16.0	06/21/2018	ND	400	100	400	3.92	
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	06/21/2018	ND	182	91.2	200	1.57	
DRO >C10-C28*	<10.0	10.0	06/21/2018	ND	215	108	200	5.85	
EXT DRO >C28-C36	<10.0	10.0	06/21/2018	ND					
Surrogate: 1-Chlorooctane	80.2	% 41-142	,						
Surrogate: 1-Chlorooctadecane	76.9	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

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Celeg D. Keene



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Project Name: Project Number: LOGAN TRANSFER LINE 701307.110.01

Project Location:

LIMEROCK - EDDY CO NM

Sampling Date:

Sampling Type: Sample Received By:

Sampling Condition:

Soil

06/19/2018

Cool & Intact

Tamara Oldaker

Sample ID: S-3 SOUTH SIDEWALL (H801686-08)

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	06/22/2018	ND	1.83	91.6	2.00	4.05	
Toluene*	<0.050	0.050	06/22/2018	ND	1.83	91.3	2.00	3.38	
Ethylbenzene*	<0.050	0.050	06/22/2018	ND	1.81	90.6	2.00	3.64	
Total Xylenes*	<0.150	0.150	06/22/2018	ND	5.66	94.3	6.00	3.06	
Total BTEX	<0.300	0.300	06/22/2018	ND					
Surrogate: 4-Bromofluorobenzene (PIL	114 9	% 69.8-14	2						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8960	16.0	06/21/2018	ND	400	100	400	3.92	
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	06/21/2018	ND	182	91.2	200	1.57	
DRO >C10-C28*	<10.0	10.0	06/21/2018	ND	215	108	200	5.85	
EXT DRO >C28-C36	<10.0	10.0	06/21/2018	ND					
Surrogate: 1-Chlorooctane	81.0	% 41-142	C						
Surrogate: 1-Chlorooctadecane	79.3	% 37.6-14	7						

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*=Accredited Analyte

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Analytical Results For:

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

Received:

06/20/2018

Reported:

06/27/2018

Project Name: Project Number: LOGAN TRANSFER LINE

Project Location:

701307.110.01

LIMEROCK - EDDY CO NM

Sampling Date:

Sampling Type:

Sampling Condition: Sample Received By: Cool & Intact

Soil

06/19/2018

Tamara Oldaker

Sample ID: S- 4 1' (H801686-09)

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

mg/kg

Analyzed By: AC

Analyte

Result

Reporting Limit 16.0

Reporting Limit

Reporting Limit

Reporting Limit

16.0

Analyzed 06/21/2018

Analyzed

Method Blank

ND

% Recovery 100

True Value QC 400

RPD

3.92

Sample ID: S- 4 NORTH SIDEWALL (H801686-10)

Chloride,	SM4500CI-B

Analyte

Analyte

Analyte

Analyte

Analyzed By: AC

Method Blank

BS

BS

400

True Value QC

Qualifier

Qualifier

Chloride

Chloride

Result 9200

2400

16.0 06/21/2018 ND

400

% Recovery 100

400

RPD 3.92

Sample ID: S- 5 1' (H801686-11)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyzed

Method Blank

BS % Recovery True Value QC

RPD

Qualifier

Chloride

Chloride

Result 368

Result

6720

16.0 06/21/2018 ND

432

108

400

3.77

Sample ID: S- 5 NORTH SIDEWALL (H801686-12)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Analyzed

06/21/2018

Method Blank

ND

BS

432

% Recovery

108

True Value QC

RPD

3.77

RPD

Qualifier

Sample ID: S- 5 SOUTH SIDEWALL (H801686-13)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Qualifier

Chloride

Result 14500 Reporting Limit 16.0

Analyzed 06/21/2018 Method Blank ND

BS 432 % Recovery True Value QC 108

400

400

3.77

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Celeg D. Keens

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

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

Received:

06/20/2018

Reported:

06/27/2018

Project Name: Project Number: LOGAN TRANSFER LINE

Project Location:

Analyte

701307.110.01

LIMEROCK - EDDY CO NM

Reporting Limit

16.0

16.0

16.0

Reporting Limit

16.0

Sampling Date:

Sampling Type:

Sampling Condition:

Sample Received By:

Cool & Intact

06/19/2018

Soil

Tamara Oldaker

RPD

3.77

RPD

3.77

Sample ID: BG - 1 (H801686-14)

Chloride, SM4500CI-B

Chloride

Chloride

Chloride

Chloride

mg/kg

Result

<16.0

48.0

Analyzed By: AC

Analyzed

06/21/2018

Method Blank

ND

108

% Recovery

True Value QC 400

Qualifier

Sample ID: BG - 2 (H801686-15)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Analyte Result Reporting Limit

Analyzed 06/21/2018 Method Blank ND

BS 432

BS

432

432

BS

432

BS

432

% Recovery 108

True Value QC 400

Qualifier

Sample ID: BG - 3 (H801686-16)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Analyte Result Reporting Limit 32.0

Analyzed 06/21/2018 Method Blank ND

% Recovery

108

108

True Value QC 400

Qualifier RPD

3.77

Sample ID: BG - 4 (H801686-17)

Analyte

Chloride, SM4500CI-B

mg/kg

Result

48.0

32.0

Analyzed By: AC

Analyzed

06/21/2018

Method Blank ND

BS % Recovery

True Value QC

400

RPD 3.77

Qualifier

Qualifier

Sample ID: BG - 5 (H801686-18)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Analyte Chloride

Result Reporting Limit

16.0

Analyzed 06/21/2018 Method Blank ND

% Recovery 108

True Value QC RPD 400

3.77

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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

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Celey D. Keine



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	TALOW/LPE		0.17/18			ANALYSIS REQUEST
Project Manager:	DAUCO ADKINS		P.O. #: 70/307 //	110.01		
Address: 4	408 w Texas Ave.		- 1	100		
city: A	State: NM Zip:	99210	Attn:	K		
Phone #:	Fax #:	1	Address:		Z	
Project #: 701 307	//O. O/ Project Owner:	Line Ruck	City:		08	
Project Name:	Logan Transfer	2	State: Zip:		21	
Project Location:	Eddy Co. www	F	Phone #:		K7	
Sampler Name:	Carlos Janamill	C	Fax #:	16		
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING		C	
Lab I.D.	Sample I.D.	OWATER VATER		2)-70 (STER -PH	
H801686		WASTE SOIL OIL SLUDG	OTHER ACID/B/ ICE / CC OTHER DATE	TIME		
	5-1 11	7	V (2/14/18		_	
2	S-1 N. Sidewall 1		11.10	ν,		
C	S-1 S. Sichewall					
4	5-2 1					
(J	5-2 N. Sickwall			2		
6	S-2 S. Sidwall					
1	V-7			2	1	
d	S-3 S. Sidewell			7	1	
2	5-4 1			6	1	
ē	S-4 N. Sidewall	-		5		
analyses. All claims including	TEMPORARY AND ADMINISTRATION OF THE CONTROL OF THE	rising whether based in contract or t	ort, shall be limited to the amount paid by t	the client for the		

Cool Intact

GYes TYes

No | No | No

CHECKED BY:
(Initials)

Sample Condition

Sampler - UPS - Bus - Other:

Delivered By: (Circle One)

Relinquished By:

service. In no event shall Cardinal be liable for incid

Relinquished By:

Time:, 40
Date:

Received By:

P. 10+ 2

Add'I Fax #:

Date: 20-18



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: TALON/LPG		01-118	ANALYSIS REQUEST
Project Manager: D. ADKIUS	P.0	P.O. #: 70/307 // D.O!	- 1
Address: 408 W. Texas Ave	,	Company: Twon/Low	
City: Actosia State: NA	Zip: 88210 Attn:	D. 4012125	3
Phone #: Fax #:	Add	Address:	
Project #: 70/307 // 10.0/ Project Owner:	I ime Ruck	r:	D
Project Name: 1000 TransferLine	State:	te: Zip:	DRI
Project Location: V Cach Co NM		Phone #:	
Sampler Name: Carlos Jaramillo	Fax #:	*	
FOR LAB USE ONLY	MATRIX	PRESERV, SAMPLING	
Lab I.D. Sample I.D.	RAB OR (C)OMP ONTAINERS OUNDWATER STEWATER IL JDGE HER:	ID/BASE: : / COOL HER :	78/14
11 5-5 /	7	7	
12 5-5 N. Sidewill		1 7 1 1	
13 5-5 S. Sidual			
14 86-1			
15 BG-2			
16 RG-3			
17 2-12-4			9
16 Br6-5			
PLEASE NOTE: Liability and Dumoges. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount pold by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event chall Cardinal be fielded for incidental of consequential damages, including without limitation, business interruptions, loss of use, or base of profile incurred by client, its subcidiaries, affaires or sucressions attributed to for relieval to the professions of services. In the professions of services have been applicable.	y claim arising whether based in contract or tort; termed waived unless made in writing and receive without limitation, business interruptions, loss of u	shall be limited to the amount paid by the client for the of the set by Cardinal within 30 days after completion of the see, or loss of profits incurred by client, its subsidiaries.	the applicable tes,

Sample Condition
Cool Infact
Yes Yes
No No

CHECKED BY:
(Initials)

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

Relinguished By

Relinquished By:

Date: Time:

Received By:

Time:

Fax Result: REMARKS:

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

Received by OCD: 5/15/2020 8:49:00 AM



July 18, 2018

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: LOGAN TRANSFER LINE

Enclosed are the results of analyses for samples received by the laboratory on 07/17/18 14:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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/ga/lab accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accredited 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.

Celey D. 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



Analytical Results For:

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

Received:

07/17/2018

Reported:

07/18/2018

Project Name: Project Number: LOGAN TRANSFER LINE

Project Location:

701307.110.01

Sampling Date:

Sampling Type:

Sample Received By:

Sampling Condition:

07/16/2018 Soil

Cool & Intact

Tamara Oldaker

Sample ID: S- 1 SOUTH SIDEWALL 1' (H801940-01)

Chloride, SM4500CI-B

Chloride

Chloride

Chloride

mg/kg

176

Result

32.0

48.0

Analyzed By: AC

Analyte

Analyte

Result Reporting Limit

16.0

Reporting Limit

16.0

LIMEROCK - EDDY CO NM

Analyzed 07/17/2018

07/17/2018

Method Blank ND

ND

BS

432

BS

432

% Recovery 108

True Value QC 400

RPD

0.00

Qualifier

Sample ID: S- 3 SOUTH SIDEWALL 1' (H801940-02)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Analyzed Method Blank % Recovery

108

True Value QC

400

RPD Qualifier

0.00

Sample ID: S- 4 1.5' (H801940-03)

Chloride, SM4500CI-B

Analyzed By: AC

Analyte Result

Reporting Limit Analyzed 16.0 07/17/2018

Method Blank ND

BS 432 % Recovery 108

True Value QC

400

RPD

0.00

Qualifier

Sample ID: S- 4 NORTH SIDEWALL 1.5' (H801940-04)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte Chloride

Result 144

Reporting Limit Analyzed 16.0 07/17/2018 Method Blank ND

BS 432 % Recovery 108

True Value QC 400

RPD 0.00 Qualifier

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Celeg & Kreene



Analytical Results For:

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

Received:

07/17/2018

Reported:

07/18/2018

Project Name:

LOGAN TRANSFER LINE

Project Number: Project Location: 701307.110.01

LIMEROCK - EDDY CO NM

Sampling Date:

Sampling Type:

Sample Received By:

Sampling Condition:

Cool & Intact

07/16/2018

Soil

Tamara Oldaker

Sample ID: S- 5 NORTH SIDEWALL 1' (H801940-05)

Chloride, SM4500CI-B

Chloride

Chloride

Chloride

mg/kg

416

Result

112

Analyzed By: AC

Analyte

Analyte

Result Reporting Limit

16.0

16.0

Analyzed

07/17/2018

07/17/2018

Method Blank ND

ND

BS 432

432

% Recovery 108

True Value QC

RPD 0.00 Qualifier

Sample ID: S-5 SOUTH SIDEWALL 1' (H801940-06)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Reporting Limit

Analyzed

Method Blank BS % Recovery 108

True Value QC

400

400

RPD

Qualifier

Sample ID: S- 3 1.5' (H801940-07)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed
	32.0	16.0	07/17/2018

Method Blank BS ND 432 % Recovery 108

True Value QC 400

0.00

0.00

RPD Qualifier

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Celeg to treens



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

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Celeg D. Keine



HAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Mariand, Hobbs, NW 88240 (575) 393-2326 FAX (575) 393-2476

Company Name: Tolon/I DII	i.				-
Project Manager: 10. Cd/, 115		P,0.崇			
Address: 408 W. Texas Ave.		Company: Talon/LPE	•		,
States NM	지p: 88210	Aftn;			
-746-8768 Faum 575-		Address:			
0.	4000	Olity:	<u>S</u>		
Meson &	,	State: Zip:	<u>e</u> ,		
2		#	<i>d</i>		-
Sampler Hames 3 Manual		Faxes			
FORLABUSEONLY	MATRIX	PRESERV SAMPLING	24		
•	ers Ater		hle —	,	,
H80/940 Sample L.D.	(@)RABOR # CONTAIN @ROUNDW WASTEWA' SOIL OIL SLUDGE	OTHER: ACID/BASE ICE/COOL OTHER: DAIL			
1 54 Sough sidewall 1	- 6 - 6	7/6/8/0%	۷,		
1 11 Sound Sidowell 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
-		1 1 1 1 1 1 1634			116
SI Mount S. Honde 1-3 4		1 1 1 1/036			
1		_			-
1 13.5 Const 2 years 1.	5	0,001			
12 2 2		7-17-8 1200	1		
				•	
	-		,		
					. —

Sampler-UPS - Bas - Other John Teel

Delivered By: (Circle One)

Time

Page 32 of 32

[†] Cardinal canact accept verbal changes. Please fax written changes to (575) 393-2326