

Work Plan Pyote Well Service, LLC: Kaiser SWD St. #9 |30-025-02538|1RP-3512 & 1RP-3621|

May 24, 2016

# Prepared By:

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

# **Prepared For:**

Pyote Well Service, LLC

Mr. Jamie Keyes NMOCD District 1 1625 N. French Drive Hobbs, NM 88240

Subject:

Soil Assessment and Remediation Work Plan

Pyote Well Service

Kaiser SWD St. #9 (30-025-02538) \*1RP-3512 & 1RP-3261\*

Dear Mr. Keyes,

Pyote Well Service, LLC (Pyote) has contracted Talon/LPE (Talon) to perform soil sampling and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

## **Site Information**

The Pyote Kaiser SWD St. #9 is located approximately thirty-three (33) miles southwest of Hobbs, New Mexico. The legal location for this facility is Unit Letter F, Section 13, Township 21S South and Range 34 East in Lea County, New Mexico. More specifically the latitude and longitude are 32.480788 North and -103.425566 West. A site plan is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Ratliff-Wink fine sandy loams with 0 to 3 percent slopes. Drainage courses in this area are normally dry.

# Ground Water and Site Ranking

According to the New Mexico Office of the State Engineer database, the ground water in this area is approximately 165-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) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 5,000 mg/kg for TPH and 1,000 mg/kg for total chlorides.

# **Incident Description and Initial Remedial Actions**

On January 14, 2015 (1RP-3512) a sump overfilled because a driver did not pump the sump dry after unloading produced water. This event coincided with heavy precipitation events which complicated the repair process. On January 16, 3016 the impacted area surrounding the load out was scraped up with a backhoe.

On April 24, 2015 a driver struck load line 3 causing the release of approximately 100bbls of produced water. Vacuum trucks were utilized to recover the standing fluid on location and a backhoe was utilized to scrape up the heavily impacted soil.

On September 11, 2015 Talon mobilized personnel to collect soil samples in two areas of concern to NMOCD. These areas (shown on the attached site plan) were low areas on the location and on the lease road just off location that held the majority of rain water. Upon receipt of analytical data from the initial sampling results NMOCD requested that the areas in question be further vertically delineated, horizontal delineation samples be taken and that samples be taken at depths of 10-feet and 15-feet BGS. The laboratory results from the soil sampling events are summarized in the table below. See Appendix IV for complete report of laboratory results.

# **Laboratory Results**

See Appendix IV for complete report of laboratory results.

September 18, 2015

Sample ID	Depth (feet)	Chlorides (mg/kg)
S-1	0	608
S-2	0	350

May 16, 2016

Sample ID	Depth (feet)	Chlorides (mg/kg)
S-1	1	2080
S-1	2	320
S-1	3	160
S-1	4	128
S-1	10	144
S-1	15	128
S-1	N.WALL	208
S-1	E.WALL	208
S-1	S. WALL	160
S-1	W. WALL	240

Sample ID	Depth (feet)	Chlorides (mg/kg)
S-2	1	1010
S-2	2	928
S-2	3	864
S-2	4	880
S-2	6	1150
S-2	8	464
S-2	10	704
S-2 REFUSAL	15	432
S-2	N. WALL	1340
S-2	E. WALL	1420
S-2	S. WALL	1010
S-2	W. WALL	1180
S-3	0	23600

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

# **Conclusions and Proposed Remedial Actions**

- The area on location in the vicinity of sample location S-1 will be excavated to a depth of 1-foot BGS. The excavation will be backfilled with caliche and contoured to match the surrounding location.
- Due to low chloride concentrations, the other potential causes of chloride impacts (pipelines, flowlines, trucks, and plugged wells in the area), safety and environmental hazards posed by excavating around the two pipeline right-of-ways on each side of the lease road and the depth to ground water (approximately 165'), Pyote respectfully requests that no further action be required on the lease road in the vicinity of sample location S-2.
- Due the number of flowlines, infrastructure and the liner in the vicinity of sample location S-3 mechanical delineation is not feasible. This area will be hand excavated to a depth of 1-foot BGS and backfilled with caliche to prevent the spread of chlorides at the surface.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.

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

Respectfully submitted,

TALON/LPE

Sheldon L. Hitchcock

Project Manager

David J. Adkins

District Manager

Attachments

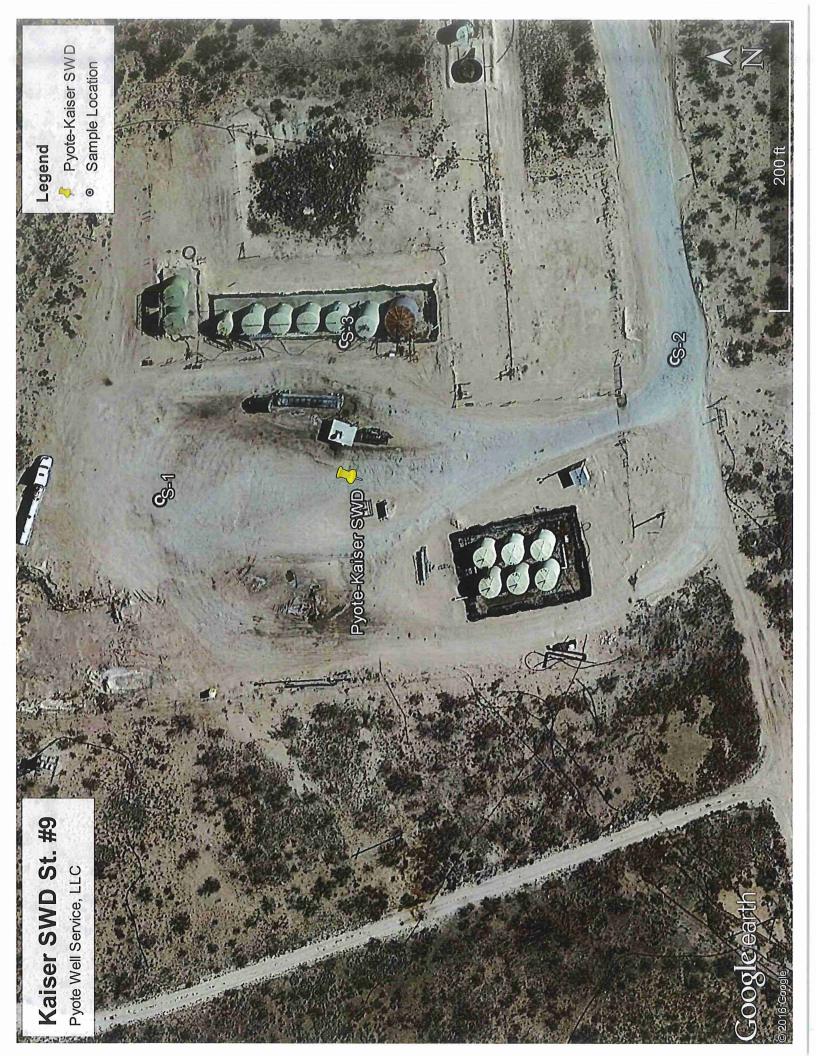
Appendix I Site Plan

Appendix II Groundwater Data

Appendix III Initial C-141

Appendix IV Laboratory Results

# APPENDIX I SITE PLAN



# APPENDIX II GROUNDWATER DATA



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

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

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

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

closed) (quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

see a market and a constant and p	,	`					0				,	,	
	P	OD											
	S	ub-	Q	3 0	)						Depth	Depth	Water
POD Number	Code ba	isin County	64 1	6 4	Sec	Tws	Rng	Х	Υ	Distance	Well	Water	Column
CP 00089	Ο	LE		2 1	13	21S	34E	647840	3594615 🌑	225	235		
CP 00939 POD1		LE	4	1 2	2 07	21S	35E	649974	3596760* 🌑	2814	400	165	235
CP 00940 POD1		LE	4	1 2	2 07	21S	35E	649974	3596760* 🌍	2814	400	165	235

Average Depth to Water:

165 feet

Minimum Depth:

165 feet

Maximum Depth:

165 feet

**Record Count: 3** 

Basin/County Search:

County: Lea

UTMNAD83 Radius Search (in meters):

Easting (X): 647936

Northing (Y): 3594819

Radius: 3000

<sup>\*</sup>UTM location was derived from PLSS - see Help

# APPENDIX III INITIAL C-141

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

# State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

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

**Release Notification and Corrective Action** 

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

pTO1502927423

						<b>OPERA</b>	ГOR	🔀 Initia	al Report	Final Report
Name of Co	mpany Py	ote Water	System	is, LLC		ContactJerr	y Burton Ope	erations Mana	ger for N	M
Address	400 W I	Ilinois STE	E 950 N	lidland TX		Telephone No. 432-448-4917				
Facility Nan	ne					Facility Typ	e Productio	n Water		
Surface Owner Pyote Water Systems,LLC   Mineral Owner						Pyote	API No	20.02	5-02538	
Surface Ow.	ner Pyote	water sy	stems,L	lvimerai C	wher		ryote	APINO	. 30~02	3~02338
				LOCA	TIO	N OF REI	LEASE			
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/West Line	County	
		-	-	10 ft	N/S	S			IFΔ	COUNTY
F	13	٥٢	34	11 2 22	0.00					5001111
		25	La	titude 32.4808	85515	34055gitud	le -103.425	6630765566		
						OF REL	-	, 0000		
Type of Relea	ase 20 hb	ols product	tion wa		CIG		Release 20 bb	Volume R	Recovered	20 bbls
Source of Re	leaseVac t	ruck	JOH WA			Date and Hour of Occurrence 1/14/1Pate and Hour of Discovery 1/14/15				
Was Immedia	ate Notice (	Given?		_		If YES, To Whom?				
		X	Yes _	No Not Re	equired					
By Whom?	Jerry Burt	on				Date and H	Iour			
Was a Water	course Read		_				olume Impacting t	the Watercourse.		
☐ Yes ☒ No					none					
If a Watercourse was Impacted, Describe Fully.*										
none										
110110										
Describe Cau	se of Proble	em and Reme	dial Actio	n Taken.*	when t	hev are inst	ructed to do on	each load. It is p	osted as we	ll at the sign in
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ticket area a	1130									
				mt t			_			
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for loade liv	10 2 8 1	y onough to	WOIRCOI	theor men	on re-	THE TIME TO	TOTAL WOTHER	o naa a company	80 041 0010	rai tilitoo to do tili
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								ctive actions for rele		
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federal, state,				numee of a c 111	roport d	1005 1101 101101	o the operator or	responsionity for ex	Simpirated Wi	demi) other
							OIL CON	SERVATION	DIVISIO	N
	i Z	1								
Signature:	emplai	The				<u></u>	- an (	//DM		
Printed Name	Jerry E	Burton				Approved by	Environmental S	pecialist:		
										500 A
Title: Open	rations N	lanager fo	or NM			Approval Da	te. 1/29/15	Expiration 1	Date: 3/29/	15
	andre	(a) tour of our	atavarat	ome com						
E-mail Addre		<i>(wpyotew</i>	atersysi	ems.com		Conditions of	f Approval:		Attached	П
Date: 1-23-	15		DI.	122 118 10	017					
Attach Addi	tional Cha	ate If Nagara		432-448-49	011		ples required		1RP-35	LZ
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						guides.				1873
						-	final C-141 by	v 3	nTO	1502927174
						Cacille	U 111 U	, -		

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

# State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

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

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

Release Notificati	on and Corrective Act	ion				
OPERA	ATOR 300	x Initial Report Final Repo				
Name of Company PYOTE WATER SYSTEMS, LLC	Contact Jerry Burton					
Address 400 W. Illinois Ste 900	Telephone No. 432.448.4917 or 432.448.5323(Audra)					
Facility Name Kaiser SWD	Facility Type SWD- pro	duction water DIDPOSAL				
B W 0 170 W 10	0	1 40114 20 035 03530				
Surface Owner Pyote Water Systems, LLC   Mineral Owner	Pyote Water Systems, LLC	API No. 30-025-02538				
LOCATI	ION OF RELEASE					
	th/South Line   Feet from the   1	East/West Line County Lea COUNTY				
Latitude	Longitude					
	RE OF RELEASE					
Type of Release; production water Source of Release	Volume of Release 100BBLS  Date and Hour of Occurrence	Volume Recovered 100 BBLS				
Vac truck (unknown due to no camera's) hit load line 3	4/24/2015	Date and Hour of Discovery 4/24/15 2:35 am				
Was Immediate Notice Given X Yes No Not Required	If YES, To Whom? Jerry Burn	lon				
By Whom? Unknown driver (575)-390-3836	Date and HOUR; 4/24/2015 2	2:35 am				
Was a Watercourse Reached?	If YES, Volume Impacting the					
Yes *** No***	DECENTED					
If a Watercourse was Impacted, Describe Fully.*	RECEIVED					
	By OCD Distric	t 1 at 11:10 am, Apr 30, 2015				
Describe Course of Ducklers and Demodial Action Tolerand						
Describe Cause of Problem and Remedial Action Taken.* unknow, at 2:35 am (575)390-3836 in the morning, upon his arrival he noticed	n truck ariver hit load line 3 cause a large amount of water on the pa	a a spiu. We had un anonymous driver call us d at the location. than noticed line 3 was had				
been hit. He did not see this happen at the Kalser	,					
Describe Area Affected and Cleanup Action Taken.*  Area affected was the pad only at the location. Jerry and his pumper I	(annu nongivad damagas thamsalua	s samedial work down by I f I reminer				
(backhoe) 2 vac trucks one from Big Buck Services and one from BT.	senny repairea aamages inemseive Services	s, remediai work done by L&I services				
I hereby certify that the information given above is true and complete to	the best of my knowledge and und	erstand that pursuant to NMOCD rules and				
regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by	notifications and perform corrective	re actions for releases which may endanger				
should their operations have failed to adequately investigate and remedi-	ate 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 res	ponsibility for compliance with any other				
federal, state, or local laws and/or regulations	OIL CON	SERVATION DIVISION				
Signature:						
Printed Staine: Jerry Burton	Approved by Environmental Spec	vialion Kelly Jov-2				
Title: NM Operations Managor for Pyote Water systems, LLC	Approval Date: 04/30/2015	Expiration Date: 07/30/2015				
jerry@pvotewatersystems.com or audra@pyotewatersystems.com	Asphoral Day, 04/30/2013	Explication Date. 01/30/2013				
E-mail Address:	Conditions of Approval:	Attached 294873				
4-26-2015 Date: 4/26/15 Phone:432.448.4917	Site samples required. Delineate as as per MNOCD guides. Geotag ph	nd remediate				
* Attach Additional Sheets If Necessary	remediation required.	over graphs of				

# APPENDIX IV LABORATORY RESULTS



September 18, 2015

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: KAISER SWD

Enclosed are the results of analyses for samples received by the laboratory on 09/11/15 10:36.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keena

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 SHELDON HITCHCOCK 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received:

09/11/2015

Reported:

09/18/2015

Project Name: Project Number: KAISER SWD NONE GIVEN

Project Location:

NOT GIVEN

608

Sampling Date:

09/11/2015

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Judy Garcia

# Sample ID: S-1 0' (H502403-01)

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

Chloride

mg/kg

Analyzed By: AP

Analyte

Result Reporting Limit

16.0

Analyzed 09/16/2015 Method Blank ND

BS 400 % Recovery 100

True Value QC 400

RPD

3.92

3.92

Qualifier

Sample ID: S-2 0' (H502403-02)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte Reporting Limit Analyzed Result Chloride 320 16.0 09/16/2015

Method Blank ND

BS 400 % Recovery 100

True Value QC 400

**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 recessor roles. Including and belingers. Calculates hardways and televise receivery to all plant all subjects and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after compelion 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, ints 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.

Celey D. Keene



## **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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

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

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

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

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Keine



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

(0/0) 333-2320 [2/0] 3/3/ 3/3/				ANALYSIS REQUEST
Company Name: Talon/LPE		BILL 10		
Project Manager: S. Hitch cook	,	P.O. #:		
Address: 408 W. Texas Ave.		company: Talon/LPE		
city: Artesia state: NM zip: 88210	zip: 88210	Attn:		
Phone #: 575-746-8768 Fax #: 575-746-8905	46-8905	Address:		
Project #: Project Owner: P	Prote	City:		
Project Name: Taisan SUD		State: Zip:		
		Phone #:		
Floject Location		Fax #:	5_	
Sampler Name: 5, Hithaula		BBESEBY SAMPING		
FOR LAB USE ONLY	MATRIX	TRESERV. SAMITEING		
Lab I.D. Sample I.D.	G)RAB OR (C)OMP CONTAINERS ROUNDWATER WASTEWATER FOIL BIL GLUDGE	OTHER: ACID/BASE: CE/COOL OTHER:	Chlori	
5-10		0 51/1/16	9:31	
25-20'		1 911/15 4:35	1.35	
		or lon shall be limited to the amount paid	by the client for the	
PLEASE NOTE: Lability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or ion, sain or unknown when the property of the applicable analyses. All claims including those for negligence and any other cause whatsboever shall be deemed when when these made in writing and received by Cardinal within 30 days after completion of the applicable analyses. All claims including those for negligence and any other cause whatsboever shall be deemed when the based in writing and received by close of both the cause when the property of t	any claim arising whether based in contra deemed waived unless made in writing a death-out limitation, business interruptions	nd received by Cardinal within 30 days after (	completion of the applicable only its subsidiaries,	
service. In no event shall Cardinal be lable for incurrant or unconstant or consequence service. In no event shall cardinal be lable for incurrant or services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated reasons or otherwise, affiliates or successions arising out of or related to the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated reasons or otherwise, affiliates or successions arising out of or related to the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated reasons or otherwise.  Phone Resi	Cardinal, regardless of whether such clair	n is based upon any of the above stated reas	t: 🗆 Yes	□ No Add'I Phone #:
Relinquished By:			□ Yes	No Add'I Fax #:

Sample Condition
Cool\_Intact
Cool\_Intact
Yes
No No No

CHECKED BY:

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

Date: Time:

Phone Result: Fax Result: REMARKS:

Received By:



May 16, 2016

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: KAISER SWD ST. #9

Enclosed are the results of analyses for samples received by the laboratory on 05/12/16 13:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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



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

05/12/2016

Result

Reported: 05/16/2016

Project Name: KAISER SWD ST. #9

Project Number: 701712.005.01

Project Location: NONE GIVEN Sampling Date:

BS

05/12/2016

Sampling Type: Soil

% Recovery

Cool & Intact

True Value QC

Sampling Condition: Sample Received By:

Jodi Henson

**RPD** 

Qualifier

Sample ID: S-1 1' (H601049-01)

Received:

Chloride, SM4500CI-B

Analyzed By: AP mg/kg

Reporting Limit

Analyzed Chloride 2080 16.0 05/13/2016 ND 400 100 400 3.92

Sample ID: S-1 2' (H601049-02)

Analyte

Chloride, SM4500CI-B mg/kg Analyzed By: AP Analyte Reporting Limit Result Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 320 16.0 05/13/2016 ND 400 100 400 3.92

Method Blank

Sample ID: S-1 3' (H601049-03)

Analyzed By: AP Chloride, SM4500CI-B mg/kg Reporting Limit Analyte Result Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 160 05/13/2016 16.0 ND 400 100 400 3.92

Sample ID: S-1 4' (H601049-04)

Chloride, SM4500Cl-B Analyzed By: AP mg/kg Analyte Result Reporting Limit Analyzed Method Blank BS True Value QC % Recovery RPD Qualifier Chloride 128 16.0 05/13/2016 ND 400 100 400 3.92

## Cardinal Laboratories

\*=Accredited Analyte

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 TEMPORE Indicating a production of the performance of the services interruptions, loss of use, or loss of profits incurred by Clerni, 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 D. Keene



TALON LPE SHELDON HITCHCOCK 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received:

05/12/2016

05/16/2016

Reported: Project Name:

KAISER SWD ST. #9

Project Number:

701712.005.01

Project Location:

NONE GIVEN

Sampling Date:

05/12/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S-1 10' (H601049-05)

Chloride, SM4500Cl-B

Chloride

Chloride

Chloride

Chloride

Chloride

mg/kg

Analyzed By: AP

Analyte

Result

144

Result

128

Result

208

Reporting Limit

16.0

Reporting Limit

16.0

Reporting Limit

16.0

16.0

Analyzed 05/13/2016 Method Blank ND

BS

400

BS

400

BS

400

BS

400

% Recovery 100

True Value QC 400

RPD

3.92

3.92

Qualifier

Sample ID: S-1 15' (H601049-06)

Chloride, SM4500CI-B

Analyte

Analyte

mg/kg

Analyzed By: AP

% Recovery

100

100

True Value QC

400

**RPD** 

Qualifier

Sample ID: S-1 N. WALL (H601049-07)

Chloride, SM4500Cl-B

Analyzed By: AP

Analyzed

05/13/2016

05/13/2016

Analyzed

05/13/2016

Method Blank

ND

Method Blank

ND

% Recovery

True Value QC

400

RPD

3.92

Oualifier

Sample ID: S-1 E. WALL (H601049-08)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte

Result 192

Reporting Limit

Analyzed

Method Blank

ND

% Recovery

100

True Value QC

400

RPD

3.92

Qualifier

Qualifier

Sample ID: S-1 S. WALL (H601049-09)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AP

Analyte

Reporting Limit Result 160 16.0

Analyzed 05/13/2016 Method Blank ND

BS % Recovery 400 100

True Value QC 400

RPD 3.92

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Celeg D. Keene



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

Received:

05/12/2016

Reported:

05/16/2016

Project Name:

KAISER SWD ST. #9

Project Number:

701712.005.01

Project Location:

NONE GIVEN

Sampling Date:

05/12/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

# Sample ID: S-1 W. WALL (H601049-10)

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

mg/kg

Analyzed By: AP

Analyte

Result Reporting Limit

16.0

Reporting Limit

16.0

Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 05/13/2016 Method Blank ND

BS

400

% Recovery

100

100

True Value QC

400

Qualifier

Sample ID: S-2 1' (H601049-11)

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

Analyte

κg	mg/
----	-----

Analyzed By: AP

% Recovery True Value QC RPD Qualifier

Chloride

Chloride

Chloride

Chloride

Chloride

Result 1010

240

16.0 05/13/2016 ND

Method Blank

BS 400

RPD

3.92

3.92

# Sample ID: S-2 2' (H601049-12)

Chloride, SN	14500CI-B
--------------	-----------

mg/kg

928

Result

864

Result

880

Analyzed By: AP

Analyte Result Reporting Limit

Analyzed 05/13/2016

Analyzed

Method Blank

ND

% Recovery

True Value QC

400

RPD

Qualifier

# Sample ID: S-2 3' (H601049-13)

# Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

100

400

3.92

Analyte

Analyte

Analyzed

05/13/2016

Analyzed

05/13/2016

Method Blank

ND

Method Blank

ND

BS 400

BS

400

BS

400

% Recovery 100

% Recovery

100

True Value QC

400

True Value QC

400

RPD Qualifier

# Sample ID: S-2 4' (H601049-14)

# Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

3.92

**RPD** Qualifier 3.92

# Cardinal Laboratories

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Received:

05/12/2016

Reported:

05/16/2016

Project Name:

KAISER SWD ST. #9

Project Number: Project Location: 701712.005.01

NONE GIVEN

Sampling Date:

Sampling Type:

BS

400

BS

400

BS

400

Sample Received By:

Sampling Condition:

Cool & Intact

05/12/2016

Jodi Henson

Soil

Sample ID: S-2 6' (H601049-15)

Chloride, SM4500CI-B

Chloride

Chloride

Chloride

mg/kg

Analyzed By: AP

Analyte

Result

1150

Result

464

704

Result

432

Result

1340

Reporting Limit

16.0

Reporting Limit

16.0

16.0

Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 05/13/2016 Method Blank ND

% Recovery 100

True Value QC

400

True Value QC

400

RPD 3.92

3.92

Qualifier

Sample ID: S-2 8' (H601049-16)

Analyte

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyzed

05/13/2016

Method Blank

% Recovery

100

**RPD** Qualifier

Sample ID: S-2 10' (H601049-17)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte

Result Reporting Limit Analyzed

05/13/2016

Method Blank ND

ND

% Recovery

True Value QC

**RPD** 

Qualifier

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

100

400

3.92

Sample ID: S-2 15' (H601049-18)

Analyzed

Method Blank BS % Recovery

True Value QC

RPD

Qualifier

Qualifier

Chloride

Chloride

05/13/2016

Analyzed

05/13/2016

ND

400

400

100

400

3.92

Sample ID: S-2 N. WALL (H601049-19)

Analyte

Analyte

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Method Blank

ND

BS % Recovery

100

True Value QC

400

**RPD** 

3.92

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Fax To:

(575) 745-8905

Received:

05/12/2016

Reported:

05/16/2016

Project Name:

KAISER SWD ST. #9

Project Number:

701712.005.01

Project Location:

NONE GIVEN

Sampling Date:

05/12/2016 Soil

Sampling Type:

Cool & Intact

Sampling Condition: Sample Received By:

Jodi Henson

# Sample ID: S-2 E. WALL (H601049-20)

Chloride	, SM45	OOCI-E
----------	--------	--------

mg/kg

Analyzed By: AP

Analyte

Result

1420

Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 05/13/2016

Method Blank ND

BS 400 % Recovery 100

True Value QC 400

Qualifier

RPD

3.92

Sample ID: S-2 S. WALL (H601049-21)

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

Analyte

mg/kg

Analyzed By: AP

Chloride

Chloride

Chloride

Result 1010

05/13/2016 16.0

ND

Method Blank

BS 416 % Recovery 104

True Value QC 400

RPD Qualifier 0.00

Sample ID: S-2 W. WALL (H601049-22)

Chloride, SM4500Cl-B

1180

Analyzed By: AP

Analyte Reporting Limit Result

Analyzed

05/13/2016

Analyzed

05/13/2016

Analyzed

Method Blank

ND

BS % Recovery

True Value QC

400

RPD

0.00

RPD

0.00

Qualifier

Sample ID: S-3 0' (H601049-23)

Chloride, SM4500CI-B

mg/kg

Analyte	Result	Reporting Limit	
Chloride	23600	16.0	

Analyzed By: AP

Method Blank ND

BS 416

416

% Recovery 104

104

True Value QC 400

Qualifier

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ND

## **Notes and Definitions**

RPD Relative Percent Difference

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

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

Analyte NOT DETECTED at or above the reporting limit

Chloride by SM4500CI-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Keine



Company Name: Talon/LPE

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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Project Manager: 5, Hit Chilott	Po #:	TO ANALYSIS REQUEST
W. T	NY.	
City: Artesia state: NM	- 1	
Phone #: 575-746-8768 Fax #: 575-746-8905		
1712,005,01	Proje	
1415m 510		
,	*	
Sampler Name: 5, 4,+Chron	riione#:	
	Fa	5
	MATRIX PRESERV.	SAMPLING
Lab I.D. Sample I.D.	SE:	Lovie
H601049	CONT GROUN WASTE SOIL DIL SLUDGE OTHER CID/BA CE / CO	
-	55	16 9,00
2/ 2/	61	
7 11 7		9:04 /
61-30		8:06
15	, ,	8:15
5-1 V. 12011		9:20
- C. Call		80:0
18.4		01.19
W. Wall		4:11
PLEASE NOTE: Uability and Damages. Cardinat's liability and client's exclusive remedy for any.	ages. Cardinate liability and client's exclusive remedy for any claim arising whether based in contract or tors shall be limited to the amount pack the same of the mount pack the same of the amount pack the same of the sam	4:12 /
dinal I	deemed waked unless made in writing and received by Cardinal within 30 da without limitation, business interruptions, loss of use, or loss of profits incurv	ra para oy me caent for the "a after completion of the applicable d by caent, its aubaddaries,
Dep://2///	Received By:  Phone Res	t:    Yes    No
Refinquished By: 10 Date:	Received By:	Fax Result:
Delivered Ry. (Circle One)		
Circle One)	Sample Condition CHECKED BY:	
Sampler - UPS - Bus - Other: 29.60	Cool Intact	
N. The state of th		

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Page 8 of 10



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476	1240 76		
Company Name: Talon/LPE		3/4410	
Project Manager: 5, HitCh Cock	P.O. #:		ANALIGIU REQUEUL
Address: 408 W. Texas Ave.	Company:	Talon/I PF	
City: Artesia state: NM	Zip: 88210 Attn:	- 1	
Phone #: 575-746-8768 Fax #: 575-746-8905			
1712,005,01	Store		
Project Name: Raisen SUD St 19		Zip:	
, S	Phone #:		
Sampler Name: 5, #+/hwww	Fax #:	2.5	
FOR CAB USE ONLY	MATRIX	SAMPLING	
Lab I.D. Sample I.D.	WATER ATER		
Ньогона	(G)RAB # CONT GROUN WASTE SOIL OIL SLUDGE OTHER ACID/BA ICE / CO OTHER	DATE TIME	
12 (-2) 2(	-	1/2/1/2/11/200	
	9	1 1001	
74		li hojiji	
20	9 0	130.71	
1	0	7	
115-20	6 ( )	/ chill	
No.	6 '	1274.7	
1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Million	
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service. In o event shall Cardinal be lable for incidental or consequental damages, including whole fluidation, business instruptions, loss of use, or loss of polits incured by classification of the applicable affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim to based upon any of the above stated desires.  Relinatis Cardinal Date:	semeo waived unless made in writing and received by Cardinal within 30 du without limitation, business interruptions, loss of use, or loss of profits incur- dinal, regardless of whether such claim is based upon any of the above sta	within 30 days after completion of the applicable rolls incurred by client, its subsidiaries, above stated reasons or otherwise.	
Time: 10	Received By:  MM HMW8	Phone Result:  Yes Fax Result:  Yes REMARKS:	□ No Add'i Phone #: □ No Add'i Fax #:
Time:	Mensed by:		
Delivered By: (Circle One)	오	ED BY:	
Sampler - UPS - Bus - Other: 29,60	Cool Intact	(Initials)	

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Page 9 of 10



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(575) 393-2326 FAX (575) 393-2476		
Company Name: Talon/LPE	BILL TO	-
Project Manager: ) , #i+chcece	P.O. #:	DISTRICTION OF THE PROPERTY OF
W. T	Company: Talon/LPE	
Fax #: 575-7	Address:	
Project #: 701212,009,01 Project Owner: 8 York	City:	
laiger 5 WO St. 7	State: Zip:	
,   ?	*	
Sampler Name: 5, +1+60xcock	Fax #:	
	PRESERV. SAMPLING	
Lab I.D.  Sample I.D.  OR (C)OMPTAINERS NOWATER WATER	: ASE: DOL :	rlonid
# CON	OTHER ACID/E ICE / C OTHER	0
5-2 12,60	7/12/16 11:12	
(1)	16	
PLEASE NOTE: Liability and Carmana Carmana invasive and delete		
analyses. All claims including those for negligence and any other case whatever sinus you ally claim arising whether based in contract or lot, shall be limited to the amount paid by the client for the service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, believes in event shall Cardinal be liable for incidental or consequential damages, including without limitation, believes in event shall cardinal be liable for incidental or consequential damages, including without limitation, believes in events of the applicable.	or tort, shall be limited to the amount paid by the client for the received by Cardinal within 30 days after completion of the a	e applicable
Tablishes or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above state.  Relinquished By:  Date:  Date	oss or use, or loss of profits incurred by client, its subsidiaries a based upon any of the above stated reasons or otherwise.	
0,000		It: ☐ Yes ☐ No Add'! Phone #:
Rélinquished By:  Date:  Réceived By:  Time:	MUONREMARKS:	ē
Delivered By: (Circle One)  Sample Condition	OHEGKED BY:	
Sampler - UPS - Bus - Other: 19,60 Cool Intact	Chin	
F	W.	

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Page 10 of 10