

Apache Corporation
Loco Hills SWD Booster Station

December 13, 2016

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-8 South bottom	4'	--	624	--	--
North Bottom	4'	--	3280	--	--
S-10 Middle		--	32	--	--
East Bottom	4'	--	32	--	--
East sidewall	--	--	16	--	--
S-11	0'	<0.300	1840	<10	4280



Figure 1 – Sample point locations.

Loco Hills Booster

Legend

- Buried Poly Line
- Feature 1
- Sample points

North Bottom

S-8

South bottom



40 ft

Loco Hills Booster

Legend

- Feature 1
- Sample points

S-10 east bottom

S-10 east sw

S-10 middle

S-11



40 ft

Loco Hills Booster

Legend

- Burried Poly Line
- Feature 1
- Sample points

North Bottom

S-8

South bottom

S-10 east, sw

S-10 middle S-11

Loco Hills Swd Booster



100 ft

Google earth

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

December 13, 2016

KIMBERLY WILSON

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: LOCO HILLS SWD BOOSTER

Enclosed are the results of analyses for samples received by the laboratory on 12/12/16 13:55.

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 accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	12/12/2016	Sampling Date:	12/08/2016
Reported:	12/13/2016	Sampling Type:	Soil
Project Name:	LOCO HILLS SWD BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-8 SOUTH BOTTOM (H602777-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	624	16.0	12/13/2016	ND	400	100	400	0.00		

Sample ID: S-8 NORTH BOTTOM (H602777-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3280	16.0	12/13/2016	ND	400	100	400	0.00	

Sample ID: S-10 MIDDLE (H602777-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/13/2016	ND	400	100	400	0.00		

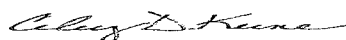
Sample ID: S-10 EAST BOTTOM (H602777-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/13/2016	ND	400	100	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	12/12/2016	Sampling Date:	12/08/2016
Reported:	12/13/2016	Sampling Type:	Soil
Project Name:	LOCO HILLS SWD BOOSTER	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: S-10 EAST SIDEWALL (H602777-05)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/13/2016	ND	400	100	400	0.00	

Sample ID: S-11 0' (H602777-06)

BTEx 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2016	ND	1.96	97.8	2.00	10.2	
Toluene*	<0.050	0.050	12/13/2016	ND	2.00	100	2.00	10.6	
Ethylbenzene*	<0.050	0.050	12/13/2016	ND	1.95	97.7	2.00	10.5	
Total Xylenes*	<0.150	0.150	12/13/2016	ND	5.99	99.8	6.00	11.0	
Total BTEX	<0.300	0.300	12/13/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 118 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1840	16.0	12/13/2016	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/13/2016	ND	175	87.4	200	5.25		
DRO >C10-C28	4280	10.0	12/13/2016	ND	177	88.3	200	9.51		

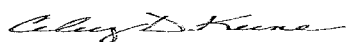
Surrogate: 1-Chlorooctane 87.2 % 35-147

Surrogate: 1-Chlorooctadecane 213 % 28-171

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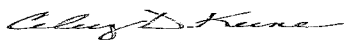
Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

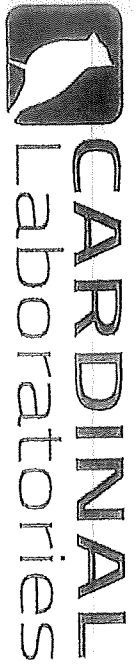
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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Talon/LE

Project Manager: Kimberly Wilson

Address: 408 W. Texas Ave.

City: Artesia

State: NM Zip: 88210

Phone #: 575-746-8768

Fax #: 575-746-8905

Project #:

Project Owner:

Project Name: loco Hill sub Booster

Project Location: Eddy City

Sample Name: Kim Wilson

P.O. #:

Company: ~~Talon/LE~~

Attn: Apache

Address:

City:

State: Zip:

Phone #:

Fax #:

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	SAMPLING	DATE	TIME	ANALYSIS REQUEST									
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :													
AL00777	5-8 South Bottom	6	1								12/9/10		Chlorides									
	5-8 South Bottom	6	1										TPH									
	5-10 Middle	6	1										BTEX									
	5-10 East Bottom	6	1																			
	5-10 East Sideroad	6	1																			
	5-11 0	6	1									2:10										

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Relinquished By: Kim Wilson

Date: 12/15/10

Received By: Heidi Jenson

Relinquished By: Kim Wilson

Date: 12/15/10

Received By: Heidi Jenson

Delivered By: (Circle One)

Sample - UPS - Bus - Other: #75 5:10

Sample Condition: Cool Intact Yes No

CHECKED BY: (initials)

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

245411

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