



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

June 16, 2014

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: WILLOW LAKE #1 SWD

Enclosed are the results of analyses for samples received by the laboratory on 06/06/14 15:30.

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

Received:	06/06/2014	Sampling Date:	06/06/2014
Reported:	06/16/2014	Sampling Type:	Soil
Project Name:	WILLOW LAKE #1 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S-1 0.5' (H401730-01)

BTEX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2014	ND	2.31	115	2.00	1.63	
Toluene*	<0.050	0.050	06/10/2014	ND	1.86	93.1	2.00	14.0	
Ethylbenzene*	<0.050	0.050	06/10/2014	ND	2.10	105	2.00	0.396	
Total Xylenes*	<0.150	0.150	06/10/2014	ND	6.37	106	6.00	0.661	
Total BTEX	<0.300	0.300	06/10/2014	ND					

Surrogate: Dibromofluoromethane 97.3 % 61.3-142

Surrogate: Toluene-d8 102 % 71.3-129

Surrogate: 4-Bromofluorobenzene 101 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	06/12/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/12/2014	ND	202	101	200	3.93	
DRO >C10-C28	<10.0	10.0	06/12/2014	ND	205	103	200	10.0	

Surrogate: 1-Chlorooctane 96.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.1 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	06/06/2014	Sampling Date:	06/06/2014
Reported:	06/16/2014	Sampling Type:	Soil
Project Name:	WILLOW LAKE #1 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S-2 1' (H401730-02)

BTEx 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/10/2014	ND	2.31	115	2.00	1.63		
Toluene*	<0.050	0.050	06/10/2014	ND	1.86	93.1	2.00	14.0		
Ethylbenzene*	<0.050	0.050	06/10/2014	ND	2.10	105	2.00	0.396		
Total Xylenes*	<0.150	0.150	06/10/2014	ND	6.37	106	6.00	0.661		
Total BTEX	<0.300	0.300	06/10/2014	ND						

Surrogate: Dibromofluoromethane 95.7 % 61.3-142

Surrogate: Toluene-d8 101 % 71.3-129

Surrogate: 4-Bromofluorobenzene 97.1 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	06/12/2014	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	06/12/2014	ND	202	101	200	3.93		
DRO >C10-C28	<10.0	10.0	06/12/2014	ND	205	103	200	10.0		

Surrogate: 1-Chlorooctane 109 % 65.2-140

Surrogate: 1-Chlorooctadecane 120 % 63.6-154

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Analytical Results For:

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

Received:	06/06/2014	Sampling Date:	06/06/2014
Reported:	06/16/2014	Sampling Type:	Soil
Project Name:	WILLOW LAKE #1 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S-3 1' (H401730-03)

BTEx 8260B			mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/10/2014	ND	2.31	115	2.00	1.63		
Toluene*	<0.050	0.050	06/10/2014	ND	1.86	93.1	2.00	14.0		
Ethylbenzene*	<0.050	0.050	06/10/2014	ND	2.10	105	2.00	0.396		
Total Xylenes*	<0.150	0.150	06/10/2014	ND	6.37	106	6.00	0.661		
Total BTEX	<0.300	0.300	06/10/2014	ND						

Surrogate: Dibromofluoromethane 101 % 61.3-142

Surrogate: Toluene-d8 99.2 % 71.3-129

Surrogate: 4-Bromofluorobenzene 92.4 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	06/12/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/12/2014	ND	202	101	200	3.93	
DRO >C10-C28	<10.0	10.0	06/12/2014	ND	205	103	200	10.0	

Surrogate: 1-Chlorooctane 89.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.0 % 63.6-154

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Received:	06/06/2014	Sampling Date:	06/06/2014
Reported:	06/16/2014	Sampling Type:	Soil
Project Name:	WILLOW LAKE #1 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S-4 0.5' (H401730-04)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2014	ND	2.31	115	2.00	1.63	
Toluene*	<0.050	0.050	06/10/2014	ND	1.86	93.1	2.00	14.0	
Ethylbenzene*	<0.050	0.050	06/10/2014	ND	2.10	105	2.00	0.396	
Total Xylenes*	<0.150	0.150	06/10/2014	ND	6.37	106	6.00	0.661	
Total BTX	<0.300	0.300	06/10/2014	ND					

Surrogate: Dibromofluoromethane 87.0 % 61.3-142
Surrogate: Toluene-d8 104 % 71.3-129
Surrogate: 4-Bromofluorobenzene 95.5 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/12/2014	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/12/2014	ND	202	101	200	3.93	
DRO >C10-C28	<10.0	10.0	06/12/2014	ND	205	103	200	10.0	

Surrogate: 1-Chlorooctane 116 % 65.2-140
Surrogate: 1-Chlorooctadecane 129 % 63.6-154

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Received:	06/06/2014	Sampling Date:	06/06/2014
Reported:	06/16/2014	Sampling Type:	Soil
Project Name:	WILLOW LAKE #1 SWD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: S-5 0.5' (H401730-05)

BTX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/10/2014	ND	2.31	115	2.00	1.63	
Toluene*	<0.050	0.050	06/10/2014	ND	1.86	93.1	2.00	14.0	
Ethylbenzene*	<0.050	0.050	06/10/2014	ND	2.10	105	2.00	0.396	
Total Xylenes*	<0.150	0.150	06/10/2014	ND	6.37	106	6.00	0.661	
Total BTX	<0.300	0.300	06/10/2014	ND					

Surrogate: Dibromofluoromethane 91.8 % 61.3-142
Surrogate: Toluene-d8 97.2 % 71.3-129
Surrogate: 4-Bromofluorobenzene 89.7 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	06/12/2014	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/12/2014	ND	192	96.0	200	4.69	
DRO >C10-C28	<10.0	10.0	06/12/2014	ND	187	93.7	200	2.60	

Surrogate: 1-Chlorooctane 75.4 % 65.2-140
Surrogate: 1-Chlorooctadecane 86.6 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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