

May 08, 2019

GREG GREGSON

MARK L. SHIDLER

1313 CAMPBELL ROAD BLDG. D

HOUSTON, TX 77055

RE: STATE 23

Enclosed are the results of analyses for samples received by the laboratory on 05/02/19 14:25.

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/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:

MARK L. SHIDLER
GREG GREGSON
1313 CAMPBELL ROAD BLDG. D
HOUSTON TX, 77055
Fax To:

Received: 05/02/2019
Reported: 05/08/2019
Project Name: STATE 23
Project Number: NONE GIVEN
Project Location: LEA

Sampling Date: 05/02/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: 1 B - BOTTOM 7" (H901590-01)

BTEX 8021B		mg/kg		Analyzed By: MS				A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	<0.050	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	<0.300	0.300	05/04/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4360	16.0	05/06/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS				A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2019	ND	197	98.5	200	1.04	
DRO >C10-C28*	91.5	10.0	05/03/2019	ND	224	112	200	2.44	
EXT DRO >C28-C36	12.3	10.0	05/03/2019	ND					

Surrogate: 1-Chlorooctane 94.2 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

MARK L. SHIDLER
GREG GREGSON
1313 CAMPBELL ROAD BLDG. D
HOUSTON TX, 77055
Fax To:

Received: 05/02/2019
Reported: 05/08/2019
Project Name: STATE 23
Project Number: NONE GIVEN
Project Location: LEA

Sampling Date: 05/02/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: 2 B - BOTTOM 7" (H901590-02)

BTX 8021B		mg/kg		Analyzed By: MS				A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	<0.050	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTX	<0.300	0.300	05/04/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/06/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS				A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2019	ND	197	98.5	200	1.04	
DRO >C10-C28*	<10.0	10.0	05/03/2019	ND	224	112	200	2.44	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					

Surrogate: 1-Chlorooctane 91.2 % 41-142

Surrogate: 1-Chlorooctadecane 99.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

MARK L. SHIDLER
GREG GREGSON
1313 CAMPBELL ROAD BLDG. D
HOUSTON TX, 77055
Fax To:

Received: 05/02/2019
Reported: 05/08/2019
Project Name: STATE 23
Project Number: NONE GIVEN
Project Location: LEA

Sampling Date: 05/02/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: 3 B - BOTTOM 7" (H901590-03)

BTX 8021B		mg/kg		Analyzed By: MS				A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	<0.050	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTX	<0.300	0.300	05/04/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1220	16.0	05/06/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS				A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2019	ND	197	98.5	200	1.04	
DRO >C10-C28*	50.8	10.0	05/03/2019	ND	224	112	200	2.44	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 122 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

MARK L. SHIDLER
GREG GREGSON
1313 CAMPBELL ROAD BLDG. D
HOUSTON TX, 77055
Fax To:

Received: 05/02/2019
Reported: 05/08/2019
Project Name: STATE 23
Project Number: NONE GIVEN
Project Location: LEA

Sampling Date: 05/02/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: 4 B - BOTTOM 7" (H901590-04)

BTEx 8021B			mg/kg					Analyzed By: MS		A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Benzene*	<0.050	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33			
Toluene*	<0.050	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04			
Ethylbenzene*	<0.050	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87			
Total Xylenes*	<0.150	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19			
Total BTEX	<0.300	0.300	05/04/2019	ND							

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B			mg/kg					Analyzed By: AC			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	2240	16.0	05/06/2019	ND	400	100	400	3.92			

TPH 8015M			mg/kg					Analyzed By: MS		A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
GRO C6-C10*	<10.0	10.0	05/03/2019	ND	197	98.5	200	1.04			
DRO >C10-C28*	48.5	10.0	05/03/2019	ND	224	112	200	2.44			
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND							

Surrogate: 1-Chlorooctane 99.2 % 41-142

Surrogate: 1-Chlorooctadecane 112 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

MARK L. SHIDLER
GREG GREGSON
1313 CAMPBELL ROAD BLDG. D
HOUSTON TX, 77055
Fax To:

Received: 05/02/2019
Reported: 05/08/2019
Project Name: STATE 23
Project Number: NONE GIVEN
Project Location: LEA

Sampling Date: 05/02/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: 5 B - BOTTOM 7" (H901590-05)

BTEx 8021B		mg/kg	Analyzed By: ms					A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/06/2019	ND	2.04	102	2.00	1.10	
Toluene*	<0.050	0.050	05/06/2019	ND	2.12	106	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/06/2019	ND	2.00	99.8	2.00	1.44	
Total Xylenes*	<0.150	0.150	05/06/2019	ND	6.18	103	6.00	1.52	
Total BTEX	<0.300	0.300	05/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC					A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2640	16.0	05/06/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg	Analyzed By: MS					A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2019	ND	197	98.5	200	1.04	
DRO >C10-C28*	68.3	10.0	05/03/2019	ND	224	112	200	2.44	
EXT DRO >C28-C36	<10.0	10.0	05/03/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 121 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

MARK L. SHIDLER
GREG GREGSON
1313 CAMPBELL ROAD BLDG. D
HOUSTON TX, 77055
Fax To:

Received: 05/02/2019
Reported: 05/08/2019
Project Name: STATE 23
Project Number: NONE GIVEN
Project Location: LEA

Sampling Date: 05/02/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: 6 B - BOTTOM 7" (H901590-06)

BTX 8021B		mg/kg		Analyzed By: ms				A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/06/2019	ND	2.04	102	2.00	1.10	
Toluene*	<0.050	0.050	05/06/2019	ND	2.12	106	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/06/2019	ND	2.00	99.8	2.00	1.44	
Total Xylenes*	<0.150	0.150	05/06/2019	ND	6.18	103	6.00	1.52	
Total BTX	<0.300	0.300	05/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 73.3-129

Chloride, SM4500Cl-B			mg/kg					Analyzed By: AC			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	272	16.0	05/06/2019	ND	400	100	400	3.92			

TPH 8015M		mg/kg		Analyzed By: MS				A-01	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/03/2019	ND	197	98.5	200	1.04	
DRO >C10-C28*	563	10.0	05/03/2019	ND	224	112	200	2.44	
EXT DRO >C28-C36	156	10.0	05/03/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 138 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

A-01	Sample container contained headspace which could cause the results to be biased low.
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

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

Company Name: Mark L. Shidler						BILL TO						ANALYSIS REQUEST							
Project Manager: Gregory Gregson						P.O. #:													
Address: 1313 Campbell Rd, Bldg D						Company: Mark L. Shidler, Inc.													
City: Houston						Attn:													
State: TX zip: 77055						Address:													
Phone #: 713-705-0472 Fax #:						City: Houston													
Project #: Project Owner:						State: TX Zip: 77055													
Project Location:						Phone #: (713) 481-6487													
Fax #: (713) 224-5523																			
Sampler Name:						PRESERV						SAMPLING							
FOR LAB USE ONLY						MATRIX													
						GROUNDWATER													
						WASTEWATER													
						SOIL													
						OIL													
						SLUDGE													
						OTHER :													
						ACID/BASE:													
						ICE / COOL													
						OTHER :													
Lab I.D.						DATE						TIME							
Sample I.D.																			
(G)RAB OR (C)OMP.																			
# CONTAINERS																			
1						5/2						12:12							
2						5/2						12:14							
3						5/2						12:18							
4						5/2						12:23							
5						5/2						12:27							
6						5/2						12:31							
CL																			
TPH Ext																			
BTEx																			

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Reinquished By:		Date:		Received/By:	
		5-2-19		Jamaica	
		Time:		Jamaica	
Phone Result:		<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:	
Fax Result:		<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:	
REMARKS:					

11

100

10.

Sample Condition	Cool	Intact
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes	

CHECKED
(Initials)

Gregson@marklshidderinc.com