

May 06, 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 <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)

Celey D. Keine

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



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

Received: 05/02/2019
Reported: 05/06/2019
Project Name: STATE 23

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 A - TOP SURFACE (H901589-01)**

BTEX 8021B	mg/	/kg	Analyze	d By: MS					S-04, A-01
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	3.25	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	9.93	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	4.12	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	12.7	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	30.0	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	193 9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2520	16.0	05/06/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					S-06, A-01
TPH 8015M  Analyte	<b>mg</b> / Result	/kg Reporting Limit	<b>Analyze</b> Analyzed	d By: MS  Method Blank	BS	% Recovery	True Value QC	RPD	S-06, A-01 Qualifier
			<u> </u>	-	BS 216	% Recovery	True Value QC	RPD 6.27	
Analyte	Result	Reporting Limit	Analyzed	Method Blank		•	·		
Analyte GRO C6-C10*	Result	Reporting Limit 50.0	Analyzed 05/03/2019	Method Blank	216	108	200	6.27	

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Surrogate: 1-Chlorooctadecane

\*=Accredited Analyte

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Celey D. Keine

269 %

37.6-147



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

Received: 05/02/2019 Reported:

05/06/2019

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 A - TOP SURFACE (H901589-02)**

BTEX 8021B	mg/	/kg	Analyze	d 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*	1.09	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	2.52	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	11.5	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	15.1	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	91.8	% 73.3-12	9						
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	05/06/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					S-06, A-01

Method Blank

ND

ND

ND

BS

216

203

% Recovery

108

101

True Value QC

200

200

RPD

6.27

5.49

Qualifier

Analyzed

05/03/2019

05/03/2019

05/03/2019

Surrogate: 1-Chlorooctane	192 %	41-142
Surrogate: 1-Chlorooctadecane	273 %	37.6-147

Result

306

6120

1130

Reporting Limit

50.0

50.0

50.0

Analyte

GRO C6-C10\*

DRO >C10-C28\*

**EXT DRO >C28-C36** 

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Celeg D. Keene



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

Received: 05/02/2019 Reported:

Sampling Date: 05/02/2019 05/06/2019 Sampling Type: Soil

Project Name: STATE 23 Sampling Condition: Cool & Intact Sample Received By: Tamara Oldaker Project Number: NONE GIVEN

Project Location: LEA

### **Sample ID: 3 A - TOP SURFACE (H901589-03)**

mg/	kg	Analyze	d By: MS					A-01
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<0.050	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
<0.050	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
0.123	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
0.511	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
0.634	0.300	05/04/2019	ND					
126 9	73.3-12	9						
mg/	kg	Analyze	d By: AC					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
1260	16.0	05/06/2019	ND	400	100	400	3.92	
mg/	kg	Analyze	d By: MS					A-01
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
25.4	10.0	05/03/2019	ND	216	108	200	6.27	
1270	10.0	05/03/2019	ND	203	101	200	5.49	
	Result <0.050 <0.050 <b>0.123  0.511  0.634</b>	<0.050 0.050 <0.050 0.050  0.123 0.050  0.511 0.150  0.634 0.300   126 % 73.3-12  mg/ky  Result Reporting Limit  1260 16.0  mg/ky  Result Reporting Limit  25.4 10.0	Result       Reporting Limit       Analyzed         <0.050	Result         Reporting Limit         Analyzed         Method Blank           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           < 0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           <0.050

Surrogate: 1-Chlorooctadecane 121 % 37.6-147

\*=Accredited Analyte Cardinal Laboratories

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

Received: 05/02/2019 Reported: 05/06/2019

 05/02/2019
 Sampling Date:
 05/02/2019

 05/06/2019
 Sampling Type:
 Soil

Project Name: STATE 23 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: LEA

### **Sample ID: 4 A - TOP SURFACE (H901589-04)**

BTEX 8021B	mg	/kg	Analyze	ed By: MS					S-04, A-01
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.240	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	2.52	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	2.22	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	5.11	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	10.1	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (Pa	D 170	% 73.3-12	?9						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	05/06/2019	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	ed By: MS					S-06, A-01
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	141	50.0	05/03/2019	ND	216	108	200	6.27	
DRO >C10-C28*	5300	50.0	05/03/2019	ND	203	101	200	5.49	
EXT DRO >C28-C36	1400	50.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	132	% 41-142	2						
Surrogate: 1-Chlorooctane	132	% 41-142	2						

Surrogate: 1-Chlorooctadecane 252 % 37.6-147

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

Received: 05/02/2019 Reported: 05/06/2019

 05/02/2019
 Sampling Date:
 05/02/2019

 05/06/2019
 Sampling Type:
 Soil

Project Name: STATE 23
Project Number: NONE GIVEN

Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Project Location: LEA

# **Sample ID: 5 A - TOP SURFACE (H901589-05)**

BTEX 8021B	mg/	/kg	Analyze	d 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	110 9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	05/06/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d 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*	15.0	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-Chlorooctadecane 105 % 37.6-147

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

Received: 05/02/2019 Reported: 05/06/2019

05/06/2019 STATE 23 NONE GIVEN

Project Location: LEA

Project Name:

RTFY 8021R

Project Number:

Sampling Date: 05/02/2019

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

### **Sample ID: 6 A - TOP SURFACE (H901589-06)**

BIEX 8021B	mg/	кд	Anaiyze	а ву: м5					5-04, A-01
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.601	0.050	05/04/2019	ND	2.00	99.8	2.00	2.33	
Toluene*	2.01	0.050	05/04/2019	ND	1.99	99.3	2.00	3.04	
Ethylbenzene*	2.78	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87	
Total Xylenes*	9.15	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19	
Total BTEX	14.5	0.300	05/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	203 9	73.3-12	9						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	05/06/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					S-06, A-01
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	309	50.0	05/03/2019	ND	197	98.5	200	1.04	
DRO >C10-C28*	7870	50.0	05/03/2019	ND	224	112	200	2.44	
EXT DRO >C28-C36	1950	50.0	05/03/2019	ND					
Surrogate: 1-Chlorooctane	141 9	% 41-142	?						

Analyzed By: MC

Surrogate: 1-Chlorooctadecane 342 % 37.6-147

Cardinal Laboratories \*=Accredited Analyte

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C-04 A-01



# **Notes and Definitions**

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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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Celeg D. Freene



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: MON-K	Mary Walder Ing	•					411111			0		011118					D	N	ANALYSIS	REQUEST	ES	7				
Project Manager:	Gregory Cheason						7	P.O.	#					$\exists$						ᅦ	$\dashv$		$\neg$	$\dashv$	$\neg$	
Address:  3 3		J					0	mom	par	ıy:	3	だしい	Company: Mark L. Shidler/rc	C												_
city: Howston	State: Tx	Zip:	7	700	5		ъ	Attn:	3.50											11.79.1						
Phone #: 7/3 - 7	-705-0477 Fax#:				1		ъ	Address:	ssa,	*:																
Project #:	Project Owner:						0	city: House to	#	200	57	3														
Project Name:	State 23						(n	State:		D	区 Zip:	ië: 7	055													
Project Location:							70	Phone # (7) 3	າe #	3	W.	184	-6487	Ú												
Sampler Name:							т	Fax #: (7/3	#:(	10	3	hee	5227- HER	(J)												
FOR LAB USE ONLY			П	500	MATRIX	문		P	PRESERV	F	ì	SAMPLING	ING		l t											
				TER											+ Ex	EX										
Lab I.D.	Sample I.D.	G)RAB OR CONTAIN	ROUNDW	VASTEWA	OIL	IL	LUDGE	THER : CID/BASE	CE / COOL	THER:	THEIX.	DATE	TIME	CL	TPH	BTI										
	1A - Top Surface				-		-	_			v	<i>4</i>	11:40	7	<	~					4		$\sqcap$	$\dashv$		
7	70			7	X						a	d)	11:45	-	_	_										
CV	7A				X						N	b	11:40													
4	なな				X						- 0	5)4	11:52	,												
5	54				X						(7)	2/2	11:58	-												
6	D				2	-		+		-	7.	5/2	12:04	1-	<b>(</b> —	+				П						
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PLEASE NOTE: Liability and analyses. All claims including service. In no event shall Ca	PLEASE NOTE: Liability and Damages, Cardina'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 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 shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,	ny claim an eemed wa without lin	rising waived un	hether iless m busine	based in ade in s	n cont writing rruption	and re	tort, s ceived of us	hall be d by C ie, or l	limite ardina oss of	d to t with	he amount pa in 30 days aft s incurred by	id by the clien er completion client, its subs	t for the of the applica idiaries,	able											
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Relinquished By:

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

Sample Condition
Cool Intact
Yes Yes
No No

10

CHECKED BY: (Initials)

95 resson and shider com

SSresson GMarkl Shidlering. Com

affiliates or successors arising out of or related to the performant Relinquished By:

Date: 5-2-19
Time: 14:25
Date:

Received By:

Received By:

Phone Result: Fax Result: REMARKS:

□ Yes

□ □ No

Add'l Phone #: Add'l Fax #:

Time: