



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 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,

A handwritten signature in black ink that reads "Celey D. Keene".

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	Sampling Date:	05/02/2019
Reported:	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: 1 A - TOP SURFACE (H901589-01)

BTEX 8021B		mg/kg		Analyzed 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 % 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	2520	16.0	05/06/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS				S-06, A-01		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	367	50.0	05/03/2019	ND	216	108	200	6.27		
DRO >C10-C28*	5010	50.0	05/03/2019	ND	203	101	200	5.49		
EXT DRO >C28-C36	992	50.0	05/03/2019	ND						

Surrogate: 1-Chlorooctane 146 % 41-142

Surrogate: 1-Chlorooctadecane 269 % 37.6-147

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 any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion 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, 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.



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	Sampling Date:	05/02/2019
Reported:	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: 2 A - TOP SURFACE (H901589-02)

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*	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 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed 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		Analyzed By: MS				S-06, A-01		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	306	50.0	05/03/2019	ND	216	108	200	6.27		
DRO >C10-C28*	6120	50.0	05/03/2019	ND	203	101	200	5.49		
EXT DRO >C28-C36	1130	50.0	05/03/2019	ND						

Surrogate: 1-Chlorooctane 192 % 41-142

Surrogate: 1-Chlorooctadecane 273 % 37.6-147

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 any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion 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, 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.



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	Sampling Date:	05/02/2019
Reported:	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: 3 A - TOP SURFACE (H901589-03)

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*	0.123	0.050	05/04/2019	ND	2.00	99.9	2.00	2.87		
Total Xylenes*	0.511	0.150	05/04/2019	ND	5.56	92.7	6.00	3.19		
Total BTEX	0.634	0.300	05/04/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 126 % 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	1260	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*	25.4	10.0	05/03/2019	ND	216	108	200	6.27		
DRO >C10-C28*	1270	10.0	05/03/2019	ND	203	101	200	5.49		
EXT DRO >C28-C36	346	10.0	05/03/2019	ND						

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 121 % 37.6-147

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 any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion 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, 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.



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	Sampling Date:	05/02/2019
Reported:	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		Analyzed 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 (PID) 170 % 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	400	16.0	05/06/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed 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

Surrogate: 1-Chlorooctadecane 252 % 37.6-147

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 any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion 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, 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.



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	Sampling Date:	05/02/2019
Reported:	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: 5 A - TOP SURFACE (H901589-05)

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	05/04/2019	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 % 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	400	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*	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-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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 any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion 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, 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.



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	Sampling Date:	05/02/2019
Reported:	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: 6 A - TOP SURFACE (H901589-06)

BTEX 8021B		mg/kg		Analyzed By: MS				S-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 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed 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		Analyzed 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 % 41-142

Surrogate: 1-Chlorooctadecane 342 % 37.6-147

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 any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion 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, 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.



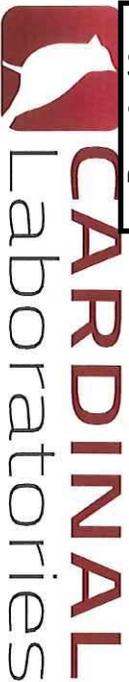
Celey D. Keene, Lab Director/Quality Manager

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



Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Mark L. Swidler Inc Project Manager: Gregory Gregson Address: 1313 Campbell Rd Bldg D City: Houston State: TX Zip: 77055 Phone #: 713-705-0472 Fax #: Project #: Project Owner: Project Name: State 23 Project Location: Sampler Name: FOR LAB USE ONLY		BILL TO P.O. #: Company: Mark L. Swidler Inc Attn: Address: City: Houston State: TX Zip: 77055 Phone #: (713) 481-6487 Fax #: (713) 224-5523		ANALYSIS REQUEST							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	CL	TPH Ext	BTEX
H990589	1A - Top Surface	91	1	<input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE OTHER :	<input type="checkbox"/> ACID/BASE: <input type="checkbox"/> ICE / COOL OTHER :		5/2	11:40	✓	✓	✓
	2 2A			<input checked="" type="checkbox"/>			5/2	11:45	✓	✓	✓
	3 3A			<input checked="" type="checkbox"/>			5/2	11:49	✓	✓	✓
	4 4A			<input checked="" type="checkbox"/>			5/2	11:52	✓	✓	✓
	5 5A			<input checked="" type="checkbox"/>			5/2	11:58	✓	✓	✓
	6 6A			<input checked="" type="checkbox"/>			5/2	12:04	✓	✓	✓

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 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 consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates 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 stated reasons or otherwise.

Relinquished By: *[Signature]* Date: 5-2-19 Time: 14:25
 Relinquished By: *[Signature]* Date:
 Time:
 Received By: *[Signature]*

Delivered By: (Circle One) UPS Bus Other: 1.9c #97
 Sample Condition Cool Intact Yes No Yes No
 CHECKED BY: (Initials) *[Signature]*

Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:
 REMARKS:
 gregson@marklswidler.com
 gregson@marklswidler.com