

September 11, 2015

CLAY TIPTON

BTA Oil Producers

103 South Pecos

Midland, TX 79701

RE: PARDUE D 1

Enclosed are the results of analyses for samples received by the laboratory on 09/10/15 11:04.

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:

BTA Oil Producers
CLAY TIPTON
103 South Pecos
Midland TX, 79701
Fax To: (432) 683-0312

Received: 09/10/2015
Reported: 09/11/2015
Project Name: PARDUE D 1
Project Number: NONE GIVEN
Project Location: LOVING, NM

Sampling Date: 09/10/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: 1 (H502392-01)

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	09/10/2015	ND	1.90	94.9	2.00	1.11	
Toluene*	<0.050	0.050	09/10/2015	ND	1.79	89.4	2.00	1.55	
Ethylbenzene*	<0.050	0.050	09/10/2015	ND	1.80	89.8	2.00	0.196	
Total Xylenes*	<0.150	0.150	09/10/2015	ND	5.94	99.0	6.00	0.897	
Total BTEX	<0.300	0.300	09/10/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	09/11/2015	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	09/10/2015	ND	191	95.6	200	1.42	
DRO >C10-C28	<10.0	10.0	09/10/2015	ND	207	104	200	0.170	

Surrogate: 1-Chlorooctane 66.9 % 47.2-157

Surrogate: 1-Chlorooctadecane 67.5 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Midland TX, 79701
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Received: 09/10/2015
Reported: 09/11/2015
Project Name: PARDUE D 1
Project Number: NONE GIVEN
Project Location: LOVING, NM

Sampling Date: 09/10/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: 2 (H502392-02)

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	09/10/2015	ND	1.90	94.9	2.00	1.11	
Toluene*	<0.050	0.050	09/10/2015	ND	1.79	89.4	2.00	1.55	
Ethylbenzene*	<0.050	0.050	09/10/2015	ND	1.80	89.8	2.00	0.196	
Total Xylenes*	<0.150	0.150	09/10/2015	ND	5.94	99.0	6.00	0.897	
Total BTEx	<0.300	0.300	09/10/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	09/11/2015	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	09/10/2015	ND	191	95.6	200	1.42	
DRO >C10-C28	<10.0	10.0	09/10/2015	ND	207	104	200	0.170	

Surrogate: 1-Chlorooctane 75.3 % 47.2-157

Surrogate: 1-Chlorooctadecane 76.6 % 52.1-176

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 103 South Pecos
 Midland TX, 79701
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 Received: 09/10/2015
 Reported: 09/11/2015
 Project Name: PARDUE D 1
 Project Number: NONE GIVEN
 Project Location: LOVING, NM

 Sampling Date: 09/10/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: 3 (H502392-03)

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	09/10/2015	ND	1.90	94.9	2.00	1.11	
Toluene*	<0.050	0.050	09/10/2015	ND	1.79	89.4	2.00	1.55	
Ethylbenzene*	<0.050	0.050	09/10/2015	ND	1.80	89.8	2.00	0.196	
Total Xylenes*	<0.150	0.150	09/10/2015	ND	5.94	99.0	6.00	0.897	
Total BTEx	<0.300	0.300	09/10/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1150	16.0	09/11/2015	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	09/10/2015	ND	191	95.6	200	1.42	
DRO >C10-C28	<10.0	10.0	09/10/2015	ND	207	104	200	0.170	

Surrogate: 1-Chlorooctane 75.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 66.3 % 52.1-176

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 103 South Pecos
 Midland TX, 79701
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 Received: 09/10/2015
 Reported: 09/11/2015
 Project Name: PARDUE D 1
 Project Number: NONE GIVEN
 Project Location: LOVING, NM

 Sampling Date: 09/10/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: 4 (H502392-04)

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	09/10/2015	ND	1.90	94.9	2.00	1.11	
Toluene*	<0.050	0.050	09/10/2015	ND	1.79	89.4	2.00	1.55	
Ethylbenzene*	<0.050	0.050	09/10/2015	ND	1.80	89.8	2.00	0.196	
Total Xylenes*	<0.150	0.150	09/10/2015	ND	5.94	99.0	6.00	0.897	
Total BTEx	<0.300	0.300	09/10/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	09/11/2015	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	09/10/2015	ND	191	95.6	200	1.42	
DRO >C10-C28	<10.0	10.0	09/10/2015	ND	207	104	200	0.170	

Surrogate: 1-Chlorooctane 64.2 % 47.2-157

Surrogate: 1-Chlorooctadecane 63.7 % 52.1-176

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103 South Pecos
Midland TX, 79701
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Received: 09/10/2015
Reported: 09/11/2015
Project Name: PARDUE D 1
Project Number: NONE GIVEN
Project Location: LOVING, NM

Sampling Date: 09/10/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: BACK GROUND (H502392-05)

BTX 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	09/10/2015	ND	1.90	94.9	2.00	1.11	
Toluene*	<0.050	0.050	09/10/2015	ND	1.79	89.4	2.00	1.55	
Ethylbenzene*	<0.050	0.050	09/10/2015	ND	1.80	89.8	2.00	0.196	
Total Xylenes*	<0.150	0.150	09/10/2015	ND	5.94	99.0	6.00	0.897	
Total BTX	<0.300	0.300	09/10/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/11/2015	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	09/10/2015	ND	191	95.6	200	1.42	
DRO >C10-C28	<10.0	10.0	09/10/2015	ND	207	104	200	0.170	

Surrogate: 1-Chlorooctane 72.4 % 47.2-157

Surrogate: 1-Chlorooctadecane 73.1 % 52.1-176

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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



Page 8 of 8

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

Company Name: BT4

Project Manager: Clay T. Jones

Address: 104 S. Pecos

City: Midland

Phone #: 575-349-5784

Project #:

Project Name: Padue D 1

Project Location: Loving

Sample Name: Clay

State: TX

Fax #:

Project Owner: RTA

City:

State:

Phone #:

Fax #:

Zip: 79701

Attn:

Address:

City:

State:

Zip:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

1502392

1

2

3

4

5

back ground

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

11:05

4:10

11:05

4:10

11:08

4:10

11:09

9:10

11:10

9:10

BTEx

CL

TPH

Relinquished By: [Signature]

Relinquished By: [Signature]

Delivered By: (Circle One) 2.40

Sampler - UPS - Bus - Other:

Received By: [Signature]

Received By: [Signature]

Checked By: [Signature]

Checked By: [Signature]

Phone Result: ☐ Yes ☐ No

Fax Result: ☐ Yes ☐ No

Remarks:

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BILL TO

ANALYSIS REQUEST

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