



May 11, 2018

Mike Bratcher & Crystal Weaver

NMOCD District 2

811 S. First St

Artesia, NM 88210

Re: Closure Report

XTO – Poker Lake Unit 139

NMOCD Reference #: 2RP-3503

Mr. Mike Bratcher & Ms. Crystal Weaver:

RXSoil, Inc. is pleased to submit the Closure Report summarizing the on-site soil remediation of produced water impacted and crude oil distressed soil at the Poker Lake Unit ("PLU") 139 site located in Eddy County, New Mexico.

Sincerely,

A handwritten signature in black ink, appearing to read "Jace Caraway".

Jace Caraway  
Chief Operating Officer  
RXSoil, Inc.  
(940) 210-2051

A handwritten signature in black ink, appearing to read "Zach Robbins".

Zach Robbins  
Technical and Engineering Analyst  
RXSoil, Inc.  
(210) 400-7645

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## I. Introduction

On behalf of XTO Energy, RXSoil, Inc. has prepared this closure report that describes the remedial action of the following site:

PLU 139 (32.19998, -103.83173), API No. 30-015-29847

PLU 139 is located in Unit Letter “J”, Section 24, Township 24S, Range 30E (see “Vicinity Map”, *Figure 1*). The C-141 (*Appendix A*), approved January 15, 2016, indicates a freeze on January 12 caused a split in a flowline. It was reported that 33 barrels of produced water and 118 barrels of oil were released (See “Spill Map”, *Figure 2*), and that five (5) barrels of produced water and 90 barrels of oil were recovered during the initial response.

## II. Regulatory Guidelines

Information was unavailable for depth to ground water in the New Mexico Water Rights Reporting System for Sections 24 and 25, Township 24 South, Range 30 East. The search was extended for adjacent sections, in which one data point was found (*Appendix B*). This point, which is located about 7,000 feet west of the site (*Figure 3*), shows depth to ground water of 400 feet. An Eddy County Depth to Ground Water map (dated February 2005) signifies depths between 350 and 375 feet. This is evidence that the depth to ground water is greater than 100 feet, scoring 0 for that section.

The site is also greater than 1,000 feet from all water sources and any surface water.

The ranking score for this site’s threat to public health, ground water and environment therefore is 0.

Depth to Ground Water:			
(Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet	20 points	
	50 feet to 99 feet	10 points	
	>100 feet	0 points	X
Wellhead Protection Area:			
(Less than 200 feet from a private domestic water source; or less than 1000 feet from all other water sources)	Yes	20 points	
	No	0 points	X
Distance to Surface Water:			
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	20 points	
	200 feet to 1000 feet	10 points	
	>1000 feet	0 points	X
RANKING SCORE (TOTAL POINTS)			0

The target cleanup levels are determined using the *Guidelines for Remediation of Leaks, Spills and Releases* published by the NMOCD (August 13, 1993). The Recommended Remediation Action Levels (RRAL) for the associated classification are 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethyl benzene, and total xylenes (BTEX), 5,000 ppm total petroleum hydrocarbons (TPH) and 600 ppm chlorides.

Post-remediation discrete confirmation samples were collected and properly packaged, preserved and transported to a third-party laboratory by chain of custody, and analyzed for BTEX (Method 8260 or 8021), TPH (Method 8015 extended range) and chloride (Method 4500).

### III. Delineation Report

RXSoil contracted Atkins Engineering Associates to conduct vertical delineation of impacted soil by drilling bore holes throughout the impacted regions. Per the Work Plan, a bore hole was scheduled to be drilled in both the north spill area ("Area A") and the south spill area ("Area B"). Due to power lines overhead of Area B, the drilling rig was unable to safely mount in that area. Therefore, only the Area A bore hole was drilled. The location of the bore hole can be seen in *Figure 4*. Field screenings were taken throughout the process and drilling continued until there was 10' vertical depth of chloride readings less than or equal to 250 ppm.

Samples were tested by Cardinal Laboratories in Hobbs, NM. A summary of the results is below with the lab report listed in *Appendix C*. These samples are identified as "139NBH1.X" which represents PLU 139, North Bore Hole 1, depth X.

Sent: 12/06/17		Reported: 12/12/17			Laboratory: Cardinal Labs	
Delineation: Pre-Remediation Data Results						
Sample	Lab ID Sample	CL (mg/kg)	TPH (mg/kg)	BTEX (mg/kg)	Other	DATE
#1	139NBH1.1'	6,260	55.60	<0.300	-	9-Dec
#2	139NBH1.2'	6,260	84.50	<0.300	-	9-Dec
#3	139NBH1.3'	5,330	14.40	<0.300	-	9-Dec
#4	139NBH1.4'-6'	6,800	23.00	<0.300	-	9-Dec
#5	139NBH1.9'-11'	8,800	<10.0	<0.300	-	9-Dec
#6	139NBH1.14'-16'	8,660	<10.0	<0.300	-	9-Dec
#7	139NBH1.19'-21	10,700	<10.0	<0.300	-	9-Dec
#8	139NBH1.24'	112	<10.0	<0.300	-	9-Dec
#9	139NBH1.34'	128	<10.0	<0.300	-	9-Dec

Horizontal delineation was conducted during excavation. Based on test results from side wall screenings throughout excavation, a gradient of contamination levels helped determine any required further horizontal excavation.

This process is outlined in **Section IV**.

#### IV. Soil Remediation Activity

The remediation of this release is being combined with the remediation of PLU 078 (NMOCD Reference # 2RP-3980). Impacted material from PLU 139 was excavated to a depth of 4' and replaced with clean material from an area adjacent to PLU 078.

To confirm all contaminated material was excavated, side wall and bottom samples were taken. Excavation continued north, east and south until side walls were clean. The west side wall was on the edge of the road where an aboveground pipeline for the facility was located. RXSoil could not safely continue excavation in that direction. To mitigate this, the west walls were lined with 20 mil polyliner to prevent leaching of any contaminants into the remediated area. Bottom samples were taken from both areas at a depth of 4'. The results are shown below with sample points shown in *Figure 4* and the full lab reports shown in *Appendix D*. These samples are identified as "A/B-139 X(SP)" for Area A or B of PLU 139 and either north, east, south, west or bottom Sample Point. 1,324 cubic yards of material was excavated from Area A and 774 cubic yards of material was excavated from Area B.

Sent: 1/5/18		Reported: 1/8/18		Laboratory: Cardinal Labs		
Excavation Data Results						
Sample	Lab ID Sample	CL (mg/kg)	TPH (mg/kg)	BTEX (mg/kg)	Other	DATE
#1	A-139 WSP	1,040	<30.0	<0.300	-	5-Jan
#2	A-139 BSP	2,960	82.30	<0.300	-	5-Jan
#3	A-139 NSP	<16.0	-	-	-	5-Jan
#4	A-139 SSP	<16.0	-	-	-	5-Jan
#5	A-139 ESP	32.0	-	-	-	5-Jan
#6	B-139 WSP	16.0	<30.0	<0.300	-	5-Jan
#7	B-139 BSP	64.0	<30.0	<0.300	-	5-Jan
#8	B-139 N	16.0	-	-	-	5-Jan
#9	B-139 S	16.0	-	-	-	5-Jan
#10	B-139 E	32.0	-	-	-	5-Jan

The subsurfaces of the excavated areas were lined with 20 mil polyliner to prevent any leaching from contaminants below. Pictures of this liner can be seen in *Appendix E*.

RXSoil created engineered treatment cells at PLU 078 for in-situ remediation of produced water impacted and crude oil distressed soil. The impacted soil from both PLU 078 and PLU 139 has been placed into these containment cells and a proprietary delivery system will be installed to apply RXSoil chemicals for remediation of the soil. No harmful or hazardous chemicals are used in the RXSoil Process, as previously approved by the NMOCD.

Background material from PLU 078, upon thorough field screenings was determined to be clean and used to backfill the excavated area at 139. These sample points can be seen in *Figure 5* with the results from field screenings (all non-detectable) displayed in a table in *Appendix F*.

Discrete confirmation samples of the material after backfill were taken to confirm compliance and

correlation with the field screenings. Nine sample points were chosen at various depths throughout the areas and sent for third-party lab testing for chloride, TPH and BTEX. The sample points can be seen in *Figure 6* with the lab report shown in *Appendix G*. A summary of this lab data confirming compliance is listed below. Samples are labeled “139 SPX *N-D*” where *X* is the cell, *N* is the sample number and *D* is the depth.

Sent: 2/7/18		Reported: 2/9/18		Laboratory: Cardinal Labs		
Confirmation Data Results						
Sample	Lab ID Sample	CL (mg/kg)	TPH (mg/kg)	BTEX (mg/kg)	Other	DATE
#1	139 SPA 1-2'	48.0	<30.0	<0.300	-	9-Feb
#2	139 SPA 2-3'	48.0	<30.0	<0.300	-	9-Feb
#3	139 SPA 3-1'	128.0	<30.0	<0.300	-	9-Feb
#4	139 SPA 4-3'	80.0	<30.0	<0.300	-	9-Feb
#5	139 SPA 5-2'	176	76.0	<0.300	-	9-Feb
#6	139 SPB 1-3'	16.0	<30.0	<0.300	-	9-Feb
#7	139 SPB 2-2'	48.0	<30.0	<0.300	-	9-Feb
#8	139 SPB 3-1'	32.0	<30.0	<0.300	-	9-Feb
#9	139 SPB 4-2'	32.0	<30.0	<0.300	-	9-Feb
#10	139 BACKGROUND 2'	16.0	<30.0	<0.300	-	9-Feb
	NMOCD Standards	600.0	5,000	50		

Pictures of the finished areas can be seen in *Appendix H*.

## V. Conclusions

Prior to performing the restoration activities, the backfilled areas of PLU 139 will be tilled and contoured to the surrounding surface landscape. During peak planting season, the area will be seeded with BLM #2 seed mix as directed by the New Mexico Bureau of Land Management (“BLM”). Once the restoration activities are performed, the area will be monitored for growth. Prior to completing the activities, the BLM will be contacted to inspect and approve restoration activities.

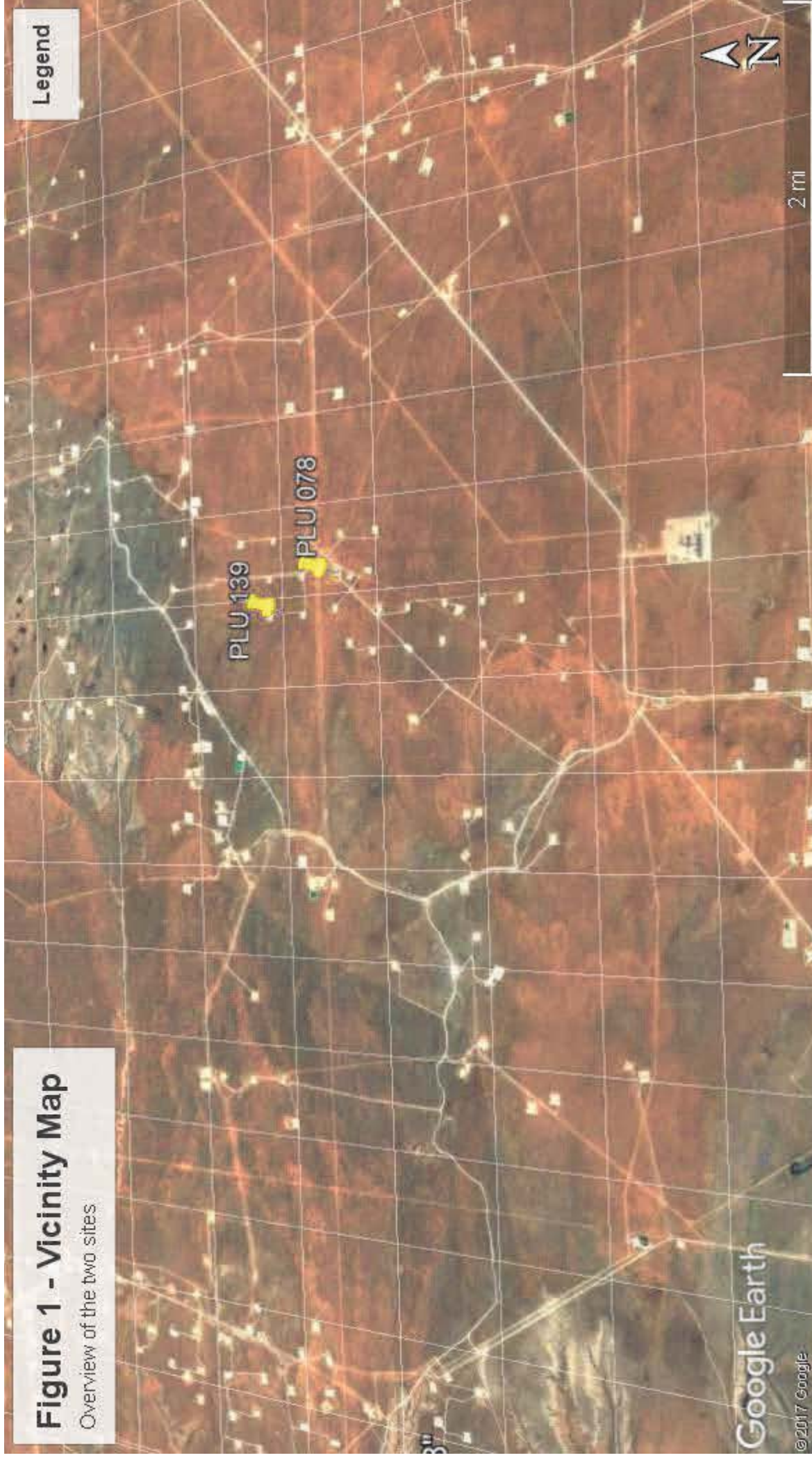
RXSoil is pleased to submit this Closure Report on behalf of XTO to the NMOCD. Laboratory results show all excavation and confirmation tests of chloride, BTEX and TPH concentrations to be below thresholds set by the NMOCD.

RXSoil is recommending no further action be taken in the remediation of the release with RP# 2RP-3980.



## Figure 1 - Vicinity Map

Overview of the two sites





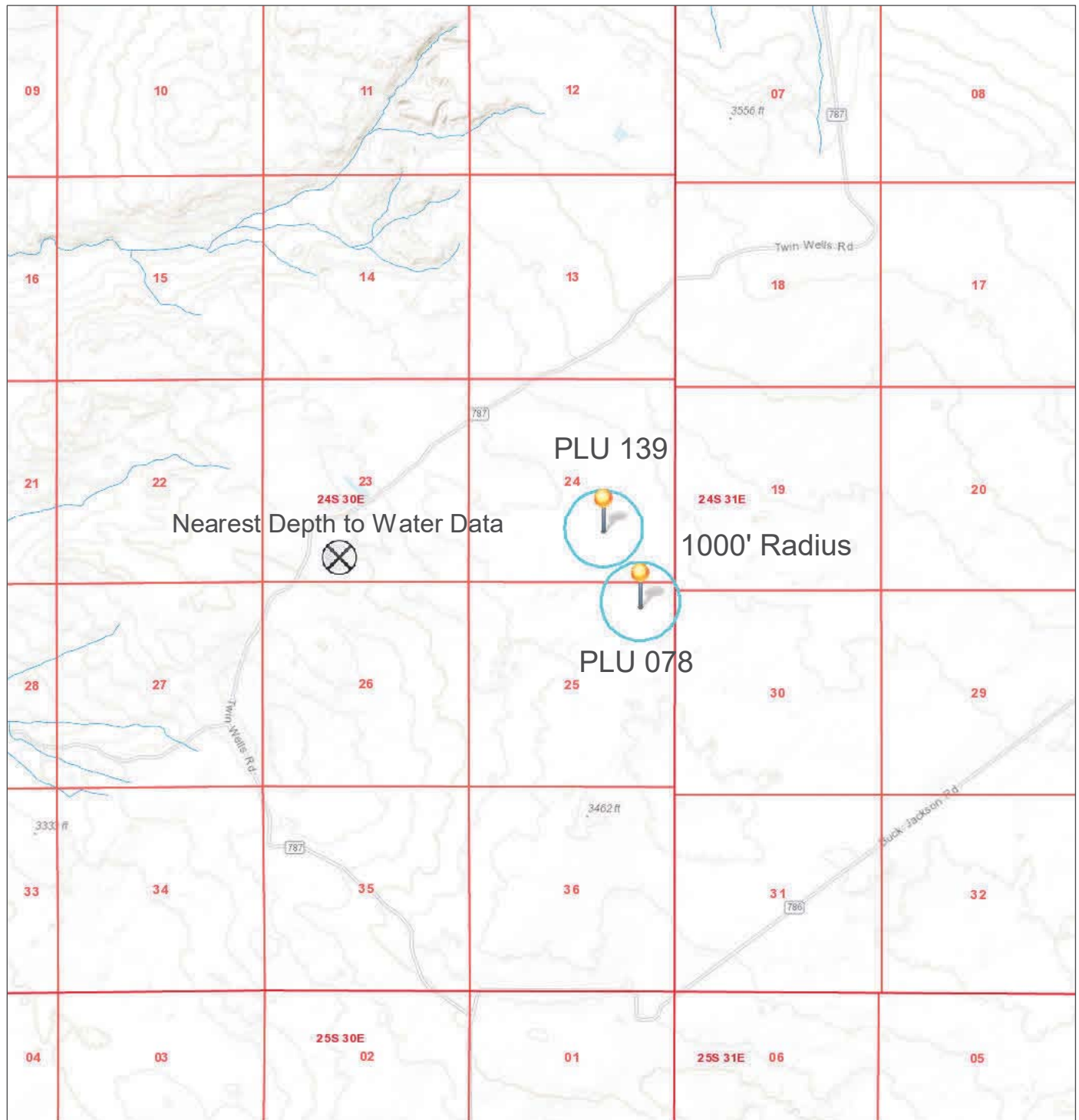
**Figure 2 - Spill Map**

Area A (North) and Area B (South)





# Figure 3 - Water Map



October 31, 2017

1:36,112

## Points



Contaminated Areas



Depth to Groundwater Data

## Areas



PLSS Townships



PLSS First Division

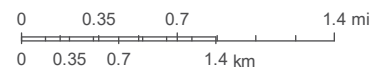


OSE Streams



NM Probable Plays

9



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

**Figure 4A. Delineation and Excavation Map**





**Figure 4B. Delineation and Excavation Map**





Figure 5A. Confirmation Sampling Map

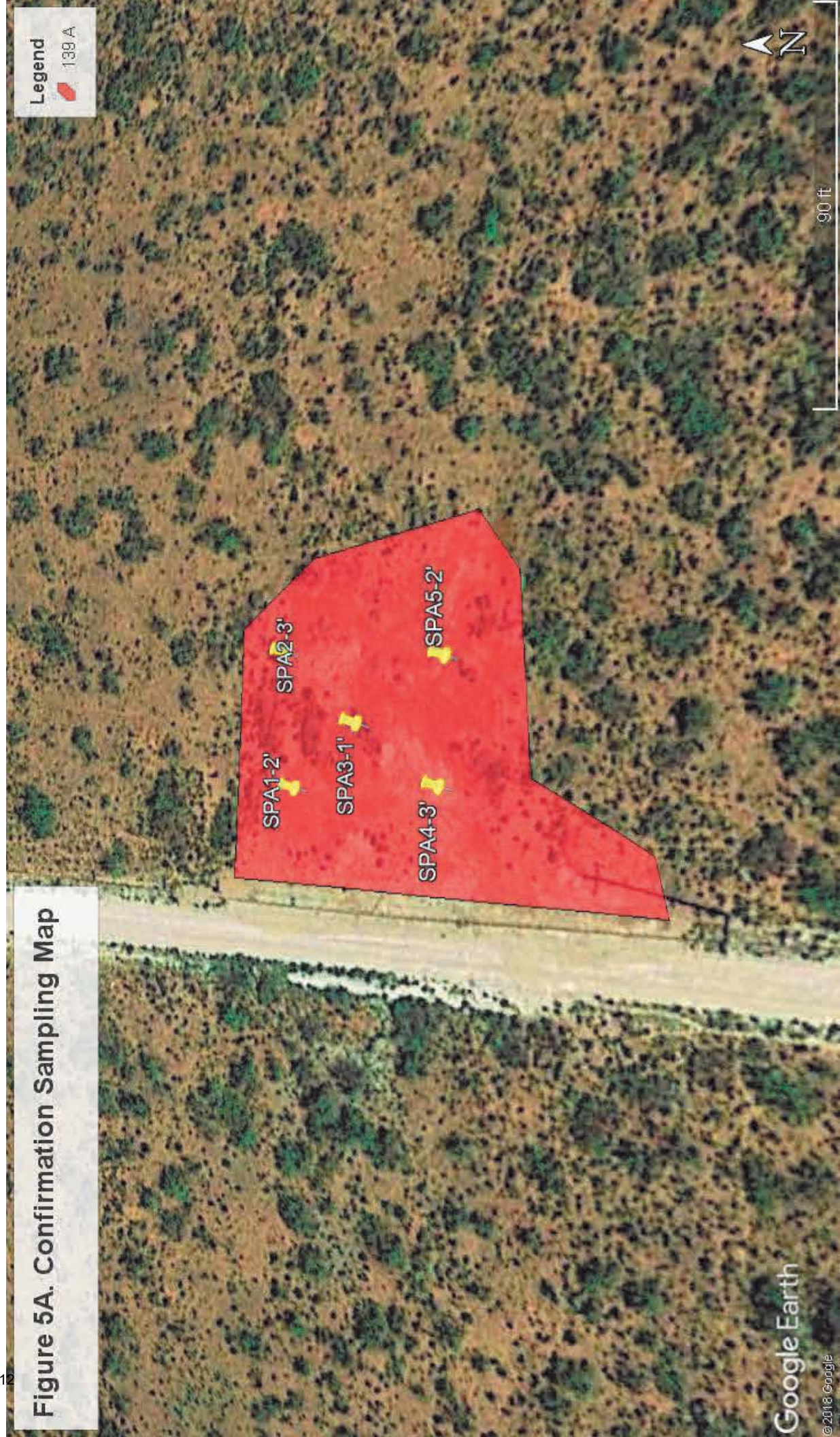




Figure 5B. Confirmation Sampling Map





## **APPENDIX A**

### **C-141, RELEASE NOTIFICATION AND CORRECTIVE ACTION DOCUMENT**

#### **POKER LAKE UNIT 139 (2RP-3980)**



District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

**Release Notification and Corrective Action**

**OPERATOR**

☐ Initial Report ☒ Final Report

Name of Company: XTO Energy	Contact: Kyle Littrell	
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No: 432-221-7331	
Facility Name: PLU #139	Facility Type: Exploration and Production	
Surface Owner: Federal	Mineral Owner: Federal	API No: 30-015-29847

**LOCATION OF RELEASE**

Unit Letter J	Section 24	Township 24S	Range 30E	Feet from the 1980	North/South Line South	Feet from the 1980	East/West Line East	County Eddy
------------------	---------------	-----------------	--------------	-----------------------	---------------------------	-----------------------	------------------------	----------------

Latitude 32.19998 Longitude -103.83173 NAD83

**NATURE OF RELEASE**

Type of Release Crude Oil and Produced Water	Volume of Release 118 BO 33 BPW	Volume Recovered 90 BO 5 BPW
Source of Release Flowline	Date and Hour of Occurrence 1/12/2016 11 am	Date and Hour of Discovery 1/12/2016 12:08 pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher/Heather Patterson (NMOCD), Jim Amos (BLM)	
By Whom? Bradley Blevins	Date and Hour: 1/12/2016 2:45 pm via email	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.\*  
N/A


**Describe Cause of Problem and Remedial Action Taken.\***

The PLU 139 well was pickled and the flowline was flushed with fresh water, due to low lying areas of the flowline, the fresh water settled and froze causing flowline to split. A check valve at the battery header also failed causing fluid to flow back down the flowline and was released out the failed flowline.

**Describe Area Affected and Cleanup Action Taken.\***

Release affected approximately 9,000 square feet of pasture. Per a NMOCD approved work plan, environmental contractor delineated the site via field soil sampling and screening. Soil samples were submitted to a commercial laboratory for confirmation analyses. Impacted soils to 4' bgs were removed for treatment and the excavations were lined with reinforced plastic. The excavations were backfilled with clean topsoil and will be seeded with BLM #2 seed mix during the upcoming growing season.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Amy Ruth		Approved by Environmental Specialist:	
Title: Environmental Coordinator		Approval Date:	Expiration Date:
E-mail Address: Amy_Ruth@xtoenergy.com		Conditions of Approval:	
Date: 5/10/2018 Phone: 575-689-3380		Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary

## **APPENDIX B**

### **WATER COLUMN/AVERAGE DEPTH TO WATER**



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the  
POD suffix indicates the  
POD has been replaced  
& no longer serves a  
water right file.)

(R=POD has been  
replaced,  
O=orphaned,  
C=the file is  
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	DepthWell	DepthWater	Water Column
<a href="#">C 02110</a>			ED	4	3	23	24S	30E		608036	3562950*	600	400	200
<a href="#">C 02780</a>			ED	2	3	2	23	24S	30E	608535	3563857*	505		
<a href="#">C 02781</a>			ED	4	3	2	23	24S	30E	608535	3563657*	624		
<a href="#">C 02782</a>			ED	4	3	2	23	24S	30E	608535	3563657*	808		

Average Depth to Water:

400 feet

Minimum Depth:

400 feet

Maximum Depth:

400 feet

Record Count: 4

PLSS Search:

Section(s): 23

Township: 24S

Range: 30E

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



**APPENDIX C**

**DELINEATION LAB REPORT**



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

---

December 12, 2017

STAN MICKLE

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: PLU 139

Enclosed are the results of analyses for samples received by the laboratory on 12/06/17 14:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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](http://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:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 12/06/2017  
 Reported: 12/12/2017  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 12/05/2017  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: 139 N BH 1.1' (H703371-01)**

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	12/08/2017	ND	2.02	101	2.00	3.33		
Toluene*	<0.050	0.050	12/08/2017	ND	2.06	103	2.00	3.59		
Ethylbenzene*	<0.050	0.050	12/08/2017	ND	2.08	104	2.00	3.33		
Total Xylenes*	<0.150	0.150	12/08/2017	ND	6.03	100	6.00	3.66		
Total BTEX	<0.300	0.300	12/08/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6260	16.0	12/08/2017	ND	432	108	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	12/09/2017	ND	199	99.3	200	4.49	
DRO >C10-C28	38.8	10.0	12/09/2017	ND	206	103	200	15.0	
EXT DRO >C28-C36	16.8	10.0	12/09/2017	ND					

Surrogate: 1-Chlorooctane 95.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 93.1 % 34.7-157

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





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

**Analytical Results For:**

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 12/06/2017  
Reported: 12/12/2017  
Project Name: PLU 139  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 12/05/2017  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: 139 N BH 1.2' (H703371-02)**

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	12/08/2017	ND	2.02	101	2.00	3.33	
Toluene*	<0.050	0.050	12/08/2017	ND	2.06	103	2.00	3.59	
Ethylbenzene*	<0.050	0.050	12/08/2017	ND	2.08	104	2.00	3.33	
Total Xylenes*	<0.150	0.150	12/08/2017	ND	6.03	100	6.00	3.66	
Total BTX	<0.300	0.300	12/08/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6260	16.0	12/08/2017	ND	432	108	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	12/09/2017	ND	199	99.3	200	4.49	
DRO >C10-C28	63.3	10.0	12/09/2017	ND	206	103	200	15.0	
EXT DRO >C28-C36	21.2	10.0	12/09/2017	ND					

Surrogate: 1-Chlorooctane 113 % 28.3-164

Surrogate: 1-Chlorooctadecane 112 % 34.7-157

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



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

### Analytical Results For:

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 12/06/2017  
Reported: 12/12/2017  
Project Name: PLU 139  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 12/05/2017  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

### Sample ID: 139 N BH 1.3' (H703371-03)

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	12/08/2017	ND	2.02	101	2.00	3.33	
Toluene*	<0.050	0.050	12/08/2017	ND	2.06	103	2.00	3.59	
Ethylbenzene*	<0.050	0.050	12/08/2017	ND	2.08	104	2.00	3.33	
Total Xylenes*	<0.150	0.150	12/08/2017	ND	6.03	100	6.00	3.66	
Total BTX	<0.300	0.300	12/08/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5330	16.0	12/08/2017	ND	432	108	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	12/09/2017	ND	199	99.3	200	4.49	
DRO >C10-C28	14.4	10.0	12/09/2017	ND	206	103	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	12/09/2017	ND					

Surrogate: 1-Chlorooctane 101 % 28.3-164

Surrogate: 1-Chlorooctadecane 97.1 % 34.7-157

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 12/06/2017  
 Reported: 12/12/2017  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 12/05/2017  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: 139 N BH 1.4'- 6' (H703371-04)**

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	12/08/2017	ND	2.02	101	2.00	3.33	
Toluene*	<0.050	0.050	12/08/2017	ND	2.06	103	2.00	3.59	
Ethylbenzene*	<0.050	0.050	12/08/2017	ND	2.08	104	2.00	3.33	
Total Xylenes*	<0.150	0.150	12/08/2017	ND	6.03	100	6.00	3.66	
Total BTX	<0.300	0.300	12/08/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6800	16.0	12/08/2017	ND	432	108	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	12/09/2017	ND	199	99.3	200	4.49	
DRO >C10-C28	23.0	10.0	12/09/2017	ND	206	103	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	12/09/2017	ND					

Surrogate: 1-Chlorooctane 91.9 % 28.3-164

Surrogate: 1-Chlorooctadecane 88.6 % 34.7-157

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 12/06/2017  
 Reported: 12/12/2017  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 12/05/2017  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: 139 N BH 1.9' - 11' (H703371-05)**

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	12/08/2017	ND	2.02	101	2.00	3.33	
Toluene*	<0.050	0.050	12/08/2017	ND	2.06	103	2.00	3.59	
Ethylbenzene*	<0.050	0.050	12/08/2017	ND	2.08	104	2.00	3.33	
Total Xylenes*	<0.150	0.150	12/08/2017	ND	6.03	100	6.00	3.66	
Total BTX	<0.300	0.300	12/08/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8800	16.0	12/08/2017	ND	432	108	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	12/09/2017	ND	199	99.3	200	4.49	
DRO >C10-C28	<10.0	10.0	12/09/2017	ND	206	103	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	12/09/2017	ND					

Surrogate: 1-Chlorooctane 103 % 28.3-164

Surrogate: 1-Chlorooctadecane 100 % 34.7-157

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

### Analytical Results For:

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 12/06/2017  
Reported: 12/12/2017  
Project Name: PLU 139  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 12/05/2017  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

### Sample ID: 139 N BH 1.14' - 16' (H703371-06)

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	12/08/2017	ND	2.02	101	2.00	3.33	
Toluene*	<0.050	0.050	12/08/2017	ND	2.06	103	2.00	3.59	
Ethylbenzene*	<0.050	0.050	12/08/2017	ND	2.08	104	2.00	3.33	
Total Xylenes*	<0.150	0.150	12/08/2017	ND	6.03	100	6.00	3.66	
Total BTX	<0.300	0.300	12/08/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8660	16.0	12/08/2017	ND	432	108	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	12/09/2017	ND	199	99.3	200	4.49	
DRO >C10-C28	<10.0	10.0	12/09/2017	ND	206	103	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	12/09/2017	ND					

Surrogate: 1-Chlorooctane 109 % 28.3-164

Surrogate: 1-Chlorooctadecane 107 % 34.7-157

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 12/06/2017  
 Reported: 12/12/2017  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 12/05/2017  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: 139 N BH 1.19' - 21' (H703371-07)**

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	12/08/2017	ND	2.02	101	2.00	3.33	
Toluene*	<0.050	0.050	12/08/2017	ND	2.06	103	2.00	3.59	
Ethylbenzene*	<0.050	0.050	12/08/2017	ND	2.08	104	2.00	3.33	
Total Xylenes*	<0.150	0.150	12/08/2017	ND	6.03	100	6.00	3.66	
Total BTEx	<0.300	0.300	12/08/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10700	16.0	12/08/2017	ND	432	108	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	12/09/2017	ND	199	99.3	200	4.49	
DRO >C10-C28	<10.0	10.0	12/09/2017	ND	206	103	200	15.0	
EXT DRO >C28-C36	<10.0	10.0	12/09/2017	ND					

Surrogate: 1-Chlorooctane 95.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 92.1 % 34.7-157

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 12/06/2017  
 Reported: 12/12/2017  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 12/05/2017  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: 139 N BH 1.24' (H703371-08)**

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	12/08/2017	ND	2.02	101	2.00	3.33	
Toluene*	<0.050	0.050	12/08/2017	ND	2.06	103	2.00	3.59	
Ethylbenzene*	<0.050	0.050	12/08/2017	ND	2.08	104	2.00	3.33	
Total Xylenes*	<0.150	0.150	12/08/2017	ND	6.03	100	6.00	3.66	
Total BTX	<0.300	0.300	12/08/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	12/08/2017	ND	432	108	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	12/09/2017	ND	238	119	200	11.3	
DRO >C10-C28	<10.0	10.0	12/09/2017	ND	244	122	200	22.0	
EXT DRO >C28-C36	<10.0	10.0	12/09/2017	ND					

Surrogate: 1-Chlorooctane 94.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 89.9 % 34.7-157

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 12/06/2017  
 Reported: 12/12/2017  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 12/05/2017  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: 139 N BH 1.34' (H703371-09)**

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	12/08/2017	ND	2.02	101	2.00	3.33	
Toluene*	<0.050	0.050	12/08/2017	ND	2.06	103	2.00	3.59	
Ethylbenzene*	<0.050	0.050	12/08/2017	ND	2.08	104	2.00	3.33	
Total Xylenes*	<0.150	0.150	12/08/2017	ND	6.03	100	6.00	3.66	
Total BTX	<0.300	0.300	12/08/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	12/08/2017	ND	432	108	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	12/10/2017	ND	238	119	200	11.3	
DRO >C10-C28	<10.0	10.0	12/10/2017	ND	244	122	200	22.0	
EXT DRO >C28-C36	<10.0	10.0	12/10/2017	ND					

Surrogate: 1-Chlorooctane 102 % 28.3-164

Surrogate: 1-Chlorooctadecane 96.8 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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Cardinal Laboratories

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---

Celey D. Keene, Lab Director/Quality Manager



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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> <u>RSBL</u>				<b>Project Manager:</b> <u>STAN MICKLE</u>				<b>P.O. #:</b>				<b>ANALYSIS REQUEST</b>			
<b>Address:</b>				<b>City:</b>				<b>Company:</b>							
<b>Phone #:</b>				<b>State:</b>				<b>Zip:</b>				<b>Attn:</b>			
<b>Project #:</b>				<b>Fax #:</b>				<b>Address:</b>				<b>City:</b>			
<b>Project Name:</b> <u>PLA #139</u>				<b>Project Owner:</b>				<b>State:</b>				<b>Zip:</b>			
<b>Project Location:</b>				<b>Phone #:</b>				<b>State:</b>				<b>Zip:</b>			
<b>Sampler Name:</b> <u>STAN MICKLE</u>				<b>Phone #:</b>				<b>State:</b>				<b>Zip:</b>			
<b>FOR LAB USE ONLY</b>				<b>Fax #:</b>				<b>Matrix:</b>				<b>Preserv:</b>			
<b>Lab I.D.</b>				<b>Sample I.D.</b>				<b>(G)RAB OR (C)OMP.</b>				<b># CONTAINERS</b>			
<b>Matrix:</b>				<b>GROUNDWATER</b>				<b>WASTEWATER</b>				<b>SOIL</b>			
<b>OIL</b>				<b>SLUDGE</b>				<b>OTHER :</b>				<b>ACID/BASE:</b>			
<b>ICE / COOL</b>				<b>OTHER :</b>				<b>DATE</b>				<b>TIME</b>			
<b>SAMPLING</b>				<b>DATE</b>				<b>TIME</b>				<b>CLORIDES</b>			
<b>TPH</b>				<b>BTEX</b>				<b>Added 12/7/17 TO.</b>				<b>Added 12/2/17 TO.</b>			

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**Relinquished By:** [Signature] **Date:** 12-4-17 **Received By:** [Signature] **Date:** 12-4-17

**Relinquished By:** [Signature] **Date:** 12-4-17 **Received By:** [Signature] **Date:** 12-4-17

**Delivered By: (Circle One)** None

**Sampler - UPS - Bus - Other:** Delivered 12/4/17

**Sample Condition:** Cool ☒ Intact ☒ Yes ☐ No ☐ Yes ☐ No

**CHECKED BY:** [Signature] **Initials:** TS

**Phone Result:** ☐ Yes ☐ No **Add'l Phone #:**

**Fax Result:** ☐ Yes ☐ No **Add'l Fax #:**

**REMARKS:**

**APPENDIX D**

**EXCAVATION LAB REPORT**



January 08, 2018

STAN MICKLE

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: PLU 139

Enclosed are the results of analyses for samples received by the laboratory on 01/05/18 14:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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](http://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 blue ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 01/05/2018  
Reported: 01/08/2018  
Project Name: PLU 139  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 01/04/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: A- 139 NSP (H800046-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/08/2018	ND	416	104	400	0.00		

**Sample ID: A- 139 SSP (H800046-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/08/2018	ND	416	104	400	0.00		

**Sample ID: A- 139 ESP (H800046-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/08/2018	ND	416	104	400	0.00		

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

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

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



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

[illegible]





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

January 11, 2018

STAN MICKLE

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: PLU 139

Enclosed are the results of analyses for samples received by the laboratory on 01/05/18 14:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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](http://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:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 01/05/2018  
 Reported: 01/11/2018  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 01/05/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: A- 139 WSP (H800048-01)**

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	01/09/2018	ND	1.98	99.0	2.00	2.55	
Toluene*	<0.050	0.050	01/09/2018	ND	2.02	101	2.00	2.46	
Ethylbenzene*	<0.050	0.050	01/09/2018	ND	2.05	103	2.00	2.25	
Total Xylenes*	<0.150	0.150	01/09/2018	ND	6.09	102	6.00	2.02	
Total BTX	<0.300	0.300	01/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1040	16.0	01/08/2018	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	01/10/2018	ND	201	100	200	11.8	
DRO >C10-C28*	<10.0	10.0	01/10/2018	ND	197	98.3	200	13.5	
EXT DRO >C28-C36	<10.0	10.0	01/10/2018	ND					

Surrogate: 1-Chlorooctane 77.5 % 41-142

Surrogate: 1-Chlorooctadecane 74.1 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 01/05/2018  
 Reported: 01/11/2018  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 01/05/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: A- 139 BSP (H800048-02)**

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	01/09/2018	ND	1.98	99.0	2.00	2.55		
Toluene*	<0.050	0.050	01/09/2018	ND	2.02	101	2.00	2.46		
Ethylbenzene*	<0.050	0.050	01/09/2018	ND	2.05	103	2.00	2.25		
Total Xylenes*	<0.150	0.150	01/09/2018	ND	6.09	102	6.00	2.02		
Total BTEx	<0.300	0.300	01/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2960	16.0	01/08/2018	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	01/10/2018	ND	201	100	200	11.8	
DRO >C10-C28*	82.3	10.0	01/10/2018	ND	197	98.3	200	13.5	
EXT DRO >C28-C36	<10.0	10.0	01/10/2018	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



### Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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

---

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

January 08, 2018

STAN MICKLE

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: PLU 139

Enclosed are the results of analyses for samples received by the laboratory on 01/05/18 14:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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](http://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:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 01/05/2018  
 Reported: 01/08/2018  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 01/05/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B- 139 N (H800047-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	01/08/2018	ND	416	104	400	0.00		

**Sample ID: B- 139 E (H800047-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/08/2018	ND	416	104	400	0.00		

**Sample ID: B- 139 S (H800047-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	01/08/2018	ND	416	104	400	0.00		

Cardinal Laboratories

\*=Accredited Analyte

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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

---

Cardinal Laboratories

\*=Accredited Analyte

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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

<b>Company Name:</b> <u>KSOIL</u>				<b>P.O. #:</b>			
<b>Project Manager:</b> <u>STAN MCELLE</u>				<b>Company:</b>			
<b>Address:</b>				<b>Attn:</b>			
<b>City:</b>				<b>Address:</b>			
<b>Phone #:</b> <u>210-853-7645</u>				<b>Fax #:</b>			
<b>Project #:</b>				<b>City:</b>			
<b>Project Name:</b> <u>PLU 139</u>				<b>State:</b>			
<b>Project Location:</b>				<b>Zip:</b>			
<b>Sampler Name:</b> <u>JACOB MCELLE</u>				<b>Phone #:</b>			
<b>FOR LAB USE ONLY</b>				<b>Fax #:</b>			

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS REQUEST					
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			ICE / COOL	OTHER :	CHLORIDES (100%)	TPH (50%)	BTEX (50%)	
H800047	B.139 N	G				X					01/05	09:00	X	X	X			
	B.139 E	G				X					01/05	09:00	X	X	X			
	B.139 S	G				X					01/05	09:00	X	X	X			

<b>Relinquished By:</b> <u>[Signature]</u>		<b>Received By:</b> <u>[Signature]</u>	
<b>Date:</b> <u>1-5-18</u>	<b>Time:</b> <u>12:30</u>	<b>Date:</b>	<b>Time:</b>
<b>Refiniquished By:</b>		<b>Received By:</b>	

<b>Delivered By: (Circle One)</b> <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Bus <input type="checkbox"/> Other: <u>Corrected-0050</u>	<b>Sample Condition</b> Cool <input type="checkbox"/> Yes <input type="checkbox"/> No Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>CHECKED BY:</b> (Initials) <u>TS</u>
<b>REMARKS:</b> <u>100% RUSH CHLORIDES</u> <u>50% RUSH TPH/BTEX</u>		



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

---

January 11, 2018

STAN MICKLE

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: PLU 139

Enclosed are the results of analyses for samples received by the laboratory on 01/05/18 14:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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](http://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:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 01/05/2018  
 Reported: 01/11/2018  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 01/05/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B- 139 WSP (H800049-01)**

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	01/09/2018	ND	1.98	99.0	2.00	2.55	
Toluene*	<0.050	0.050	01/09/2018	ND	2.02	101	2.00	2.46	
Ethylbenzene*	<0.050	0.050	01/09/2018	ND	2.05	103	2.00	2.25	
Total Xylenes*	<0.150	0.150	01/09/2018	ND	6.09	102	6.00	2.02	
Total BTX	<0.300	0.300	01/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/08/2018	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	01/10/2018	ND	201	100	200	11.8	
DRO >C10-C28*	<10.0	10.0	01/10/2018	ND	197	98.3	200	13.5	
EXT DRO >C28-C36	<10.0	10.0	01/10/2018	ND					

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 96.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 01/05/2018  
 Reported: 01/11/2018  
 Project Name: PLU 139  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 01/05/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: B- 139 BSP (H800049-02)**

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	01/09/2018	ND	1.98	99.0	2.00	2.55	
Toluene*	<0.050	0.050	01/09/2018	ND	2.02	101	2.00	2.46	
Ethylbenzene*	<0.050	0.050	01/09/2018	ND	2.05	103	2.00	2.25	
Total Xylenes*	<0.150	0.150	01/09/2018	ND	6.09	102	6.00	2.02	
Total BTEX	<0.300	0.300	01/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/08/2018	ND	432	108	400	3.64		

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	01/10/2018	ND	201	100	200	11.8	
DRO >C10-C28*	<10.0	10.0	01/10/2018	ND	197	98.3	200	13.5	
EXT DRO >C28-C36	<10.0	10.0	01/10/2018	ND					

Surrogate: 1-Chlorooctane 78.4 % 41-142

Surrogate: 1-Chlorooctadecane 75.8 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



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

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

**APPENDIX E**

**POLY LINER PICTURES**





*Figure 1: Cross sectional view of backfill with poly liner in place in Area A*



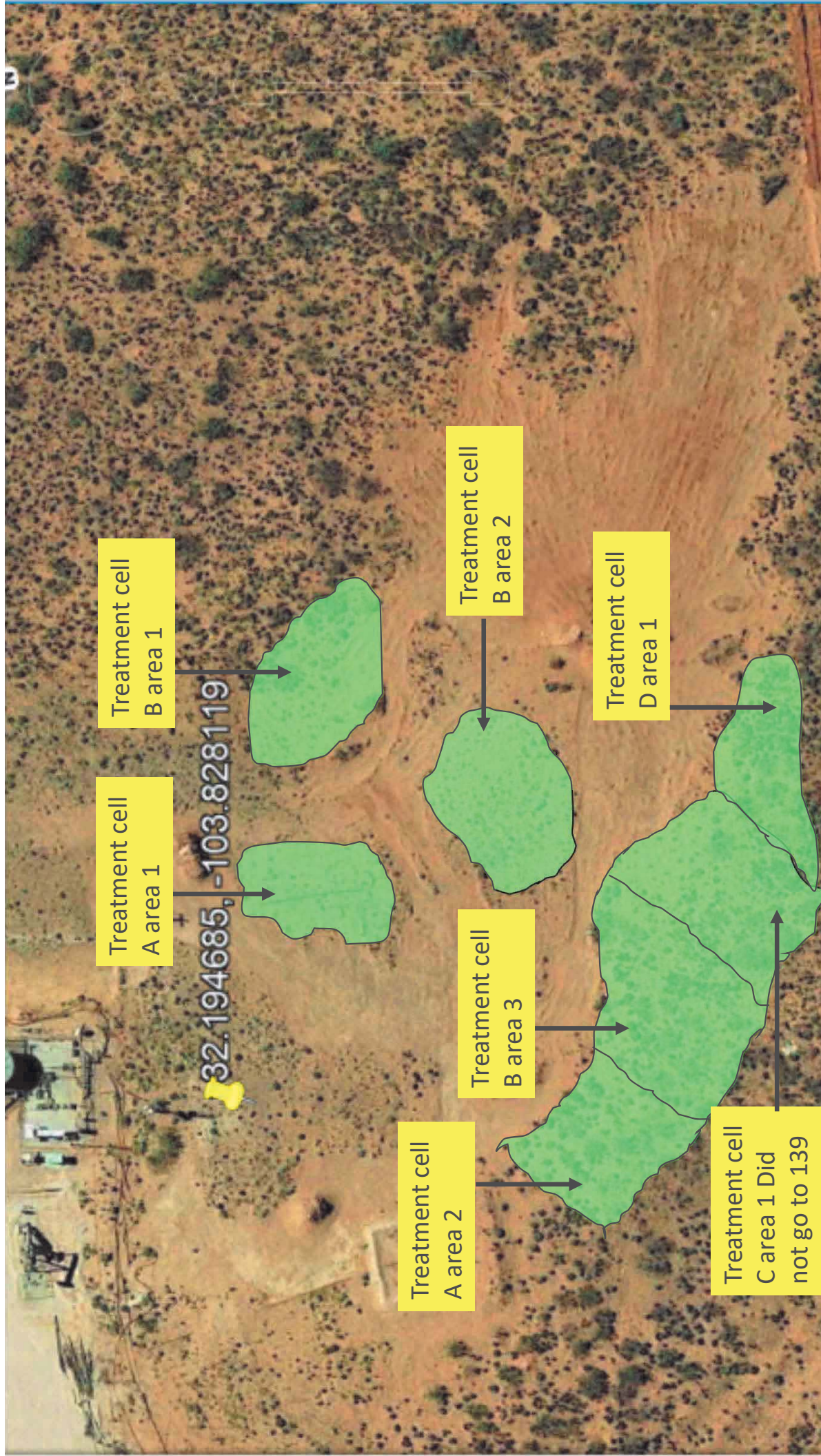
*Figure 2: Poly liner shown in place in Area B.*

## **APPENDIX F.I**

### **BACKGROUND MATERIAL FIELD SCREENINGS RESULT**

#### **SAMPLE MAP**





## **APPENDIX F.II**

### **BACKGROUND MATERIAL FIELD SCREENINGS RESULT**

#### **FIELD SCREENINGS DATA**



## Appendix F. Background Material

[illegible]

**APPENDIX G**

**CONFIRMATION LAB REPORT**



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

---

February 09, 2018

STAN MICKLE

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: PLU 078

Enclosed are the results of analyses for samples received by the laboratory on 02/08/18 16:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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](http://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



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

### Analytical Results For:

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 02/08/2018  
Reported: 02/09/2018  
Project Name: PLU 078  
Project Number: XTO  
Project Location: NOT GIVEN

Sampling Date: 02/07/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

### Sample ID: 139 SPA 1-2 (H800416-01)

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	02/09/2018	ND	2.05	103	2.00	1.96	
Toluene*	<0.050	0.050	02/09/2018	ND	2.01	100	2.00	2.18	
Ethylbenzene*	<0.050	0.050	02/09/2018	ND	1.97	98.6	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/09/2018	ND	6.01	100	6.00	1.60	
Total BTX	<0.300	0.300	02/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 72-148

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	02/09/2018	ND	432	108	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	02/09/2018	ND	183	91.7	200	0.778	
DRO >C10-C28*	<10.0	10.0	02/09/2018	ND	162	81.0	200	5.27	
EXT DRO >C28-C36	<10.0	10.0	02/09/2018	ND					

Surrogate: 1-Chlorooctane 84.8 % 41-142

Surrogate: 1-Chlorooctadecane 84.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

### Analytical Results For:

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 02/08/2018  
Reported: 02/09/2018  
Project Name: PLU 078  
Project Number: XTO  
Project Location: NOT GIVEN

Sampling Date: 02/07/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

### Sample ID: 139 SPA 2-3 (H800416-02)

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	02/09/2018	ND	2.05	103	2.00	1.96		
Toluene*	<0.050	0.050	02/09/2018	ND	2.01	100	2.00	2.18		
Ethylbenzene*	<0.050	0.050	02/09/2018	ND	1.97	98.6	2.00	1.49		
Total Xylenes*	<0.150	0.150	02/09/2018	ND	6.01	100	6.00	1.60		
Total BTX	<0.300	0.300	02/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 72-148

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	02/09/2018	ND	432	108	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	02/09/2018	ND	183	91.7	200	0.778	
DRO >C10-C28*	<10.0	10.0	02/09/2018	ND	162	81.0	200	5.27	
EXT DRO >C28-C36	<10.0	10.0	02/09/2018	ND					

Surrogate: 1-Chlorooctane 77.1 % 41-142

Surrogate: 1-Chlorooctadecane 76.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

### Analytical Results For:

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 02/08/2018  
Reported: 02/09/2018  
Project Name: PLU 078  
Project Number: XTO  
Project Location: NOT GIVEN

Sampling Date: 02/07/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

### Sample ID: 139 SPA 3-1 (H800416-03)

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	02/09/2018	ND	2.05	103	2.00	1.96		
Toluene*	<0.050	0.050	02/09/2018	ND	2.01	100	2.00	2.18		
Ethylbenzene*	<0.050	0.050	02/09/2018	ND	1.97	98.6	2.00	1.49		
Total Xylenes*	<0.150	0.150	02/09/2018	ND	6.01	100	6.00	1.60		
Total BTEX	<0.300	0.300	02/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	02/09/2018	ND	432	108	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	02/09/2018	ND	183	91.7	200	0.778	
DRO >C10-C28*	<10.0	10.0	02/09/2018	ND	162	81.0	200	5.27	
EXT DRO >C28-C36	<10.0	10.0	02/09/2018	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

### Analytical Results For:

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 02/08/2018  
Reported: 02/09/2018  
Project Name: PLU 078  
Project Number: XTO  
Project Location: NOT GIVEN

Sampling Date: 02/07/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

### Sample ID: 139 SPA 4-3 (H800416-04)

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	02/09/2018	ND	2.05	103	2.00	1.96		
Toluene*	<0.050	0.050	02/09/2018	ND	2.01	100	2.00	2.18		
Ethylbenzene*	<0.050	0.050	02/09/2018	ND	1.97	98.6	2.00	1.49		
Total Xylenes*	<0.150	0.150	02/09/2018	ND	6.01	100	6.00	1.60		
Total BTEx	<0.300	0.300	02/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/09/2018	ND	432	108	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	02/09/2018	ND	183	91.7	200	0.778	
DRO >C10-C28*	<10.0	10.0	02/09/2018	ND	162	81.0	200	5.27	
EXT DRO >C28-C36	<10.0	10.0	02/09/2018	ND					

Surrogate: 1-Chlorooctane 95.1 % 41-142

Surrogate: 1-Chlorooctadecane 96.6 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 02/08/2018  
 Reported: 02/09/2018  
 Project Name: PLU 078  
 Project Number: XTO  
 Project Location: NOT GIVEN

 Sampling Date: 02/07/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: 139 SPA 5-2 (H800416-05)**

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	02/09/2018	ND	2.05	103	2.00	1.96		
Toluene*	<0.050	0.050	02/09/2018	ND	2.01	100	2.00	2.18		
Ethylbenzene*	<0.050	0.050	02/09/2018	ND	1.97	98.6	2.00	1.49		
Total Xylenes*	<0.150	0.150	02/09/2018	ND	6.01	100	6.00	1.60		
Total BTEX	<0.300	0.300	02/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	02/09/2018	ND	432	108	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	02/09/2018	ND	183	91.7	200	0.778	
DRO >C10-C28*	76.0	10.0	02/09/2018	ND	162	81.0	200	5.27	
EXT DRO >C28-C36	<10.0	10.0	02/09/2018	ND					

Surrogate: 1-Chlorooctane 92.2 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

### Analytical Results For:

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 02/08/2018  
Reported: 02/09/2018  
Project Name: PLU 078  
Project Number: XTO  
Project Location: NOT GIVEN

Sampling Date: 02/07/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

### Sample ID: 139 SPB 1-3 (H800416-06)

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	02/09/2018	ND	2.05	103	2.00	1.96	
Toluene*	<0.050	0.050	02/09/2018	ND	2.01	100	2.00	2.18	
Ethylbenzene*	<0.050	0.050	02/09/2018	ND	1.97	98.6	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/09/2018	ND	6.01	100	6.00	1.60	
Total BTX	<0.300	0.300	02/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/09/2018	ND	432	108	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	02/09/2018	ND	183	91.7	200	0.778	
DRO >C10-C28*	<10.0	10.0	02/09/2018	ND	162	81.0	200	5.27	
EXT DRO >C28-C36	<10.0	10.0	02/09/2018	ND					

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

### Analytical Results For:

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 02/08/2018  
Reported: 02/09/2018  
Project Name: PLU 078  
Project Number: XTO  
Project Location: NOT GIVEN

Sampling Date: 02/07/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

### Sample ID: 139 SPB 2-2 (H800416-07)

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	02/09/2018	ND	2.05	103	2.00	1.96		
Toluene*	<0.050	0.050	02/09/2018	ND	2.01	100	2.00	2.18		
Ethylbenzene*	<0.050	0.050	02/09/2018	ND	1.97	98.6	2.00	1.49		
Total Xylenes*	<0.150	0.150	02/09/2018	ND	6.01	100	6.00	1.60		
Total BTEx	<0.300	0.300	02/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 72-148

Chloride, SM4500CI-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	02/09/2018	ND	432	108	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	02/09/2018	ND	183	91.7	200	0.778	
DRO >C10-C28*	<10.0	10.0	02/09/2018	ND	162	81.0	200	5.27	
EXT DRO >C28-C36	<10.0	10.0	02/09/2018	ND					

Surrogate: 1-Chlorooctane 96.4 % 41-142

Surrogate: 1-Chlorooctadecane 97.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 02/08/2018  
 Reported: 02/09/2018  
 Project Name: PLU 078  
 Project Number: XTO  
 Project Location: NOT GIVEN

 Sampling Date: 02/07/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: 139 SPB 3-1 (H800416-08)**

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	02/09/2018	ND	2.05	103	2.00	1.96		
Toluene*	<0.050	0.050	02/09/2018	ND	2.01	100	2.00	2.18		
Ethylbenzene*	<0.050	0.050	02/09/2018	ND	1.97	98.6	2.00	1.49		
Total Xylenes*	<0.150	0.150	02/09/2018	ND	6.01	100	6.00	1.60		
Total BTEX	<0.300	0.300	02/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/09/2018	ND	432	108	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	02/09/2018	ND	183	91.7	200	0.778	
DRO >C10-C28*	<10.0	10.0	02/09/2018	ND	162	81.0	200	5.27	
EXT DRO >C28-C36	<10.0	10.0	02/09/2018	ND					

Surrogate: 1-Chlorooctane 97.1 % 41-142

Surrogate: 1-Chlorooctadecane 99.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RX-SOIL INC.  
 STAN MICKLE  
 201 MAIN STREET, SUITE 1360  
 FORT WORTH TX, 76102  
 Fax To: NA

 Received: 02/08/2018  
 Reported: 02/09/2018  
 Project Name: PLU 078  
 Project Number: XTO  
 Project Location: NOT GIVEN

 Sampling Date: 02/07/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: 139 SPB 4-2 (H800416-09)**

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	02/09/2018	ND	2.05	103	2.00	1.96		
Toluene*	<0.050	0.050	02/09/2018	ND	2.01	100	2.00	2.18		
Ethylbenzene*	<0.050	0.050	02/09/2018	ND	1.97	98.6	2.00	1.49		
Total Xylenes*	<0.150	0.150	02/09/2018	ND	6.01	100	6.00	1.60		
Total BTX	<0.300	0.300	02/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/09/2018	ND	432	108	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	02/09/2018	ND	183	91.7	200	0.778	
DRO >C10-C28*	<10.0	10.0	02/09/2018	ND	162	81.0	200	5.27	
EXT DRO >C28-C36	<10.0	10.0	02/09/2018	ND					

Surrogate: 1-Chlorooctane 85.3 % 41-142

Surrogate: 1-Chlorooctadecane 86.0 % 37.6-147

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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



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February 09, 2018

STAN MICKLE

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: PLU 078

Enclosed are the results of analyses for samples received by the laboratory on 02/08/18 16:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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](http://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



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

### Analytical Results For:

RX-SOIL INC.  
STAN MICKLE  
201 MAIN STREET, SUITE 1360  
FORT WORTH TX, 76102  
Fax To: NA

Received: 02/08/2018  
Reported: 02/09/2018  
Project Name: PLU 078  
Project Number: XTO  
Project Location: NOT GIVEN

Sampling Date: 02/08/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

### Sample ID: 139 BACKGROUND 2' (H800415-01)

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	02/09/2018	ND	2.05	103	2.00	1.96	
Toluene*	<0.050	0.050	02/09/2018	ND	2.01	100	2.00	2.18	
Ethylbenzene*	<0.050	0.050	02/09/2018	ND	1.97	98.6	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/09/2018	ND	6.01	100	6.00	1.60	
Total BTEX	<0.300	0.300	02/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/09/2018	ND	432	108	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	02/09/2018	ND	183	91.7	200	0.778	
DRO >C10-C28*	<10.0	10.0	02/09/2018	ND	162	81.0	200	5.27	
EXT DRO >C28-C36	<10.0	10.0	02/09/2018	ND					

Surrogate: 1-Chlorooctane 77.6 % 41-142

Surrogate: 1-Chlorooctadecane 79.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

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***	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





### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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[illegible]

**APPENDIX H**

**FINISHED PROJECT PICTURES**



*Figure 1: Aerial view of Area A*



*Figure 2: Finished grade of Area B.*