

Terra Oilfield Services

**Biliken 6 Federal 1H-Release #2
Closure Report**

**Section 12, Township 26S, Range 34E
Lea County, New Mexico**

April 17, 2018



Prepared for:

**Terra Oilfield Services
15487 Pin Oak Drive
Conroe, TX 77384**

By:

**Safety & Environmental Solutions, Inc.
703 East Clinton Street
Hobbs, New Mexico 88240
(575) 397-0510**

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I. Company Contacts

Representative	Company	Telephone	E-mail
Todd Nilson	Terra Oilfield Services	618-407-6696	Todd.nilson@terraofs.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

II. Background

Safety and Environmental Solutions, Inc., hereinafter referred to as (SESI) was engaged by Terra Oilfield Services to assess a spill area on the Biliken 6 Federal 1H Release #2, concerning a two hundred fifty (250) bbls. treated water release. This site is situated in Lea County, Section 12, Township 26S, and Range 34E.

According to the C-141: approximately two hundred fifty (250) barrels of treated water was released when a lay flat hose ruptured while transferring treated water from a frac pond to the location. A vacuum truck was dispatched and two hundred thirty (230) bbls. was recovered. A remediation contractor was contacted. This incident references **RP# 4662**.

III. Surface and Ground Water

There is no record of groundwater in the immediate vicinity of the site location. Further research of the New Mexico Office of the State Engineer records indicates the average depth to groundwater for the area to be 150' bgs. According to the Chevron/Texaco Map, the groundwater is in excess of 140' bgs.

IV. Characterization

The target cleanup levels are determined using the *Guidelines for Remediation of Leaks, Spills and Releases* published by the NMOCD (August 13, 1993). Based on the ranking criteria presented below, the applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined benzene, toluene, ethyl benzene, and total xylenes (BTEX), and 5,000 ppm Total Petroleum Hydrocarbons (TPH). Characterization of vertical extent of chloride concentration to a level of 250 mg/kg (PPM) is also required.

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

V. Work Performed

On March 29, 2017, SESI personnel were onsite to look over the Terra Biliken Release #2 to determine where to install the boreholes using the Geo probe, and to determine vertical extent of contamination. Borehole one was installed to the depth of ten feet, where soil was wet red sand to four feet; five to twelve feet caliche, clay mix, and a lot of moisture. At the four to eight foot boring the plastic core liner crimped up and was easily extracted. The eight to twelve foot boring the plastic liner crimped up inside the core barrel and the liner and soil sample was lost in removing and clearing the core barrel. After clearing the core barrel boring was stopped. Soil sample cores were capped off, labeled and properly preserved. Rigged down and set up to install borehole #2. Borehole two was installed to the depth of refusal at five and half feet. Soil sample cores were capped and properly preserved. The sample points were mapped using the Juno 3B.

Terra Oilfield Services									
Biliken 6 Fed 1H Release #2									
Soil Sample Results: Cardinal Laboratories 4-6-2017									
SAMPLE ID	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total BTEX	Chlorides	TPH GRO	TPH DRO	EXT DRO
BH-1 @ 4ft	0.114	0.233	<0.050	<0.150	0.347	11600	<10.0	20.5	36.6
BH-1 @ 8ft	<0.050	<0.050	<0.050	<0.150	<0.300	22800	<10.0	14.9	18.4
BH-1 @ 10ft	<0.050	<0.050	<0.050	<0.150	<0.300	14600	<10.0	12.0	14.4
BH-2 @ 4ft	<0.050	<0.050	<0.050	<0.150	<0.300	6200	<10.0	15.7	15.7
BH-2 @ 5.5ft	<0.050	<0.050	<0.050	<0.150	<0.300	20000	<10.0	15.2	17.9

On April 5, 2017, SESI personnel were onsite with Custom Welding Backhoe w/operator and spotter at the Terra Biliken Release #2 to install five test trenches to determine vertical extent of contamination. The first test trench was installed to the depth of six feet and soil samples obtained at surface, two, four and six feet and field tested for Chlorides. Vertical was met at four and six feet, with results were less than 124 ppm. The soil characteristics were: surface to two and half feet, red brown sand; two and half to six feet, white solid caliche with one to three inch angular rock. The trench was then backfilled after photos were taken. Test trench two was then installed to the depth of six feet and soil samples obtained at surface, two, four and six feet and field tested for Chlorides. Vertical was met at two, four and six feet, with results less than 124 ppm. The soil characteristics were: surface to four feet, red brown sand; four to six feet, solid white caliche with to six inch rocks. The trench was backfilled after photos were taken. Test trench three was installed to backhoe refusal at twelve feet. Soil samples were obtained at surface, two, four, six, eight, ten and twelve feet and field tested for Chlorides. Vertical was met at ten and twelve feet, where results were 124 and less than 124 ppm. Soil characteristics were: surface to five feet, red brown sand; five to twelve feet, solid white caliche with one to five inch rocks. Trench was backfilled and photos taken. Test trench four was installed to the depth of refusal at twelve feet. Soil samples were obtained at eight, ten and twelve feet and field tested for Chlorides. Vertical was met at ten and twelve feet, with results less than 124 ppm. Soil characteristics were: surface to five feet, red brown sand; five to twelve feet, solid white caliche with one to six inch rocks. Trench was backfilled and photos taken. Test trench five was installed to the depth of refusal at twelve feet. Soil samples were obtained and field tested at eight, ten and twelve feet. Vertical was met at ten and twelve feet, with results 124 and less than 124 ppm. Soil characteristics were: surface to five and half feet, red brown sand; five and half to twelve feet, solid white caliche with one to six inch rocks. Trench was backfilled and photos taken.

All soil samples points, test trench sample points, and pipelines were mapped using the Juno 3B. The samples were properly packaged, preserved and transported to Cardinal Laboratories of Hobbs, NM by chain of custody, and analyzed for TPH(total petroleum hydrocarbons)(Method 8015M), and Chlorides (Method SM4500Cl-B). The results are recapped in the following table:

Terra Oilfield Services Biliken 6 Fed 1H Release #2 Soil Sample Results: Cardinal Laboratories 4-13-2017									
SAMPLE ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	Chlorides	TPH GRO	TPH DRO	EXT DRO
TT-1 @ 4ft	<0.050	<0.050	<0.050	<0.150	<0.300	96.0	<10.0	<10.0	<10.0
TT-1 @ 6ft	<0.050	<0.050	<0.050	<0.150	<0.300	112	<10.0	<10.0	<10.0
TT-2 @ 4ft	<0.050	<0.050	<0.050	<0.150	<0.300	32.0	<10.0	<10.0	<10.0
TT-2 @ 6ft	<0.050	<0.050	<0.050	<0.150	<0.300	32.0	<10.0	<10.0	<10.0
TT-3 @ 6ft	<0.050	<0.050	<0.050	<0.150	<0.300	12800	<10.0	<10.0	<10.0
TT-3 @ 10ft	<0.050	<0.050	<0.050	<0.150	<0.300	16.0	<10.0	<10.0	<10.0
TT-3 @ 12ft	<0.050	<0.050	<0.050	<0.150	<0.300	32.0	<10.0	<10.0	<10.0
TT-4 @ 8ft	<0.050	<0.050	<0.050	<0.150	<0.300	4660	<10.0	<10.0	<10.0
TT-4 @ 10ft	<0.050	<0.050	<0.050	<0.150	<0.300	48.0	<10.0	<10.0	<10.0
TT-4 @ 12ft	<0.050	<0.050	<0.050	<0.150	<0.300	96.0	<10.0	<10.0	<10.0
TT-5 @ 8ft	<0.050	<0.050	<0.050	<0.150	<0.300	15800	<10.0	<10.0	<10.0
TT-5 @ 10ft	<0.050	<0.050	<0.050	<0.150	<0.300	96.0	<10.0	<10.0	<10.0
TT-5 @ 12ft	<0.050	<0.050	<0.050	<0.150	<0.300	64.0	<10.0	<10.0	<10.0

On March 19, 2017 SESI personnel was onsite at the Terra Biliken release #2 to obtain surface soil samples in the area where the trench was backfilled. Five soil samples were obtained at one foot depths. The soil sample points were mapped using the Juno 3B. The samples were properly packaged, preserved and transported to Cardinal Laboratories of Hobbs, NM by chain of custody, and analyzed for TPH(total petroleum hydrocarbons)(Method 8015M), and Chlorides (Method SM4500Cl-B). The results are recapped in the following table:

Terra Oilfield Services Release #2 Cardinal Lab Results: 4-25-2017									
SAMPLE ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	TPH GRO C6-C10	TPH DRO C10-C28	TPH DRO C28-C36	Chlorides
Trench Line SP-1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	176
Trench Line SP-2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	448
Trench Line SP-3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	272
Trench Line SP-4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	352
Trench Line SP-5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	336

From February 23, 2018, to February 26, 2018, SESI personnel was onsite with SDR personnel to perform remediation at the Terra Billiken release #2 to begin the remediation. The location was checked to find mark pipelines, and to day light the pipeline before beginning the excavating. The pipeline could not be found with the line finder or by hand digging to the depth of five feet. Marked the area to be excavated was marked with pin flags and excavating began to four feet in depth. Field testing was performed and soil samples were obtained during the excavation. Seven soil samples were obtained: three on the walls and four from the bottom. The wall sample field test results ranged between less than 128 ppm to 180 ppm. Three bottom soil samples test results were Less than 128 ppm and one soil sample test result was 2580 ppm. All bottom samples were at four foot in depth. Five wall sample were obtained and field tested with results all less than 128 ppm. Two bottom samples were obtained and results were less than 128 ppm and one 1172 ppm, from the far East excavation. All soil samples were properly preserved. Excavation was completed, sample points were mapped, and site photos were taken.

From February 28, 2018, to March 2, 2018, SESI personnel was onsite with SDR personnel to begin loading and hauling the spoils. All trucks were loaded and sent to Sundance for disposal. The excavation was mapped for the liner and SDR picked up the liner. A total of Two hundred twenty yards of spoils was hauled to disposal. The next day, the trucks were again loaded up and sent to Sundance for disposal. A twelve foot long trench was installed in the roadway across the release area to the depth of four foot. Soil samples were obtained in the release area and samples North and South away from the release area at the surface, two and half foot and four foot. All nine samples were field tested for Chlorides, with results less than 128 ppm. Soil samples were properly preserved. The trench was then backfilled for loading purposes. The 20 mil. liner was brought onsite and installed by SESI and SDR personnel, and soil was placed on top to keep it in place. Photos of the installed liner were taken. Two trips each were made to Sundance for disposal for a total of two hundred yards disposed. Total to date is four hundred twenty yards disposed. The next day, six bellies were loaded up and sent to Sundance for disposal and backfilling began as the two end dump trucks begin hauling in backfill. At the end of the day, the six belly dumps completed the hauling of the spoils for a total of two hundred forty yards hauled. Total spoils hauled was six hundred sixty yards on thirty three loads. The 20 yard end dumps made nineteen trips for a total of three hundred eighty yards of backfill to complete the job. Backfilling was completed and photos were taken.

The samples were properly packaged, preserved and transported to Cardinal Laboratories of Hobbs, NM and Hall Environmental Analysis Laboratory of Albuquerque, NM by chain of custody, and analyzed for TPH(total petroleum hydrocarbons)(Method 8015M), and Chlorides (Method 300). The results are recapped in the following table:

Terra Oilfield Services Release #2 Results: 3-8-2018									
SAMPLE ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	TPH GRO C6-C10	TPH DRO C10-C28	TPH DRO C28-C36	Chlorides
SP-1 Bottom 4ft	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-2 North Wall	ND	ND	ND	ND	ND	ND	ND	ND	160
SP-3 Bottom 4ft	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-4 West Wall	ND	ND	ND	ND	ND	ND	ND	ND	140
SP-5 Bottom 4ft	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-6 East Wall	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-7 Bottom 4ft	ND	ND	ND	ND	ND	ND	ND	ND	2900
SP-8 West Wall	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-9 Bottom 4ft	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-10 North Wall	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-11 Bottom 4ft	ND	ND	ND	ND	ND	ND	ND	ND	1300
SP-12 South Wall	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-13 West Wall	ND	ND	ND	ND	ND	ND	ND	ND	30
SP-14 North Wall	ND	ND	ND	ND	ND	ND	ND	ND	31
SP-15 Surface	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-15 2.5ft	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-15 4ft	ND	ND	ND	ND	ND	ND	ND	ND	47
SP-16 Surface North	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-16 2.5ft North	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-16 4ft North	ND	ND	ND	ND	ND	ND	ND	ND	44.1
SP-17 Surface South	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-17 2.5 South	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-17 4ft South	ND	ND	ND	ND	ND	ND	ND	ND	48.6

VI. Request for Closure

The results of the confirmation sampling indicate that all soils impacted above 5000 ppm TPH and 1000 ppm Chlorides were removed and transported to an approved NMOCD facility for disposal. The area was backfilled with clean soil and returned to grade. Reseeding according to the appropriate BLM requirements will be completed. Terra Oilfield Services submits this closure report and requests that no further action be required.

The entire horizontal area of the impacted soil was excavated to a depth of 4' with the exception of the area within 34' on each side of the gas and water line that inwithin the contaminated area. The open ditch containing the Lucid Energy Group lines was impacted by this release, however, surface sampling of the backfilled ditch confirm the soil used to backfill the ditch was not contaminated. A 20 mil liner was installed on the bottom of the excavation. This liner will protect any chloride contamination being left in place from further migration resulting from future fluid releases.. Confirmation samples of the sides and bottom of the excavation were taken, with results reported above, to confirm horizontal extent and to document any contamination being left in place on the bottom of the excavation.

The excavation was backfilled with uncontaminated soil and returned to natural grade. Reseeding according to the appropriate BLM requirements will be completed.

VII. Figures & Appendices

Figure 1 - Vicinity Map

Figure 2 - Site Plan

Appendix A – C-141

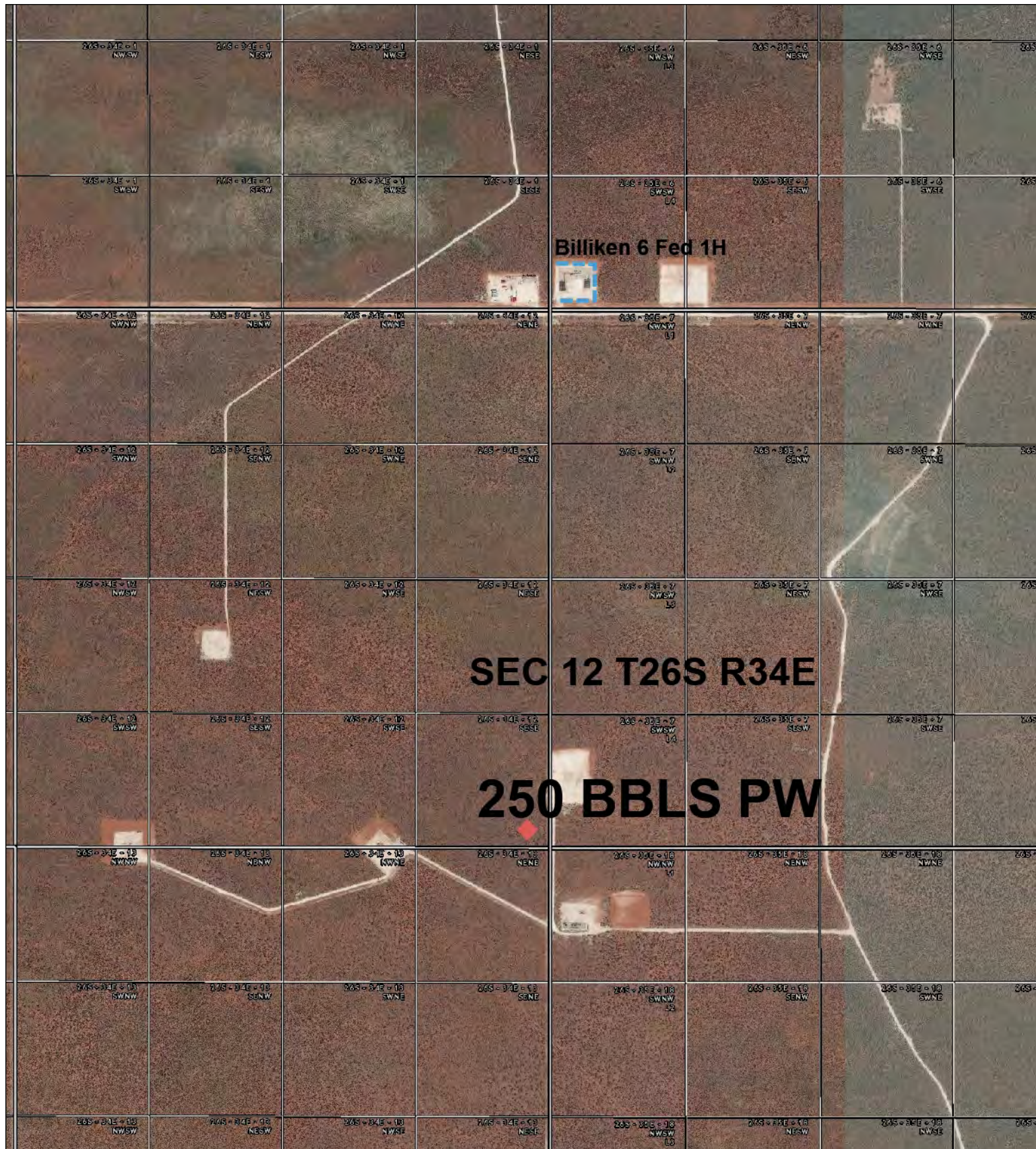
Appendix B – Groundwater

Appendix C – Analytical Results

Appendix D – Photo Documentation

Figure 1

Vicinity Map



Spill 3/21/2017



This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Menoud
Map is current as of: 23-Mar-2017

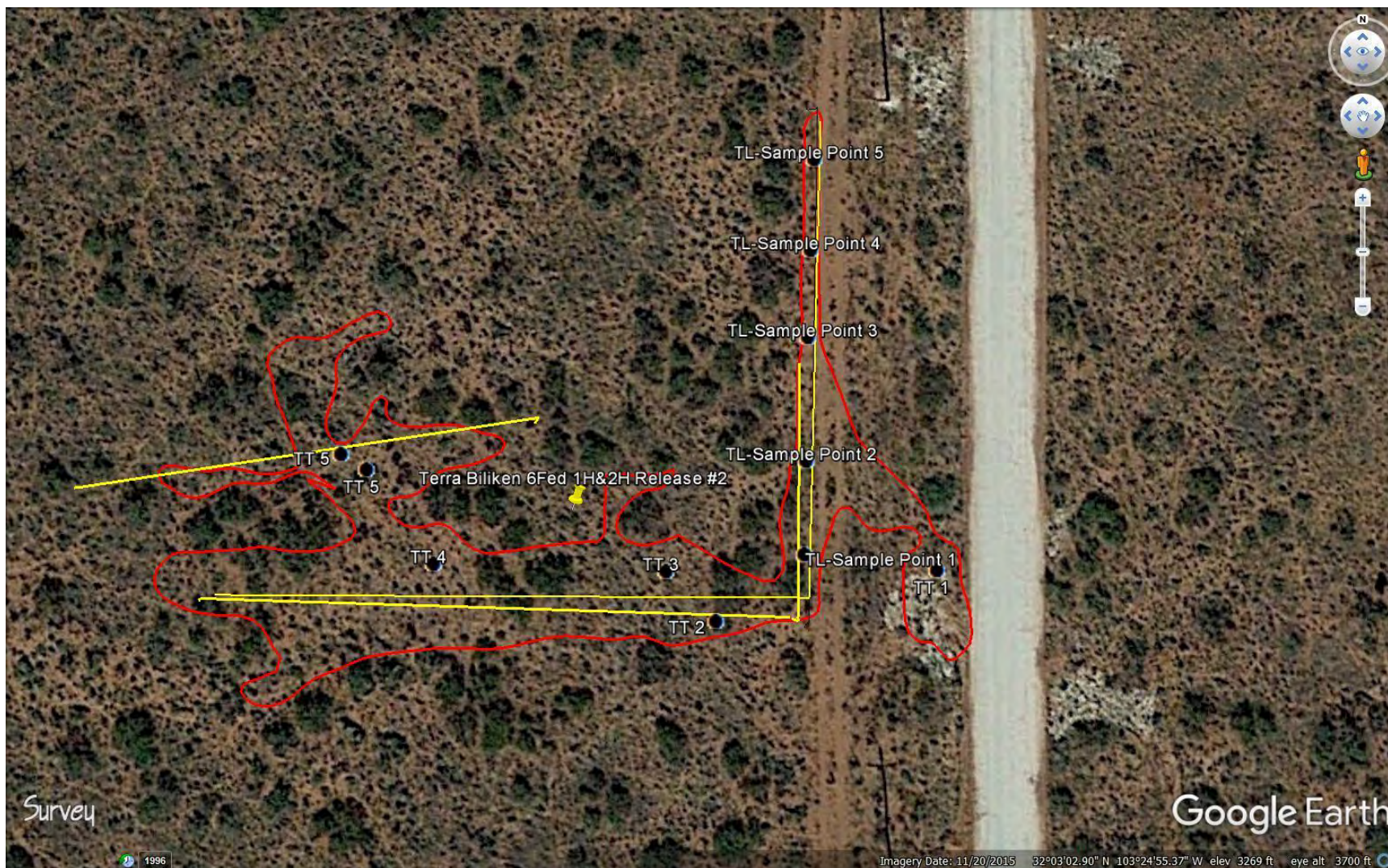


Miles

0 0.07 0.14 0.28 1:14,228



Figure 2
Site Plan

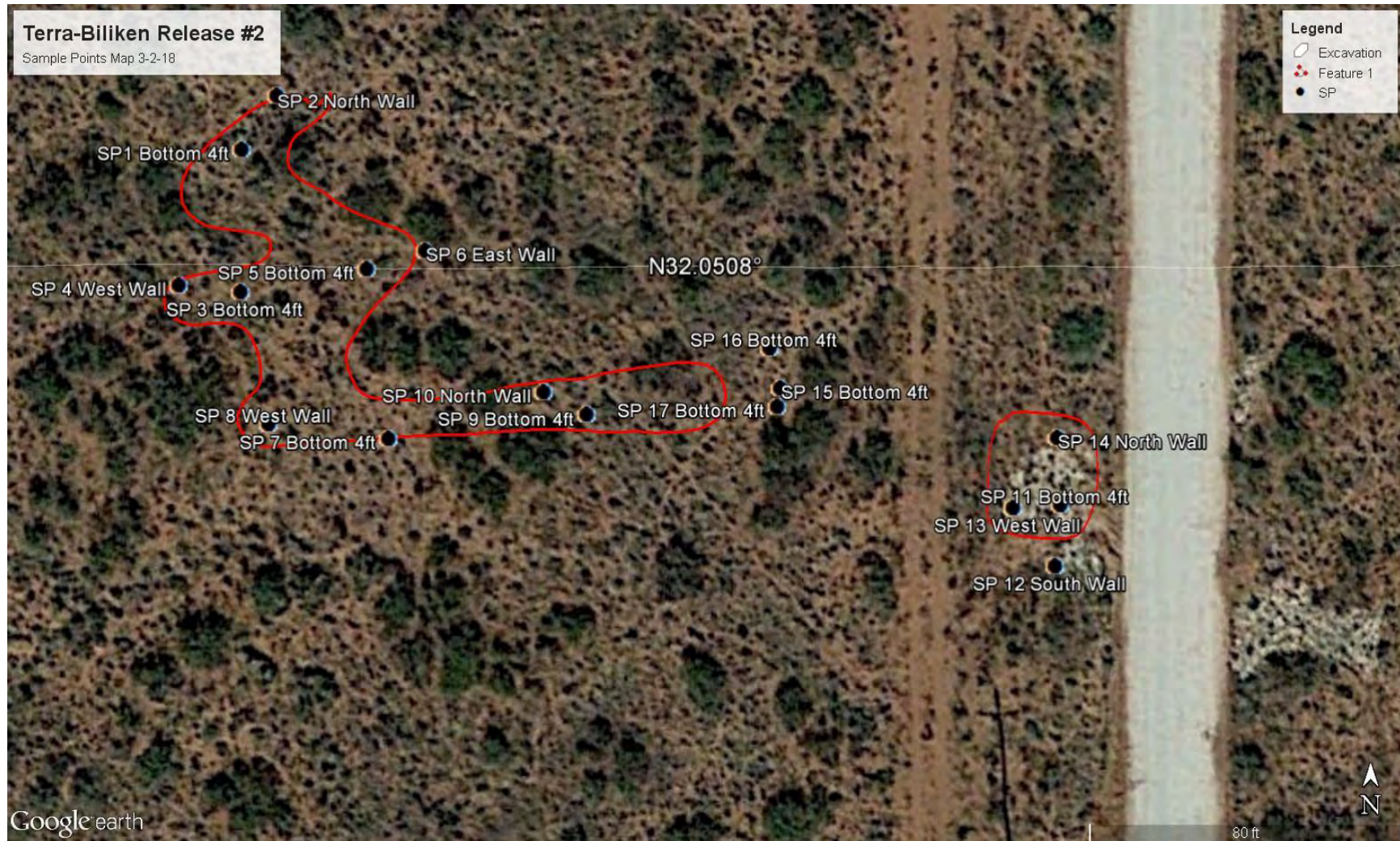


Terra-Biliken Release #2

Sample Points Map 3-2-18

Legend

- Excavation
- Feature 1
- SP



Appendix A

C-141

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

Form C-141
Revised August 8, 2011

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

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: Devon Energy Production Co LP (6137)	Contact: Stephen Richards, Devon Completions Foreman
Address: PO Box 250 Artesia, NM 88211	Telephone No. 575-252-3717
Facility Name: Billiken 6 Federal 1H	Facility Type: Oil Well

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-025-42685
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LOCATION OF RELEASE

Unit Letter P	Section 12	Township 26S	Range 34E	Feet from the 160	North/South Line SOUTH	Feet from the 210	East/West Line EAST	County LEA
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Latitude: **32.051182 N** Longitude: **-103.415898 W**

NATURE OF RELEASE

Type of Release: TREATED WATER	Volume of Release: 250 BBLS	Volume Recovered: 230 BBLS
Source of Release LAY FLAT WATER LINE	Date and Hour of Occurrence 3/21/2017; 4:17 PM	Date and Hour of Discovery 3/21/2017; 4:17 PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? BLM: Shelly Tucker OCD: Olivia Yu	
By Whom? Mike Shoemaker, EHS Professional	Date and Hour: BLM: 3/22/17, 12:33 PM OCD: 3/22/17, 12:42 PM	
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.*

While transferring treated water from a frac pond to the location, the lay flat hose ruptured. A 2 inch split developed and released treated water on the ground. The pump was shut down and the hose was repaired.

Describe Area Affected and Cleanup Action Taken.*

The spill area affected is approximately 200' x 6' running North and South and 195' x 40' running East and West on the pipeline easement following the lease road. A central location of the spill is: Lat – N 32.051182; Long – W -103.415898 and is approximately 1.01 miles South of the Billiken 6 Fed #1. An estimated 250 barrels of treated produced water was spilled, a vacuum truck was dispatched, and 230 barrels was recovered. A remediation contractor will be contacted.

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: <i>Denise Menoud</i>	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Denise Menoud	Approved by Environmental Specialist:		
Title: Field Admin Support	Approval Date:	Expiration Date:	
E-mail Address: Denise.Menoud@dvn.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 3/23/2017	Phone: 575-746-5544		

* Attach Additional Sheets If Necessary

Appendix B

Groundwater



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	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02291		CUB	LE	1	1	2	06	26S	34E	640825	3550140*	220	160	60
C 02292 POD1	C		LE	4	1	2	06	26S	34E	640992	3549987	200	140	60
C 03441 POD1	C		LE	4	1	2	06	26S	34E	640971	3550039	250		
C 03442 POD1	C		LE	4	1	2	06	26S	34E	641056	3550028	251		

Average Depth to Water: **150 feet**

Minimum Depth: **140 feet**

Maximum Depth: **160 feet**

Record Count: 4

PLSS Search:

Township: 26S

Range: 34E

*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

Analytical Results

April 06, 2017

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: TER -17-002

Enclosed are the results of analyses for samples received by the laboratory on 03/31/17 14:55.

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.

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:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 03/31/2017
Reported: 04/06/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 03/29/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH -1 4' (H700861-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.114	0.050	04/05/2017	ND	2.19	110	2.00	0.503	
Toluene*	0.233	0.050	04/05/2017	ND	2.13	107	2.00	0.718	
Ethylbenzene*	<0.050	0.050	04/05/2017	ND	2.18	109	2.00	0.693	
Total Xylenes*	<0.150	0.150	04/05/2017	ND	6.19	103	6.00	0.676	
Total BTX	0.347	0.300	04/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 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	11600	16.0	04/05/2017	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	04/04/2017	ND	203	101	200	1.44	
DRO >C10-C28	20.5	10.0	04/04/2017	ND	220	110	200	2.30	
EXT DRO >C28-C36	36.6	10.0	04/04/2017	ND					

Surrogate: 1-Chlorooctane 105 % 28.3-164

Surrogate: 1-Chlorooctadecane 113 % 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

Analytical Results For:

 Safety & Environmental Solutions
 Bob Allen
 703 East Clinton
 Hobbs NM, 88240
 Fax To: (575) 393-4388

 Received: 03/31/2017
 Reported: 04/06/2017
 Project Name: TER -17-002
 Project Number: TER - 17- 002
 Project Location: NOT GIVEN

 Sampling Date: 03/29/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BH -1 8' (H700861-02)

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	04/05/2017	ND	2.19	110	2.00	0.503	
Toluene*	<0.050	0.050	04/05/2017	ND	2.13	107	2.00	0.718	
Ethylbenzene*	<0.050	0.050	04/05/2017	ND	2.18	109	2.00	0.693	
Total Xylenes*	<0.150	0.150	04/05/2017	ND	6.19	103	6.00	0.676	
Total BTEX	<0.300	0.300	04/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 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	22800	16.0	04/05/2017	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	04/04/2017	ND	203	101	200	1.44	
DRO >C10-C28	14.9	10.0	04/04/2017	ND	220	110	200	2.30	
EXT DRO >C28-C36	18.4	10.0	04/04/2017	ND					

Surrogate: 1-Chlorooctane 115 % 28.3-164

Surrogate: 1-Chlorooctadecane 117 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 03/31/2017
Reported: 04/06/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 03/29/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH -1 10' (H700861-03)

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	04/05/2017	ND	2.19	110	2.00	0.503	
Toluene*	<0.050	0.050	04/05/2017	ND	2.13	107	2.00	0.718	
Ethylbenzene*	<0.050	0.050	04/05/2017	ND	2.18	109	2.00	0.693	
Total Xylenes*	<0.150	0.150	04/05/2017	ND	6.19	103	6.00	0.676	
Total BTEX	<0.300	0.300	04/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 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	14600	16.0	04/05/2017	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	04/04/2017	ND	203	101	200	1.44	
DRO >C10-C28	12.0	10.0	04/04/2017	ND	220	110	200	2.30	
EXT DRO >C28-C36	14.4	10.0	04/04/2017	ND					

Surrogate: 1-Chlorooctane 98.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 104 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 03/31/2017
Reported: 04/06/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 03/29/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH -2 4' (H700861-04)

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	04/05/2017	ND	2.19	110	2.00	0.503	
Toluene*	<0.050	0.050	04/05/2017	ND	2.13	107	2.00	0.718	
Ethylbenzene*	<0.050	0.050	04/05/2017	ND	2.18	109	2.00	0.693	
Total Xylenes*	<0.150	0.150	04/05/2017	ND	6.19	103	6.00	0.676	
Total BTEX	<0.300	0.300	04/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 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	6200	16.0	04/05/2017	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	04/04/2017	ND	203	101	200	1.44	
DRO >C10-C28	15.7	10.0	04/04/2017	ND	220	110	200	2.30	
EXT DRO >C28-C36	15.7	10.0	04/04/2017	ND					

Surrogate: 1-Chlorooctane 92.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 97.7 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 03/31/2017
Reported: 04/06/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 03/29/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BH -2 5.5' (H700861-05)

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	04/05/2017	ND	2.19	110	2.00	0.503	
Toluene*	<0.050	0.050	04/05/2017	ND	2.13	107	2.00	0.718	
Ethylbenzene*	<0.050	0.050	04/05/2017	ND	2.18	109	2.00	0.693	
Total Xylenes*	<0.150	0.150	04/05/2017	ND	6.19	103	6.00	0.676	
Total BTEX	<0.300	0.300	04/05/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 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	20000	16.0	04/05/2017	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	04/04/2017	ND	203	101	200	1.44	
DRO >C10-C28	15.2	10.0	04/04/2017	ND	220	110	200	2.30	
EXT DRO >C28-C36	17.9	10.0	04/04/2017	ND					

Surrogate: 1-Chlorooctane 102 % 28.3-164

Surrogate: 1-Chlorooctadecane 108 % 34.7-157

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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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Safety and Environmental Solutions				BILL TO				ANALYSIS REQUEST			
Project Manager: Bob Allen				P.O. #:							
Address: 703 East Clinton, PO Box 1613				Company: Same							
City: Hobbs				Attn:							
Phone #: 575 397-0510				Fax #: 575 393-4388							
Project #: 7ER-17-002				Project Owner:							
Project Name:				State:				Zip:			
Project Location:				Phone #:				Fax #:			
Sampler Name: BADIA BOYER				FOR LAB USE ONLY							
Lab I.D.				Sample I.D.							
				(G)RAB OR (C)OMP.							
				# CONTAINERS							
				GROUNDWATER							
				WASTEWATER							
				SOIL							
				OIL							
				SLUDGE							
				OTHER :							
				ACID/BASE:							
				ICE / COOL							
				OTHER :							
				DATE							
				TIME							
				CHLORIDE							
				TPH (B+58015 EXT)							
				BTEX							

Relinquished By:		Date: 3/31/17		Received By:		Date: 3/31/17	
Relinquished By:		Time:		Received By:		Time:	
Delivered By: (Circle One)		Sample Condition		CHECKED BY:		INITIALS	
Sampler - UPS - Bus - Other:		Cool <input type="checkbox"/> Intact <input type="checkbox"/>		2.4e		70-#75	

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REMARKS:

Phone Result: ☐ Yes ☒ No Add'l Phone #:
 Fax Result: ☐ Yes ☒ No Add'l Fax #:
 Add'l Phone #:
 Add'l Fax #:

April 13, 2017

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: TER -17-002

Enclosed are the results of analyses for samples received by the laboratory on 04/06/17 16:55.

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.

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:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 1 4' (H700922-01)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTEx	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 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	96.0	16.0	04/10/2017	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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 82.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 82.2 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 1 6' (H700922-02)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTEX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 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	04/10/2017	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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 79.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 79.0 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 2 4' (H700922-03)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTEX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 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	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 94.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 96.6 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 2 6' (H700922-04)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTEX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 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	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 90.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 86.1 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 3 10' (H700922-05)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTEX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 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	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 98.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 94.0 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 3 12' (H700922-06)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 87.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 85.5 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 4 10' (H700922-07)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 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	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 84.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 83.3 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 4 12' (H700922-08)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 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	96.0	16.0	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 87.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 85.7 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 5 10' (H700922-09)

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	04/11/2017	ND	1.94	97.1	2.00	1.51		
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30		
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11		
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12		
Total BTEX	<0.300	0.300	04/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 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	96.0	16.0	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 92.9 % 28.3-164

Surrogate: 1-Chlorooctadecane 95.2 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 5 12' (H700922-10)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTEX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 94.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 96.8 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 3 6' (H700922-11)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTEX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 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	12800	16.0	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 87.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 91.0 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 4 8' (H700922-12)

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	04/11/2017	ND	1.94	97.1	2.00	1.51	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.9	2.00	1.30	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.79	89.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.08	84.6	6.00	1.12	
Total BTEX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 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	4660	16.0	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 92.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 95.9 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/06/2017
Reported: 04/13/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/05/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TT - 5 8' (H700922-13)

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	04/10/2017	ND	1.64	82.2	2.00	5.42		
Toluene*	<0.050	0.050	04/10/2017	ND	1.72	85.9	2.00	5.58		
Ethylbenzene*	<0.050	0.050	04/10/2017	ND	1.76	87.8	2.00	5.67		
Total Xylenes*	<0.150	0.150	04/10/2017	ND	4.99	83.2	6.00	5.44		
Total BTEX	<0.300	0.300	04/10/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 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	15800	16.0	04/11/2017	ND	416	104	400	3.77	

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	04/10/2017	ND	207	104	200	4.30	
DRO >C10-C28	<10.0	10.0	04/10/2017	ND	219	109	200	3.12	
EXT DRO >C28-C36	<10.0	10.0	04/10/2017	ND					

Surrogate: 1-Chlorooctane 95.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 98.9 % 34.7-157

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

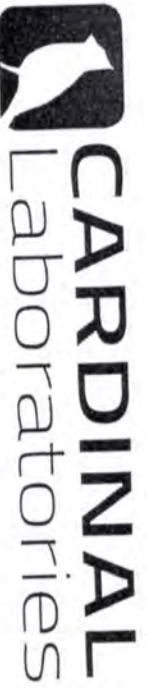
Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1582

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

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: Same

Attn:

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project Name:

Project Location:

Sample Name:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

TPH (1562)

BTEX

Chlorides

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Relinquished By:

Date: 8/16/17

Time: 4:55

Received By:

Date: 8/16/17

Time: 4:55

Relinquished By:

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Received By:

Date: 8/16/17

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Date: 8/16/17

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Sampler - UPS - Bus - Other:

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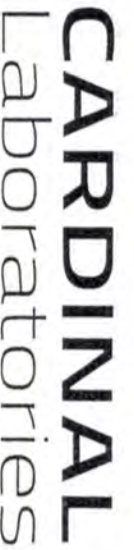
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101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

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77
7

Page 17 of 17



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

April 25, 2017

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: TER -17-002

Enclosed are the results of analyses for samples received by the laboratory on 04/20/17 7:58.

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.

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:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/20/2017
Reported: 04/25/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/19/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TRENCH LINE SP-1 (H701039-01)

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	04/22/2017	ND	1.94	96.8	2.00	0.897	
Toluene*	<0.050	0.050	04/22/2017	ND	1.85	92.7	2.00	1.13	
Ethylbenzene*	<0.050	0.050	04/22/2017	ND	1.87	93.3	2.00	0.506	
Total Xylenes*	<0.150	0.150	04/22/2017	ND	5.32	88.7	6.00	0.459	
Total BTEX	<0.300	0.300	04/22/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 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	04/24/2017	ND	448	112	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	04/21/2017	ND	188	93.9	200	1.40	
DRO >C10-C28	<10.0	10.0	04/21/2017	ND	195	97.4	200	0.145	
EXT DRO >C28-C36	<10.0	10.0	04/21/2017	ND					

Surrogate: 1-Chlorooctane 73.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 72.4 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/20/2017
Reported: 04/25/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/19/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TRENCH LINE SP-2 (H701039-02)

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	04/22/2017	ND	1.94	96.8	2.00	0.897	
Toluene*	<0.050	0.050	04/22/2017	ND	1.85	92.7	2.00	1.13	
Ethylbenzene*	<0.050	0.050	04/22/2017	ND	1.87	93.3	2.00	0.506	
Total Xylenes*	<0.150	0.150	04/22/2017	ND	5.32	88.7	6.00	0.459	
Total BTX	<0.300	0.300	04/22/2017	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	448	16.0	04/24/2017	ND	448	112	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	04/21/2017	ND	198	98.8	200	1.91	
DRO >C10-C28	<10.0	10.0	04/21/2017	ND	207	104	200	1.74	
EXT DRO >C28-C36	<10.0	10.0	04/21/2017	ND					

Surrogate: 1-Chlorooctane 98.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 94.5 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/20/2017
Reported: 04/25/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/19/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TRENCH LINE SP-3 (H701039-03)

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	04/22/2017	ND	1.94	96.8	2.00	0.897	
Toluene*	<0.050	0.050	04/22/2017	ND	1.85	92.7	2.00	1.13	
Ethylbenzene*	<0.050	0.050	04/22/2017	ND	1.87	93.3	2.00	0.506	
Total Xylenes*	<0.150	0.150	04/22/2017	ND	5.32	88.7	6.00	0.459	
Total BTX	<0.300	0.300	04/22/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 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	272	16.0	04/24/2017	ND	448	112	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	04/21/2017	ND	198	98.8	200	1.91	
DRO >C10-C28	<10.0	10.0	04/21/2017	ND	207	104	200	1.74	
EXT DRO >C28-C36	<10.0	10.0	04/21/2017	ND					

Surrogate: 1-Chlorooctane 88.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 85.9 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Safety & Environmental Solutions
 Bob Allen
 703 East Clinton
 Hobbs NM, 88240
 Fax To: (575) 393-4388

 Received: 04/20/2017
 Reported: 04/25/2017
 Project Name: TER -17-002
 Project Number: TER - 17- 002
 Project Location: NOT GIVEN

 Sampling Date: 04/19/2017
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: TRENCH LINE SP-4 (H701039-04)

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	04/22/2017	ND	1.94	96.8	2.00	0.897		
Toluene*	<0.050	0.050	04/22/2017	ND	1.85	92.7	2.00	1.13		
Ethylbenzene*	<0.050	0.050	04/22/2017	ND	1.87	93.3	2.00	0.506		
Total Xylenes*	<0.150	0.150	04/22/2017	ND	5.32	88.7	6.00	0.459		
Total BTEX	<0.300	0.300	04/22/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 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	352	16.0	04/24/2017	ND	448	112	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	04/21/2017	ND	198	98.8	200	1.91	
DRO >C10-C28	<10.0	10.0	04/21/2017	ND	207	104	200	1.74	
EXT DRO >C28-C36	<10.0	10.0	04/21/2017	ND					

Surrogate: 1-Chlorooctane 97.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 96.1 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/20/2017
Reported: 04/25/2017
Project Name: TER -17-002
Project Number: TER - 17- 002
Project Location: NOT GIVEN

Sampling Date: 04/19/2017
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: TRENCH LINE SP-5 (H701039-05)

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	04/22/2017	ND	1.94	96.8	2.00	0.897	
Toluene*	<0.050	0.050	04/22/2017	ND	1.85	92.7	2.00	1.13	
Ethylbenzene*	<0.050	0.050	04/22/2017	ND	1.87	93.3	2.00	0.506	
Total Xylenes*	<0.150	0.150	04/22/2017	ND	5.32	88.7	6.00	0.459	
Total BTX	<0.300	0.300	04/22/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	336	16.0	04/24/2017	ND	448	112	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	04/21/2017	ND	198	98.8	200	1.91	
DRO >C10-C28	<10.0	10.0	04/21/2017	ND	207	104	200	1.74	
EXT DRO >C28-C36	<10.0	10.0	04/21/2017	ND					

Surrogate: 1-Chlorooctane 92.9 % 28.3-164

Surrogate: 1-Chlorooctadecane 87.3 % 34.7-157

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

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Celey D. Keene, Lab Director/Quality Manager

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

Company Name: Safety and Environmental Solutions

Project Manager: Bob Allen

Address: 703 East Clinton, PO Box 1613

City: Hobbs

State: NM Zip: 88240

Phone #: 575 397-0510

Fax #: 575 393-4388

Project #: JER-17-002

Project Owner:

Project Name:

Project Location:

Sample Name:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

BILL TO

P.O. #:

Company: Same

Attn:

Address:

City:

State:

Phone #:

Fax #:

ANALYSIS REQUEST

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

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Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 08, 2018

Bob Allen
Safety & Environmental Solutions
PO Box 1613
Hobbs, NM 88241
TEL: (575) 397-0510
FAX (575) 393-4388

RE: Terra Billiken Release 2

OrderNo.: 1802E52

Dear Bob Allen:

Hall Environmental Analysis Laboratory received 14 sample(s) on 2/28/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-1 Bottom 4Ft

Project: Terra Billiken Release 2

Collection Date: 2/23/2018 10:15:00 AM

Lab ID: 1802E52-001

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	ND	30		mg/Kg	20	3/2/2018 7:29:35 PM	36801
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/5/2018 5:02:11 PM	36807
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/5/2018 5:02:11 PM	36807
Surr: DNOP	99.8	70-130		%Rec	1	3/5/2018 5:02:11 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/5/2018 10:36:00 AM	36800
Surr: BFB	90.7	15-316		%Rec	1	3/5/2018 10:36:00 AM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.094		mg/Kg	1	3/5/2018 10:36:00 AM	36800
Benzene	ND	0.024		mg/Kg	1	3/5/2018 10:36:00 AM	36800
Toluene	ND	0.047		mg/Kg	1	3/5/2018 10:36:00 AM	36800
Ethylbenzene	ND	0.047		mg/Kg	1	3/5/2018 10:36:00 AM	36800
Xylenes, Total	ND	0.094		mg/Kg	1	3/5/2018 10:36:00 AM	36800
Surr: 4-Bromofluorobenzene	89.7	80-120		%Rec	1	3/5/2018 10:36:00 AM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-2 North Wall

Project: Terra Billiken Release 2

Collection Date: 2/23/2018 9:00:00 AM

Lab ID: 1802E52-002

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	160	30		mg/Kg	20	3/2/2018 7:41:59 PM	36801
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/5/2018 6:14:56 PM	36807
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/5/2018 6:14:56 PM	36807
Surr: DNOP	103	70-130		%Rec	1	3/5/2018 6:14:56 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/5/2018 11:46:04 AM	36800
Surr: BFB	88.6	15-316		%Rec	1	3/5/2018 11:46:04 AM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	3/5/2018 11:46:04 AM	36800
Benzene	ND	0.025		mg/Kg	1	3/5/2018 11:46:04 AM	36800
Toluene	ND	0.049		mg/Kg	1	3/5/2018 11:46:04 AM	36800
Ethylbenzene	ND	0.049		mg/Kg	1	3/5/2018 11:46:04 AM	36800
Xylenes, Total	ND	0.099		mg/Kg	1	3/5/2018 11:46:04 AM	36800
Surr: 4-Bromofluorobenzene	87.9	80-120		%Rec	1	3/5/2018 11:46:04 AM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-3 Bottom 4Ft

Project: Terra Billiken Release 2

Collection Date: 2/23/2018 11:00:00 AM

Lab ID: 1802E52-003

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/4/2018 10:41:19 AM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/5/2018 6:38:59 PM	36807
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/5/2018 6:38:59 PM	36807
Surr: DNOP	102	70-130		%Rec	1	3/5/2018 6:38:59 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/5/2018 1:19:43 PM	36800
Surr: BFB	93.5	15-316		%Rec	1	3/5/2018 1:19:43 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.094		mg/Kg	1	3/5/2018 1:19:43 PM	36800
Benzene	ND	0.024		mg/Kg	1	3/5/2018 1:19:43 PM	36800
Toluene	ND	0.047		mg/Kg	1	3/5/2018 1:19:43 PM	36800
Ethylbenzene	ND	0.047		mg/Kg	1	3/5/2018 1:19:43 PM	36800
Xylenes, Total	ND	0.094		mg/Kg	1	3/5/2018 1:19:43 PM	36800
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	3/5/2018 1:19:43 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-4 West Wall

Project: Terra Billiken Release 2

Collection Date: 2/23/2018 10:45:00 AM

Lab ID: 1802E52-004

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	140	30		mg/Kg	20	3/4/2018 11:18:34 AM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/5/2018 7:03:12 PM	36807
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/5/2018 7:03:12 PM	36807
Surr: DNOP	108	70-130		%Rec	1	3/5/2018 7:03:12 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/5/2018 1:43:12 PM	36800
Surr: BFB	91.4	15-316		%Rec	1	3/5/2018 1:43:12 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	3/5/2018 1:43:12 PM	36800
Benzene	ND	0.024		mg/Kg	1	3/5/2018 1:43:12 PM	36800
Toluene	ND	0.049		mg/Kg	1	3/5/2018 1:43:12 PM	36800
Ethylbenzene	ND	0.049		mg/Kg	1	3/5/2018 1:43:12 PM	36800
Xylenes, Total	ND	0.097		mg/Kg	1	3/5/2018 1:43:12 PM	36800
Surr: 4-Bromofluorobenzene	90.7	80-120		%Rec	1	3/5/2018 1:43:12 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-5 Bottom 4Ft

Project: Terra Billiken Release 2

Collection Date: 2/23/2018 1:15:00 PM

Lab ID: 1802E52-005

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/4/2018 11:30:58 AM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/5/2018 7:27:12 PM	36807
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/5/2018 7:27:12 PM	36807
Surr: DNOP	98.3	70-130		%Rec	1	3/5/2018 7:27:12 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/5/2018 2:06:33 PM	36800
Surr: BFB	89.5	15-316		%Rec	1	3/5/2018 2:06:33 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.094		mg/Kg	1	3/5/2018 2:06:33 PM	36800
Benzene	ND	0.023		mg/Kg	1	3/5/2018 2:06:33 PM	36800
Toluene	ND	0.047		mg/Kg	1	3/5/2018 2:06:33 PM	36800
Ethylbenzene	ND	0.047		mg/Kg	1	3/5/2018 2:06:33 PM	36800
Xylenes, Total	ND	0.094		mg/Kg	1	3/5/2018 2:06:33 PM	36800
Surr: 4-Bromofluorobenzene	88.7	80-120		%Rec	1	3/5/2018 2:06:33 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-6 East Wall

Project: Terra Billiken Release 2

Collection Date: 2/23/2018 1:40:00 PM

Lab ID: 1802E52-006

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/4/2018 11:43:23 AM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/5/2018 7:51:18 PM	36807
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/5/2018 7:51:18 PM	36807
Surr: DNOP	100	70-130		%Rec	1	3/5/2018 7:51:18 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/5/2018 2:29:46 PM	36800
Surr: BFB	88.9	15-316		%Rec	1	3/5/2018 2:29:46 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.094		mg/Kg	1	3/5/2018 2:29:46 PM	36800
Benzene	ND	0.023		mg/Kg	1	3/5/2018 2:29:46 PM	36800
Toluene	ND	0.047		mg/Kg	1	3/5/2018 2:29:46 PM	36800
Ethylbenzene	ND	0.047		mg/Kg	1	3/5/2018 2:29:46 PM	36800
Xylenes, Total	ND	0.094		mg/Kg	1	3/5/2018 2:29:46 PM	36800
Surr: 4-Bromofluorobenzene	87.6	80-120		%Rec	1	3/5/2018 2:29:46 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-7 Bottom 4Ft

Project: Terra Billiken Release 2

Collection Date: 2/23/2018 2:15:00 PM

Lab ID: 1802E52-007

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	2900	150		mg/Kg	100	3/7/2018 1:50:45 PM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/5/2018 8:15:13 PM	36807
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/5/2018 8:15:13 PM	36807
Surr: DNOP	101	70-130		%Rec	1	3/5/2018 8:15:13 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/5/2018 2:53:16 PM	36800
Surr: BFB	89.9	15-316		%Rec	1	3/5/2018 2:53:16 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	3/5/2018 2:53:16 PM	36800
Benzene	ND	0.024		mg/Kg	1	3/5/2018 2:53:16 PM	36800
Toluene	ND	0.049		mg/Kg	1	3/5/2018 2:53:16 PM	36800
Ethylbenzene	ND	0.049		mg/Kg	1	3/5/2018 2:53:16 PM	36800
Xylenes, Total	ND	0.097		mg/Kg	1	3/5/2018 2:53:16 PM	36800
Surr: 4-Bromofluorobenzene	88.8	80-120		%Rec	1	3/5/2018 2:53:16 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-8 West Wall

Project: Terra Billiken Release 2

Collection Date: 2/26/2018 8:00:00 AM

Lab ID: 1802E52-008

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/4/2018 12:33:01 PM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	3/5/2018 8:39:21 PM	36807
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/5/2018 8:39:21 PM	36807
Surr: DNOP	100	70-130		%Rec	1	3/5/2018 8:39:21 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/5/2018 3:16:41 PM	36800
Surr: BFB	86.9	15-316		%Rec	1	3/5/2018 3:16:41 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	3/5/2018 3:16:41 PM	36800
Benzene	ND	0.024		mg/Kg	1	3/5/2018 3:16:41 PM	36800
Toluene	ND	0.048		mg/Kg	1	3/5/2018 3:16:41 PM	36800
Ethylbenzene	ND	0.048		mg/Kg	1	3/5/2018 3:16:41 PM	36800
Xylenes, Total	ND	0.096		mg/Kg	1	3/5/2018 3:16:41 PM	36800
Surr: 4-Bromofluorobenzene	85.4	80-120		%Rec	1	3/5/2018 3:16:41 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-9 Bottom 4Ft

Project: Terra Billiken Release 2

Collection Date: 2/26/2018 8:30:00 AM

Lab ID: 1802E52-009

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/4/2018 12:45:26 PM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/5/2018 9:03:25 PM	36807
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	3/5/2018 9:03:25 PM	36807
Surr: DNOP	102	70-130		%Rec	1	3/5/2018 9:03:25 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/5/2018 3:40:05 PM	36800
Surr: BFB	87.2	15-316		%Rec	1	3/5/2018 3:40:05 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	3/5/2018 3:40:05 PM	36800
Benzene	ND	0.024		mg/Kg	1	3/5/2018 3:40:05 PM	36800
Toluene	ND	0.048		mg/Kg	1	3/5/2018 3:40:05 PM	36800
Ethylbenzene	ND	0.048		mg/Kg	1	3/5/2018 3:40:05 PM	36800
Xylenes, Total	ND	0.097		mg/Kg	1	3/5/2018 3:40:05 PM	36800
Surr: 4-Bromofluorobenzene	86.0	80-120		%Rec	1	3/5/2018 3:40:05 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-10 North Wall

Project: Terra Billiken Release 2

Collection Date: 2/26/2018 8:45:00 AM

Lab ID: 1802E52-010

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/4/2018 12:57:51 PM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/5/2018 9:27:27 PM	36807
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/5/2018 9:27:27 PM	36807
Surr: DNOP	101	70-130		%Rec	1	3/5/2018 9:27:27 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/5/2018 7:57:25 PM	36800
Surr: BFB	90.2	15-316		%Rec	1	3/5/2018 7:57:25 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	3/5/2018 7:57:25 PM	36800
Benzene	ND	0.025		mg/Kg	1	3/5/2018 7:57:25 PM	36800
Toluene	ND	0.050		mg/Kg	1	3/5/2018 7:57:25 PM	36800
Ethylbenzene	ND	0.050		mg/Kg	1	3/5/2018 7:57:25 PM	36800
Xylenes, Total	ND	0.10		mg/Kg	1	3/5/2018 7:57:25 PM	36800
Surr: 4-Bromofluorobenzene	88.1	80-120		%Rec	1	3/5/2018 7:57:25 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-11 Bottom 4Ft

Project: Terra Billiken Release 2

Collection Date: 2/26/2018 10:30:00 AM

Lab ID: 1802E52-011

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CJS
Chloride	1300	75		mg/Kg	50	3/7/2018 2:03:09 PM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	3/5/2018 9:51:26 PM	36807
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/5/2018 9:51:26 PM	36807
Surr: DNOP	101	70-130		%Rec	1	3/5/2018 9:51:26 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/5/2018 8:20:40 PM	36800
Surr: BFB	88.4	15-316		%Rec	1	3/5/2018 8:20:40 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	3/5/2018 8:20:40 PM	36800
Benzene	ND	0.025		mg/Kg	1	3/5/2018 8:20:40 PM	36800
Toluene	ND	0.049		mg/Kg	1	3/5/2018 8:20:40 PM	36800
Ethylbenzene	ND	0.049		mg/Kg	1	3/5/2018 8:20:40 PM	36800
Xylenes, Total	ND	0.098		mg/Kg	1	3/5/2018 8:20:40 PM	36800
Surr: 4-Bromofluorobenzene	89.1	80-120		%Rec	1	3/5/2018 8:20:40 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-12 South Wall

Project: Terra Billiken Release 2

Collection Date: 2/26/2018 11:30:00 AM

Lab ID: 1802E52-012

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	30		mg/Kg	20	3/4/2018 1:22:41 PM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/5/2018 10:15:29 PM	36807
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/5/2018 10:15:29 PM	36807
Surr: DNOP	103	70-130		%Rec	1	3/5/2018 10:15:29 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/5/2018 8:43:51 PM	36800
Surr: BFB	86.9	15-316		%Rec	1	3/5/2018 8:43:51 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	3/5/2018 8:43:51 PM	36800
Benzene	ND	0.025		mg/Kg	1	3/5/2018 8:43:51 PM	36800
Toluene	ND	0.050		mg/Kg	1	3/5/2018 8:43:51 PM	36800
Ethylbenzene	ND	0.050		mg/Kg	1	3/5/2018 8:43:51 PM	36800
Xylenes, Total	ND	0.10		mg/Kg	1	3/5/2018 8:43:51 PM	36800
Surr: 4-Bromofluorobenzene	87.3	80-120		%Rec	1	3/5/2018 8:43:51 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-13 West Wall

Project: Terra Billiken Release 2

Collection Date: 2/26/2018 12:15:00 PM

Lab ID: 1802E52-013

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	30	30		mg/Kg	20	3/4/2018 1:35:05 PM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/5/2018 10:39:30 PM	36807
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/5/2018 10:39:30 PM	36807
Surr: DNOP	105	70-130		%Rec	1	3/5/2018 10:39:30 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/5/2018 9:07:04 PM	36800
Surr: BFB	88.0	15-316		%Rec	1	3/5/2018 9:07:04 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.092		mg/Kg	1	3/5/2018 9:07:04 PM	36800
Benzene	ND	0.023		mg/Kg	1	3/5/2018 9:07:04 PM	36800
Toluene	ND	0.046		mg/Kg	1	3/5/2018 9:07:04 PM	36800
Ethylbenzene	ND	0.046		mg/Kg	1	3/5/2018 9:07:04 PM	36800
Xylenes, Total	ND	0.092		mg/Kg	1	3/5/2018 9:07:04 PM	36800
Surr: 4-Bromofluorobenzene	87.5	80-120		%Rec	1	3/5/2018 9:07:04 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1802E52**

Date Reported: **3/8/2018**

CLIENT: Safety & Environmental Solutions

Client Sample ID: SP-14 North Wall

Project: Terra Billiken Release 2

Collection Date: 2/26/2018 11:45:00 AM

Lab ID: 1802E52-014

Matrix: SOIL

Received Date: 2/28/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	31	30		mg/Kg	20	3/4/2018 1:47:29 PM	36821
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/5/2018 11:03:51 PM	36807
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/5/2018 11:03:51 PM	36807
Surr: DNOP	94.7	70-130		%Rec	1	3/5/2018 11:03:51 PM	36807
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/5/2018 9:30:09 PM	36800
Surr: BFB	89.8	15-316		%Rec	1	3/5/2018 9:30:09 PM	36800
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	3/5/2018 9:30:09 PM	36800
Benzene	ND	0.024		mg/Kg	1	3/5/2018 9:30:09 PM	36800
Toluene	ND	0.049		mg/Kg	1	3/5/2018 9:30:09 PM	36800
Ethylbenzene	ND	0.049		mg/Kg	1	3/5/2018 9:30:09 PM	36800
Xylenes, Total	ND	0.098		mg/Kg	1	3/5/2018 9:30:09 PM	36800
Surr: 4-Bromofluorobenzene	89.3	80-120		%Rec	1	3/5/2018 9:30:09 PM	36800

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802E52

08-Mar-18

Client: Safety & Environmental Solutions

Project: Terra Billiken Release 2

Sample ID	MB-36801		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 36801		RunNo: 49514					
Prep Date:	3/2/2018		Analysis Date: 3/2/2018		SeqNo: 1600237		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-36801		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 36801		RunNo: 49514					
Prep Date:	3/2/2018		Analysis Date: 3/2/2018		SeqNo: 1600238		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.6	90	110			

Sample ID	MB-36821		SampType:	mblk		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	36821		RunNo:	49544				
Prep Date:	3/4/2018		Analysis Date:	3/4/2018		SeqNo:	1601148		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-36821		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 36821		RunNo: 49544					
Prep Date:	3/4/2018		Analysis Date: 3/4/2018		SeqNo: 1601149		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802E52

08-Mar-18

Client: Safety & Environmental Solutions

Project: Terra Billiken Release 2

Sample ID	LCS-36807		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 36807		RunNo: 49530					
Prep Date:	3/2/2018		Analysis Date: 3/5/2018		SeqNo: 1600960		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.3	70	130			
Surr: DNOP	4.0		5.000		80.2	70	130			

Sample ID	MB-36807	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 36807			RunNo: 49530					
Prep Date:	3/2/2018	Analysis Date: 3/5/2018			SeqNo: 1600961		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		95.1	70	130			

Sample ID	1802E52-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SP-1 Bottom 4Ft		Batch ID: 36807		RunNo: 49530					
Prep Date:	3/2/2018		Analysis Date: 3/5/2018		SeqNo: 1602070		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.86	0	95.8	55.8	125			
Surr: DNOP	4.6		5.086		90.3	70	130			

Sample ID	1802E52-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	SP-1 Bottom 4Ft		Batch ID:	36807		RunNo:	49530				
Prep Date:	3/2/2018		Analysis Date:	3/5/2018		SeqNo:	1602071		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	45	9.4	46.99	0	95.1	55.8	125	8.63	20		
Surr: DNOP	4.6		4.699		97.0	70	130	0	0		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802E52

08-Mar-18

Client: Safety & Environmental Solutions

Project: Terra Billiken Release 2

Sample ID	MB-36800		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 36800		RunNo: 49541					
Prep Date:	3/2/2018		Analysis Date: 3/5/2018		SeqNo: 1601997		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		91.3	15	316			

Sample ID	LCS-36800		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 36800		RunNo: 49541					
Prep Date:	3/2/2018		Analysis Date: 3/5/2018		SeqNo: 1601998		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	5.0	25.00	0	119	75.9	131			
Surr: BFB	1100		1000		115	15	316			

Sample ID	1802E52-002AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	SP-2 North Wall		Batch ID: 36800		RunNo: 49541					
Prep Date:	3/2/2018		Analysis Date: 3/5/2018		SeqNo: 1602001		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	23.97	0	101	77.8	128			
Surr: BFB	1000		958.8		107	15	316			

Sample ID	1802E52-002AMSD		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	SP-2 North Wall		Batch ID: 36800		RunNo: 49541					
Prep Date:	3/2/2018		Analysis Date: 3/5/2018		SeqNo: 1602002		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.52	0	98.8	77.8	128	3.90	20	
Surr: BFB	980		940.7		104	15	316	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit
W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802E52

08-Mar-18

Client: Safety & Environmental Solutions

Project: Terra Billiken Release 2

Sample ID MB-36800	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 36800		RunNo: 49541							
Prep Date: 3/2/2018	Analysis Date: 3/5/2018		SeqNo: 1602035		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		92.1	80	120			

Sample ID LCS-36800	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 36800		RunNo: 49541							
Prep Date: 3/2/2018	Analysis Date: 3/5/2018		SeqNo: 1602036		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.93	0.10	1.000	0	92.8	70.1	121			
Benzene	1.0	0.025	1.000	0	102	77.3	128			
Toluene	1.0	0.050	1.000	0	103	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	102	80.7	127			
Xylenes, Total	3.1	0.10	3.000	0	104	81.6	129			
Surr: 4-Bromofluorobenzene	0.95		1.000		94.6	80	120			

Sample ID 1802E52-001AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: SP-1 Bottom 4Ft	Batch ID: 36800		RunNo: 49541							
Prep Date: 3/2/2018	Analysis Date: 3/5/2018		SeqNo: 1602038		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.82	0.098	0.9804	0	83.3	72.5	138			
Benzene	0.91	0.025	0.9804	0	92.9	80.9	132			
Toluene	0.92	0.049	0.9804	0	94.2	79.8	136			
Ethylbenzene	0.91	0.049	0.9804	0	93.0	79.4	140			
Xylenes, Total	2.8	0.098	2.941	0	96.2	78.5	142			
Surr: 4-Bromofluorobenzene	0.88		0.9804		89.5	80	120			

Sample ID 1802E52-001AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: SP-1 Bottom 4Ft	Batch ID: 36800		RunNo: 49541							
Prep Date: 3/2/2018	Analysis Date: 3/5/2018		SeqNo: 1602039		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.84	0.10	0.9980	0	83.9	72.5	138	2.57	20	
Benzene	0.93	0.025	0.9980	0	93.3	80.9	132	2.20	20	
Toluene	0.95	0.050	0.9980	0	94.9	79.8	136	2.54	20	
Ethylbenzene	0.93	0.050	0.9980	0	93.5	79.4	140	2.33	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802E52

08-Mar-18

Client: Safety & Environmental Solutions

Project: Terra Billiken Release 2

Sample ID 1802E52-001AMSD		SampType: MSD		TestCode: EPA Method 8021B: Volatiles						
Client ID: SP-1 Bottom 4Ft	Batch ID: 36800			RunNo: 49541						
Prep Date: 3/2/2018	Analysis Date: 3/5/2018			SeqNo: 1602039		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	2.9	0.10	2.994	0	96.3	78.5	142	1.88	20	
Surr: 4-Bromofluorobenzene	0.88		0.9980		88.3	80	120	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: **Safety Env Solutions**

Work Order Number: **1802E52**

RcptNo: **1**

Received By: **Mandy Woods**

2/28/2018 9:45:00 AM

Completed By: **Ashley Gallegos**

2/28/2018 11:08:09 AM

Reviewed By: **mw 2/28/18**
labeled by:
DDS

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by:

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			

Chain-of-Custody Record

Client: Safety & Environmental Solutions

Mailing Address: 703 E. Clinton

7 Hobbs NW 88240

Phone #: 575-397-0510

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: 5 Day Rush

☐ Standard ☒ Rush

Project Name: Terra

Billiken Release #2

Project #: TEP-17-002

Project Manager: Allen, Bob

Sampler: Sofi Jerry

On Ice: ☒ Yes ☐ No

Sample Temperature: 23°

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
2/23	1015	S	SP-1 - Bottom 4A	1	Ice	1802 E52a
2/23	0900	S	SP-2 North wall	1	None	-001
2/23	1100	S	SP-3 Bottom 4A	1		-002
2/23	1045	S	SP-4 West wall	1		-003
2/23	1315	S	SP-5 Bottom 4A	1		-004
2/23	1340	S	SP-6 Gas wall	1		-005
2/23	1415	S	SP-7 Bottom 4A	1		-006
2/26	0900	S	SP-8 West wall	1		-007
2/26	0930	S	SP-9 Bottom 4A	1		-008
2/26	0845	S	SP-10 North wall	1		-009
2/26	1030	S	SP-11 Bottom 4A	1		-010
2/26	1130	S	SP-12 South wall	1		-011
Relinquished by: <u>Sofi Jerry</u>						
Date:	Time:	Received by: <u>Allen, Bob</u>				
2/21/18	0900	Date: <u>2/26/18</u> Time: <u>0915</u>				
Date:	Time:	Received by:				
		Date: Time:				



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (8021)	<input checked="" type="checkbox"/>
BTEX + MTBE + TPH (Gas only)	<input checked="" type="checkbox"/>
TPH 8015B (GRO / DRO / MRO)	<input checked="" type="checkbox"/>
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	
8270 (Semi-VOA)	<input checked="" type="checkbox"/>
Air Bubbles (Y or N)	

Remarks:

March 13, 2018

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: TER -17-002

Enclosed are the results of analyses for samples received by the laboratory on 03/02/18 9:00.

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/ga/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP -15 SURFACE	H800619-01	Soil	01-Mar-18 00:00	02-Mar-18 09:00
SP -15 2.5'	H800619-02	Soil	01-Mar-18 00:00	02-Mar-18 09:00
SP -15 4'	H800619-03	Soil	01-Mar-18 00:00	02-Mar-18 09:00
SP -16 SURFACE NORTH	H800619-04	Soil	01-Mar-18 00:00	02-Mar-18 09:00
SP -16 2.5' NORTH	H800619-05	Soil	01-Mar-18 00:00	02-Mar-18 09:00
SP -16 4' NORTH	H800619-06	Soil	01-Mar-18 00:00	02-Mar-18 09:00
SP -17 SURFACE SOUTH	H800619-07	Soil	01-Mar-18 00:00	02-Mar-18 09:00
SP -17 2.5' SOUTH	H800619-08	Soil	01-Mar-18 00:00	02-Mar-18 09:00
SP -17 4' SOUTH	H800619-09	Soil	01-Mar-18 00:00	02-Mar-18 09:00

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

SP -15 SURFACE H800619-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			89.9 %	72-148		8030506	MS	06-Mar-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	8030203	MS	05-Mar-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8030203	MS	05-Mar-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8030203	MS	05-Mar-18	8015B	
Surrogate: 1-Chlorooctane			112 %	41-142		8030203	MS	05-Mar-18	8015B	
Surrogate: 1-Chlorooctadecane			98.0 %	37.6-147		8030203	MS	05-Mar-18	8015B	

Green Analytical Laboratories

Soluble (DI Water Extraction)

Chloride	<10.0		10.0	mg/kg wet	10	B803030	JDA	07-Mar-18	EPA300.0	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

SP-15 2.5' H800619-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8030506	MS	06-Mar-18	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			92.8 %	72-148		8030506	MS	06-Mar-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	8030203	MS	05-Mar-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8030203	MS	05-Mar-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8030203	MS	05-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctane</i>			105 %	41-142		8030203	MS	05-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			93.6 %	37.6-147		8030203	MS	05-Mar-18	8015B	

Green Analytical Laboratories

Soluble (DI Water Extraction)

Chloride	<10.0		10.0	mg/kg wet	10	B803030	JDA	07-Mar-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

SP -15 4' H800619-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8030506	MS	06-Mar-18	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			92.7 %	72-148		8030506	MS	06-Mar-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctane</i>			94.6 %	41-142		8030205	MS	03-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			85.0 %	37.6-147		8030205	MS	03-Mar-18	8015B	

Green Analytical Laboratories

Soluble (DI Water Extraction)

Chloride	47.0		10.0	mg/kg wet	10	B803030	JDA	07-Mar-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

SP-16 SURFACE NORTH H800619-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8030506	MS	06-Mar-18	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			<i>91.2 %</i>	<i>72-148</i>		<i>8030506</i>	<i>MS</i>	<i>06-Mar-18</i>	<i>8021B</i>	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctane</i>			<i>104 %</i>	<i>41-142</i>		<i>8030205</i>	<i>MS</i>	<i>03-Mar-18</i>	<i>8015B</i>	
<i>Surrogate: 1-Chlorooctadecane</i>			<i>94.6 %</i>	<i>37.6-147</i>		<i>8030205</i>	<i>MS</i>	<i>03-Mar-18</i>	<i>8015B</i>	

Green Analytical Laboratories

Soluble (DI Water Extraction)

Chloride	<10.0		10.0	mg/kg wet	10	B803030	JDA	07-Mar-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

SP -16 2.5' NORTH

H800619-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8030506	MS	06-Mar-18	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			<i>91.3 %</i>	<i>72-148</i>		<i>8030506</i>	<i>MS</i>	<i>06-Mar-18</i>	<i>8021B</i>	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctane</i>			<i>94.7 %</i>	<i>41-142</i>		<i>8030205</i>	<i>MS</i>	<i>03-Mar-18</i>	<i>8015B</i>	
<i>Surrogate: 1-Chlorooctadecane</i>			<i>83.5 %</i>	<i>37.6-147</i>		<i>8030205</i>	<i>MS</i>	<i>03-Mar-18</i>	<i>8015B</i>	

Green Analytical Laboratories

Soluble (DI Water Extraction)

Chloride	<10.0		10.0	mg/kg wet	10	B803030	JDA	07-Mar-18	EPA300.0	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

SP-16 4' NORTH H800619-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8030506	MS	06-Mar-18	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			<i>91.6 %</i>	<i>72-148</i>		<i>8030506</i>	<i>MS</i>	<i>06-Mar-18</i>	<i>8021B</i>	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctane</i>			<i>96.6 %</i>	<i>41-142</i>		<i>8030205</i>	<i>MS</i>	<i>03-Mar-18</i>	<i>8015B</i>	
<i>Surrogate: 1-Chlorooctadecane</i>			<i>84.8 %</i>	<i>37.6-147</i>		<i>8030205</i>	<i>MS</i>	<i>03-Mar-18</i>	<i>8015B</i>	

Green Analytical Laboratories

Soluble (DI Water Extraction)

Chloride	44.1		10.0	mg/kg wet	10	B803030	JDA	07-Mar-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

SP -17 SURFACE SOUTH

H800619-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8030506	MS	06-Mar-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8030506	MS	06-Mar-18	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			92.8 %	72-148		8030506	MS	06-Mar-18	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctane</i>			97.4 %	41-142		8030205	MS	03-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			86.9 %	37.6-147		8030205	MS	03-Mar-18	8015B	

Green Analytical Laboratories

Soluble (DI Water Extraction)

Chloride	<10.0		10.0	mg/kg wet	10	B803030	JDA	07-Mar-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

SP-17 2.5' SOUTH H800619-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8030704	MS	07-Mar-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8030704	MS	07-Mar-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8030704	MS	07-Mar-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8030704	MS	07-Mar-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8030704	MS	07-Mar-18	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			<i>91.7 %</i>	<i>72-148</i>		<i>8030704</i>	<i>MS</i>	<i>07-Mar-18</i>	<i>8021B</i>	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctane</i>			<i>95.9 %</i>	<i>41-142</i>		<i>8030205</i>	<i>MS</i>	<i>03-Mar-18</i>	<i>8015B</i>	
<i>Surrogate: 1-Chlorooctadecane</i>			<i>81.9 %</i>	<i>37.6-147</i>		<i>8030205</i>	<i>MS</i>	<i>03-Mar-18</i>	<i>8015B</i>	

Green Analytical Laboratories

Soluble (DI Water Extraction)

Chloride	<10.0		10.0	mg/kg wet	10	B803030	JDA	07-Mar-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

SP -17 4' SOUTH H800619-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8030704	MS	07-Mar-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8030704	MS	07-Mar-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8030704	MS	07-Mar-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8030704	MS	07-Mar-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8030704	MS	07-Mar-18	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			<i>91.2 %</i>	<i>72-148</i>		<i>8030704</i>	<i>MS</i>	<i>07-Mar-18</i>	<i>8021B</i>	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8030205	MS	03-Mar-18	8015B	
<i>Surrogate: 1-Chlorooctane</i>			<i>91.3 %</i>	<i>41-142</i>		<i>8030205</i>	<i>MS</i>	<i>03-Mar-18</i>	<i>8015B</i>	
<i>Surrogate: 1-Chlorooctadecane</i>			<i>76.5 %</i>	<i>37.6-147</i>		<i>8030205</i>	<i>MS</i>	<i>03-Mar-18</i>	<i>8015B</i>	

Green Analytical Laboratories

Soluble (DI Water Extraction)

Chloride	48.6		10.0	mg/kg wet	10	B803030	JDA	07-Mar-18	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8030506 - Volatiles

Blank (8030506-BLK1)

Prepared & Analyzed: 05-Mar-18

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0911		mg/kg	0.100		91.1	72-148			

LCS (8030506-BS1)

Prepared & Analyzed: 05-Mar-18

Benzene	2.10	0.050	mg/kg	2.00		105	79.5-124			
Toluene	2.12	0.050	mg/kg	2.00		106	75.5-127			
Ethylbenzene	2.18	0.050	mg/kg	2.00		109	77.7-125			
Total Xylenes	6.69	0.150	mg/kg	6.00		112	70.9-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.0917		mg/kg	0.100		91.7	72-148			

LCS Dup (8030506-BSD1)

Prepared & Analyzed: 05-Mar-18

Benzene	2.17	0.050	mg/kg	2.00		108	79.5-124	3.17	6.5	
Toluene	2.19	0.050	mg/kg	2.00		110	75.5-127	3.54	7.02	
Ethylbenzene	2.22	0.050	mg/kg	2.00		111	77.7-125	1.80	7.83	
Total Xylenes	6.81	0.150	mg/kg	6.00		114	70.9-124	1.77	7.78	
Surrogate: 4-Bromofluorobenzene (PID)	0.0902		mg/kg	0.100		90.2	72-148			

Batch 8030704 - Volatiles

Blank (8030704-BLK1)

Prepared & Analyzed: 07-Mar-18

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0914		mg/kg	0.100		91.4	72-148			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

Volatile Organic Compounds by EPA Method 8021 - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8030704 - Volatiles
LCS (8030704-BS1)

Prepared & Analyzed: 07-Mar-18

Benzene	1.96	0.050	mg/kg	2.00		98.0	79.5-124			
Toluene	1.94	0.050	mg/kg	2.00		97.1	75.5-127			
Ethylbenzene	1.91	0.050	mg/kg	2.00		95.5	77.7-125			
Total Xylenes	5.84	0.150	mg/kg	6.00		97.3	70.9-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.0896		mg/kg	0.100		89.6	72-148			

LCS Dup (8030704-BSD1)

Prepared & Analyzed: 07-Mar-18

Benzene	1.94	0.050	mg/kg	2.00		97.0	79.5-124	1.01	6.5	
Toluene	1.93	0.050	mg/kg	2.00		96.4	75.5-127	0.734	7.02	
Ethylbenzene	1.91	0.050	mg/kg	2.00		95.6	77.7-125	0.0946	7.83	
Total Xylenes	5.82	0.150	mg/kg	6.00		97.0	70.9-124	0.287	7.78	
Surrogate: 4-Bromofluorobenzene (PID)	0.0898		mg/kg	0.100		89.8	72-148			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8030203 - General Prep - Organics

Blank (8030203-BLK1)

Prepared: 02-Mar-18 Analyzed: 05-Mar-18

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	57.7		mg/kg	50.0		115	41-142			
Surrogate: 1-Chlorooctadecane	53.7		mg/kg	50.0		107	37.6-147			

LCS (8030203-BS1)

Prepared: 02-Mar-18 Analyzed: 05-Mar-18

GRO C6-C10	238	10.0	mg/kg	200		119	76.5-133			
DRO >C10-C28	197	10.0	mg/kg	200		98.6	72.9-138			
Total TPH C6-C28	435	10.0	mg/kg	400		109	78-132			
Surrogate: 1-Chlorooctane	54.8		mg/kg	50.0		110	41-142			
Surrogate: 1-Chlorooctadecane	50.7		mg/kg	50.0		101	37.6-147			

LCS Dup (8030203-BSD1)

Prepared: 02-Mar-18 Analyzed: 05-Mar-18

GRO C6-C10	245	10.0	mg/kg	200		122	76.5-133	2.67	20.6	
DRO >C10-C28	194	10.0	mg/kg	200		96.8	72.9-138	1.85	20.6	
Total TPH C6-C28	438	10.0	mg/kg	400		110	78-132	0.650	18	
Surrogate: 1-Chlorooctane	51.5		mg/kg	50.0		103	41-142			
Surrogate: 1-Chlorooctadecane	48.2		mg/kg	50.0		96.5	37.6-147			

Batch 8030205 - General Prep - Organics

Blank (8030205-BLK1)

Prepared & Analyzed: 02-Mar-18

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	52.0		mg/kg	50.0		104	41-142			
Surrogate: 1-Chlorooctadecane	49.0		mg/kg	50.0		98.1	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
703 East Clinton
Hobbs NM, 88240

Project: TER -17-002
Project Number: TER - 17- 002
Project Manager: Bob Allen
Fax To: (575) 393-4388

Reported:
13-Mar-18 16:24

Petroleum Hydrocarbons by GC FID - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8030205 - General Prep - Organics
LCS (8030205-BS1)

Prepared & Analyzed: 02-Mar-18

GRO C6-C10	200	10.0	mg/kg	200		99.8	76.5-133			
DRO >C10-C28	191	10.0	mg/kg	200		95.6	72.9-138			
Total TPH C6-C28	391	10.0	mg/kg	400		97.7	78-132			
Surrogate: 1-Chlorooctane	52.6		mg/kg	50.0		105	41-142			
Surrogate: 1-Chlorooctadecane	49.2		mg/kg	50.0		98.3	37.6-147			

LCS Dup (8030205-BS1)

Prepared & Analyzed: 02-Mar-18

GRO C6-C10	207	10.0	mg/kg	200		104	76.5-133	3.71	20.6	
DRO >C10-C28	199	10.0	mg/kg	200		99.6	72.9-138	4.12	20.6	
Total TPH C6-C28	406	10.0	mg/kg	400		102	78-132	3.91	18	
Surrogate: 1-Chlorooctane	49.6		mg/kg	50.0		99.2	41-142			
Surrogate: 1-Chlorooctadecane	46.7		mg/kg	50.0		93.5	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Safety & Environmental Solutions
 703 East Clinton
 Hobbs NM, 88240

 Project: TER -17-002
 Project Number: TER - 17- 002
 Project Manager: Bob Allen
 Fax To: (575) 393-4388

 Reported:
 13-Mar-18 16:24

Soluble (DI Water Extraction) - Quality Control
Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B803030 - General Prep - Wet Chem										
Blank (B803030-BLK1)				Prepared: 06-Mar-18 Analyzed: 07-Mar-18						
Chloride	ND	10.0	mg/kg wet							
LCS (B803030-BS1)				Prepared: 06-Mar-18 Analyzed: 07-Mar-18						
Chloride	236	10.0	mg/kg wet	250		94.4	85-115			
LCS Dup (B803030-BSD1)				Prepared: 06-Mar-18 Analyzed: 07-Mar-18						
Chloride	236	10.0	mg/kg wet	250		94.5	85-115	0.0974	20	

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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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*=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

Company Name: <u>Sageen & Environmental</u>		BILL TO		ANALYSIS REQUEST																																			
Project Manager: <u>Allen, Bob</u>		P.O. #:																																					
Address: <u>203 E. Clinton</u>		Company:																																					
City: <u>Hobbs</u>		Attn:																																					
State: <u>NM</u> Zip: <u>88240</u>		Address:																																					
Phone #: <u>575-397-0510</u> Fax #:		City:																																					
Project #: <u>TER-17-002</u> Project Owner:		State:		Zip:																																			
Project Name:		Phone #:																																					
Project Location:		Fax #:																																					
Sample Name:		PRESERV		SAMPLING																																			
FOR LAB USE ONLY																																							
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME											
1 SP-15		Sageen		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X		TPH GT									
2 SP-15		245 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X		GTEX									
3 SP-15		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X		Chlorides (300)									
4 SP-16		Turpan North		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
5 SP-16		25 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
6 SP-16		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
7 SP-17		Engine South		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
8 SP-17		2.5, South		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
9 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
10 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
11 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
12 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
13 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
14 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
15 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
16 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
17 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
18 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
19 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
20 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
21 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
22 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
23 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
24 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
25 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
26 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
27 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
28 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
29 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
30 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
31 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
32 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
33 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
34 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
35 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
36 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
37 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
38 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
39 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
40 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
41 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
42 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
43 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
44 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
45 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
46 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
47 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
48 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
49 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
50 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
51 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
52 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
53 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
54 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
55 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
56 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
57 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
58 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
59 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
60 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
61 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
62 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
63 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
64 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
65 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
66 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
67 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
68 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
69 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
70 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
71 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
72 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
73 SP-17		4 ft		G		1		X		X		X		X		X		X		X		X		X		3/1/18		X											
74 SP-17																																							

Appendix D

Site Photos



Terra Oilfield Services-Biliken Release #2

Excavation Photos: 3-5-2018







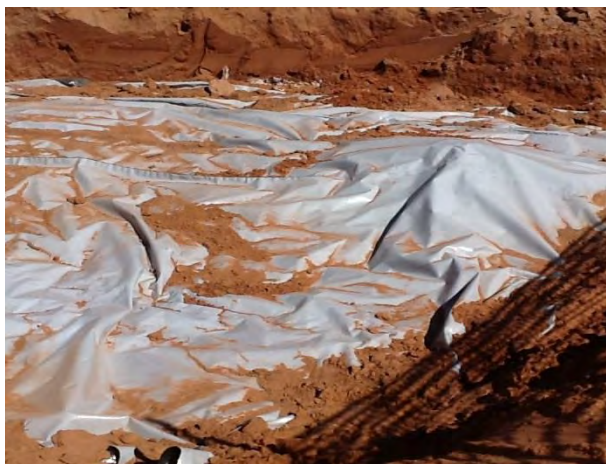
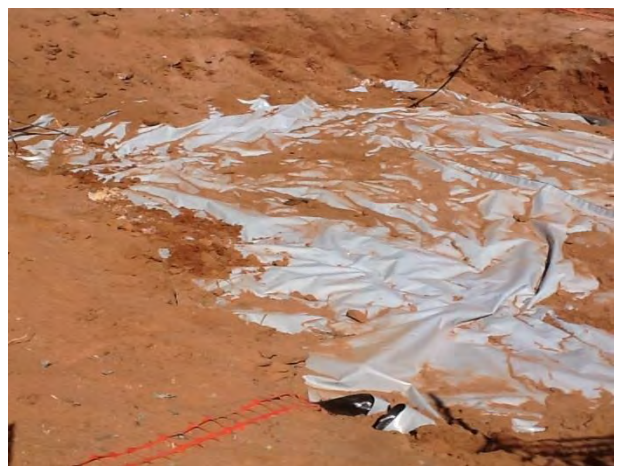
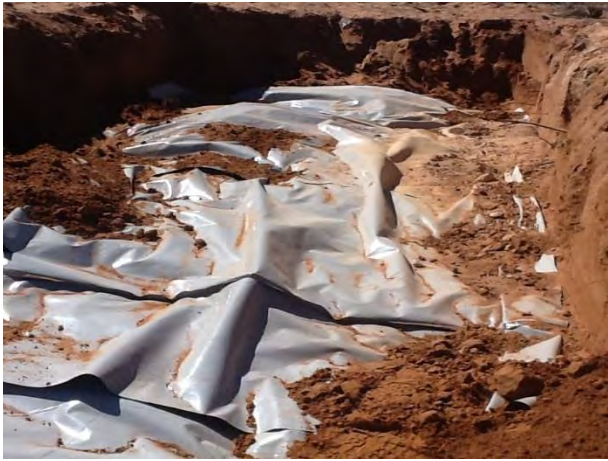
Terra Oilfield Services-Biliken Release #2

Liner Photos: 3-5-2018











Terra Oilfield Services-Biliken Release #2

Backfill Photos: 3-5-2018



