

# *Basin Environmental Service Technologies, LLC*

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## **REMEDIATION SUMMARY & SITE CLOSURE REQUEST**

**Grand Banks Energy  
ARU #14  
Lea County, New Mexico  
Unit Letter "I", Section 2, Township 16 South, Range 32 East  
Latitude 32.943974° North, Longitude -103.734328° West  
NMOCD Reference #: 1RP-3985**

Prepared For:

Grand Banks Energy  
10 Desta Drive  
Midland, Texas 79705

Prepared By:

Basin Environmental Service Technologies, LLC  
3100 Plains Highway  
Lovington, New Mexico 88260

**May 2016**

***APPROVED***

***By Olivia Yu at 2:43 pm, Jun 28, 2017***

**NMOCD grants closure to 1RP-3985.**

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Robbie Runnels  
Project Manager

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## 1.0 INTRODUCTION & BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin Environmental), on behalf of Grand Banks Energy (Grand Banks) has prepared this *Remediation Summary & Site Closure Request* for the release site known as the ARU #14. The legal description of the release site is Unit Letter "I", Section 2, Township 16 South, Range 32 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32.943974° North latitude and -103.734328° West longitude. The property affected by the release is owned by the state of New Mexico. Please reference Figure 1 for a "Site Location Map".

On October 30, 2015, Grand Banks discovered a release had occurred at the ARU #14. A welded joint on a poly flow line parted causing a release of crude oil in the pasture. The release was later reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on November 19, 2015. The "Release Notification and Corrective Action" (Form C-141) indicated approximately seventy-five (75) barrels (bbls) of crude oil were released. During initial response activities, the system was shut down and emergency crews were call to the release site where saturated soils were excavated and stockpiled. The entirety of the release (approximately 75 bbls) was in the pasture, impacting approximately forty-two thousand nine-hundred ninety-eight (42,998) square feet (ft<sup>2</sup>).

The Form C-141 is provided as Appendix A. General photographs of the release site are provided in Appendix B.

## 2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated information for the southeast quarter of Section 2, Township 16 South, Range 32 East, had three (3) wells placed and average depth to water being two-hundred seventy-two (272) feet below ground surface (bgs). Based on the NMOCD ranking system, zero (0) points were assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated there are no water wells within one thousand (1,000') feet of the release. Based on the NMOCD ranking system, zero (0) points were assigned to the site as a result of this criterion.

There are no surface water bodies within one thousand feet (1,000') of the release. Based on the NMOCD ranking system, zero (0) points were assigned to the site as a result of this criterion.

NMOCD guidelines indicate the ARU #14 release site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene – 10 mg/kg (ppm)
- Benzene, ethylbenzene, toluene, and xylenes (BTEX) – 50 mg/kg (ppm)
- Total petroleum hydrocarbons (TPH) – 5,000 mg/kg (ppm)

The New Mexico Administrative Code (NMAC) does not currently specify a remediation level for chloride concentrations in soil. Chloride remediation levels are set by the NMOCD on a site-specific basis.

### **3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES**

Basin personnel were on site beginning January 8, 2016 to begin delineation and remediation activities. Initial samples taken with depth were retrieved and submitted to a certified NMOCD approved commercial laboratory for initial analysis of chloride concentration utilizing method SM4500Cl-B. Gasoline range organics (GRO) and diesel range organics (DRO) were analyzed utilizing method TPH 8015M. Benzene, toluene, ethylbenzene and xylenes (BTEX) were analyzed utilizing method BTEX 8021B. A “Site & Sample Location Map” is provided as Figure 2. Laboratory analytical reports are provided as Appendix D.

On January 29, 2016, excavation of impacted soil commenced at the site. A chloride test kit was used to field-screen the horizontal extent and depth of impacted soil and to guide the excavation process. A photo-ionization detector (PID) was also used for determining the presence of hydrocarbons and the boundaries of the impacted soil. The impacted soil was excavated and transported to Gandy Marley Inc. Landfarm (Permit # NM-711-1-0019), for disposal.

The impacted area was excavated down to approximately two (2) feet bgs. The release site was broken down into five (5) distinct areas. Each individual area had numerous soil sample points placed at approximately fifty (50) foot intervals. In Area 5, two (2) floor sample points (Area 5 #2, Area 5 #3) were excavated deeper (4’ and 6’ bgs respectively) in order to extract the contaminated soils. Wall samples were taken at half of the total depth of excavation to ensure the removal of all impacted soils above the recommended remediation action levels (RRAL). Soil samples were sent to an approved NMOCD laboratory for concentration analysis of chlorides and total petroleum hydrocarbons (TPH).

Discrete wall soil samples were retrieved at half the depth of excavation for all Area sample points and submitted to an approved NMOCD laboratory for concentration analysis of chlorides, BTEX and TPH. Laboratory analysis confirms that the boundaries of the release were encompassed within the excavated area. Laboratory analysis also shows the impacted areas of the release met the criteria necessary for closure of the release.

The excavated area encompassed forty-six thousand seven-hundred ninety-eight (46,798) ft<sup>2</sup> and was backfilled utilizing clean, non-impacted soils and contoured to fit the surrounding topography. The release site was blended with straw for soil retention and seeded with a native blend of vegetation free from invasive and noxious species.

Table 1 summarizes the “Concentrations of BTEX, TPH & Chloride in Soil”.

## **4.0 QA/QC PROCEDURES**

### **4.1 Soil Sampling**

Soil samples were delivered to Cardinal Laboratories in Hobbs, New Mexico, for TPH, and/or chloride analysis using the methods described below:

- TPH concentrations in accordance with EPA Method SW-846 8015M
- Chloride concentrations in accordance with EPA Methods 4500 Cl-B

### **4.2 Decontamination of Equipment**

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

### **4.3 Laboratory Protocol**

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form(s). These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

## **5.0 SITE CLOSURE REQUEST**

Soil samples collected from the sidewalls of the ARU #14 excavation were analyzed by an NMOCD-approved laboratory, and concentrations of benzene, BTEX, and TPH were below the regulatory remediation action levels established for the site by the NMOCD.

Basin Environmental recommends Grand Banks provide the NMOCD Hobbs District Office a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the ARU #14 release site.

## **6.0 LIMITATIONS**

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin Environmental has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin Environmental has not conducted an independent examination of the facts contained in referenced materials and statements. Basin Environmental has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin Environmental has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Grand Banks Energy. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and/or Grand Banks Energy.

## **7.0 DISTRIBUTION:**

Copy 1:        Jamie Keyes  
                 New Mexico Energy, Minerals and Natural Resources Department  
                 Oil Conservation Division (District 1)  
                 1625 N. French Drive  
                 Hobbs, NM 88240

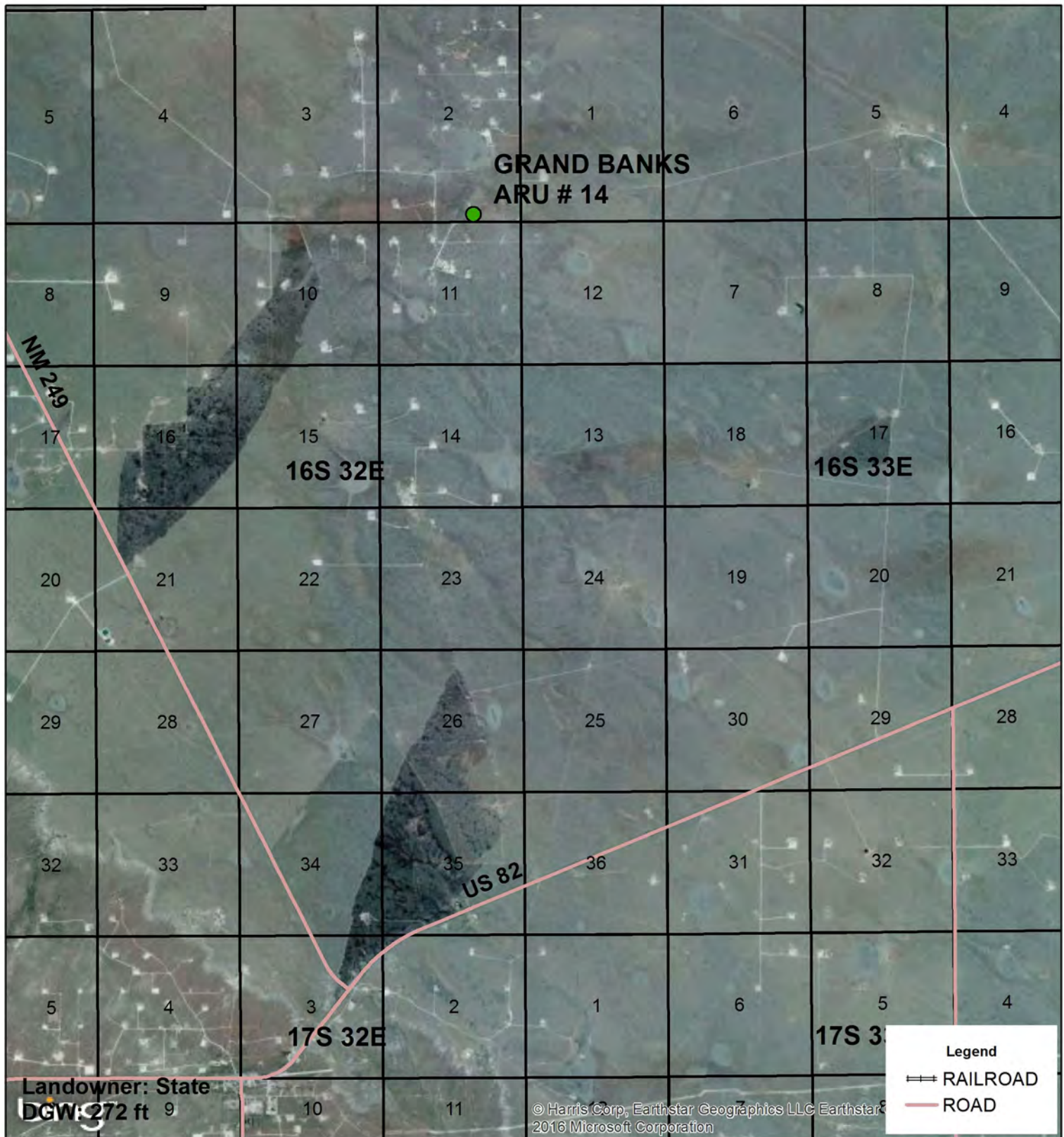
Copy 2:        Wayne Price  
                 Grand Banks Energy  
                 10 Desta Drive  
                 Midland, TX 79705

Copy 3:        Basin Environmental Service Technologies, LLC  
                 P.O. Box 301  
                 Lovington, NM 88260

# FIGURES



# Site Location Map



## GRAND BANKS ARU #14

UL O SECTION 2  
T-16-S R-32-E  
LEA COUNTY, NM

Figure # 1

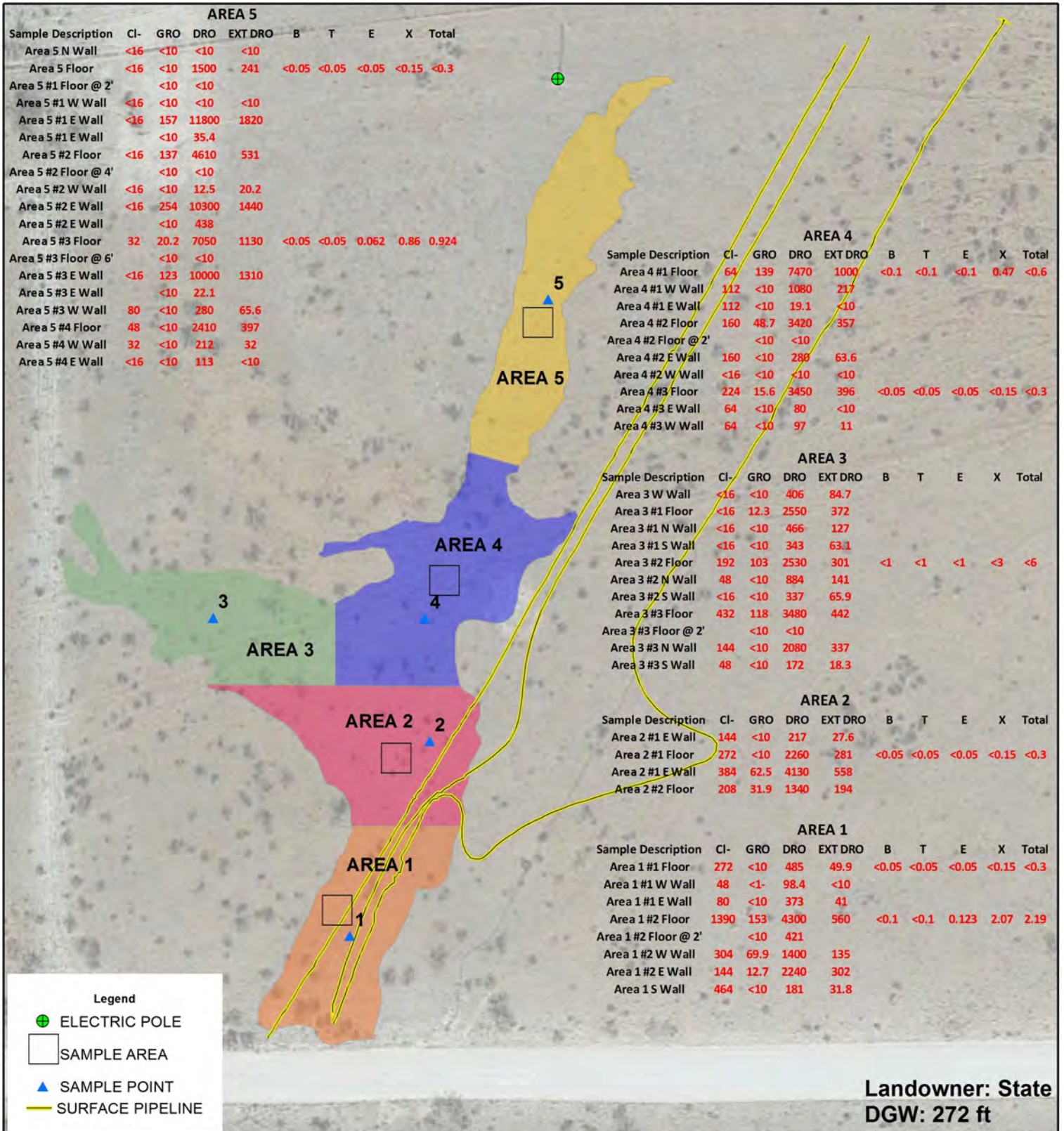
0 3,400 6,800  
Feet

GPS date: 1/8/16 KL  
Drawing date: 1/11/16  
Drafted by: T. Grieco





# Area Sampling Data



**GRAND BANKS**  
**ARU #14**

**UL O SECTION 2**  
**T-16-S R-32-E**  
**LEA COUNTY, NM**

**Underground facilities are spatially projected and need to be field verified.**

**GPS: 32.943974 -103.734328**

0 50 100  
Feet

GPS date: 1/8/16 KL  
Drawing date: 2/22/16  
Drafted by: T. Grieco



# TABLES

**TABLE 1**  
**CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**

**GRAND BANKS ENERGY**  
**ARU #14**  
**LEA COUNTY, NEW MEXICO**  
**NMOCD # - 1RP - 3985**

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	4500 CI-B CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/Kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)		
Initial SP 1 @ 3"	3"	1/8/2016	In-Situ	<0.050	0.7550	1.14	22.4000	24.3000	2110.0	39800.0	NA	<b>41910</b>	<b>1,630</b>
Initial SP 2 @ 3"	3"	1/8/2016	In-Situ	<0.050	<0.050	<0.050	0.2740	<0.300	<10.0	181.0	NA	<b>181</b>	<16.0
Initial SP 3 @ 3"	3"	1/8/2016	In-Situ	<0.050	0.159	0.27	4.02	4.44	55.8	3080.0	NA	<b>3136</b>	<16.0
Initial SP 4 @ 3"	3"	1/8/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	277.0	NA	<b>277</b>	432.0
Initial SP 5 @ 3"	3"	1/8/2016	In-Situ	0.773	25	9.23	107	142	3690.0	29200.0	NA	<b>32890</b>	64.0
Area 1 @ 18"	18"	1/29/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	292.0	43.1	<b>335</b>	528.0
Area 2 @ 18"	18"	1/29/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	255.0	33.8	<b>289</b>	<16.0
Area 4 @ 18"	18"	1/29/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	308.0	34.3	<b>342</b>	48.0
Area 5 @ 18"	18"	1/29/2016	In-Situ	NA	NA	NA	NA	NA	745.0	4010.0	403.0	<b>5158</b>	48.0
Area 5 - N Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	<10.0	<10.0	<b>0</b>	<16.0
Area 5 - #1 Floor	2'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	1500.0	241.0	<b>1741</b>	<16.0
Area 5 - #1 W Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	<10.0	<10.0	<b>0</b>	<16.0
Area 5 - #1 E Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	157.0	11800.0	1820.0	<b>13777</b>	<16.0
Area 5 - #2 Floor	2'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	137.0	4610.0	531.0	<b>5278</b>	<16.0
Area 5 - #2 W Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	12.5	20.2	<b>33</b>	<16.0
Area 5 - #2 E Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	254.0	10300.0	1440.0	<b>11994</b>	<16.0
Area 5 - #3 Floor	2'	3/22/2016	In-Situ	<.050	<.050	0.062	0.862	0.924	20.2	7050.0	1130.0	<b>8200</b>	32.0
Area 5 - #3 E Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	123.0	10000.0	1310.0	<b>11433</b>	<16.0
Area 5 - #3 W Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	280.0	65.6	<b>346</b>	80.0
Area 5 - #4 Floor	2'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	2410.0	397.0	<b>2807</b>	48.0
Area 5 - #4 W Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	212.0	32.0	<b>244</b>	32.0
Area 5 - #4 E Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	113.0	<10.0	<b>113</b>	<16.0
Area 4 - #1 Floor	2'	3/22/2016	In-Situ	<0.100	<0.100	<0.100	0.465	<0.600	139.0	7470.0	1000.0	<b>8609</b>	64.0
Area 4 - #1 W Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	1080.0	217.0	<b>1297</b>	112.0
Area 4 - #1 E Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	19.1	<10.0	<b>19</b>	112.0
Area 4 - #2 Floor	2'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	48.7	3420.0	357.0	<b>3826</b>	160.0
Area 4 - #2 E Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	280.0	63.6	<b>344</b>	160.0
Area 4 - #2 W Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	<10.0	<10.0	<b>0</b>	<16.0
Area 4 - #3 Floor	2'	3/22/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	15.6	3450.0	396.0	<b>3862</b>	224.0
Area 4 - #3 E Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	80.0	<10.0	<b>80</b>	64.0
Area 4 - #3 W Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	97.0	11.0	<b>108</b>	64.0
Area 2 - #1 E Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	217.0	27.6	<b>245</b>	144.0
Area 2 - #1 Floor	2'	3/22/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	2260.0	281.0	<b>2541</b>	272.0
Area 2 - #2 E Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	62.5	4130.0	558.0	<b>4751</b>	384.0
Area 2 - #2 Floor	2'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	31.9	1340.0	194.0	<b>1566</b>	208.0
Area 3 - W Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	406.0	84.7	<b>491</b>	<16.0
Area 3 - #1 Floor	2'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	12.3	2550.0	372.0	<b>2934</b>	<16.0

**TABLE 1  
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**

**GRAND BANKS ENERGY  
ARU #14  
LEA COUNTY, NEW MEXICO  
NMOCD # - 1RP - 3985**

Area 3 - #1 N Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	466.0	127.0	<b>593</b>	<16.0
Area 3 - #1 S Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	343.0	63.1	<b>406</b>	<16.0
Area 3 - #2 Floor	2'	3/22/2016	In-Situ	<1.00	<1.00	<1.00	<3.00	<6.00	103.0	2530.0	301.0	<b>2934</b>	192.0
Area 3 - #2 N Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	884.0	141.0	<b>1025</b>	48.0
Area 3 - #2 S Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	337.0	65.9	<b>403</b>	<16.0
Area 3 - #3 Floor	2'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	118.0	3840.0	442.0	<b>4400</b>	432.0
Area 3 - #3 N Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	2080.0	337.0	<b>2417</b>	144.0
Area 3 - #3 S Wall	1'	3/22/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	172.0	18.3	<b>190</b>	48.0
Area 1 - #1 Floor	2'	3/24/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	485.0	49.9	<b>535</b>	272.0
Area 1 - #1 W Wall	1'	3/24/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	98.4	<10.0	<b>98</b>	48.0
Area 1 - #1 E Wall	1'	3/24/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	373.0	41.9	<b>415</b>	80.0
Area 1 - #2 Floor	2'	3/24/2016	In-Situ	<0.100	<0.100	0.123	2.07	2.19	153.0	4300.0	560.0	<b>5013</b>	1,390.0
Area 1 - #2 W Wall	1'	3/24/2016	In-Situ	NA	NA	NA	NA	NA	69.9	1400.0	135.0	<b>1605</b>	304.0
Area 1 - #2 E Wall	1'	3/24/2016	In-Situ	NA	NA	NA	NA	NA	12.7	2240.0	302.0	<b>2555</b>	144.0
Area 1 - S Wall	1'	3/24/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	181.0	31.8	<b>213</b>	464.0
Area 1 - SP #2 - Floor @ 2'	2'	4/7/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	421.0	NA	<b>421</b>	NA
Area 5 - SP #1 - Floor @ 2'	2'	4/7/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	<10.0	NA	<b>&lt;10.0</b>	NA
Area 5 - SP #2 - Floor @ 4'	4'	4/7/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	<10.0	NA	<b>&lt;10.0</b>	NA
Area 5 - SP #3 - Floor @ 6'	6'	4/7/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	<10.0	NA	<b>&lt;10.0</b>	NA
Area 4 - SP #2 - Floor @ 2'	2'	4/7/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	<10.0	NA	<b>&lt;10.0</b>	NA
Area 3 - SP #3 - Floor @ 2'	2'	4/7/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	<10.0	NA	<b>&lt;10.0</b>	NA
Area 5 - SP #1 - East Wall	1'	4/7/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	35.4	<10.0	<b>35</b>	NA
Area 5 - SP #2 - East Wall	1'	4/7/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	438.0	<10.0	<b>438</b>	NA
Area 5 - SP #3 - East Wall	1'	4/7/2016	In-Situ	NA	NA	NA	NA	NA	<10.0	22.1	<10.0	<b>22</b>	NA
Area #1 SP #1 East Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	667.0	97.9	<b>765</b>	640.0
Area #1 SP #1 West Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	271.0	48.5	<b>320</b>	176.0
Area #2 SP #1 East Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	345.0	69.0	<b>414</b>	112.0
Area #2 SP #1 West Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1740.0	338.0	<b>2078</b>	112.0
Area #4 SP #1 East Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	581.0	122.0	<b>703</b>	224.0
Area #4 SP #1 West Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	196.0	32.9	<b>229</b>	48.0
Area #4 SP #2 East Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	0.473	0.473	17.0	1940.0	333.0	<b>2290</b>	112.0
Area #4 SP #2 West Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	55.5	15.6	<b>71</b>	80.0
Area #5 SP #1 East Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	19.4	11.1	<b>31</b>	96.0
Area #5 SP #1 West Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	27.5	<10.0	<b>28</b>	48.0
Area #5 SP #2 East Wall	2'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	528.0	74.0	<b>602</b>	<16.0
Area #5 SP #2 West Wall	2'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	83.2	<10.0	<b>83</b>	<16.0
Area #5 SP #3 East Wall	3'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	84.6	12.8	<b>97</b>	16.0
Area #5 SP #3 West Wall	3'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	13.7	<10.0	<b>14</b>	48.0
Area #5 SP #4 East Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	473.0	57.2	<b>530</b>	80.0
Area #5 SP #4 West Wall	1'	4/27/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	112.0	18.2	<b>130</b>	96.0

**TABLE 1**  
**CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**

**GRAND BANKS ENERGY**  
**ARU #14**  
**LEA COUNTY, NEW MEXICO**  
**NMOCD # - 1RP - 3985**

<b>NMOCD Recommended Remediation Action Level</b>	<b>10</b>				<b>50</b>				<b>5000</b>	<b>1,000</b>
---	-----------	--	--	--	-----------	--	--	--	-------------	--------------

*NA = Not analyzed.*

# APPENDICES

# 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

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

Form C-141  
Revised August 8, 2011

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: Grand Banks Energy Company	Contact: John Kimberly	
Address: 10 Desta Drive, Suite 300 E. Midland, TX 79705	Telephone No.	
Facility Name: ARU #14	Facility Type: Oil Flow Line	
Surface Owner: NMSLO	Mineral Owner: NMSLO	API No. 30-025-00365

**LOCATION OF RELEASE**

Unit Letter I	Section 2	Township 16S	Range 32E	Feet from the 20	North/South Line South	Feet from the 660	East/West Line East	County Lea
------------------	--------------	-----------------	--------------	---------------------	---------------------------	----------------------	------------------------	---------------

Latitude: 32.943974 Longitude: -103.734328

**NATURE OF RELEASE**

Type of Release: Crude Oil	Volume of Release: 75 bbls	Volume Recovered:
Source of Release: New surface poly flow line	Date and Hour of Occurrence: October 29 or 30-2015	Date and Hour of Discovery: October 30, 2015 - 9 a.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? Pumper	Date and Hour: Same as above.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

**APPROVED**

By Olivia Yu at 2:48 pm, Jun 28, 2017

If a Watercourse was Impacted, Describe Fully.\*



Describe Cause of Problem and Remedial Action Taken.\*

A poly line weld failed, causing the release. System was shut down to stop the flow of crude oil.

Describe Area Affected and Cleanup Action Taken.\*

Approximately 600'X75' of area impacted. Area was excavated down to approximately 4' in some areas. Once remediation was complete, area was backfilled with clean, non-impacted soil and contoured to surrounding area. The site was seeded with land-owner approved non-invasive, non-noxious seeds at a time conducive for germination.

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

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: John E. Kimberly	Approved by Environmental Specialist: 	
Title: President	Approval Date: 6/28/2017	Expiration Date: xx/xx/xxxx
E-mail Address: jek3738@gmail.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 12/12/2016 Phone: 432 682 1044		

\* Attach Additional Sheets If Necessary

1RP-3985

# APPENDIX – B

## Photo Documentation



# Grand Banks Energy – ARU #144

Unit Letter I, Section 2, T16S, R32E



Release area, facing north

1/8/16



Initial release area, facing south

1/8/16



Excavation, facing north

4/14/16



Excavation, facing northeast

4/14/16





Excavation, facing southwest

4/14/16



Backfilling, facing north

5/13/16



Backfilling, facing northwest

5/13/16



Site complete, facing north

5/23/16

# APPENDIX – C

## Analytical Reports



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

---

January 18, 2016

KYLE NORMAN

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: GRAND BANKS A. D.

Enclosed are the results of analyses for samples received by the laboratory on 01/12/16 8:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
KYLE NORMAN  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received: 01/12/2016  
Reported: 01/18/2016  
Project Name: GRAND BANKS A. D.  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 01/08/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: INITIAL SAMPLE PT. 1 @ 3" (H600062-01)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	01/15/2016	ND	2.22	111	2.00	12.2	
<b>Toluene*</b>	<b>0.755</b>	0.500	01/15/2016	ND	2.17	109	2.00	12.0	
<b>Ethylbenzene*</b>	<b>1.14</b>	0.500	01/15/2016	ND	1.97	98.7	2.00	11.0	
<b>Total Xylenes*</b>	<b>22.4</b>	1.50	01/15/2016	ND	5.93	98.9	6.00	10.3	
<b>Total BTX</b>	<b>24.3</b>	3.00	01/15/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1630</b>	16.0	01/13/2016	ND	448	112	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10</b>	<b>2110</b>	100	01/12/2016	ND	201	100	200	4.33		
<b>DRO &gt;C10-C28</b>	<b>39800</b>	100	01/12/2016	ND	186	92.8	200	7.29		

Surrogate: 1-Chlorooctane 248 % 35-147

Surrogate: 1-Chlorooctadecane 1070 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
KYLE NORMAN  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received: 01/12/2016  
Reported: 01/18/2016  
Project Name: GRAND BANKS A. D.  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 01/08/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: INITIAL SAMPLE PT. 2 @ 3" (H600062-02)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/12/2016	ND	2.22	111	2.00	12.2		
Toluene*	<0.050	0.050	01/12/2016	ND	2.17	109	2.00	12.0		
Ethylbenzene*	<0.050	0.050	01/12/2016	ND	1.97	98.7	2.00	11.0		
<b>Total Xylenes*</b>	<b>0.274</b>	0.150	01/12/2016	ND	5.93	98.9	6.00	10.3		
Total BTEX	<0.300	0.300	01/12/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 128 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/13/2016	ND	448	112	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/12/2016	ND	201	100	200	4.33	
DRO >C10-C28	181	10.0	01/12/2016	ND	186	92.8	200	7.29	

Surrogate: 1-Chlorooctane 91.1 % 35-147

Surrogate: 1-Chlorooctadecane 104 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 Basin Environmental Service  
 KYLE NORMAN  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

 Received: 01/12/2016  
 Reported: 01/18/2016  
 Project Name: GRAND BANKS A. D.  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 01/08/2016  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: INITIAL SAMPLE PT. 3 @ 3" (H600062-03)**

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	01/12/2016	ND	2.22	111	2.00	12.2	
Toluene*	0.159	0.050	01/12/2016	ND	2.17	109	2.00	12.0	
Ethylbenzene*	0.270	0.050	01/12/2016	ND	1.97	98.7	2.00	11.0	
Total Xylenes*	4.02	0.150	01/12/2016	ND	5.93	98.9	6.00	10.3	
Total BTX	4.44	0.300	01/12/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/13/2016	ND	448	112	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	55.8	10.0	01/12/2016	ND	201	100	200	4.33	
DRO >C10-C28	3080	10.0	01/12/2016	ND	186	92.8	200	7.29	

Surrogate: 1-Chlorooctane 107 % 35-147

Surrogate: 1-Chlorooctadecane 141 % 28-171

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
KYLE NORMAN  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received: 01/12/2016  
Reported: 01/18/2016  
Project Name: GRAND BANKS A. D.  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 01/08/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: INITIAL SAMPLE PT. 4 @ 3" (H600062-04)**

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	01/12/2016	ND	2.22	111	2.00	12.2	
Toluene*	<0.050	0.050	01/12/2016	ND	2.17	109	2.00	12.0	
Ethylbenzene*	<0.050	0.050	01/12/2016	ND	1.97	98.7	2.00	11.0	
Total Xylenes*	<0.150	0.150	01/12/2016	ND	5.93	98.9	6.00	10.3	
Total BTEx	<0.300	0.300	01/12/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	01/13/2016	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/12/2016	ND	201	100	200	4.33	
DRO >C10-C28	277	10.0	01/12/2016	ND	186	92.8	200	7.29	

Surrogate: 1-Chlorooctane 94.4 % 35-147

Surrogate: 1-Chlorooctadecane 92.0 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
KYLE NORMAN  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received: 01/12/2016  
Reported: 01/18/2016  
Project Name: GRAND BANKS A. D.  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 01/08/2016  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: INITIAL SAMPLE PT. 5 @ 3" (H600062-05)**

BTEx 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.773</b>	0.500	01/15/2016	ND	2.22	111	2.00	12.2	
<b>Toluene*</b>	<b>25.0</b>	0.500	01/15/2016	ND	2.17	109	2.00	12.0	
<b>Ethylbenzene*</b>	<b>9.23</b>	0.500	01/15/2016	ND	1.97	98.7	2.00	11.0	
<b>Total Xylenes*</b>	<b>107</b>	1.50	01/15/2016	ND	5.93	98.9	6.00	10.3	
<b>Total BTEx</b>	<b>142</b>	3.00	01/15/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 73.6-140

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	01/13/2016	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>3690</b>	50.0	01/12/2016	ND	201	100	200	4.33	
<b>DRO &gt;C10-C28</b>	<b>29200</b>	50.0	01/12/2016	ND	186	92.8	200	7.29	

Surrogate: 1-Chlorooctane 249 % 35-147

Surrogate: 1-Chlorooctadecane 730 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

---

February 19, 2016

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: GRAND BANKS ARU #14

Enclosed are the results of analyses for samples received by the laboratory on 02/02/16 8:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

Basin Environmental Service  
BEN J. ARGUIJO  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	02/02/2016	Sampling Date:	01/29/2016
Reported:	02/19/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	AFE 26056	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AREA 1 @ 18" (H600231-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	02/03/2016	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/02/2016	ND	214	107	200	2.54	
DRO >C10-C28	292	10.0	02/02/2016	ND	208	104	200	6.50	
EXT DRO >C28-C35	43.1	10.0	02/02/2016	ND					
Surrogate: 1-Chlorooctane	81.7 %	35-147							
Surrogate: 1-Chlorooctadecane	86.3 %	28-171							

**Sample ID: AREA 2 @ 18" (H600231-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/03/2016	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/02/2016	ND	214	107	200	2.54	
<b>DRO &gt;C10-C28</b>	<b>255</b>	10.0	02/02/2016	ND	208	104	200	6.50	
<b>EXT DRO &gt;C28-C35</b>	<b>33.8</b>	10.0	02/02/2016	ND					
Surrogate: 1-Chlorooctane	83.2 %	35-147							
Surrogate: 1-Chlorooctadecane	89.3 %	28-171							

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
BEN J. ARGUIJO  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	02/02/2016	Sampling Date:	01/29/2016
Reported:	02/19/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	AFE 26056	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: AREA 4 @ 18" (H600231-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/03/2016	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	02/02/2016	ND	214	107	200	2.54	
DRO >C10-C28	308	10.0	02/02/2016	ND	208	104	200	6.50	
EXT DRO >C28-C35	34.3	10.0	02/02/2016	ND					
Surrogate: 1-Chlorooctane									
	75.6 %	35-147							
Surrogate: 1-Chlorooctadecane									
	83.2 %	28-171							

**Sample ID: AREA 5 @ 18" (H600231-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/03/2016	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	745	10.0	02/02/2016	ND	214	107	200	2.54	
DRO >C10-C28	4010	10.0	02/02/2016	ND	208	104	200	6.50	
EXT DRO >C28-C35	403	10.0	02/02/2016	ND					
Surrogate: 1-Chlorooctane									
	129 %	35-147							
Surrogate: 1-Chlorooctadecane									
	128 %	28-171							

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\*=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

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---

Celey D. Keene, Lab Director/Quality Manager



# ARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Basin Environmental Service Technologies, LLC  
Project Manager: Ben Arguilo  
Address: P.O. Box 301  
City: Lovington  
State: NM Zip: 88260  
Phone #: (575) 396-2378 Fax #: (575) 396-1429  
Project #: AFE 26056 Project Owner:  
Project Name:  
Project Location: GRAND BANKS ARU #14  
Sampler Name: Steve Taylor

### BILL TO

### ANALYSIS REQUEST

P.O. #:

Company:

BASIN

Attn:

Address:

City:

State: NM Zip: 88220

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D. \*

HL00231

(G)RAB OR (C)OMP, # CONTAINERS

MATRIX: GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER: ACID/BASE, ICE / COOL, OTHER:

DATE TIME

Chloride, TPH (8015M), BTEX (8021B) HOLD

1 SP#1@18" Area 1 @ 18"  
2 SP#2@18" Area 2 @ 18"  
3 SP#3@18" Area 4 @ 18"  
4 SP#4@18" Area 5 @ 18"

G 1 1/29/2016 9:00  
G 1 1/29/2016 10:00  
G 1 1/29/2016 11:00  
G 1 1/29/2016 12:00

X X X  
X X X  
X X X  
X X X

Relinquished By:

Date: 1/2/16

Received By:

Phone Result:

Yes No

Add'l Phone #:

Fax Result:

Yes No

Add'l Fax #:

Relinquished By:

Date: 1-2-16

Received By:

Phone Result:

Yes No

Add'l Phone #:

Fax Result:

Yes No

Add'l Fax #:

Delivered By: (Circle One)

Date: 1-2-16

Received By:

Phone Result:

Yes No

Add'l Phone #:

Fax Result:

Yes No

Add'l Fax #:

Sampler - UPS - Bus - Other:

Date: 1-2-16

Received By:

Phone Result:

Yes No

Add'l Phone #:

Fax Result:

Yes No

Add'l Fax #:

FORM-006  
Revision 1.0

\* Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

#54



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

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March 30, 2016

ROBBIE RUNNELS

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: GRAND BANKS ARU #14

Enclosed are the results of analyses for samples received by the laboratory on 03/23/16 10:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 Basin Environmental Service  
 ROBBIE RUNNELS  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - N WALL (H600621-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/23/2016	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/23/2016	ND	203	101	200	4.31	
DRO >C10-C28	<10.0	10.0	03/23/2016	ND	215	108	200	14.0	
EXT DRO >C28-C35	<10.0	10.0	03/23/2016	ND					
Surrogate: 1-Chlorooctane	97.0 %	35-147							
Surrogate: 1-Chlorooctadecane	107 %	28-171							

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - # 1 FLOOR (H600621-02)**

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	03/24/2016	ND	2.00	99.9	2.00	3.95	
Toluene*	<0.050	0.050	03/24/2016	ND	1.93	96.5	2.00	4.58	
Ethylbenzene*	<0.050	0.050	03/24/2016	ND	1.71	85.6	2.00	5.45	
Total Xylenes*	<0.150	0.150	03/24/2016	ND	5.26	87.7	6.00	5.58	
Total BTX	<0.300	0.300	03/24/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/23/2016	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/23/2016	ND	203	101	200	4.31	
DRO >C10-C28	1500	10.0	03/23/2016	ND	215	108	200	14.0	
EXT DRO >C28-C35	241	10.0	03/23/2016	ND					

Surrogate: 1-Chlorooctane 93.1 % 35-147

Surrogate: 1-Chlorooctadecane 119 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - #1 W WALL (H600621-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/23/2016	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/23/2016	ND	203	101	200	4.31	
DRO >C10-C28	<10.0	10.0	03/23/2016	ND	215	108	200	14.0	
EXT DRO >C28-C35	<10.0	10.0	03/23/2016	ND					
Surrogate: 1-Chlorooctane		93.0 %	35-147						
Surrogate: 1-Chlorooctadecane		101 %	28-171						

**Sample ID: AREA 5 - #1 E WALL (H600621-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/23/2016	ND	432	108	400	3.77		
TPH 8015M		mg/kg		Analyzed By: CK						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	157	10.0	03/23/2016	ND	203	101	200	4.31		
DRO >C10-C28	11800	10.0	03/23/2016	ND	215	108	200	14.0		
EXT DRO >C28-C35	1820	10.0	03/23/2016	ND						
Surrogate: 1-Chlorooctane		141 %	35-147							
Surrogate: 1-Chlorooctadecane		381 %	28-171							

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - #2 FLOOR (H600621-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	137	10.0	03/23/2016	ND	203	101	200	4.31	
DRO >C10-C28	4610	10.0	03/23/2016	ND	215	108	200	14.0	
EXT DRO >C28-C35	531	10.0	03/23/2016	ND					
Surrogate: 1-Chlorooctane	126 %	35-147							
Surrogate: 1-Chlorooctadecane	153 %	28-171							

**Sample ID: AREA 5 - #2 W WALL (H600621-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/23/2016	ND	432	108	400	3.77		
TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/23/2016	ND	203	101	200	4.31		
DRO >C10-C28	12.5	10.0	03/23/2016	ND	215	108	200	14.0		
EXT DRO >C28-C35	20.2	10.0	03/23/2016	ND						
Surrogate: 1-Chlorooctane	99.5 %	35-147								
Surrogate: 1-Chlorooctadecane	101 %	28-171								

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Basin Environmental Service  
 ROBBIE RUNNELS  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - #2 E WALL (H600621-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/23/2016	ND	432	108	400	3.77		
TPH 8015M		mg/kg		Analyzed By: CK						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	254	10.0	03/23/2016	ND	203	101	200	4.31		
DRO >C10-C28	10300	10.0	03/23/2016	ND	215	108	200	14.0		
EXT DRO >C28-C35	1440	10.0	03/23/2016	ND						
Surrogate: 1-Chlorooctane	168 %	35-147								
Surrogate: 1-Chlorooctadecane	275 %	28-171								

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - #3 FLOOR (H600621-08)**

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	03/24/2016	ND	2.00	99.9	2.00	3.95	
Toluene*	<0.050	0.050	03/24/2016	ND	1.93	96.5	2.00	4.58	
Ethylbenzene*	0.062	0.050	03/24/2016	ND	1.71	85.6	2.00	5.45	
Total Xylenes*	0.862	0.150	03/24/2016	ND	5.26	87.7	6.00	5.58	
Total BTX	0.924	0.300	03/24/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M	mg/kg		Analyzed By: CK						S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	20.2	10.0	03/23/2016	ND	203	101	200	4.31	
DRO >C10-C28	7050	10.0	03/23/2016	ND	215	108	200	14.0	
EXT DRO >C28-C35	1130	10.0	03/23/2016	ND					

Surrogate: 1-Chlorooctane 97.3 % 35-147

Surrogate: 1-Chlorooctadecane 224 % 28-171

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - #3 E WALL (H600621-09)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/23/2016	ND	432	108	400	3.77		
TPH 8015M		mg/kg		Analyzed By: CK						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	123	10.0	03/23/2016	ND	199	99.4	200	6.46		
DRO >C10-C28	10000	10.0	03/23/2016	ND	189	94.3	200	0.437		
EXT DRO >C28-C35	1310	10.0	03/23/2016	ND						
Surrogate: 1-Chlorooctane	157 %	35-147								
Surrogate: 1-Chlorooctadecane	299 %	28-171								

**Sample ID: AREA 5 - #3 W WALL (H600621-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/23/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	280	10.0	03/23/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	65.6	10.0	03/23/2016	ND					
Surrogate: 1-Chlorooctane	104 %	35-147							
Surrogate: 1-Chlorooctadecane	109 %	28-171							

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**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - #4 FLOOR (H600621-11)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	2410	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	397	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	83.5 %	35-147							
Surrogate: 1-Chlorooctadecane	129 %	28-171							

**Sample ID: AREA 5 - #4 W WALL (H600621-12)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	212	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	32.0	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	100 %	35-147							
Surrogate: 1-Chlorooctadecane	115 %	28-171							

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**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - #4 E WALL (H600621-13)**

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/23/2016	ND	432	108	400	3.77		
TPH 8015M			mg/kg							
			Analyzed By: CK							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46		
<b>DRO &gt;C10-C28</b>	<b>113</b>	10.0	03/24/2016	ND	189	94.3	200	0.437		
EXT DRO >C28-C35	<10.0	10.0	03/24/2016	ND						
<hr/>										
Surrogate: 1-Chlorooctane	90.9 %	35-147								
Surrogate: 1-Chlorooctadecane	112 %	28-171								

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ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 4 - #1 FLOOR (H600621-14)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	03/24/2016	ND	2.00	99.9	2.00	3.95	
Toluene*	<0.100	0.100	03/24/2016	ND	1.93	96.5	2.00	4.58	
Ethylbenzene*	<0.100	0.100	03/24/2016	ND	1.71	85.6	2.00	5.45	
<b>Total Xylenes*</b>	<b>0.465</b>	0.300	03/24/2016	ND	5.26	87.7	6.00	5.58	
Total BTEX	<0.600	0.600	03/24/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/23/2016	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	139	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	7470	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	1000	10.0	03/24/2016	ND					

Surrogate: 1-Chlorooctane 201 % 35-147

Surrogate: 1-Chlorooctadecane 436 % 28-171

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**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 4 - #1 W WALL (H600621-15)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	1080	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	217	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	96.2 %	35-147							
Surrogate: 1-Chlorooctadecane	123 %	28-171							

**Sample ID: AREA 4 - #1 E WALL (H600621-16)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	19.1	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	<10.0	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	97.4 %	35-147							
Surrogate: 1-Chlorooctadecane	104 %	28-171							

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**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 4 - #2 FLOOR (H600621-17)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	48.7	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	3420	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	357	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	117 %	35-147							
Surrogate: 1-Chlorooctadecane	156 %	28-171							

**Sample ID: AREA 4 - #2 E WALL (H600621-18)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	280	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	63.6	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane									
	105 %	35-147							
Surrogate: 1-Chlorooctadecane									
	116 %	28-171							

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Basin Environmental Service  
 ROBBIE RUNNELS  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 4 - #2 W WALL (H600621-19)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/23/2016	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	<10.0	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	<10.0	10.0	03/24/2016	ND					

Surrogate: 1-Chlorooctane	91.5 %	35-147
Surrogate: 1-Chlorooctadecane	104 %	28-171

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**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 4 - #3 FLOOR (H600621-20)**

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	03/24/2016	ND	2.00	99.9	2.00	3.95	
Toluene*	<0.050	0.050	03/24/2016	ND	1.93	96.5	2.00	4.58	
Ethylbenzene*	<0.050	0.050	03/24/2016	ND	1.71	85.6	2.00	5.45	
Total Xylenes*	<0.150	0.150	03/24/2016	ND	5.26	87.7	6.00	5.58	
Total BTX	<0.300	0.300	03/24/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	03/23/2016	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	15.6	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	3450	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	396	10.0	03/24/2016	ND					

Surrogate: 1-Chlorooctane 101 % 35-147

Surrogate: 1-Chlorooctadecane 145 % 28-171

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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 4 - #3 E WALL (H600621-21)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	80.0	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	<10.0	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	95.5 %	35-147							
Surrogate: 1-Chlorooctadecane	118 %	28-171							

**Sample ID: AREA 4 - #3 W WALL (H600621-22)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	97.0	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	11.0	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	102 %	35-147							
Surrogate: 1-Chlorooctadecane	121 %	28-171							

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Basin Environmental Service  
 ROBBIE RUNNELS  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 2 - #1 E WALL (H600621-23)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/23/2016	ND	432	108	400	3.77	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	217	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	27.6	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	94.1 %	35-147							
Surrogate: 1-Chlorooctadecane	106 %	28-171							

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**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 2 - #1 FLOOR (H600621-24)**

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	03/24/2016	ND	2.00	99.9	2.00	3.95		
Toluene*	<0.050	0.050	03/24/2016	ND	1.93	96.5	2.00	4.58		
Ethylbenzene*	<0.050	0.050	03/24/2016	ND	1.71	85.6	2.00	5.45		
Total Xylenes*	<0.150	0.150	03/24/2016	ND	5.26	87.7	6.00	5.58		
Total BTEX	<0.300	0.300	03/24/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	03/24/2016	ND	368	92.0	400	8.33	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/24/2016	ND	199	99.4	200	6.46	
DRO >C10-C28	2260	10.0	03/24/2016	ND	189	94.3	200	0.437	
EXT DRO >C28-C35	281	10.0	03/24/2016	ND					

Surrogate: 1-Chlorooctane 100 % 35-147

Surrogate: 1-Chlorooctadecane 142 % 28-171

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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 2 - #1 E WALL (H600621-25)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	03/24/2016	ND	368	92.0	400	8.33	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	62.5	10.0	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	4130	10.0	03/24/2016	ND	185	92.3	200	1.14	
EXT DRO >C28-C35	558	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	95.7 %	35-147							
Surrogate: 1-Chlorooctadecane	128 %	28-171							

**Sample ID: AREA 2 - #2 FLOOR (H600621-26)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/24/2016	ND	368	92.0	400	8.33	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	31.9	10.0	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	1340	10.0	03/24/2016	ND	185	92.3	200	1.14	
EXT DRO >C28-C35	194	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	106 %	35-147							
Surrogate: 1-Chlorooctadecane	101 %	28-171							

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 3 - W WALL (H600621-27)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/24/2016	ND	368	92.0	400	8.33		
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	03/24/2016	ND	189	94.4	200	1.39		
<b>DRO &gt;C10-C28</b>	<b>406</b>	10.0	03/24/2016	ND	185	92.3	200	1.14		
<b>EXT DRO &gt;C28-C35</b>	<b>84.7</b>	10.0	03/24/2016	ND						
Surrogate: 1-Chlorooctane	70.5 %	35-147								
Surrogate: 1-Chlorooctadecane	70.7 %	28-171								

**Sample ID: AREA 3 - #1 FLOOR (H600621-28)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/24/2016	ND	368	92.0	400	8.33	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	12.3	10.0	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	2550	10.0	03/24/2016	ND	185	92.3	200	1.14	
EXT DRO >C28-C35	372	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane									
	82.9 %	35-147							
Surrogate: 1-Chlorooctadecane									
	102 %	28-171							

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**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 3 - #1 N WALL (H600621-29)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/24/2016	ND	368	92.0	400	8.33	
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	03/24/2016	ND	189	94.4	200	1.39	
<b>DRO &gt;C10-C28</b>	<b>466</b>	10.0	03/24/2016	ND	185	92.3	200	1.14	
<b>EXT DRO &gt;C28-C35</b>	<b>127</b>	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	90.6 %	35-147							
Surrogate: 1-Chlorooctadecane	96.8 %	28-171							

**Sample ID: AREA 3 - #1 S WALL (H600621-30)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/24/2016	ND	368	92.0	400	8.33	
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	03/24/2016	ND	189	94.4	200	1.39	
<b>DRO &gt;C10-C28</b>	<b>343</b>	10.0	03/24/2016	ND	185	92.3	200	1.14	
<b>EXT DRO &gt;C28-C35</b>	<b>63.1</b>	10.0	03/24/2016	ND					
<i>Surrogate: 1-Chlorooctane</i>									
	89.8 %	35-147							
<i>Surrogate: 1-Chlorooctadecane</i>									
	91.2 %	28-171							

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**Analytical Results For:**

 Basin Environmental Service  
 ROBBIE RUNNELS  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 3 - #2 FLOOR (H600621-31)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	03/24/2016	ND	2.00	99.9	2.00	3.95	
Toluene*	<1.00	1.00	03/24/2016	ND	1.93	96.5	2.00	4.58	
Ethylbenzene*	<1.00	1.00	03/24/2016	ND	1.71	85.6	2.00	5.45	
Total Xylenes*	<3.00	3.00	03/24/2016	ND	5.26	87.7	6.00	5.58	
Total BTEx	<6.00	6.00	03/24/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	03/24/2016	ND	368	92.0	400	8.33	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	103	10.0	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	2530	10.0	03/24/2016	ND	185	92.3	200	1.14	
EXT DRO >C28-C35	301	10.0	03/24/2016	ND					

Surrogate: 1-Chlorooctane 110 % 35-147

Surrogate: 1-Chlorooctadecane 108 % 28-171

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ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 3 - #2 N WALL (H600621-32)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/24/2016	ND	368	92.0	400	8.33	
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	03/24/2016	ND	189	94.4	200	1.39	
DRO >C10-C28	884	10.0	03/24/2016	ND	185	92.3	200	1.14	
EXT DRO >C28-C35	141	10.0	03/24/2016	ND					
Surrogate: 1-Chlorooctane	95.8 %	35-147							
Surrogate: 1-Chlorooctadecane	105 %	28-171							

**Sample ID: AREA 3 - #2 S WALL (H600621-33)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/24/2016	ND	368	92.0	400	8.33	
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	03/24/2016	ND	189	94.4	200	1.39	
<b>DRO &gt;C10-C28</b>	<b>337</b>	10.0	03/24/2016	ND	185	92.3	200	1.14	
<b>EXT DRO &gt;C28-C35</b>	<b>65.9</b>	10.0	03/24/2016	ND					
<i>Surrogate: 1-Chlorooctane</i>									
	87.1 %	35-147							
<i>Surrogate: 1-Chlorooctadecane</i>									
	90.5 %	28-171							

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Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 3 - #3 FLOOR (H600621-34)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	03/24/2016	ND	368	92.0	400	8.33		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	118	10.0	03/24/2016	ND	189	94.4	200	1.39		
DRO >C10-C28	3840	10.0	03/24/2016	ND	185	92.3	200	1.14		
EXT DRO >C28-C35	442	10.0	03/24/2016	ND						
Surrogate: 1-Chlorooctane										
	118 %	35-147								
Surrogate: 1-Chlorooctadecane										
	116 %	28-171								

**Sample ID: AREA 3 - #3 N WALL (H600621-35)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	03/24/2016	ND	368	92.0	400	8.33		
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	03/24/2016	ND	189	94.4	200	1.39		
DRO >C10-C28	2080	10.0	03/24/2016	ND	185	92.3	200	1.14		
EXT DRO >C28-C35	337	10.0	03/24/2016	ND						
Surrogate: 1-Chlorooctane										
	155 %	35-147								
Surrogate: 1-Chlorooctadecane										
	165 %	28-171								

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	03/23/2016	Sampling Date:	03/22/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 3 - #3 S WALL (H600621-36)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/24/2016	ND	368	92.0	400	8.33	
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	03/24/2016	ND	194	96.8	200	2.99	
DRO >C10-C28	172	10.0	03/24/2016	ND	200	99.8	200	17.4	QR-03
EXT DRO >C28-C35	18.3	10.0	03/24/2016	ND					
<hr/>									
Surrogate: 1-Chlorooctane	96.4 %	35-147							
Surrogate: 1-Chlorooctadecane	105 %	28-171							

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager







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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Grand Banks		P.O. #:		ANALYSIS REQUEST																																					
Project Manager: Robbie Runnels		Company: Basin Environ.																																							
Address:		Attn:																																							
City:		Address:																																							
State:		City:																																							
Zip:		State:																																							
Phone #:		Fax #:																																							
Project #: Grand Banks ARU #14		Project Owner:																																							
Project Name: ARU #14		State:																																							
Project Location: Lea County		Zip:																																							
Phone #:		Fax #:																																							
Sample Name: Bill Wooley		PRESERV																																							
FOR LAB USE ONLY		SAMPLING																																							
Lab I.D.		Sample I.D.																																							
11		Area 5 - #4 Floor		(G) RAB (C) OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		Chlorides		TPH 8015 M		BTEX		Texas TPH		Complete Cations/Anions		TDS	
12		Area 5 - #4 W Wall		✓		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		3/22/16		09:10		✓		✓		✓		✓		✓			
13		Area 5 - #4 E Wall		✓		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		3/22/16		09:15		✓		✓		✓		✓		✓			
14		Area 4 - #1 Floor		✓		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		3/22/16		09:20		✓		✓		✓		✓		✓			
15		Area 4 - #1 W Wall		✓		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		3/22/16		09:25		✓		✓		✓		✓		✓			
16		Area 4 - #1 E Wall		✓		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		3/22/16		09:30		✓		✓		✓		✓		✓			
17		Area 4 - #2 Floor		✓		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		3/22/16		09:35		✓		✓		✓		✓		✓			
18		Area 4 - #2 E Wall		✓		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		3/22/16		09:40		✓		✓		✓		✓		✓			
19		Area 4 - #2 W Wall		✓		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		3/22/16		09:45		✓		✓		✓		✓		✓			
20		Area 4 - #3 Floor		✓		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		3/22/16		09:50		✓		✓		✓		✓		✓			
21		Area 4 - #3 Floor		✓		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		3/22/16		09:55		✓		✓		✓		✓		✓			
Relinquished By: Bill Wooley		Date: 3/23/16		Time: 17:00		Received By: Jody Walters		Date: 3/23/16		Time: 17:00		Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		CHECKED BY: (Initials)		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Add'l Phone #:		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Add'l Fax #:		REMARKS:		email results pm@basinenr.com															
Relinquished By: Jody Walters		Date: 3/23/16		Time: 17:00		Received By: Jody Walters		Date: 3/23/16		Time: 17:00		Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		CHECKED BY: (Initials)		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Add'l Phone #:		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Add'l Fax #:		REMARKS:		email results pm@basinenr.com															
Delivered By: (Circle One)		Date: 3/23/16		Time: 17:00		Received By: Jody Walters		Date: 3/23/16		Time: 17:00		Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		CHECKED BY: (Initials)		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Add'l Phone #:		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Add'l Fax #:		REMARKS:		email results pm@basinenr.com															
Sampler - UPS - Bus - Other:		Date: 3/23/16		Time: 17:00		Received By: Jody Walters		Date: 3/23/16		Time: 17:00		Sample Condition: Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		CHECKED BY: (Initials)		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Add'l Phone #:		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Add'l Fax #:		REMARKS:		email results pm@basinenr.com															

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54



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### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



ARDINAL LABORATORIES

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(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> Grand Banks <b>Project Manager:</b> Robbie Runnels <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b> <b>Project #:</b> Grand Banks ARU #14 <b>Project Owner:</b> <b>Project Name:</b> ARU #14 <b>Project Location:</b> Lea County <b>Sampler Name:</b> Bill Wooley <small>FOR LAB USE ONLY</small>				<b>P.O. #:</b> <b>Company:</b> Basin Environ. <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>			
<b>Lab I.D.</b> <b>Sample I.D.</b>				<b>DATE</b> <b>TIME</b>			
<b>Area 3 - #2 Floor</b> <b>Area 3 - #2 N Wall</b> <b>Area 3 - #2 S Wall</b> <b>Area 3 - #3 Floor</b> <b>Area 3 - #3 N Wall</b> <b>Area 3 - #3 S Wall</b>				<input checked="" type="checkbox"/> (G) RAE OR (C) COMP.		<b># CONTAINERS</b>	
				<b>MATRIX</b> GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :		<b>PRESERV</b> ACID/BASE: ICE / COOL OTHER :	
<b>DATE</b> <b>TIME</b>				<b>ANALYSIS REQUEST</b> Chlorides TPH 8015 M BTEX Texas TPH Complete Cations/Anions TDS			
<b>3/22/16</b> <b>10:50</b>				<input checked="" type="checkbox"/>			
<b>3/22/16</b> <b>10:55</b>				<input checked="" type="checkbox"/>			
<b>3/22/16</b> <b>11:00</b>				<input checked="" type="checkbox"/>			
<b>3/22/16</b> <b>11:05</b>				<input checked="" type="checkbox"/>			
<b>3/22/16</b> <b>11:10</b>				<input checked="" type="checkbox"/>			
<b>3/22/16</b> <b>11:15</b>				<input checked="" type="checkbox"/>			
<b>3/22/16</b> <b>00:00</b>				<input type="checkbox"/>			
<b>3/22/16</b> <b>00:00</b>				<input type="checkbox"/>			
<b>3/22/16</b> <b>00:00</b>				<input type="checkbox"/>			
<b>3/22/16</b> <b>00:00</b>				<input type="checkbox"/>			

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<b>Relinquished By:</b> Bill Wooley <b>Date:</b> 3/23/16 <b>Time:</b> 17:00		<b>Received By:</b> Jody Walters <b>Date:</b> 3/23/16 <b>Time:</b> 17:00	
<b>Relinquished By:</b> Jody Walters <b>Date:</b> 3/23/16 <b>Time:</b> 17:00		<b>Received By:</b> Jody Walters <b>Date:</b> 3/23/16 <b>Time:</b> 17:00	
<b>Delivered By:</b> (Circle One) Sampler - UPS - Bus - Other:		<b>Sample Condition</b> Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Remarks:</b> email results pm@basinenv.com		<b>Phone Result:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Add'l Phone #:</b> <b>Fax Result:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Add'l Fax #:</b>	





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

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March 30, 2016

ROBBIE RUNNELS

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: GRAND BANKS ARU #14

Enclosed are the results of analyses for samples received by the laboratory on 03/24/16 11:47.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 Basin Environmental Service  
 ROBBIE RUNNELS  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	03/24/2016	Sampling Date:	03/24/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 1 - #1 FLOOR (H600640-01)**

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	03/29/2016	ND	2.07	104	2.00	5.25	
Toluene*	<0.050	0.050	03/29/2016	ND	1.96	97.8	2.00	7.05	
Ethylbenzene*	<0.050	0.050	03/29/2016	ND	1.72	85.9	2.00	8.63	
Total Xylenes*	<0.150	0.150	03/29/2016	ND	5.28	87.9	6.00	8.62	
Total BTEX	<0.300	0.300	03/29/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	03/28/2016	ND	416	104	400	3.92		

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	03/28/2016	ND	179	89.3	200	3.87	
DRO >C10-C28	485	10.0	03/28/2016	ND	160	79.9	200	4.90	
EXT DRO >C28-C35	49.9	10.0	03/28/2016	ND					

Surrogate: 1-Chlorooctane 82.8 % 35-147

Surrogate: 1-Chlorooctadecane 87.4 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/24/2016	Sampling Date:	03/24/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 1 - #1 W WALL (H600640-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	03/28/2016	ND	416	104	400	3.92		
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	03/28/2016	ND	179	89.3	200	3.87		
DRO >C10-C28	98.4	10.0	03/28/2016	ND	160	79.9	200	4.90		
EXT DRO >C28-C35	<10.0	10.0	03/28/2016	ND						
Surrogate: 1-Chlorooctane	94.3 %	35-147								
Surrogate: 1-Chlorooctadecane	106 %	28-171								

**Sample ID: AREA 1 - #1 E WALL (H600640-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	03/28/2016	ND	416	104	400	3.92		
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	03/28/2016	ND	179	89.3	200	3.87		
DRO >C10-C28	373	10.0	03/28/2016	ND	160	79.9	200	4.90		
EXT DRO >C28-C35	41.9	10.0	03/28/2016	ND						
Surrogate: 1-Chlorooctane	88.5 %	35-147								
Surrogate: 1-Chlorooctadecane	100 %	28-171								

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/24/2016	Sampling Date:	03/24/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 1 - #2 FLOOR (H600640-04)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	03/29/2016	ND	2.07	104	2.00	5.25	
Toluene*	<0.100	0.100	03/29/2016	ND	1.96	97.8	2.00	7.05	
Ethylbenzene*	0.123	0.100	03/29/2016	ND	1.72	85.9	2.00	8.63	
Total Xylenes*	2.07	0.300	03/29/2016	ND	5.28	87.9	6.00	8.62	
Total BTX	2.19	0.600	03/29/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1390	16.0	03/28/2016	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	153	10.0	03/28/2016	ND	179	89.3	200	3.87	
DRO >C10-C28	4300	10.0	03/28/2016	ND	160	79.9	200	4.90	
EXT DRO >C28-C35	560	10.0	03/28/2016	ND					

Surrogate: 1-Chlorooctane 109 % 35-147

Surrogate: 1-Chlorooctadecane 135 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	03/24/2016	Sampling Date:	03/24/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 1 - #2 W WALL (H600640-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	03/28/2016	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	69.9	10.0	03/28/2016	ND	179	89.3	200	3.87	
DRO >C10-C28	1400	10.0	03/28/2016	ND	160	79.9	200	4.90	
EXT DRO >C28-C35	135	10.0	03/28/2016	ND					
Surrogate: 1-Chlorooctane									
	98.4 %	35-147							
Surrogate: 1-Chlorooctadecane									
	101 %	28-171							

**Sample ID: AREA 1 - #2 E WALL (H600640-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/28/2016	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	12.7	10.0	03/28/2016	ND	179	89.3	200	3.87	
DRO >C10-C28	2240	10.0	03/28/2016	ND	160	79.9	200	4.90	
EXT DRO >C28-C35	302	10.0	03/28/2016	ND					
Surrogate: 1-Chlorooctane									
	87.3 %	35-147							
Surrogate: 1-Chlorooctadecane									
	114 %	28-171							

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Basin Environmental Service  
 ROBBIE RUNNELS  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	03/24/2016	Sampling Date:	03/24/2016
Reported:	03/30/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 1 - S WALL (H600640-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>464</b>	16.0	03/28/2016	ND	416	104	400	3.92		
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	03/28/2016	ND	179	89.3	200	3.87		
<b>DRO &gt;C10-C28</b>	<b>181</b>	10.0	03/28/2016	ND	160	79.9	200	4.90		
<b>EXT DRO &gt;C28-C35</b>	<b>31.8</b>	10.0	03/28/2016	ND						
<hr/>										
Surrogate: 1-Chlorooctane	72.1 %	35-147								
Surrogate: 1-Chlorooctadecane	78.6 %	28-171								

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside if QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





April 11, 2016

ROBBIE RUNNELS

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: GRAND BANKS ARU #14

Enclosed are the results of analyses for samples received by the laboratory on 04/08/16 8:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/08/2016	Sampling Date:	04/07/2016
Reported:	04/11/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 1 - SP #2 - FLOOR @ 2' (H600764-01)**

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	04/08/2016	ND	164	82.0	200	17.7	
<b>DRO &gt;C10-C28</b>	<b>421</b>	10.0	04/08/2016	ND	166	83.0	200	6.94	

Surrogate: 1-Chlorooctane 105 % 35-147

Surrogate: 1-Chlorooctadecane 113 % 28-171

**Sample ID: AREA 5 - SP #1 - FLOOR @ 2' (H600764-02)**

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	04/08/2016	ND	164	82.0	200	17.7	
DRO >C10-C28	<10.0	10.0	04/08/2016	ND	166	83.0	200	6.94	

Surrogate: 1-Chlorooctane 93.6 % 35-147

Surrogate: 1-Chlorooctadecane 110 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/08/2016	Sampling Date:	04/04/2016
Reported:	04/11/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - SP #2 - FLOOR @ 4' (H600764-03)**

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	04/08/2016	ND	164	82.0	200	17.7		
DRO >C10-C28	<10.0	10.0	04/08/2016	ND	166	83.0	200	6.94		

Surrogate: 1-Chlorooctane 91.7 % 35-147

Surrogate: 1-Chlorooctadecane 112 % 28-171

**Sample ID: AREA 5 - SP #3 - FLOOR @ 6' (H600764-04)**

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	04/08/2016	ND	164	82.0	200	17.7		
DRO >C10-C28	<10.0	10.0	04/08/2016	ND	166	83.0	200	6.94		

Surrogate: 1-Chlorooctane 86.8 % 35-147

Surrogate: 1-Chlorooctadecane 101 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/08/2016	Sampling Date:	04/05/2016
Reported:	04/11/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 4 - SP #2 - FLOOR @ 2' (H600764-05)**

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	04/08/2016	ND	164	82.0	200	17.7		
DRO >C10-C28	<10.0	10.0	04/08/2016	ND	166	83.0	200	6.94		

Surrogate: 1-Chlorooctane 98.8 % 35-147

Surrogate: 1-Chlorooctadecane 115 % 28-171

**Sample ID: AREA 3 - SP #3 - FLOOR @ 2' (H600764-06)**

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	04/08/2016	ND	164	82.0	200	17.7		
DRO >C10-C28	<10.0	10.0	04/08/2016	ND	166	83.0	200	6.94		

Surrogate: 1-Chlorooctane 98.4 % 35-147

Surrogate: 1-Chlorooctadecane 115 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Basin Environmental Service  
 ROBBIE RUNNELS  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	04/08/2016	Sampling Date:	04/04/2016
Reported:	04/11/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - SP #1 - EAST WALL (H600764-07)**

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	04/08/2016	ND	164	82.0	200	17.7	
DRO >C10-C28	35.4	10.0	04/08/2016	ND	166	83.0	200	6.94	

Surrogate: 1-Chlorooctane 73.7 % 35-147

Surrogate: 1-Chlorooctadecane 92.6 % 28-171

**Sample ID: AREA 5 - SP #2 - EAST WALL (H600764-08)**

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	04/08/2016	ND	164	82.0	200	17.7	
DRO >C10-C28	438	10.0	04/08/2016	ND	166	83.0	200	6.94	

Surrogate: 1-Chlorooctane 102 % 35-147

Surrogate: 1-Chlorooctadecane 123 % 28-171

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Basin Environmental Service  
ROBBIE RUNNELS  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/08/2016	Sampling Date:	04/05/2016
Reported:	04/11/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA 5 - SP #3 - EAST WALL (H600764-09)**

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	04/08/2016	ND	164	82.0	200	17.7		
<b>DRO &gt;C10-C28</b>	<b>22.1</b>	10.0	04/08/2016	ND	166	83.0	200	6.94		

Surrogate: 1-Chlorooctane 94.1 % 35-147

Surrogate: 1-Chlorooctadecane 112 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

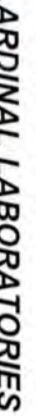
\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

## 1

#54

April 29, 2016

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: GRAND BANKS ARU #14

Enclosed are the results of analyses for samples received by the laboratory on 04/28/16 8:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
BEN J. ARGUIJO  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #1 SP #1 EAST WALL (H600911-01)**

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	04/28/2016	ND	2.05	103	2.00	1.04		
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21		
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818		
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397		
Total BTEX	<0.300	0.300	04/28/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	640	16.0	04/28/2016	ND	400	100	400	7.69		

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	667	10.0	04/28/2016	ND	225	112	200	6.90	QM-07
EXT DRO >C28-C35	97.9	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 77.3 % 35-147

Surrogate: 1-Chlorooctadecane 115 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
BEN J. ARGUIJO  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #1 SP #1 WEST WALL (H600911-02)**

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	04/28/2016	ND	2.05	103	2.00	1.04		
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21		
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818		
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397		
Total BTEX	<0.300	0.300	04/28/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	04/28/2016	ND	400	100	400	7.69	

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	271	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	48.5	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 77.8 % 35-147

Surrogate: 1-Chlorooctadecane 92.4 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
BEN J. ARGUIJO  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #2 SP #1 EAST WALL (H600911-03)**

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	04/28/2016	ND	2.05	103	2.00	1.04		
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21		
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818		
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397		
Total BTX	<0.300	0.300	04/28/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	04/28/2016	ND	400	100	400	7.69	

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	345	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	69.0	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 79.6 % 35-147

Surrogate: 1-Chlorooctadecane 100 % 28-171

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**Analytical Results For:**

Basin Environmental Service  
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P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #2 SP #1 WEST WALL (H600911-04)**

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	04/28/2016	ND	2.05	103	2.00	1.04		
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21		
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818		
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397		
Total BTEX	<0.300	0.300	04/28/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	04/28/2016	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	1740	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	338	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 81.8 % 35-147

Surrogate: 1-Chlorooctadecane 191 % 28-171

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Basin Environmental Service  
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Lovington NM, 88260  
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Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #4 SP #1 EAST WALL (H600911-05)**

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	04/28/2016	ND	2.05	103	2.00	1.04	
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818	
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397	
Total BTEX	<0.300	0.300	04/28/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	04/28/2016	ND	400	100	400	7.69		

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	581	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	122	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 82.5 % 35-147

Surrogate: 1-Chlorooctadecane 120 % 28-171

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Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #4 SP #1 WEST WALL (H600911-06)**

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	04/28/2016	ND	2.05	103	2.00	1.04	
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818	
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397	
Total BTEX	<0.300	0.300	04/28/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/28/2016	ND	400	100	400	7.69	

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	196	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	32.9	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 87.9 % 35-147

Surrogate: 1-Chlorooctadecane 101 % 28-171

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Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #4 SP #2 EAST WALL (H600911-07)**

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	04/28/2016	ND	2.05	103	2.00	1.04		
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21		
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818		
Total Xylenes*	0.473	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397		
Total BTX	0.473	0.300	04/28/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	04/28/2016	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	17.0	10.0	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	1940	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	333	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 91.2 % 35-147

Surrogate: 1-Chlorooctadecane 197 % 28-171

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**Analytical Results For:**

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Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #4 SP #2 WEST WALL (H600911-08)**

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	04/28/2016	ND	2.05	103	2.00	1.04	
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818	
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397	
Total BTEX	<0.300	0.300	04/28/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	04/28/2016	ND	400	100	400	7.69		

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	55.5	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	15.6	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 80.2 % 35-147

Surrogate: 1-Chlorooctadecane 99.2 % 28-171

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BEN J. ARGUIJO  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #5 SP #1 EAST WALL (H600911-09)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/28/2016	ND	2.05	103	2.00	1.04	
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818	
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397	
Total BTEX	<0.300	0.300	04/28/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/28/2016	ND	400	100	400	7.69	

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	19.4	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	11.1	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 75.2 % 35-147

Surrogate: 1-Chlorooctadecane 87.9 % 28-171

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**Analytical Results For:**

 Basin Environmental Service  
 BEN J. ARGUIJO  
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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #5 SP #1 WEST WALL (H600911-10)**

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	04/28/2016	ND	2.05	103	2.00	1.04		
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21		
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818		
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397		
Total BTEX	<0.300	0.300	04/28/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/28/2016	ND	400	100	400	7.69		

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	27.5	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	<10.0	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 75.2 % 35-147

Surrogate: 1-Chlorooctadecane 90.6 % 28-171

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Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #5 SP #2 EAST WALL (H600911-11)**

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	04/28/2016	ND	2.05	103	2.00	1.04		
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21		
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818		
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397		
Total BTEX	<0.300	0.300	04/28/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	04/28/2016	ND	400	100	400	7.69		

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	528	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	74.0	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 90.5 % 35-147

Surrogate: 1-Chlorooctadecane 126 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 Basin Environmental Service  
 BEN J. ARGUIJO  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #5 SP #2 WEST WALL (H600911-12)**

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	04/28/2016	ND	2.05	103	2.00	1.04	
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21	
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818	
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397	
Total BTEX	<0.300	0.300	04/28/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/28/2016	ND	400	100	400	7.69	

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	04/28/2016	ND	203	102	200	5.92	
<b>DRO &gt;C10-C28</b>	<b>83.2</b>	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	<10.0	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 77.5 % 35-147

Surrogate: 1-Chlorooctadecane 88.3 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
BEN J. ARGUIJO  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #5 SP #3 EAST WALL (H600911-13)**

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	04/28/2016	ND	2.05	103	2.00	1.04		
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21		
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818		
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397		
Total BTX	<0.300	0.300	04/28/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/28/2016	ND	400	100	400	7.69	

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	84.6	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	12.8	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 77.5 % 35-147

Surrogate: 1-Chlorooctadecane 89.6 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
BEN J. ARGUIJO  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #5 SP #3 WEST WALL (H600911-14)**

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	04/28/2016	ND	2.05	103	2.00	1.04		
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21		
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818		
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397		
Total BTEX	<0.300	0.300	04/28/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/28/2016	ND	400	100	400	7.69	

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	13.7	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	<10.0	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 81.7 % 35-147

Surrogate: 1-Chlorooctadecane 92.6 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
BEN J. ARGUIJO  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #5 SP #4 EAST WALL (H600911-15)**

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	04/28/2016	ND	2.05	103	2.00	1.04		
Toluene*	<0.050	0.050	04/28/2016	ND	1.98	99.0	2.00	1.21		
Ethylbenzene*	<0.050	0.050	04/28/2016	ND	1.79	89.4	2.00	0.818		
Total Xylenes*	<0.150	0.150	04/28/2016	ND	5.55	92.6	6.00	0.0397		
Total BTEX	<0.300	0.300	04/28/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	04/28/2016	ND	400	100	400	7.69		

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	04/28/2016	ND	203	102	200	5.92	
DRO >C10-C28	473	10.0	04/28/2016	ND	225	112	200	6.90	
EXT DRO >C28-C35	57.2	10.0	04/28/2016	ND					

Surrogate: 1-Chlorooctane 77.1 % 35-147

Surrogate: 1-Chlorooctadecane 103 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Basin Environmental Service  
BEN J. ARGUIJO  
P.O. Box 301  
Lovington NM, 88260  
Fax To: (575) 396-1429

Received:	04/28/2016	Sampling Date:	04/27/2016
Reported:	04/29/2016	Sampling Type:	Soil
Project Name:	GRAND BANKS ARU #14	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: AREA #5 SP #4 WEST WALL (H600911-16)**

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	04/29/2016	ND	2.02	101	2.00	0.375		
Toluene*	<0.050	0.050	04/29/2016	ND	1.95	97.3	2.00	0.137		
Ethylbenzene*	<0.050	0.050	04/29/2016	ND	1.74	87.0	2.00	1.37		
Total Xylenes*	<0.150	0.150	04/29/2016	ND	5.37	89.4	6.00	1.05		
Total BTEX	<0.300	0.300	04/29/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/28/2016	ND	400	100	400	7.69	

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	04/29/2016	ND	197	98.3	200	1.25	
DRO >C10-C28	112	10.0	04/29/2016	ND	224	112	200	8.70	
EXT DRO >C28-C35	18.2	10.0	04/29/2016	ND					

Surrogate: 1-Chlorooctane 76.5 % 35-147

Surrogate: 1-Chlorooctadecane 91.6 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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---

Celey D. Keene, Lab Director/Quality Manager





# CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Basin Environmental Service Technologies, LLC

Project Manager: Ben Arguilo

Address: P.O. Box 301

City: Lovington

Phone #: (575)396-2378

Project #:

Project Name:

Project Location: Lea

Sampler Name: Steve Taylor

### BILL TO

P.O. #:

Company: Basin Env.

Attn: Jody

Address: P.O. Box 301

City: Lovington

State: NM Zip: 88260

Phone #: (575) 396-2378

Fax #: (575) 396-1429

### ANALYSIS REQUEST

Chloride

TPH (8015M)

BTEX (8021B)

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Area #1 SP#1 Eastwall

Area #1 SP#1 Westwall

Area#2 SP#1 Eastwall

Area#2 SP#1 Westwall

Area#4 SP#1 Eastwall

Area#4 SP#1 Westwall

Area#4 SP#2 Eastwall

Area#4 SP#2 Westwall

Area#5 SP#1 Eastwall

Area#5 SP#1 Westwall

Area#5 SP#1 Westwall

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

Chloride

TPH (8015M)

BTEX (8021B)

Chloride

TPH (8015M)

BTEX (8021B)

Chloride

TPH (8015M)

BTEX (8021B)

Chloride

TPH (8015M)

BTEX (8021B)

Chloride

TPH (8015M)

BTEX (8021B)

Chloride

TPH (8015M)

BTEX (8021B)

Chloride

TPH (8015M)

BTEX (8021B)

Chloride

TPH (8015M)

BTEX (8021B)

Chloride

TPH (8015M)

BTEX (8021B)

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

Time: 8:15

Time: 8:35

Time: 8:35

Time: 8:35

Time: 8:35

Time: 8:35

Time: 8:35

Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

Time: 8:15

Time: 8:35

Time: 8:35

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Time: 8:35

Time: 8:35

Time: 8:35

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

Time: 8:15

Time: 8:35

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Time: 8:35

Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

Time: 8:15

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

Time: 8:15

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

Time: 8:15

Time: 8:35

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

Time: 8:15

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

Time: 8:15

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Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

Time: 8:15

Time: 8:35

Time: 8:35

Time: 8:35

Time: 8:35

Time: 8:35

Time: 8:35

Relinquished By:

Date: 4/27/16

Received By:

Date: 4/27/16

Time: 7:00

Time: 8:15

Time: 8:35

Time: 8:35

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

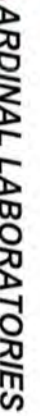
CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> Basin Environmental Service Technologies, LLC		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>															
<b>Project Manager:</b> Ben Arguilo		<b>P.O. #:</b>																	
<b>Address:</b> P.O. Box 301		<b>Company:</b> Basin Env.																	
<b>City:</b> Lovington		<b>Attn:</b> Jody																	
<b>Phone #:</b> (575) 396-2378		<b>Address:</b> P.O. Box 301																	
<b>Project #:</b>		<b>City:</b> Lovington																	
<b>Project Name:</b> Grand Banks ARU-14		<b>State:</b> NM <b>Zip:</b> 88260																	
<b>Project Location:</b> Lea		<b>Phone #:</b> (575) 396-2378																	
<b>Sampler Name:</b> Steve Taylor		<b>Fax #:</b> (575) 396-1429																	
<b>FOR LAB USE ONLY</b>		<b>PRESERV</b>		<b>SAMPLING</b>															
<b>Lab I.D.</b>  <b>Sample I.D.</b>  #00811	(G)RAB OR (C)OMP.																		
	# CONTAINERS																		
	GROUNDWATER																		
	WASTEWATER																		
	SOIL																		
	OIL																		
	SLUDGE																		
	OTHER :																		
	ACID/BASE:																		
	ICE / COOL																		
OTHER :																			
	<b>DATE</b>	<b>TIME</b>																	
11	Area#5 SP#2 Eastwall	g	1	4/27/2016	8:45	X	X	X											
12	Area#5 SP#2 Westwall	g	1	4/27/2016	8:40	X	X	X											
13	Area#5 SP#3 Eastwall	g	1	4/27/2016	8:55	X	X	X											
14	Area#5 SP#3 Westwall	g	1	4/27/2016	8:50	X	X	X											
15	Area#5 SP#4 Eastwall	g	1	4/27/2016	9:05	X	X	X											
16	Area#5 SP#4 Westwall	g	1	4/27/2016	9:00	X	X	X											
<b>PLEASE NOTE:</b> Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.																			
<b>Relinquished By:</b>		<b>Date:</b> 4/28/16		<b>Received By:</b>															
<b>Relinquished By:</b>		<b>Time:</b> 7:00		<b>Received By:</b>															
<b>Delivered By: (Circle One)</b>		<b>Date:</b> 4/28/16		<b>Received By:</b>															
<b>Sampler - UPS - Bus - Other:</b>		<b>Type:</b> 8:15		<b>Received By:</b>															
<b>Sample Condition</b>		<b>CHECKED BY:</b>																	
<input type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																	
<b>REMARKS:</b>																			
Please email results to pm@basinenr.com & Tassavote@BassPet.com																			

FORM-006  
Revision 1.0

corrected  
Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

#54



(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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