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REMEDIATION SUMMARY & RISK-BASED SITE CLOSURE PROPOSAL

**FASKEN OIL & RANCH, LTD.
LING FEDERAL #2
Lea County, New Mexico
Unit Letter "L" (NW/SW), Section 31, Township 19 South, Range 34 East
Latitude 32.614774° North, Longitude -103.605973° West
NMOCD Reference #1RP-3495**

Prepared For:

Fasken Oil & Ranch, Ltd.
303 West Wall, Suite 1800
Midland, TX 79701

Prepared By:

Basin Environmental Service Technologies, LLC
3100 Plains Highway
Lovington, NM 88260

March 2015

A handwritten signature in black ink, appearing to read "Ben J. Arguijo", is written over a horizontal line.

Ben J. Arguijo
Project Manager

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1.0 INTRODUCTION & BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin Environmental), on behalf of Fasken Oil & Ranch, Ltd. (Fasken), has prepared this *Remediation Summary & Risk-Based Site Closure Proposal* for the release site known as Ling Federal #2. The legal description of the release site is Unit Letter "L" (NW/SW), Section 31, Township 19 South, Range 34 East in Lea County, New Mexico. The geographic coordinates of the release site are 32.614774° North latitude and 103.605973° West longitude. The property affected by the release is owned by the United States Department of the Interior – Bureau of Land Management (BLM). Please reference Figure 1 for a "Site Location Map".

On January 5, 2015, Fasken discovered a release had occurred at the Ling Federal #2 tank battery. A pipe between the on-site oil and water tanks burst, resulting in a release of approximately one hundred and eighty-six barrels (186 bbls) of condensate. The release was attributed to inclement weather. During initial response activities, the damaged pipe was replaced, and a vacuum truck was utilized to recover free-standing liquid.

The release was reported to the New Mexico Oil Conservation Division's (NMOCD) Hobbs District Office on January 6, 2015. The "Release Notification and Corrective Action" (Form C-141) indicated approximately five barrels of the released liquid were recovered, resulting in a net loss of approximately one hundred and eighty-one barrels (181 bbls) of condensate. The release impacted an area of the tank battery pad and adjacent pastureland measuring approximately three thousand, one hundred square feet (3,100 ft²).

The Form C-141 is provided as Appendix A. General photographs of the release site are provided as 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 was unavailable for the southwest quarter of Section 31, Township 19 South, Range 34 East. A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater should be encountered approximately seventy-five feet (75') below ground surface (bgs). Based on the NMOCD ranking system, ten (10) points will be assigned to the site as a result of this criterion.

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

NMOCD guidelines indicate the Ling Federal #2 release site has an initial ranking score of ten (10) points. The soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene – 10 mg/kg (ppm)
- Benzene, toluene, ethylbenzene, and total xylene (BTEX) – 50 mg/kg (ppm)
- Total petroleum hydrocarbons (TPH) – 1,000 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

On January 14, 2015, Basin Environmental conducted delineation activities at the site. A series of five (5) hand-augered soil borings (HA-1 through HA-5) were advanced along the flow path and in pooling areas of the release in an effort to determine the vertical and horizontal extent of impacted soil. The soil borings were advanced in one (1) to two-foot (2') vertical intervals, and core soil samples were field-screened with a photo-ionization detector (PID) and/or chloride test kit. Selected soil samples were submitted to Cardinal Laboratories in Hobbs, New Mexico, for analysis of TPH, BTEX, and/or chloride concentrations in accordance with the Environmental Protection Agency (EPA) laboratory analytical methods described in Section 4.1 below. Locations of the hand-augered soil borings are depicted in Figure 2, "Site & Sample Location Map". Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chloride in Soil". Field-test results are summarized in Table 2. Laboratory analytical reports are provided as Appendix C.

Soil boring HA-1 was advanced in an inferred pooling area on the caliche pad to the east of the Ling Federal #2 tank battery. The soil boring was advanced to a total depth of approximately nine feet (9') bgs. Four (4) confirmation soil samples (HA-1 @ Surface, HA-1 @ 4', HA-1 @ 6', and HA-1 @ 9') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated benzene concentrations were less than the laboratory method detection limit (MDL) in all submitted soil samples. Total BTEX concentrations ranged from less than the appropriate laboratory MDL in soil samples HA-1 @ 4' and HA-1 @ 6' to 196 mg/kg in soil sample HA-1 @ Surface. TPH concentrations ranged from less than the laboratory MDL in soil samples HA-1 @ 4' and HA-1 @ 6' to 5,231 mg/kg in soil sample HA-1 @ Surface. Chloride concentrations ranged from less than the laboratory MDL in soil samples HA-1 @ Surface and HA-1 @ 4' to 48.0 mg/kg in soil sample HA-1 @ 9'.

Soil boring HA-2 was advanced in pastureland to the east of the Ling Federal #2 tank battery, at the terminus of a secondary flow path of the release. The soil boring was advanced to a total depth of approximately nine feet (9') bgs. Five (5) confirmation soil samples (HA-2 @ Surface, HA-2 @ 4', HA-2 @ 6', HA-2 @ 8', and HA-2 @ 9') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated benzene and total BTEX concentrations were less than the appropriate laboratory MDL in all submitted soil samples, with the exception of soil sample HA-2 @ Surface, which exhibited a total BTEX concentration of 330 mg/kg. TPH concentrations ranged from less than the laboratory MDL in soil samples HA-2 @ 6', HA-2 @ 8', and HA-2 @ 9' to 11,907 mg/kg in soil sample HA-2 @ Surface. Chloride concentrations were less than the laboratory MDL in all submitted soil samples.

Soil boring HA-3 was advanced in pastureland to the south of the Ling Federal #2 tank battery, along the primary flow path of the release. The soil boring was advanced to a total depth of

approximately seven and one-half feet (7.5') bgs. Four (4) confirmation soil samples (HA-3 @ Surface, HA-3 @ 4', HA-3 @ 6', and HA-3 @ 7.5') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated benzene concentrations were less than the laboratory MDL in all submitted soil samples. Total BTEX concentrations ranged from 11.5 mg/kg in soil sample HA-3 @ 6' to 622 mg/kg in soil sample HA-3 @ Surface. TPH concentrations ranged from 938 mg/kg in soil sample HA-3 @ 6' to 18,660 mg/kg in soil sample HA-3 @ Surface. Chloride concentrations ranged from 48.0 mg/kg in soil sample HA-3 @ 4' to 208 mg/kg in soil sample HA-3 @ Surface.

Soil boring HA-4 was advanced in pastureland to the south of the Ling Federal #2 tank battery, at the terminus of the primary flow path of the release. The soil boring was advanced to a total depth of approximately seven feet (7') bgs. Four (4) confirmation soil samples (HA-4 @ Surface, HA-4 @ 4', HA-4 @ 6', and HA-4 @ 7') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated benzene concentrations were less than the laboratory MDL in all submitted soil samples. Total BTEX concentrations ranged from 90.4 mg/kg in soil sample HA-4 @ 4' to 864 mg/kg in soil sample HA-4 @ Surface. TPH concentrations ranged from 1,419 mg/kg in soil sample HA-4 @ 4' to 24,370 mg/kg in soil sample HA-4 @ Surface. Chloride concentrations ranged from less than the laboratory MDL in soil samples HA-4 @ 4' and HA-4 @ 7' to 144 mg/kg in soil sample HA-4 @ Surface.

Soil boring HA-5 was advanced on the caliche pad to the south of the Ling Federal #2 tank battery, near the point of release. The soil boring was advanced to a total depth of approximately eight feet (8') bgs. Four (4) confirmation soil samples (HA-5 @ Surface, HA-5 @ 4', HA-5 @ 6', and HA-5 @ 8') were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride concentrations. Laboratory analytical results indicated benzene and total BTEX concentrations were less than the laboratory MDL in all submitted soil samples, with the exception of soil sample HA-5 @ Surface, which exhibited a total BTEX concentration of 254 mg/kg. TPH concentrations ranged from less than the laboratory MDL in soil sample HA-5 @ 6' to 8,222 mg/kg in soil sample HA-5 @ Surface. Chloride concentrations ranged from 192 mg/kg in soil sample HA-5 @ 8' to 832 mg/kg in soil sample HA-5 @ Surface.

Following advancement of the soil borings, one (1) soil sample (Background) was collected approximately two hundred and fifty feet (250') south-southeast of the release site to assess the background concentrations of BTEX, TPH, and chloride in the area. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations in the background sample were less than the appropriate laboratory MDL.

Review of laboratory analytical results indicates additional vertical delineation is required in the areas represented by soil borings HA-3 and HA-4.

4.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROCEDURES

4.1 Soil Sampling

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

- BTEX concentrations in accordance with EPA Method SW-846 8021b
- TPH concentrations in accordance with modified EPA Method SW-846 8015M
- Chloride concentrations in accordance with EPA Method SM 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 PROPOSED ACTIVITIES

Fasken proposes to conduct the following activities to progress the Ling Federal #2 release site to an NMOCD- and BLM-approved, risk-based closure:

- Delineation trenches will be advanced to the extent practicable in the areas represented by hand-augered soil borings HA-3 and HA-4 to further delineate the vertical extent of impacted soil. Soil samples will be collected at one (1) to two-foot (2') vertical intervals and field-screened with a PID. Representative soil samples will be submitted to Cardinal Laboratory for confirmatory analyses of BTEX, TPH, and/or chloride concentrations using the EPA laboratory analytical methods described in Section 4.1 above.
- If vertical delineation cannot be achieved via trenching, a drilling rig will be employed to advance one (1) soil boring (SB-1) in the area of hand-augered soil boring HA-4. Soil samples will be collected at five-foot (5') drilling intervals and field-screened with a PID. Representative soil samples will be submitted to Cardinal Laboratory for confirmatory analyses of BTEX, TPH, and/or chloride concentrations using the EPA laboratory analytical methods described in Section 4.1 above.
- Heavily impacted, visibly stained soil on the caliche pad surrounding the Ling Federal #2 tank battery will be scraped up and stockpiled on-site on six-millimeter (6mm) polypropylene plastic, pending final disposition.
- The areas represented by hand-augered soil borings HA-2, HA-3, and HA-4 will be excavated until laboratory analytical results indicate contaminants of concern are below the recommended remediation action levels (RRALs) established for the site by the NMOCD, or to a maximum depth of five feet (5') bgs. The horizontal limits of the excavations will be determined by field-screening using a PID and/or visual/olfactory senses. Confirmation soil samples will be collected at approximately fifty-foot (50') horizontal increments and submitted to Cardinal Laboratory for analysis of BTEX, TPH, and/or chloride concentrations.

- Due to safety and environmental concerns, excavation of the secondary flow path (i.e., the area represented by hand-augered soil boring HA-2) will be limited by the presence of active pipelines adjacent to the release site. In addition, all open excavations will be fenced off during periods of inactivity to prevent injury to oilfield personnel, livestock, and wildlife.
- Excavated soil will be stockpiled on-site on six-millimeter (6mm) polypropylene plastic, pending final disposition. Visibly stained soil and soil exhibiting chloride concentrations over 500 mg/kg and/or TPH concentrations over 5,000 mg/kg will be transported to Lazy Ace Landfarm, LLC (NMOCD Permit # WM-01-041) for disposal. Lesser impacted soil (as determined by visual/olfactory senses, laboratory analytical results, and/or PID readings) will be remediated on-site. Impacted material will be blended with non-impacted material, treated with a water/fertilizer mix, and aerated to facilitate attenuation and off-gassing of contaminants. One (1) stockpile soil sample will be collected for every five hundred cubic yards (500 yd³) of treated soil and submitted to Cardinal Laboratory for analysis of BTEX, TPH, and/or chloride concentrations. When laboratory analytical results indicate contaminant concentrations are below the RRALs established for the site by the NMOCD, the blended/treated soil will be used as backfill material.
- The excavations will be backfilled with the blended/treated soil and approximately two feet (2') of compacted caliche. The compacted caliche will serve to inhibit vertical migration of contaminants left in-situ. Clean, locally acquired topsoil will be installed atop the backfilled excavations and contoured to fit the surrounding topography.
- Disturbed areas in the pastureland adjacent to the Ling Federal #2 tank battery will be seeded with a BLM-approved seed mix at a time conducive to germination.

6.0 REPORTING

Pending review and approval by the NMOCD and BLM, Fasken is prepared to begin field activities and perform the corrective actions summarized in this *Remediation Summary & Risk-Based Site Closure Proposal*. Upon completion of the corrective actions, Fasken will submit a *Remediation Summary & Risk-Based Site Closure Request* to the NMOCD and BLM, documenting remediation activities and results of confirmation soil samples.

7.0 LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Risk-Based Site Closure Proposal* 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 Fasken Oil & Ranch, Ltd. 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 Fasken Oil & Ranch, Ltd.

8.0 DISTRIBUTION:

- Copy 1: Tomas Oberding
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division (District 1)
1625 N. French Dr.
Hobbs, NM 88240
- Copy 2: Jeff Robertson
United States Department of the Interior
Bureau of Land Management
602 E. Greene Street
Carlsbad, NM 88220
- Copy 3: Aaron Pachlhofer
Fasken Oil & Ranch, Ltd.
6101 Holiday Hill Road
Midland, TX 79707
- Copy 4: Jimmy Carlile
Fasken Oil & Ranch, Ltd.
303 West Wall, Suite 1800
Midland, TX 79701
- Copy 5: Basin Environmental Service Technologies, LLC
P.O. Box 301
Lovington, NM 88260

Figures



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1,000 500 0 1,000 2,000

 Distance in Feet

Figure 1
Site Location Map
Fasken Oil & Ranch, Ltd.
Ling Federal #2
Lea County, New Mexico
NMOCD Reference #: 1RP-3495



Basin Environmental Service Technologies, LLC
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
March 4, 2015	Scale: 1" = 2000'



12 6 0 12 24



Distance in Feet

Legend



Release



Hand-Augered Soil Boring

Figure 2
Site & Sample Location Map
Fasken Oil & Ranch, Ltd.
Ling Federal #2
Lea County, New Mexico
NMOCD Reference #: 1RP-3495



Basin Environmental Service Technologies, LLC
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA

Checked By: BRB

March 6, 2015

Scale: 1" = 24'

Tables

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

FASKEN OIL & RANCH, LTD.
LING FEDERAL #2
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE #: 1RP-3495

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TPH C ₆ -C ₂₈ (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 ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)		
HA-1 @ Surface	Surface	1/14/2015	In-Situ	<2.00	11.8	18.6	165	196	2,590	2,590	50.7	5,231	<16.0
HA-1 @ 4'	4'	1/14/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
HA-1 @ 6'	6'	1/14/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
HA-1 @ 9'	9'	1/14/2015	In-Situ	<0.050	0.091	<0.050	<0.150	0.091	13.3	66.9	<10.0	80.2	48.0
HA-2 @ Surface	Surface	01/14/15	In-Situ	<0.050	48.9	32.1	249	330	7,310	4,500	97.0	11,907	<16.0
HA-2 @ 4'	4'	1/14/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	66.3	136	<10.0	202	<16.0
HA-2 @ 6'	6'	1/14/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
HA-2 @ 8'	8'	1/14/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
HA-2 @ 9'	9'	1/14/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
HA-3 @ Surface	Surface	1/14/2015	In-Situ	<10.0	135	57.0	430	622	12,600	6,060	<10.0	18,660	208
HA-3 @ 4'	4'	1/14/2015	In-Situ	<10.0	122	49.2	372	544	11,000	5,510	<100	16,510	48.0
HA-3 @ 6'	6'	1/14/2015	In-Situ	<0.200	0.481	1.03	9.97	11.5	491	447	<10.0	938	-
HA-3 @ 7.5'	7.5'	1/14/2015	In-Situ	<0.500	<0.500	0.940	11.3	12.2	847	619	<10.0	1,466	80.0
HA-4 @ Surface	Surface	1/14/2015	In-Situ	<10.0	212	77.3	575	864	16,200	8,170	<100	24,370	144
HA-4 @ 4'	4'	1/14/2015	In-Situ	<0.500	10.8	8.80	70.8	90.4	838	581	<10.0	1,419	<16.0
HA-4 @ 6'	6'	1/14/2015	In-Situ	<2.00	20.4	15.8	126	162	2,480	1,520	<10.0	4,000	-
HA-4 @ 7'	7'	1/14/2015	In-Situ	<5.00	44.2	24.6	194	263	5,000	3,160	65.0	8,225	<16.0
HA-5 @ Surface	Surface	1/14/2015	In-Situ	<5.00	32.8	24.1	197	254	5,070	3,100	52.3	8,222	832
HA-5 @ 4'	4'	1/14/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	21.9	35.7	<10.0	57.6	208
HA-5 @ 6'	6'	01/14/15	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	-
HA-5 @ 8'	8'	1/14/2015	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	11.0	<10.0	<10.0	11.0	192
Background	1'	01/14/15	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
NMOCD Recommended Remediation Action Level				10				50				1,000	500

- = Not analyzed.

**TABLE 2
FIELD-TEST RESULTS**

**FASKEN OIL & RANCH, LTD.
LING FEDERAL #2
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE #: 1RP-3495**

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	PID READING	Hach Quantab
					CHLORIDE (PPM)
HA-1 @ Surface	Surface	1/14/2015	In-Situ	4,437	4,437
HA-1 @ 1'	1'	1/14/2015	In-Situ	321	-
HA-1 @ 2'	2'	1/14/2015	In-Situ	150	-
HA-1 @ 4'	4'	1/14/2015	In-Situ	10.9	<120
HA-1 @ 5'	5'	1/14/2015	In-Situ	368	-
HA-1 @ 6'	6'	1/14/2015	In-Situ	28.9	-
HA-1 @ 8'	8'	1/14/2015	In-Situ	28.1	-
HA-1 @ 9'	9'	1/14/2015	In-Situ	228	-
HA-2 @ Surface	Surface	1/14/2015	In-Situ	4,963	<120
HA-2 @ 2'	2'	1/14/2015	In-Situ	4,810	-
HA-2 @ 4'	4'	1/14/2015	In-Situ	3,062	<120
HA-2 @ 6'	6'	1/14/2015	In-Situ	1,425	-
HA-2 @ 8'	8'	1/14/2015	In-Situ	790	-
HA-2 @ 9'	9'	1/14/2015	In-Situ	908	-
HA-3 @ Surface	Surface	1/14/2015	In-Situ	4,377	<120
HA-3 @ 2'	2'	1/14/2015	In-Situ	4,664	-
HA-3 @ 4'	4'	1/14/2015	In-Situ	4,236	<120
HA-3 @ 6'	6'	1/14/2015	In-Situ	4,400	-
HA-3 @ 7.5'	7.5'	1/14/2015	In-Situ	3,833	-
HA-4 @ Surface	Surface	1/14/2015	In-Situ	3,994	<120
HA-4 @ 2'	2'	1/14/2015	In-Situ	4,322	-
HA-4 @ 4'	4'	1/14/2015	In-Situ	4,467	<120
HA-4 @ 6'	6'	1/14/2015	In-Situ	4,765	-
HA-4 @ 7'	7'	1/14/2015	In-Situ	4,672	-
HA-5 @ Surface	Surface	1/14/2015	In-Situ	3,039	<120
HA-5 @ 2'	2'	1/14/2015	In-Situ	3,144	-
HA-5 @ 4'	4'	1/14/2015	In-Situ	2,029	228
HA-5 @ 6'	6'	1/14/2015	In-Situ	799	-
HA-5 @ 8'	8'	1/14/2015	In-Situ	630	-

Appendices

Appendix A

Release Notification and

Corrective Action (Form 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: Fasken Oil and Ranch, Ltd	Contact: Aaron Pachlhofer	
Address: 6101 Holiday Hill Road, Midland, TX, 79707	Telephone No.: 432-687-1777	
Facility Name: Ling Federal #2	Facility Type: Gas well	
Surface Owner: BLM	Mineral Owner: BLM	API No.: 30-025-30336

LOCATION OF RELEASE

Unit Letter NWSW	Section 31	Township 19S	Range 34E	Feet from the	North/South Line	Feet from the	East/West Line	County LEA
---------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release: Condensate	Volume of Release 186	Volume Recovered 5
Source of Release: Piping	Date and Hour of Occurrence: N/A	Date and Hour of Discovery 1/5/15, 11:00 a.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Reported	
By Whom? Aaron Pachlhofer	Date and Hour: 1/6/15, 10:00 a.m. to Tomas Oberding/Jeff Robertson	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Pipe between oil tank and water take burst due to inclement weather. Broken pipe has been fixed

Describe Area Affected and Cleanup Action Taken.*

Affected area calculated at approximately 3,100 square feet. Pooled liquids have been recovered. Further remedial action is pending discussion with BLM.

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.

OIL CONSERVATION DIVISION

Signature:

Printed Name: Aaron Pachlhofer, P.G.

Title: Environmental Coordinator

E-mail Address: aaronp@forl.com

Date: 1/7/15 Phone: 432-687-1777

Approved by Environmental Specialist:

Approval Date: 1-9-15

Expiration Date: 3-9-15

Conditions of Approval:

Site inspection required. Submit &
completion report to NMOCD
under same file C-141 by
3-8-15.

Attached ☐

IRP-3425

* Attach Additional Sheets If Necessary

JAN 13 2015

Appendix C

Photographs



Ling Federal #2 – Advancement of Soil Boring HA-5 Near Point of Release
(Looking West-Northwest)



Ling Federal #2 – Pooling Area on Caliche Pad
(Looking South; Soil Boring HA-1 Flagged in Background)



Ling Federal #2 – Pooling Area on Caliche Pad
(Looking Southeast; Soil Boring HA-1 Flagged in Background)



Ling Federal #2 – Primary Flow Path of Release
(Looking Northwest; Soil Boring HA-3 Flagged in Foreground)



Ling Federal #2 – Primary Flow Path of Release
(Looking Northwest; Soil Boring HA-4 Flagged in Foreground; HA-3 Visible in Background)



Ling Federal #2 – Secondary Flow Path of Release
(Looking Southeast; Soil Boring HA-2 Visible in Midground, Flagged in Orange)

Appendix D

Laboratory Analytical Reports

January 26, 2015

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: LING FEDERAL #2

Enclosed are the results of analyses for samples received by the laboratory on 01/16/15 12:35.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

 Received: 01/16/2015
 Reported: 01/26/2015
 Project Name: LING FEDERAL #2
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 01/14/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: HA-1 @ SURFACE (H500162-01)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	01/24/2015	ND	1.73	86.3	2.00	4.78	
Toluene*	11.8	2.00	01/24/2015	ND	1.68	83.8	2.00	5.78	
Ethylbenzene*	18.6	2.00	01/24/2015	ND	1.64	81.8	2.00	5.48	
Total Xylenes*	165	6.00	01/24/2015	ND	4.94	82.4	6.00	5.56	
Total BTX	196	12.0	01/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 61-154

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	01/19/2015	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	2590	10.0	01/17/2015	ND	195	97.5	200	0.878	
DRO >C10-C28	2590	10.0	01/17/2015	ND	207	103	200	3.71	
EXT DRO >C28-C35	50.7	10.0	01/17/2015	ND					

Surrogate: 1-Chlorooctane 156 % 47.2-157

Surrogate: 1-Chlorooctadecane 121 % 52.1-176

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: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-1 @ 4' (H500162-02)

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	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTEX	<0.300	0.300	01/22/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

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	01/19/2015	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	01/17/2015	ND	195	97.5	200	0.878	
DRO >C10-C28	<10.0	10.0	01/17/2015	ND	207	103	200	3.71	
EXT DRO >C28-C35	<10.0	10.0	01/17/2015	ND					

Surrogate: 1-Chlorooctane 101 % 47.2-157

Surrogate: 1-Chlorooctadecane 114 % 52.1-176

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*=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: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-1 @ 6' (H500162-03)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTEX	<0.300	0.300	01/22/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 61-154

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	01/17/2015	ND	195	97.5	200	0.878	
DRO >C10-C28	<10.0	10.0	01/17/2015	ND	207	103	200	3.71	
EXT DRO >C28-C35	<10.0	10.0	01/17/2015	ND					

Surrogate: 1-Chlorooctane 92.3 % 47.2-157

Surrogate: 1-Chlorooctadecane 104 % 52.1-176

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

Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-1 @ 9' (H500162-04)

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	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	0.091	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTEX	<0.300	0.300	01/22/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 61-154

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	01/19/2015	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	13.3	10.0	01/17/2015	ND	195	97.5	200	0.878	
DRO >C10-C28	66.9	10.0	01/17/2015	ND	207	103	200	3.71	
EXT DRO >C28-C35	<10.0	10.0	01/17/2015	ND					

Surrogate: 1-Chlorooctane 91.1 % 47.2-157

Surrogate: 1-Chlorooctadecane 105 % 52.1-176

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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:	01/16/2015	Sampling Date:	01/14/2015
Reported:	01/26/2015	Sampling Type:	Soil
Project Name:	LING FEDERAL #2	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: HA-2 @ SURFACE (H500162-05)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<5.00	5.00	01/24/2015	ND	1.73	86.3	2.00	4.78	
Toluene*	48.9	5.00	01/24/2015	ND	1.68	83.8	2.00	5.78	
Ethylbenzene*	32.1	5.00	01/24/2015	ND	1.64	81.8	2.00	5.48	
Total Xylenes*	249	15.0	01/24/2015	ND	4.94	82.4	6.00	5.56	
Total BTEX	330	30.0	01/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 61-154

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	01/19/2015	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
GRO C6-C10	7310	10.0	01/17/2015	ND	195	97.5	200	0.878	
DRO >C10-C28	4500	10.0	01/17/2015	ND	207	103	200	3.71	
EXT DRO >C28-C35	97.0	10.0	01/17/2015	ND					

Surrogate: 1-Chlorooctane 207 % 47.2-157

Surrogate: 1-Chlorooctadecane 127 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-2 @ 4' (H500162-06)

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	01/22/2015	ND	1.62	80.9	2.00	9.70		
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4		
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6		
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3		
Total BTEX	<0.300	0.300	01/22/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 61-154

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	01/19/2015	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	66.3	10.0	01/17/2015	ND	195	97.5	200	0.878	
DRO >C10-C28	136	10.0	01/17/2015	ND	207	103	200	3.71	
EXT DRO >C28-C35	<10.0	10.0	01/17/2015	ND					

Surrogate: 1-Chlorooctane 108 % 47.2-157

Surrogate: 1-Chlorooctadecane 114 % 52.1-176

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: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-2 @ 6' (H500162-07)

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	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTX	<0.300	0.300	01/22/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

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	01/19/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	<10.0	10.0	01/19/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND					

Surrogate: 1-Chlorooctane 106 % 47.2-157

Surrogate: 1-Chlorooctadecane 115 % 52.1-176

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: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-2 @ 8' (H500162-08)

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	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTX	<0.300	0.300	01/22/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

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	01/19/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	<10.0	10.0	01/19/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND					

Surrogate: 1-Chlorooctane 103 % 47.2-157

Surrogate: 1-Chlorooctadecane 113 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Analytical Results For:

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

Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-2 @ 9' (H500162-09)

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	01/22/2015	ND	1.62	80.9	2.00	9.70		
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4		
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6		
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3		
Total BTEX	<0.300	0.300	01/22/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

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	01/19/2015	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/19/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	<10.0	10.0	01/19/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND					

Surrogate: 1-Chlorooctane 103 % 47.2-157

Surrogate: 1-Chlorooctadecane 107 % 52.1-176

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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: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-3 @ SURFACE (H500162-10)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<10.0	10.0	01/24/2015	ND	1.73	86.3	2.00	4.78	
Toluene*	135	10.0	01/24/2015	ND	1.68	83.8	2.00	5.78	
Ethylbenzene*	57.0	10.0	01/24/2015	ND	1.64	81.8	2.00	5.48	
Total Xylenes*	430	30.0	01/24/2015	ND	4.94	82.4	6.00	5.56	
Total BTEx	622	60.0	01/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 61-154

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	01/19/2015	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-06
GRO C6-C10	12600	100	01/20/2015	ND	194	97.2	200	2.07		
DRO >C10-C28	6060	100	01/20/2015	ND	203	101	200	0.517		
EXT DRO >C28-C35	<100	100	01/20/2015	ND						

Surrogate: 1-Chlorooctane 309 % 47.2-157

Surrogate: 1-Chlorooctadecane 134 % 52.1-176

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 Received: 01/16/2015
 Reported: 01/26/2015
 Project Name: LING FEDERAL #2
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 01/14/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: HA-3 @ 4' (H500162-11)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<10.0	10.0	01/24/2015	ND	1.73	86.3	2.00	4.78	
Toluene*	122	10.0	01/24/2015	ND	1.68	83.8	2.00	5.78	
Ethylbenzene*	49.2	10.0	01/24/2015	ND	1.64	81.8	2.00	5.48	
Total Xylenes*	372	30.0	01/24/2015	ND	4.94	82.4	6.00	5.56	
Total BTEx	544	60.0	01/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 61-154

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	01/19/2015	ND	416	104	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
GRO C6-C10	11000	100	01/20/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	5510	100	01/20/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<100	100	01/20/2015	ND					

Surrogate: 1-Chlorooctane 271 % 47.2-157

Surrogate: 1-Chlorooctadecane 127 % 52.1-176

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Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-3 @ 6' (H500162-12)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	0.481	0.200	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	1.03	0.200	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	9.97	0.600	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTEX	11.5	1.20	01/22/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 61-154

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	491	10.0	01/19/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	447	10.0	01/19/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND					

Surrogate: 1-Chlorooctane 128 % 47.2-157

Surrogate: 1-Chlorooctadecane 118 % 52.1-176

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Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-3 @ 7.5' (H500162-13)

BTEx 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	01/24/2015	ND	1.73	86.3	2.00	4.78	
Toluene*	<0.500	0.500	01/24/2015	ND	1.68	83.8	2.00	5.78	
Ethylbenzene*	0.940	0.500	01/24/2015	ND	1.64	81.8	2.00	5.48	
Total Xylenes*	11.3	1.50	01/24/2015	ND	4.94	82.4	6.00	5.56	
Total BTEX	12.2	3.00	01/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 61-154

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	01/19/2015	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	847	10.0	01/19/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	619	10.0	01/19/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND					

Surrogate: 1-Chlorooctane 143 % 47.2-157

Surrogate: 1-Chlorooctadecane 112 % 52.1-176

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Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-4 @ SURFACE (H500162-14)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<10.0	10.0	01/24/2015	ND	1.73	86.3	2.00	4.78	
Toluene*	212	10.0	01/24/2015	ND	1.68	83.8	2.00	5.78	
Ethylbenzene*	77.3	10.0	01/24/2015	ND	1.64	81.8	2.00	5.48	
Total Xylenes*	575	30.0	01/24/2015	ND	4.94	82.4	6.00	5.56	
Total BTEX	864	60.0	01/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 61-154

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	01/19/2015	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-06

Surrogate: 1-Chlorooctane 353 % 47.2-157

Surrogate: 1-Chlorooctadecane 142 % 52.1-176

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Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-4 @ 4' (H500162-15)

BTEx 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	01/24/2015	ND	1.73	86.3	2.00	4.78	
Toluene*	10.8	0.500	01/24/2015	ND	1.68	83.8	2.00	5.78	
Ethylbenzene*	8.80	0.500	01/24/2015	ND	1.64	81.8	2.00	5.48	
Total Xylenes*	70.8	1.50	01/24/2015	ND	4.94	82.4	6.00	5.56	
Total BTEX	90.4	3.00	01/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 61-154

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	01/19/2015	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	838	10.0	01/19/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	581	10.0	01/19/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND					

Surrogate: 1-Chlorooctane 139 % 47.2-157

Surrogate: 1-Chlorooctadecane 115 % 52.1-176

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Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-4 @ 6' (H500162-16)

BTX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	01/24/2015	ND	1.73	86.3	2.00	4.78	
Toluene*	20.4	2.00	01/24/2015	ND	1.68	83.8	2.00	5.78	
Ethylbenzene*	15.8	2.00	01/24/2015	ND	1.64	81.8	2.00	5.48	
Total Xylenes*	126	6.00	01/24/2015	ND	4.94	82.4	6.00	5.56	
Total BTX	162	12.0	01/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 61-154

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	2480	10.0	01/19/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	1520	10.0	01/19/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND					

Surrogate: 1-Chlorooctane 205 % 47.2-157

Surrogate: 1-Chlorooctadecane 123 % 52.1-176

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 Received: 01/16/2015
 Reported: 01/26/2015
 Project Name: LING FEDERAL #2
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 01/14/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: HA-4 @ 7' (H500162-17)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<5.00	5.00	01/24/2015	ND	1.73	86.3	2.00	4.78	
Toluene*	44.2	5.00	01/24/2015	ND	1.68	83.8	2.00	5.78	
Ethylbenzene*	24.6	5.00	01/24/2015	ND	1.64	81.8	2.00	5.48	
Total Xylenes*	194	15.0	01/24/2015	ND	4.94	82.4	6.00	5.56	
Total BTEX	263	30.0	01/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 61-154

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	01/19/2015	ND	416	104	400	0.00	
TPH 8015M	mg/kg		Analyzed By: MS						S-04

Surrogate: 1-Chlorooctane 173 % 47.2-157

Surrogate: 1-Chlorooctadecane 119 % 52.1-176

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Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-5 @ SURFACE (H500162-18)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<5.00	5.00	01/24/2015	ND	1.73	86.3	2.00	4.78	
Toluene*	32.8	5.00	01/24/2015	ND	1.68	83.8	2.00	5.78	
Ethylbenzene*	24.1	5.00	01/24/2015	ND	1.64	81.8	2.00	5.48	
Total Xylenes*	197	15.0	01/24/2015	ND	4.94	82.4	6.00	5.56	
Total BTEX	254	30.0	01/24/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	832	16.0	01/19/2015	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-04

Surrogate: 1-Chlorooctane 173 % 47.2-157

Surrogate: 1-Chlorooctadecane 120 % 52.1-176

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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: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-5 @ 4' (H500162-19)

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	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTX	<0.300	0.300	01/22/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

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	01/19/2015	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	21.9	10.0	01/19/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	35.7	10.0	01/19/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND					

Surrogate: 1-Chlorooctane 109 % 47.2-157

Surrogate: 1-Chlorooctadecane 117 % 52.1-176

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Analytical Results For:

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

Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: HA-5 @ 6' (H500162-20)

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	01/22/2015	ND	1.62	80.9	2.00	9.70		
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4		
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6		
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3		
Total BTX	<0.300	0.300	01/22/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

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	01/19/2015	ND	194	97.2	200	2.07		
DRO >C10-C28	<10.0	10.0	01/19/2015	ND	203	101	200	0.517		
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND						

Surrogate: 1-Chlorooctane 104 % 47.2-157

Surrogate: 1-Chlorooctadecane 113 % 52.1-176

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Analytical Results For:

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

 Received: 01/16/2015
 Reported: 01/26/2015
 Project Name: LING FEDERAL #2
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 01/14/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: HA-5 @ 8' (H500162-21)

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	01/22/2015	ND	1.62	80.9	2.00	9.70		
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4		
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6		
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3		
Total BTEX	<0.300	0.300	01/22/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	01/19/2015	ND	432	108	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	11.0	10.0	01/19/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	<10.0	10.0	01/19/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND					

Surrogate: 1-Chlorooctane 106 % 47.2-157

Surrogate: 1-Chlorooctadecane 113 % 52.1-176

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Analytical Results For:

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

Received: 01/16/2015
Reported: 01/26/2015
Project Name: LING FEDERAL #2
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 01/14/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: BACKGROUND (H500162-22)

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	01/21/2015	ND	1.69	84.6	2.00	4.80	
Toluene*	<0.050	0.050	01/21/2015	ND	1.71	85.5	2.00	4.41	
Ethylbenzene*	<0.050	0.050	01/21/2015	ND	1.68	83.8	2.00	4.10	
Total Xylenes*	<0.150	0.150	01/21/2015	ND	5.00	83.3	6.00	5.01	
Total BTEX	<0.300	0.300	01/21/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 61-154

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	01/19/2015	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/19/2015	ND	194	97.2	200	2.07	
DRO >C10-C28	<10.0	10.0	01/19/2015	ND	203	101	200	0.517	
EXT DRO >C28-C35	<10.0	10.0	01/19/2015	ND					

Surrogate: 1-Chlorooctane 107 % 47.2-157

Surrogate: 1-Chlorooctadecane 114 % 52.1-176

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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



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

Page 25 of 27

Company Name: Basin Environmental Service Technologies, LLC				BILL TO				ANALYSIS REQUEST											
Project Manager: Ben Arguijo				P.O. #:				<div style="display: flex; justify-content: space-around;"> <div>TPH (8015M)</div> <div>Chloride</div> <div>BTEX (8021B)</div> </div> <div style="position: absolute; left: 670px; top: 230px; transform: rotate(-90deg);"> BTEX added 1/22 BTEX added 1/23 </div>											
Address: P.O. Box 301				Company: Fasken Oil & Ranch, Ltd.															
City: Lovington State: NM Zip: 88260				Attn: Aaron Pachlhofer															
Phone #: (575)396-2378 Fax #: (575)396-1429				Address: 6101 Holiday Hill Rd.															
Project #:				City: Midland															
Project Name: Ling Federal #2				State: TX Zip: 79707															
Project Location: Lea Co., NM				Phone #: (432)687-1777															
Sampler Name: Ben J. Arguijo				Fax #:															

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.			SAMPLING		TPH (8015M)	Chloride	BTEX (8021B)	Hold	BTEX added 1/22	BTEX added 1/23
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME						
H500162																				
1	HA-1 @ Surface	G	1		X					X			1/14/15	0930	X	X				
2	HA-1 @ 4'	G	1		X					X			1/14/15	0955	X	X				
3	HA-1 @ 6'	G	1		X					X			1/14/15	1010	X					
4	HA-1 @ 9'	G	1		X					X			1/14/15	1030	X	X				
5	HA-2 @ Surface	G	1		X					X			1/14/15	1035	X	X				
6	HA-2 @ 4'	G	1		X					X			1/14/15	1055	X	X				
7	HA-2 @ 6'	G	1		X					X			1/14/15	1115	X					
8	HA-2 @ 8'	G	1		X					X			1/14/15	1130	X					
9	HA-2 @ 9'	G	1		X					X			1/14/15	1140	X	X				
10	HA-3 @ Surface	G	1		X					X			1/14/15	1150	X	X				

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Relinquished By:	Date: 1/14/15	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: 1235	<i>Godi Benson</i>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:		<p>****Run BTEX if TPH <= 1,000 mg/kg****</p> <p>Please e-mail results to bjarguijo@basinenv.com, jimmyc@forl.com & aaronp@forl.com</p>	
Delivered By: (Circle One)	Sample Condition	CHECKED BY:		
Sampler - UPS - Bus - Other:	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/>	<i>gja</i>		

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1 of 3

**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				BILL TO				ANALYSIS REQUEST																					
Project Manager: Ben Arguijo				P.O. #:				TPH (8015M)	Chloride	BTEX (8021B)	BTEX added 1/22	BTEX added 1/23																	
Address: P.O. Box 301				Company: Fasken Oil & Ranch, Ltd.																									
City: Lovington State: NM Zip: 88260				Attn: Aaron Pachlhofer																									
Phone #: (575)396-2378 Fax #: (575)396-1429				Address: 6101 Holiday Hill Rd.																									
Project #: Project Owner: Fasken Oil & Ranch, Ltd.				City: Midland																									
Project Name: Denton SWD #3				State: TX Zip: 79707																									
Project Location: Lea Co., NM				Phone #: (432)687-1777																									
Sampler Name: Ben J. Arguijo				Fax #:																									
FOR LAB USE ONLY		Lab I.D.		Sample I.D.		(GRAB OR (C)OMP. # CONTAINERS)		MATRIX		PRESERV.		SAMPLING																	
						GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:		ACID/BASE: ICE / COOL OTHER:		DATE		TIME																	
H500102																													
11		HA-3 @ 4'		G 1		X		X		1/14/15		1200		X		X													
12		HA-3 @ 6'		G 1		X		X		1/14/15		1210		X															
13		HA-3 @ 7.5'		G 1		X		X		1/14/15		1215		X		X													
14		HA-4 @ Surface		G 1		X		X		1/14/15		1315		X		X													
15		HA-4 @ 4'		G 1		X		X		1/14/15		1325		X		X													
16		HA-4 @ 6'		G 1		X		X		1/14/15		1335		X															
17		HA-4 @ 7'		G 1		X		X		1/14/15		1340		X		X													
18		HA-5 @ Surface		G 1		X		X		1/14/15		1350		X		X													
19		HA-5 @ 4'		G 1		X		X		1/14/15		1400		X		X													
20		HA-5 @ 6'		G 1		X		X		1/14/15		1410		X															

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Relinquished By:		Date: 1/16/15		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
Time: 1235						Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date:		Received By:		REMARKS: ****Run BTEX if TPH <= 1,000 mg/kg**** Please e-mail results to bjarguijo@basinenv.com, jimmyc@forl.com & aaronp@forl.com			
		Time:							
Delivered By: (Circle One)				Sample Condition		CHECKED BY: (Initials)			
Sampler - UPS - Bus - Other:				Cool Intact					
				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					

#54

2 of 3

• CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

07-607

[illegible]

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Relinquished By: 		Date: 11/6/15 Time: 1235		Received By: 		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: _____ Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #: _____ REMARKS:	
Relinquished By:		Date: Time:		Received By:		****Run BTEX if TPH <= 1,000 mg/kg**** Please e-mail results to bjarguijo@basinenv.com , jimmyc@forl.com & aaronp@forl.com	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:				Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No -3.20		CHECKED BY:  (Initials)	

FORM-006
Revision 1.0

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

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