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CONESTOGA-ROVERS & ASSOCIATES

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Final Report

LOVINGTON PADDOCK UNIT #10
SOIL ASSESSMENT AND DELINEATION ACTIVITIES REPORT
RP#3291

Unit B, Section 8, Township 17 South, Range 36 East
Lea County, New Mexico

Prepared for: Chevron Environmental Management Company

Conestoga-Rovers & Associates
2135 South Loop, 250 West
Midland, Texas 79703

October 2014 • 086497 • Report No. 1

Partners in Sustainability

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Section 1.0 Introduction

Conestoga-Rovers and Associates (CRA) is pleased to present this Soil Assessment and Delineation Activities Report to Chevron Environmental Management Company (CEMC) for the Lovington Paddock Unit #10 Injection Well release location (hereafter referred to as the "Site").

This Report also serves as documentation of corrective actions performed by Chevron in association with Remediation Permit No. 3291 (RP #3291); which the New Mexico Oil Conservation Division (NMOCD) District I, Hobbs, New Mexico office assigned to the release in August of 2014.

Section 2.0 Project Information and Background

The Site is located in Unit B, Section 8, Township 17 South, Range 36 East, approximately 6 miles southeast of Lovington, New Mexico, in eastern Lea County (Figure 1 and Figure 2).

CRA understands that Chevron conducted initial field assessment activities at the Site in September 2013. Chevron's assessment included a site visit, soil sample collection, analytical laboratory analyses and preliminary determinations of impacts to environmental media. Following the initial field assessment activities Chevron delegated the continuation of assessment and delineation efforts for the Site to CEMC. In June 2014, CEMC contracted CRA to perform a comprehensive soil assessment at the Site by implementing a soil boring program.

On July 15, 2014, CRA mobilized to the Site to perform a site visit. During the site visit, proposed boring locations were marked and New Mexico one-call parameters were flagged for utility locating purposes. In addition, the Site was walked to observe site features.

2.1 Lovington Paddock Unit #10 Injection Well Release

Chevron submitted a Release Notification and Corrective Action Form (C-141) to the NMOCD dated July 29, 2013. The C-141 described a release of 52 barrels (bbls) of produced water from an open 1/2-inch needle valve on the well, of which approximately 45 bbls of produced water were recovered. The source of the release was recorded to have been due to suspected vandalism, and the release was described as follows:

> *The release resulted in an approximately 200 by 4-foot pool of fluids down a path off of the well pad to the south west and an approximately 50 by 20-foot pool on the well pad and off the south east corner in the pasture.*

In September of 2013, Chevron mobilized to the Site and collected six surficial soil samples along the release path. These six soil samples were submitted to Cardinal Laboratories, Hobbs, New Mexico for determination of benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021 B, total petroleum hydrocarbons (TPH) by Method 8015 (GRO + DRO) and chlorides by EPA Method SM4500Cl-B. The following results were reported:

Sample Point	TPH (GRO + DRO)	Chlorides
SS-1	GRO: <50.0 (mg/kg) DRO: 350 (mg/kg)	7460 (mg/kg)
SS-2	<10.0 (mg/kg)	1260 (mg/kg)
SS-3	<10.0 (mg/kg)	976 (mg/kg)
SS-4	<10.0 (mg/kg)	3040 (mg/kg)
SS-5	<10.0 (mg/kg)	1680 (mg/kg)
SS-6	<10.0 (mg/kg)	2280 (mg/kg)

Chevron returned to the Site in 2013 to perform remedial excavation activities. Chevron excavated an area leading in a south westerly direction. The remedial excavation measured approximately 325-feet in length, 20-feet in width and a depth of 18-inches below ground surface (bgs) (Figure 3). The excavated soils were loaded and transported to an approved disposal facility. The actual volume and final disposition of the excavated soils are unknown.

2.2 Recommended Remediation Action Levels

Information available on the Petroleum Recovery Research Center (PRRC) Mapping Portal, United States Geological Survey (USGS) Current Water Database for the Nation, and current (CRA) managed groundwater site(s) data demonstrate the depth to groundwater at the Site is greater than 100-feet bgs. The nearest private domestic water source is greater than 200-feet from the release site; the nearest public/municipal water source is greater than 1,000-feet from the release site; and the release site lies more than 1,000 horizontal feet from the nearest surface water body. Consequently, the NMOCD total ranking criteria score is zero (0) for the Site. The anticipated site-specific Recommended Remediation Action Levels (RRALs; per 2011 Draft Guidance) to be applied to this location by the NMOCD for TPH (GRO+DRO) at the site is 500 mg/kg and 1,000 mg/kg for chlorides.

New Mexico Oil Conservation Division Site Assessment	
Ranking Criteria	Score
Depth to Ground Water (>100 feet)	0
Wellhead Protection Area (> 1000 feet from water source, > 200 feet from domestic source)	0
Distance to Surface Body Water (>1000 horizontal feet)	0
Ranking Criteria Total Score	**0***
*Because the ranking criteria total score is 0, NMOCD established RRALs are 50 mg/kg for benzene, toluene, ethylbenzene, and xylene (BTEX), 500 mg/kg TPH (GRO + DRO), and 1,000 mg/kg for chlorides[1].	

[1] NMOCD Draft Guidance for Release Reporting and Corrective Action, September 30, 2011

Section 3.0 Drilling and Sampling

On July 15, 2014, CRA's contracted service provider, Harrison & Cooper, Inc. (HCI) of Lubbock, Texas submitted an initial New Mexico One Call utility locate ticket (2014291454) pertaining to the installation of nine soil borings under RP #3291. CRA submitted a MCBU Chevron Dig Plan with appropriate attachments for approval to the Chevron Buckeye Field Management Team. On July 29, 2014, HCI and CRA mobilized to the Site to begin soil boring activities. The soil borings were pre-cleared via air knife techniques to a depth of 5-feet bgs or until refusal. The remainder of each boring was advanced using an air rotary drill rig and split spoon sampling techniques were utilized to collect soil samples. Nine soil borings were advanced across the Site. Eight soil borings were advanced to a total depth of 35-feet bgs. One soil boring was advanced to a total depth of 45-feet bgs based on field screening for chlorides. A photo log documenting the drilling activities is included as Appendix B. Chloride concentrations in soil were field screened by mixing soil samples with distilled water. The rinsate was then screened using Hach chloride test strips. Soil borings were logged in accordance with the Unified Soil Classification System and recorded. Visual representation of the boring logs can be found in Appendix C. The location of the soil borings are presented on the Site Details and Analytical Results Map (Figure 3).

Soil samples were collected for laboratory analysis from each boring (SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, SB-7, SB-8 and SB-9) at varying intervals beginning at 5-feet bgs. Soil samples were packed into laboratory prepared jars and stored in a cooler with ice. The soil samples were sent to Xenco Laboratories (Xenco) in Odessa, Texas for analysis of BTEX by EPA Method 8021B; TPH by EPA Method SW 8015 Modified and for chloride analysis by EPA Method 300/300.1. Soil laboratory analytical results are summarized in Table 1. The soil laboratory analytical report is included as Appendix D. A Site Details and Analytical Results Map is presented as Figure 3.

3.1 Soil Sampling Analytical Results

The soil type observed in soil samples collected during the drilling program consisted of light gray, dense caliche from the surface to approximately 20-feet bgs. Brown to tan, very fine grain sandstone with broken caliche was observed from approximately 20-feet bgs to total depth (35 and 45-feet). Moisture content observed in the soil samples was dry in all instances.

All soil samples collected (SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, SB-7, SB-8 and SB-9) from the Site in 2014 for laboratory analyses exhibited concentrations below laboratory reporting limits and below Site RRALs for BTEX (50 mg/kg) and TPH (GRO + DRO) (500 mg/kg). All soil samples collected from the Site in 2014 for laboratory analysis exhibited chloride concentrations in soil below Site RRALs (1,000 mg/kg). This data from the soil boring program demonstrates that the nature and extent of hydrocarbon and chloride impacts from the release incident are minimal and the potential risk to impact groundwater is extremely low.

Section 4.0 Conclusions

Evaluation of the analytical data obtained from soil assessment and delineation activities performed in July of 2014 has indicated that vertical and horizontal delineation of BTEX, TPH (GRO + DRO), and chloride impacts have been achieved. Based on data provided in this report, no further delineation or remedial efforts are warranted. CRA recommends closure of the release associated with RP # 3291.

If you have any questions or comments with regards to this Soil Assessment and Delineation Activities Report, please do not hesitate to contact our Midland office at (432) 686-0086. Your timely response to this correspondence is appreciated.

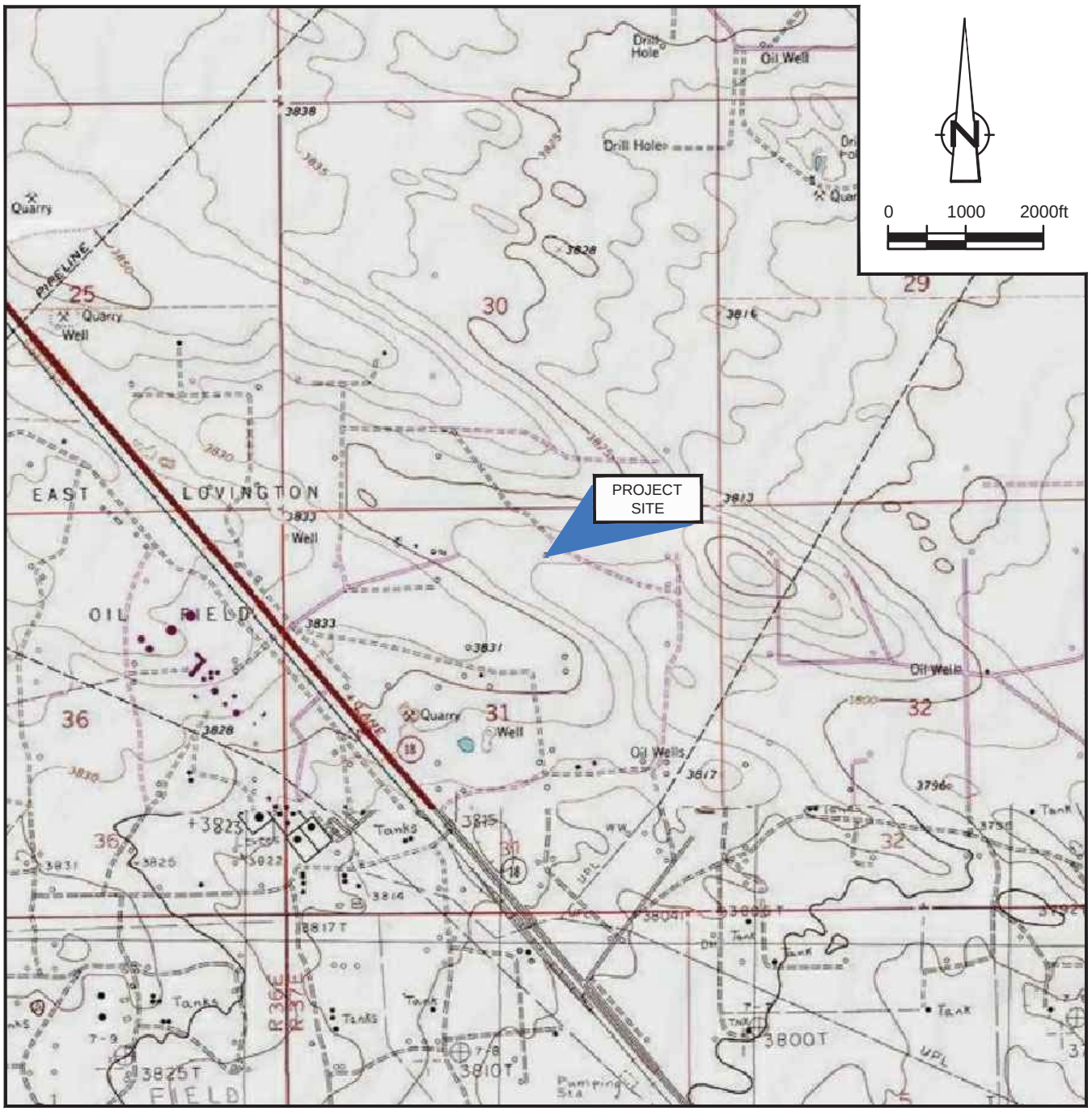
All of Which is Respectfully Submitted,

CONESTOGA ROVERS & ASSOCIATES

Thomas C. Larson
Principal, Midland Operations Manager

Jake L. Ferenz
Project Manager

Figures



SOURCE: USGS 7.5 MINUTE QUAD
"LOVINGTON AND LOVINGTON SE, NEW MEXICO"

LAT/LONG: 32.8839° NORTH, 103.2883° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

figure 1

SITE LOCATION MAP
LOVINGTON PADDOCK UNIT #10
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company

086497-00(001)GN-DL001 AUG 26/2014

LAT/LONG: 32.8839° NORTH, 103.2883° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

figure 2

SITE AERIAL MAP
LOVINGTON PADDOCK UNIT #10
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company

086497-00(001)GN-DL001 AUG 26/2014

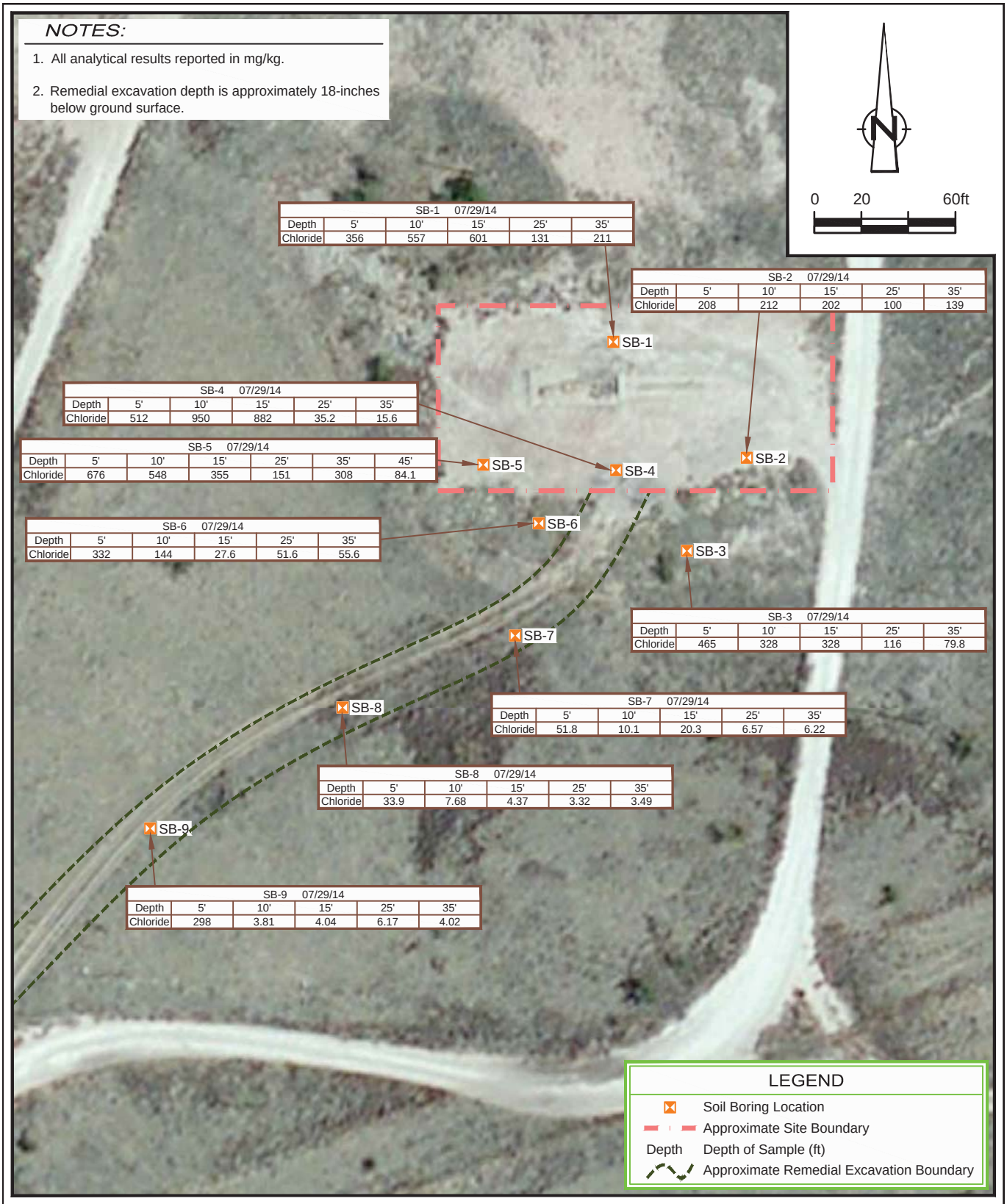


figure 3

SITE DETAILS AND ANALYTICAL RESULTS MAP
LOVINGTON PADDOCK UNIT #10
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company

086497-00(001)GN-DL001 AUG 27/2014

Tables

TABLE 1

SOIL ANALYTICAL SUMMARY
LOVINGTON PADDOCK UNIT #10
LEA COUNTY, NEW MEXICO

Sample ID	Depth (bgs)	Sample Date	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total BTEX	TPH (SW 8015 Modified)						Chlorides
								C6-C10	>C10-C28	C6-C12	C12-C28	C28-C35	Total TPH C6-C35	
NMOCD Recommended Remediation Action Levels			0.2	---	---	---	50	---	500	500	500	---	2,500	1,000
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SS #1	Surface	9/23/13	<0.500	<0.500	<0.500	<1.50	<3.00	<50.0	350	--	--	--	--	7460
SS #2	Surface	9/23/13	<0.500	<0.500	<0.500	<1.50	<3.00	<10.0	<10.0	--	--	--	--	1260
SS #3	Surface	9/23/13	<0.500	<0.500	<0.500	<1.50	<3.00	<10.0	<10.0	--	--	--	--	976
SS #4	Surface	9/23/13	<0.500	<0.500	<0.500	<1.50	<3.00	<10.0	<10.0	--	--	--	--	3040
SS #5	Surface	9/23/13	<0.500	<0.500	<0.500	<1.50	<3.00	<10.0	<10.0	--	--	--	--	1680
SS #6	Surface	9/23/13	<0.500	<0.500	<0.500	<1.50	<3.00	<10.0	<10.0	--	--	--	--	2280
SB-1	5'	7/29/14	<0.00106	<0.00212	<0.00106	<0.00106	<0.00106	--	--	<16.0	<16.0	<16.0	<16.0	356
SB-1	10'	7/29/14	<0.00106	<0.00212	<0.00106	<0.00106	<0.00106	--	--	<15.9	31.8	<15.9	31.8	557
SB-1	15'	7/29/14	<0.00107	<0.00215	<0.00107	<0.00107	<0.00107	--	--	<16.1	<16.1	<16.1	<16.1	601
SB-1	25'	7/29/14	<0.00102	<0.00205	<0.00102	<0.00102	<0.00102	--	--	<15.5	<15.5	<15.5	<15.5	131
SB-1	35'	7/29/14	<0.00106	<0.00212	<0.00106	<0.00106	<0.00106	--	--	<15.9	<15.9	<15.9	<15.9	211
SB-2	5'	7/29/14	<0.00105	<0.00211	<0.00105	<0.00105	<0.00105	--	--	<15.8	<15.8	<15.8	<15.8	208
SB-2	10'	7/29/14	<0.00110	<0.00220	<0.00110	<0.00110	<0.00110	--	--	<16.5	<16.5	<16.5	<16.5	212
SB-2	15'	7/29/14	<0.00107	<0.00213	<0.00107	<0.00107	<0.00107	--	--	<16.0	<16.0	<16.0	<16.0	202
SB-2	25'	7/29/14	<0.00103	<0.00207	<0.00103	<0.00103	<0.00103	--	--	<15.5	<15.5	<15.5	<15.5	100
SB-2	35'	7/29/14	<0.00106	<0.00211	<0.00106	<0.00106	<0.00106	--	--	<15.8	<15.8	<15.8	<15.8	139
SB-3	5'	7/29/14	<0.00106	<0.00213	<0.00106	<0.00106	<0.00106	--	--	<16.0	<16.0	<16.0	<16.0	465
SB-3	10'	7/29/14	<0.00103	<0.00207	<0.00103	<0.00103	<0.00103	--	--	<15.5	<15.5	<15.5	<15.5	328
SB-3	15'	7/29/14	<0.00106	<0.00212	<0.00106	<0.00106	<0.00106	--	--	<15.9	<15.9	<15.9	<15.9	328
SB-3	25'	7/29/14	<0.00103	<0.00206	<0.00103	<0.00103	<0.00103	--	--	<15.5	<15.5	<15.5	<15.5	116
SB-3	35'	7/29/14	<0.00105	<0.00210	<0.00105	<0.00105	<0.00105	--	--	<15.8	<15.8	<15.8	<15.8	79.8
SB-4	5'	7/29/14	<0.00109	<0.00218	<0.00109	<0.00109	<0.00109	--	--	<16.4	<16.4	<16.4	<16.4	512
SB-4	10'	7/29/14	<0.00109	<0.00218	<0.00109	<0.00109	<0.00109	--	--	<16.3	<16.3	<16.3	<16.3	950
SB-4	15'	7/29/14	<0.00108	<0.00216	<0.00108	<0.00108	<0.00108	--	--	<16.2	<16.2	<16.2	<16.2	882
SB-4	25'	7/29/14	<0.00104	<0.00207	<0.00104	<0.00104	<0.00104	--	--	<15.6	<15.6	<15.6	<15.6	35.2
SB-4	35'	7/29/14	<0.00106	<0.00212	<0.00106	<0.00106	<0.00106	--	--	<15.9	<15.9	<15.9	<15.9	15.6
SB-5	5'	7/29/14	<0.00105	<0.00210	<0.00105	<0.00105	<0.00105	--	--	<15.7	<15.7	<15.7	<15.7	676
SB-5	10'	7/29/14	<0.00109	<0.00217	<0.00109	<0.00109	<0.00109	--	--	<16.3	<16.3	<16.3	<16.3	548
SB-5	15'	7/29/14	<0.00107	<0.00215	<0.00107	<0.00107	<0.00107	--	--	<16.1	<16.1	<16.1	<16.1	355
SB-5	25'	7/29/14	<0.00104	<0.00208	<0.00104	<0.00104	<0.00104	--	--	<15.5	<15.5	<15.5	<15.5	151
SB-5	35'	7/29/14	<0.00105	<0.00210	<0.00105	<0.00105	<0.00105	--	--	<15.8	<15.8	<15.8	<15.8	308
SB-5	45'	7/29/14	<0.00105	<0.00210	<0.00105	<0.00105	<0.00105	--	--	<15.7	<15.7	<15.7	<15.7	84.1

TABLE 1

SOIL ANALYTICAL SUMMARY
LOVINGTON PADDOCK UNIT #10
LEA COUNTY, NEW MEXICO

Sample ID	Depth (bgs)	Sample Date	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total BTEX	TPH (SW 8015 Modified)						Chlorides
								C6-C10	>C10-C28	C6-C12	C12-C28	C28-C35	Total TPH C6-C35	
NMOCD Recommended Remediation Action Levels			0.2	---	---	---	50	---	500	500	500	---	2,500	1,000
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SB-6	5'	7/29/14	<0.00111	<0.00222	<0.00111	<0.00111	<0.00111	--	--	<16.6	<16.6	<16.6	<16.6	332
SB-6	10'	7/29/14	<0.00110	<0.00221	<0.00110	<0.00110	<0.00110	--	--	<16.6	<16.6	<16.6	<16.6	144
SB-6	15'	7/29/14	<0.00109	<0.00219	<0.00109	<0.00109	<0.00109	--	--	<16.5	<16.5	<16.5	<16.5	27.6
SB-6	25'	7/29/14	<0.00104	<0.00209	<0.00104	<0.00104	<0.00104	--	--	<15.7	<15.7	<15.7	<15.7	51.6
SB-6	35'	7/29/14	<0.00105	<0.00211	<0.00105	<0.00105	<0.00105	--	--	<15.9	<15.9	<15.9	<15.9	55.6
SB-7	5'	7/29/14	<0.00110	<0.00221	<0.00110	<0.00110	<0.00110	--	--	<16.6	<16.6	<16.6	<16.6	51.8
SB-7	10'	7/29/14	<0.00112	<0.00225	<0.00112	<0.00112	<0.00112	--	--	<16.9	<16.9	<16.9	<16.9	10.1
SB-7	15'	7/29/14	<0.00107	<0.00214	<0.00107	<0.00107	<0.00107	--	--	<16.1	<16.1	<16.1	<16.1	20.3
SB-7	25'	7/29/14	<0.00104	<0.00208	<0.00104	<0.00104	<0.00104	--	--	<15.7	<15.7	<15.7	<15.7	6.57
SB-7	35'	7/29/14	<0.00105	<0.00209	<0.00105	<0.00105	<0.00105	--	--	<15.8	<15.8	<15.8	<15.8	6.22
SB-8	5'	7/29/14	<0.00112	<0.00224	<0.00112	<0.00112	<0.00112	--	--	<16.8	<16.8	<16.8	<16.8	33.9
SB-8	10'	7/29/14	<0.00111	<0.00222	<0.00111	<0.00111	<0.00111	--	--	<16.7	<16.7	<16.7	<16.7	7.68
SB-8	15'	7/29/14	<0.00106	<0.00213	<0.00106	<0.00106	<0.00106	--	--	<16.0	<16.0	<16.0	<16.0	4.37
SB-8	25'	7/29/14	<0.00106	<0.00211	<0.00106	<0.00106	<0.00106	--	--	<15.9	<15.9	<15.9	<15.9	3.32
SB-8	35'	7/29/14	<0.00106	<0.00211	<0.00106	<0.00106	<0.00106	--	--	<15.9	<15.9	<15.9	<15.9	3.49
SB-9	5'	7/29/14	<0.00102	<0.00204	<0.00102	<0.00102	<0.00102	--	--	<15.3	22.9	<15.3	22.9	298
SB-9	10'	7/29/14	<0.00110	<0.00220	<0.00110	<0.00110	<0.00110	--	--	<16.5	<16.5	<16.5	<16.5	3.81
SB-9	15'	7/29/14	<0.00105	<0.00211	<0.00105	<0.00105	<0.00105	--	--	<15.9	<15.9	<15.9	<15.9	4.04
SB-9	25'	7/29/14	<0.00107	<0.00214	<0.00107	<0.00107	<0.00107	--	--	<16.0	<16.0	<16.0	<16.0	6.17
SB-9	35'	7/29/14	<0.00106	<0.00212	<0.00106	<0.00106	<0.00106	--	--	<15.9	<15.9	<15.9	<15.9	4.02

Notes:

1. All analytical results reported in (mg/kg) milligrams per kilogram
2. 2013 Chloride analyses by Method EPA SM4500Cl-B; 2014 Chloride analyses by Method EPA 300/300.1
3. BTEX analysis by Method EPA 8021 B
4. TPH analysis by Method SW 8015 Modified
5. Highlighted cells indicate concentrations exceeding guidance RRALs
6. RRALs from NMOCD (September 2011 Draft) Release Guidance Document
7. bgs - below ground surface
8. < indicates below laboratory Reporting Limit (RL)
9. (SB) indicates Soil Boring; (SS) indicates Soil Sample
10. "--" indicates not analyzed

Appendices

Appendix A

Original Form C-141

MDistrict 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 **CHEVRON**	Contact **David Pagano**
Address HCR 60, BOX 423 – Lovington, NM 88260 Physical: 56 Texas Camp Road, Lovington NM 88260	Telephone No. Office: 575-396-4414 ext 275 Cellular: 505-787-9816
Facility Name: Lovington Paddock Unit #10	Facility Type: Produced Water Injection Well

Surface Owner: **State of New Mexico**	Mineral Owner **State of New Mexico**	API No. 30-025-05377

LOCATION OF RELEASE

Longitude: 32.861662 ° Latitude: -103.374497 °

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	08	17.0S	36E	660	North	1980	East	Lea

NATURE OF RELEASE

Type of Release Spill to Land	Volume of Release 52bbls of Produced Water	Volume Recovered 45 bbls of Produced Water
Source of Release Flow Back Frac Tank	Date and Hour of Occurrence 7/26/13 11:00PM	Date and Hour of Discovery 7/27/13 07:00AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoffrey Leking	
By Whom? David Pagano	Date and Hour 7/27/13 06:10PM left voicemail	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Fluids were released through open 1/2" needle valve on LPU #10 injection well due to expected vandalism.

Describe Area Affected and Cleanup Action Taken. *

Release resulted in approx 200 by 4 foot pool of fluids down a path off of the well pad to the South West and an approx 50 by 20 foot pool on the well pad and off the south east corner in the pasture. Hyrdo Vac truck vacuumed up standing fluids and recovered approx 45 bbls of produced water. Next step is to excavate visibly contaminated soil up to 18" and haul off to disposal facility. Contamination beyond 18" will be remediated by Chevron EMC.

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: David Pagano	OIL CONSERVATION DIVISION	
Printed Name: David Pagano	Approved by District Supervisor:	
Title: Health & Environmental Specialist	Approval Date:	Expiration Date:
Date: 7/29/13 Phone: 505-787-9816	Conditions of Approval:	Attached ☐

* Attach Additional Sheets If Necessary

Appendix B

Photograph Log

PHOTO 1: View of drilling rig and CRA/CEMC personnel facing south east

PHOTO 2: View of Air-Knife borehole clearance activities facing north east

PHOTOGRAPH LOG
Lovington Paddock Unit #10
Lea County, New Mexico
Chevron Environmental Management Company

PHOTO 3: View of drilling activities facing south east

PHOTO 4: View of drilling activities facing north east

PHOTOGRAPH LOG
Lovington Paddock Unit #10
Lea County, New Mexico
Chevron Environmental Management Company

Appendix C

Soil Boring Logs

SOIL BORING LOG

Project: LPU #10
Lea County, NM

Client: CEMC

No. SB-1

File No.: 086497
Date: 07/29/2014
Drilling Co.: HCI
Supervisor: Kenny Cooper
Type Rig: Air/Mud Rotary
Logged by: Jake Ferenz

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 10:00 am Finish Time: 10:20
							☒	5			Caliche/Top Soil: Grey to white/dark brown Caliche: White to tan consolidated with small fragments
							☒	10			Caliche: Tan, consolidated with small fragments
							☒	15			
								20			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone, with broken caliche in matrix
							☒	25			Sand: Reddish brown, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone
								30			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone
							☒	35			TD = 35-Feet
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

▽ Water First Noted

⬭ Analyzed Sample

SOIL BORING LOG

Project: LPU #10
Lea County, NM

Client: CEMC

No. SB-2

File No.: 086497
Date: 07/29/2014
Drilling Co.: HCI
Supervisor: Kenny Cooper
Type Rig: Air/Mud Rotary
Logged by: Jake Ferenz

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 10:25 am Finish Time: 10:40
							☒	5			Caliche: White to tan, weathered, dense Caliche: White to tan consolidated with small fragments
							☒	10			Caliche: Tan, consolidated with small fragments
							☒	15			
								20			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone, with broken caliche in matrix
							☒	25			
								30			
							☒	35			TD = 35-Feet
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Water First Noted

Analyzed Sample

SOIL BORING LOG

Project: LPU #10
Lea County, NM

Client: CEMC

No. SB-3

File No.: 086497
Date: 07/29/2014
Drilling Co.: HCI
Supervisor: Kenny Cooper
Type Rig: Air/Mud Rotary
Logged by: Jake Ferenz

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 11:00 am Finish Time: 11:20
							☒	5			Caliche: White to tan, weathered, dense Caliche: White to tan consolidated with small fragments
							☒	10			Caliche: Tan, consolidated with small fragments
							☒	15			
								20			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone, with broken caliche in matrix
							☒	25			
								30			
							☒	35			TD = 35-Feet
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Water First Noted

Analyzed Sample

SOIL BORING LOG

Project: LPU #10
Lea County, NM

Client: CEMC

No. SB-4

File No.: 086497
Date: 07/29/2014
Drilling Co.: HCI
Supervisor: Kenny Cooper
Type Rig: Air/Mud Rotary
Logged by: Jake Ferenz

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 11:35 am Finish Time: 11:48
							☒	5			Caliche: White to tan, weathered, dense Caliche: White to tan consolidated with small fragments
							☒	10			Caliche: Tan, consolidated with small fragments
							☒	15			
								20			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone, with broken caliche in matrix
							☒	25			
								30			
							☒	35			TD = 35-Feet
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Water First Noted

Analyzed Sample

SOIL BORING LOG

Project: LPU #10
Lea County, NM

Client: CEMC

No. SB-5

File No.: 086497
Date: 07/29/2014
Drilling Co.: HCI
Supervisor: Kenny Cooper
Type Rig: Air/Mud Rotary
Logged by: Jake Ferenz

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 12:05 pm Finish Time: 12:30
							☒	5			Caliche: White to tan, weathered, dense Caliche: White to tan consolidated with small fragments
							☒	10			Caliche: Tan, consolidated with small fragments
							☒	15			
								20			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone, with broken caliche in matrix
							☒	25			
								30			
							☒	35			TD = 35-Feet
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Water First Noted

Analyzed Sample

SOIL BORING LOG

Project: LPU #10
Lea County, New Mexico

No. SB-5

Client: CEMC

File No.: 086497
Date: 07/29/2014
Drilling Co.: HCI
Supervisor: Kenny Cooper
Type Rig: Air/Mud Rotary
Logged by: Jake Ferenz

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 12:05 pm Finish Time: 12:30
							☒	45			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with moderate-well cemented very fine grain sandstone, dry Total Depth = 45-Feet
								50			
								55			
								60			
								65			
								70			
								75			
								80			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Water First Noted

Analyzed Sample

SOIL BORING LOG

Project: LPU #10
Lea County, NM

Client: CEMC

No. SB-6

File No.: 086497
Date: 07/29/2014
Drilling Co.: HCI
Supervisor: Kenny Cooper
Type Rig: Air/Mud Rotary
Logged by: Jake Ferenz

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 12:45 pm Finish Time: 12:58
							☒	5			Caliche: White to tan, weathered, dense Caliche: White to tan consolidated with small fragments
							☒	10			Caliche: Tan, consolidated with small fragments
							☒	15			
								20			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone, with broken caliche in matrix
							☒	25			
								30			
							☒	35			TD = 35-Feet
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Water First Noted

Analyzed Sample

SOIL BORING LOG

Project: LPU #10
Lea County, NM

Client: CEMC

No. SB-7

File No.: 086497
Date: 07/29/2014
Drilling Co.: HCI
Supervisor: Kenny Cooper
Type Rig: Air/Mud Rotary
Logged by: Jake Ferenz

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: Finish Time:
							☒	5			Top Soil: Brown, fine, unconsolidated, dry
											Clay: Brown, fine, unconsolidated
							☒	10			Caliche: White to tan, weathered, dense
							☒	15			
								20			Caliche: Brown to tan, sandstone in matrix
							☒	25			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone, with broken caliche in matrix
								30			
							☒	35			TD = 35-Feet
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Water First Noted

Analyzed Sample

SOIL BORING LOG

Project: LPU #10
Lea County, NM

Client: CEMC

No. SB-8

File No.: 086497
Date: 07/29/2014
Drilling Co.: HCI
Supervisor: Kenny Cooper
Type Rig: Air/Mud Rotary
Logged by: Jake Ferenz

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: Finish Time:
							☒	5			Top Soil: Brown, fine, unconsolidated, dry
											Clay: Brown, fine, unconsolidated
							☒	10			Caliche: White to tan, weathered, dense
							☒	15			
								20			Caliche: Brown to tan, sandstone in matrix
							☒	25			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone, with broken caliche in matrix
								30			
							☒	35			TD = 35-Feet
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Water First Noted

Analyzed Sample

SOIL BORING LOG

Project: LPU #10
Lea County, NM

Client: CEMC

No. SB-9

File No.: 086497
Date: 07/29/2014
Drilling Co.: HCI
Supervisor: Kenny Cooper
Type Rig: Air/Mud Rotary
Logged by: Jake Ferenz

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: Finish Time:
							☒	5			Top Soil: Brown, fine, unconsolidated, dry
											Clay: Brown, fine, unconsolidated
							☒	10			Caliche: White to tan, weathered, dense
							☒	15			
								20			Caliche: Brown to tan, sandstone in matrix
							☒	25			Sand: Brown to tan, very fine grain, unconsolidated, interbedded with well cemented very fine grain sandstone, with broken caliche in matrix
								30			
							☒	35			TD = 35-Feet
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Water First Noted

Analyzed Sample

Appendix D

Soil Laboratory Analytical Report

Analytical Report 490605

for

Conestoga Rovers & Associates

Project Manager: Jacob Ferenz

LPU#10

086497

19-AUG-14

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

19-AUG-14

Project Manager: **Jacob Ferenz**
Conestoga Rovers & Associates
2135 S Loop 250 W
Midland, TX 79703

Reference: XENCO Report No(s): **490605**
LPU#10
Project Address: Lea County,NM

Jacob Ferenz:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 490605. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 490605 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Sample Cross Reference 490605

Conestoga Rovers & Associates, Midland, TX

LPU#10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
086497-SB-1	S	07-29-14 10:05	- 5 ft	490605-001
086497-SB-1	S	07-29-14 10:07	- 10 ft	490605-002
086497-SB-1	S	07-29-14 10:10	- 15 ft	490605-003
086497-SB-1	S	07-29-14 10:15	- 25 ft	490605-004
086497-SB-1	S	07-29-14 10:20	- 35 ft	490605-005
086497-SB-2	S	07-29-14 10:27	- 5 ft	490605-006
086497-SB-2	S	07-29-14 10:28	- 10 ft	490605-007
086497-SB-2	S	07-29-14 10:30	- 15 ft	490605-008
086497-SB-2	S	07-29-14 10:37	- 25 ft	490605-009
086497-SB-2	S	07-29-14 10:40	- 35 ft	490605-010
086497-SB-3	S	07-29-14 11:05	- 5 ft	490605-011
086497-SB-3	S	07-29-14 11:07	- 10 ft	490605-012
086497-SB-3	S	07-29-14 11:10	- 15 ft	490605-013
086497-SB-3	S	07-29-14 11:15	- 20 ft	490605-014
086497-SB-3	S	07-29-14 11:20	- 35 ft	490605-015
086497-SB-4	S	07-29-14 11:37	- 5 ft	490605-016
086497-SB-4	S	07-29-14 11:39	- 10 ft	490605-017
086497-SB-4	S	07-29-14 11:40	- 15 ft	490605-018
086497-SB-4	S	07-29-14 11:44	- 25 ft	490605-019
086497-SB-4	S	07-29-14 11:44	- 35 ft	490605-020
086497-SB-6	S	07-29-14 12:46	- 5 ft	490605-021
086497-SB-6	S	07-29-14 12:48	- 10 ft	490605-022
086497-SB-6	S	07-29-14 12:50	- 15 ft	490605-023
086497-SB-6	S	07-29-14 12:54	- 25 ft	490605-024
086497-SB-6	S	07-29-14 12:58	- 35 ft	490605-025
086497-SB-5	S	07-29-14 12:07	- 5 ft	490605-026
086497-SB-5	S	07-29-14 12:09	- 10 ft	490605-027
086497-SB-5	S	07-29-14 12:11	- 15 ft	490605-028
086497-SB-5	S	07-29-14 12:15	- 25 ft	490605-029
086497-SB-5	S	07-29-14 12:19	- 35 ft	490605-030
086497-SB-5	S	07-29-14 12:30	- 45 ft	490605-031
086497-SB-7	S	07-29-14 13:07	- 5 ft	490605-032
086497-SB-7	S	07-29-14 13:09	- 10 ft	490605-033
086497-SB-7	S	07-29-14 13:11	- 15 ft	490605-034
086497-SB-7	S	07-29-14 13:15	- 25 ft	490605-035
086497-SB-7	S	07-29-14 13:19	- 35 ft	490605-036
086497-SB-8	S	07-29-14 13:31	- 5 ft	490605-037
086497-SB-8	S	07-29-14 13:33	- 10 ft	490605-038
086497-SB-8	S	07-29-14 13:35	- 15 ft	490605-039
086497-SB-8	S	07-29-14 13:39	- 25 ft	490605-040
086497-SB-8	S	07-29-14 13:43	- 35 ft	490605-041
086497-SB-9	S	07-29-14 14:26	- 5 ft	490605-042
086497-SB-9	S	07-29-14 14:28	- 10 ft	490605-043

Sample Cross Reference 490605

Conestoga Rovers & Associates, Midland, TX

LPU#10

086497-SB-9	S	07-29-14 14:30	- 15 ft	490605-044
086497-SB-9	S	07-29-14 14:34	- 25 ft	490605-045
086497-SB-9	S	07-29-14 14:38	- 35 ft	490605-046

CASE NARRATIVE

Client Name: Conestoga Rovers & Associates

Project Name: LPU#10

Project ID:	*086497*	Report Date:	*19-AUG-14*
Work Order Number(s):	*490605*	Date Received:	*07/31/2014*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

XENCO Laboratories

Certificate of Analysis Summary 490605

Conestoga Rovers & Associates, Midland, TX

Project Name: LPU#10

Project Id: 086497
Contact: Jacob Ferenz
Project Location: Lea County,NM

Date Received in Lab: Thu Jul-31-14 04:15 pm
Report Date: 19-AUG-14
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	490605-001		490605-002		490605-003		490605-004		490605-005		490605-006	
	Field Id:	086497-SB-1		086497-SB-1		086497-SB-1		086497-SB-1		086497-SB-1		086497-SB-2	
	Depth:	5 ft		10 ft		15 ft		25 ft		35 ft		5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-29-14 10:05		Jul-29-14 10:07		Jul-29-14 10:10		Jul-29-14 10:15		Jul-29-14 10:20		Jul-29-14 10:27	
BTEX by EPA 8021B	Extracted:	Aug-07-14 15:00		Aug-07-14 15:00		Aug-07-14 15:00		Aug-07-14 15:00		Aug-07-14 15:00		Aug-07-14 15:00	
	Analyzed:	Aug-08-14 00:04		Aug-08-14 00:21		Aug-08-14 00:37		Aug-08-14 01:27		Aug-08-14 01:43		Aug-08-14 01:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00106	ND	0.00106	ND	0.00107	ND	0.00102	ND	0.00106	ND	0.00105
Toluene		ND	0.00212	ND	0.00212	ND	0.00215	ND	0.00205	ND	0.00212	ND	0.00211
Ethylbenzene		ND	0.00106	ND	0.00106	ND	0.00107	ND	0.00102	ND	0.00106	ND	0.00105
m,p-Xylenes		ND	0.00212	ND	0.00212	ND	0.00215	ND	0.00205	ND	0.00212	ND	0.00211
o-Xylene		ND	0.00106	ND	0.00106	ND	0.00107	ND	0.00102	ND	0.00106	ND	0.00105
Total Xylenes		ND	0.00106	ND	0.00106	ND	0.00107	ND	0.00102	ND	0.00106	ND	0.00105
Total BTEX		ND	0.00106	ND	0.00106	ND	0.00107	ND	0.00102	ND	0.00106	ND	0.00105
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00	
	Analyzed:	Aug-06-14 15:18		Aug-06-14 15:41		Aug-06-14 16:03		Aug-06-14 16:26		Aug-06-14 17:11		Aug-06-14 17:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		356	21.4	557	42.6	601	43.0	131	10.3	211	21.3	208	21.1
Percent Moisture	Extracted:												
	Analyzed:	Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		6.35	1.00	6.08	1.00	6.97	1.00	3.12	1.00	5.96	1.00	5.43	1.00
TPH By SW8015 Mod	Extracted:	Aug-08-14 18:00		Aug-08-14 18:00		Aug-08-14 18:00		Aug-08-14 18:00		Aug-08-14 18:00		Aug-08-14 18:00	
	Analyzed:	Aug-09-14 03:04		Aug-09-14 04:19		Aug-09-14 04:46		Aug-09-14 05:11		Aug-09-14 05:35		Aug-09-14 05:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.0	ND	15.9	ND	16.1	ND	15.5	ND	15.9	ND	15.8
C12-C28 Diesel Range Hydrocarbons		ND	16.0	31.8	15.9	ND	16.1	ND	15.5	ND	15.9	ND	15.8
C28-C35 Oil Range Hydrocarbons		ND	16.0	ND	15.9	ND	16.1	ND	15.5	ND	15.9	ND	15.8
Total TPH		ND	16.0	31.8	15.9	ND	16.1	ND	15.5	ND	15.9	ND	15.8

Kelsey Brooks
Project Manager

Final 1.000

XENCO Laboratories

Certificate of Analysis Summary 490605

Conestoga Rovers & Associates, Midland, TX

Project Name: LPU#10

Project Id: 086497
Contact: Jacob Ferenz
Project Location: Lea County,NM

Date Received in Lab: Thu Jul-31-14 04:15 pm
Report Date: 19-AUG-14
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	490605-007		490605-008		490605-009		490605-010		490605-011		490605-012	
	Field Id:	086497-SB-2		086497-SB-2		086497-SB-2		086497-SB-2		086497-SB-3		086497-SB-3	
	Depth:	10 ft		15 ft		25 ft		35 ft		5 ft		10 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-29-14 10:28		Jul-29-14 10:30		Jul-29-14 10:37		Jul-29-14 10:40		Jul-29-14 11:05		Jul-29-14 11:07	
BTEX by EPA 8021B	Extracted:	Aug-07-14 15:00		Aug-07-14 15:00		Aug-07-14 15:00		Aug-07-14 15:00		Aug-07-14 15:00		Aug-07-14 15:00	
	Analyzed:	Aug-08-14 02:15		Aug-08-14 02:31		Aug-08-14 02:48		Aug-08-14 03:04		Aug-08-14 03:21		Aug-08-14 03:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00110	ND	0.00107	ND	0.00103	ND	0.00106	ND	0.00106	ND	0.00103
Toluene		ND	0.00220	ND	0.00213	ND	0.00207	ND	0.00211	ND	0.00213	ND	0.00207
Ethylbenzene		ND	0.00110	ND	0.00107	ND	0.00103	ND	0.00106	ND	0.00106	ND	0.00103
m,p-Xylenes		ND	0.00220	ND	0.00213	ND	0.00207	ND	0.00211	ND	0.00213	ND	0.00207
o-Xylene		ND	0.00110	ND	0.00107	ND	0.00103	ND	0.00106	ND	0.00106	ND	0.00103
Total Xylenes		ND	0.00110	ND	0.00107	ND	0.00103	ND	0.00106	ND	0.00106	ND	0.00103
Total BTEX		ND	0.00110	ND	0.00107	ND	0.00103	ND	0.00106	ND	0.00106	ND	0.00103
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00	
	Analyzed:	Aug-06-14 17:57		Aug-06-14 19:05		Aug-06-14 19:27		Aug-06-14 19:50		Aug-06-14 20:13		Aug-06-14 20:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		212	22.0	202	21.4	100	10.3	139	10.6	465	21.4	328	20.8
Percent Moisture	Extracted:												
	Analyzed:	Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.08	1.00	6.33	1.00	3.18	1.00	5.63	1.00	6.34	1.00	3.72	1.00
TPH By SW8015 Mod	Extracted:	Aug-08-14 18:00		Aug-07-14 18:00		Aug-07-14 18:00		Aug-06-14 17:00		Aug-06-14 17:00		Aug-06-14 17:00	
	Analyzed:	Aug-09-14 06:23		Aug-08-14 01:47		Aug-08-14 02:13		Aug-06-14 20:58		Aug-06-14 21:22		Aug-06-14 21:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.5	ND	16.0	ND	15.5	ND	15.8	ND	16.0	ND	15.5
C12-C28 Diesel Range Hydrocarbons		ND	16.5	ND	16.0	ND	15.5	ND	15.8	ND	16.0	ND	15.5
C28-C35 Oil Range Hydrocarbons		ND	16.5	ND	16.0	ND	15.5	ND	15.8	ND	16.0	ND	15.5
Total TPH		ND	16.5	ND	16.0	ND	15.5	ND	15.8	ND	16.0	ND	15.5

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 490605

Conestoga Rovers & Associates, Midland, TX

Project Name: LPU#10

Project Id: 086497
Contact: Jacob Ferenz
Project Location: Lea County,NM

Date Received in Lab: Thu Jul-31-14 04:15 pm
Report Date: 19-AUG-14
Project Manager: Kelsey Brooks

Analysis Requested		490605-013		490605-014		490605-015		490605-016		490605-017		490605-018	
	Field Id:	086497-SB-3		086497-SB-3		086497-SB-3		086497-SB-4		086497-SB-4		086497-SB-4	
	Depth:	15 ft		20 ft		35 ft		5 ft		10 ft		15 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-29-14 11:10		Jul-29-14 11:15		Jul-29-14 11:20		Jul-29-14 11:37		Jul-29-14 11:39		Jul-29-14 11:40	
BTEX by EPA 8021B	Extracted:	Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00	
	Analyzed:	Aug-08-14 12:43		Aug-08-14 13:00		Aug-08-14 13:17		Aug-08-14 13:33		Aug-08-14 13:50		Aug-08-14 14:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00106	ND	0.00103	ND	0.00105	ND	0.00109	ND	0.00109	ND	0.00108
Toluene		ND	0.00212	ND	0.00206	ND	0.00210	ND	0.00218	ND	0.00218	ND	0.00216
Ethylbenzene		ND	0.00106	ND	0.00103	ND	0.00105	ND	0.00109	ND	0.00109	ND	0.00108
m,p-Xylenes		ND	0.00212	ND	0.00206	ND	0.00210	ND	0.00218	ND	0.00218	ND	0.00216
o-Xylene		ND	0.00106	ND	0.00103	ND	0.00105	ND	0.00109	ND	0.00109	ND	0.00108
Total Xylenes		ND	0.00106	ND	0.00103	ND	0.00105	ND	0.00109	ND	0.00109	ND	0.00108
Total BTEX		ND	0.00106	ND	0.00103	ND	0.00105	ND	0.00109	ND	0.00109	ND	0.00108
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-05-14 15:00		Aug-06-14 17:45		Aug-06-14 17:45		Aug-06-14 17:45		Aug-06-14 17:45		Aug-06-14 17:45	
	Analyzed:	Aug-06-14 20:58		Aug-07-14 04:54		Aug-07-14 05:16		Aug-07-14 05:39		Aug-07-14 06:01		Aug-07-14 07:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		328	21.3	116	10.4	79.8	10.6	512	43.8	950	43.7	882	43.2
Percent Moisture	Extracted:												
	Analyzed:	Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-05-14 15:00		Aug-07-14 00:00		Aug-07-14 00:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		5.98	1.00	3.48	1.00	5.22	1.00	8.58	1.00	8.41	1.00	7.39	1.00
TPH By SW8015 Mod	Extracted:	Aug-06-14 17:00		Aug-06-14 17:00		Aug-06-14 17:00		Aug-06-14 17:00		Aug-06-14 17:00		Aug-06-14 17:00	
	Analyzed:	Aug-06-14 22:10		Aug-06-14 22:34		Aug-06-14 22:59		Aug-06-14 23:25		Aug-06-14 23:53		Aug-07-14 00:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.9	ND	15.5	ND	15.8	ND	16.4	ND	16.3	ND	16.2
C12-C28 Diesel Range Hydrocarbons		ND	15.9	ND	15.5	ND	15.8	ND	16.4	ND	16.3	ND	16.2
C28-C35 Oil Range Hydrocarbons		ND	15.9	ND	15.5	ND	15.8	ND	16.4	ND	16.3	ND	16.2
Total TPH		ND	15.9	ND	15.5	ND	15.8	ND	16.4	ND	16.3	ND	16.2

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Final 1.000

XENCO Laboratories

Certificate of Analysis Summary 490605

Conestoga Rovers & Associates, Midland, TX

Project Name: LPU#10

Project Id: 086497
Contact: Jacob Ferenz
Project Location: Lea County,NM

Date Received in Lab: Thu Jul-31-14 04:15 pm
Report Date: 19-AUG-14
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	490605-019		490605-020		490605-021		490605-022		490605-023		490605-024	
	Field Id:	086497-SB-4		086497-SB-4		086497-SB-6		086497-SB-6		086497-SB-6		086497-SB-6	
	Depth:	25 ft		35 ft		5 ft		10 ft		15 ft		25 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-29-14 11:44		Jul-29-14 11:44		Jul-29-14 12:46		Jul-29-14 12:48		Jul-29-14 12:50		Jul-29-14 12:54	
BTEX by EPA 8021B	Extracted:	Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00	
	Analyzed:	Aug-08-14 14:25		Aug-08-14 14:41		Aug-08-14 16:05		Aug-08-14 16:21		Aug-08-14 16:38		Aug-08-14 16:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00104	ND	0.00106	ND	0.00111	ND	0.00110	ND	0.00109	ND	0.00104
Toluene		ND	0.00207	ND	0.00212	ND	0.00222	ND	0.00221	ND	0.00219	ND	0.00209
Ethylbenzene		ND	0.00104	ND	0.00106	ND	0.00111	ND	0.00110	ND	0.00109	ND	0.00104
m,p-Xylenes		ND	0.00207	ND	0.00212	ND	0.00222	ND	0.00221	ND	0.00219	ND	0.00209
o-Xylene		ND	0.00104	ND	0.00106	ND	0.00111	ND	0.00110	ND	0.00109	ND	0.00104
Total Xylenes		ND	0.00104	ND	0.00106	ND	0.00111	ND	0.00110	ND	0.00109	ND	0.00104
Total BTEX		ND	0.00104	ND	0.00106	ND	0.00111	ND	0.00110	ND	0.00109	ND	0.00104
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-06-14 17:45		Aug-06-14 17:45		Aug-06-14 17:45		Aug-06-14 17:45		Aug-07-14 11:30		Aug-07-14 11:30	
	Analyzed:	Aug-07-14 07:32		Aug-07-14 07:55		Aug-07-14 08:17		Aug-07-14 08:40		Aug-07-14 14:56		Aug-07-14 15:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		35.2	2.08	15.6	2.13	332	44.4	144	11.1	27.6	11.0	51.6	10.5
Percent Moisture	Extracted:												
	Analyzed:	Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		3.80	1.00	6.11	1.00	9.93	1.00	9.68	1.00	9.27	1.00	4.70	1.00
TPH By SW8015 Mod	Extracted:	Aug-06-14 17:00		Aug-06-14 17:00		Aug-06-14 17:00		Aug-06-14 17:00		Aug-06-14 17:00		Aug-06-14 17:00	
	Analyzed:	Aug-07-14 01:28		Aug-07-14 02:16		Aug-07-14 02:41		Aug-07-14 03:05		Aug-07-14 03:30		Aug-07-14 03:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.6	ND	15.9	ND	16.6	ND	16.6	ND	16.5	ND	15.7
C12-C28 Diesel Range Hydrocarbons		ND	15.6	ND	15.9	ND	16.6	ND	16.6	ND	16.5	ND	15.7
C28-C35 Oil Range Hydrocarbons		ND	15.6	ND	15.9	ND	16.6	ND	16.6	ND	16.5	ND	15.7
Total TPH		ND	15.6	ND	15.9	ND	16.6	ND	16.6	ND	16.5	ND	15.7

Kelsey Brooks
Project Manager

Final 1.000

XENCO Laboratories

Certificate of Analysis Summary 490605

Conestoga Rovers & Associates, Midland, TX

Project Name: LPU#10

Project Id: 086497
Contact: Jacob Ferenz
Project Location: Lea County,NM

Date Received in Lab: Thu Jul-31-14 04:15 pm
Report Date: 19-AUG-14
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	490605-025		490605-026		490605-027		490605-028		490605-029		490605-030	
	Field Id:	086497-SB-6		086497-SB-5		086497-SB-5		086497-SB-5		086497-SB-5		086497-SB-5	
	Depth:	35 ft		5 ft		10 ft		15 ft		25 ft		35 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-29-14 12:58		Jul-29-14 12:07		Jul-29-14 12:09		Jul-29-14 12:11		Jul-29-14 12:15		Jul-29-14 12:19	
BTEX by EPA 8021B	Extracted:	Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00		Aug-08-14 09:00	
	Analyzed:	Aug-08-14 17:11		Aug-08-14 17:28		Aug-08-14 17:44		Aug-08-14 18:01		Aug-08-14 18:17		Aug-08-14 18:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00105	ND	0.00105	ND	0.00109	ND	0.00107	ND	0.00104	ND	0.00105
Toluene		ND	0.00211	ND	0.00210	ND	0.00217	ND	0.00215	ND	0.00208	ND	0.00210
Ethylbenzene		ND	0.00105	ND	0.00105	ND	0.00109	ND	0.00107	ND	0.00104	ND	0.00105
m,p-Xylenes		ND	0.00211	ND	0.00210	ND	0.00217	ND	0.00215	ND	0.00208	ND	0.00210
o-Xylene		ND	0.00105	ND	0.00105	ND	0.00109	ND	0.00107	ND	0.00104	ND	0.00105
Total Xylenes		ND	0.00105	ND	0.00105	ND	0.00109	ND	0.00107	ND	0.00104	ND	0.00105
Total BTEX		ND	0.00105	ND	0.00105	ND	0.00109	ND	0.00107	ND	0.00104	ND	0.00105
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30	
	Analyzed:	Aug-07-14 15:41		Aug-07-14 16:04		Aug-07-14 16:27		Aug-07-14 18:00		Aug-07-14 18:23		Aug-07-14 18:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		55.6	10.6	676	105	548	43.6	355	21.6	151	10.4	308	21.1
Percent Moisture	Extracted:												
	Analyzed:	Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		5.56	1.00	4.89	1.00	8.22	1.00	7.45	1.00	3.90	1.00	5.06	1.00
TPH By SW8015 Mod	Extracted:	Aug-06-14 17:00		Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00	
	Analyzed:	Aug-07-14 04:19		Aug-07-14 13:25		Aug-07-14 14:43		Aug-07-14 15:09		Aug-07-14 15:35		Aug-07-14 16:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.9	ND	15.7	ND	16.3	ND	16.1	ND	15.5	ND	15.8
C12-C28 Diesel Range Hydrocarbons		ND	15.9	ND	15.7	ND	16.3	ND	16.1	ND	15.5	ND	15.8
C28-C35 Oil Range Hydrocarbons		ND	15.9	ND	15.7	ND	16.3	ND	16.1	ND	15.5	ND	15.8
Total TPH		ND	15.9	ND	15.7	ND	16.3	ND	16.1	ND	15.5	ND	15.8

Kelsey Brooks
Project Manager

Final 1.000

XENCO Laboratories

Certificate of Analysis Summary 490605

Conestoga Rovers & Associates, Midland, TX

Project Name: LPU#10

Project Id: 086497
Contact: Jacob Ferenz
Project Location: Lea County,NM

Date Received in Lab: Thu Jul-31-14 04:15 pm
Report Date: 19-AUG-14
Project Manager: Kelsey Brooks

Analysis Requested		Lab Id:	490605-031		490605-032		490605-033		490605-034		490605-035		490605-036	
		Field Id:	086497-SB-5		086497-SB-7		086497-SB-7		086497-SB-7		086497-SB-7		086497-SB-7	
		Depth:	45 ft		5 ft		10 ft		15 ft		25 ft		35 ft	
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sampled:	Jul-29-14 12:30		Jul-29-14 13:07		Jul-29-14 13:09		Jul-29-14 13:11		Jul-29-14 13:15		Jul-29-14 13:19	
BTEX by EPA 8021B	Extracted:	Aug-08-14 16:00		Aug-08-14 16:00		Aug-08-14 16:00		Aug-08-14 16:00		Aug-08-14 16:00		Aug-08-14 16:00	
	Analyzed:	Aug-08-14 18:50		Aug-08-14 19:07		Aug-08-14 21:51		Aug-08-14 22:07		Aug-08-14 22:24		Aug-08-14 22:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00105	ND	0.00110	ND	0.00112	ND	0.00107	ND	0.00104	ND	0.00105
Toluene		ND	0.00210	ND	0.00221	ND	0.00225	ND	0.00214	ND	0.00208	ND	0.00209
Ethylbenzene		ND	0.00105	ND	0.00110	ND	0.00112	ND	0.00107	ND	0.00104	ND	0.00105
m,p-Xylenes		ND	0.00210	ND	0.00221	ND	0.00225	ND	0.00214	ND	0.00208	ND	0.00209
o-Xylene		ND	0.00105	ND	0.00110	ND	0.00112	ND	0.00107	ND	0.00104	ND	0.00105
Total Xylenes		ND	0.00105	ND	0.00110	ND	0.00112	ND	0.00107	ND	0.00104	ND	0.00105
Total BTEX		ND	0.00105	ND	0.00110	ND	0.00112	ND	0.00107	ND	0.00104	ND	0.00105
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30	
	Analyzed:	Aug-07-14 19:08		Aug-07-14 19:31		Aug-07-14 19:53		Aug-07-14 20:38		Aug-07-14 21:01		Aug-07-14 22:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		84.1	10.5	51.8	11.1	10.1	2.26	20.3	2.14	6.57	2.10	6.22	2.11
Percent Moisture	Extracted:												
	Analyzed:	Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		4.96	1.00	9.68	1.00	11.3	1.00	6.71	1.00	4.73	1.00	5.01	1.00
TPH By SW8015 Mod	Extracted:	Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00	
	Analyzed:	Aug-07-14 17:19		Aug-07-14 17:43		Aug-07-14 18:09		Aug-07-14 18:33		Aug-07-14 18:57		Aug-07-14 19:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.7	ND	16.6	ND	16.9	ND	16.1	ND	15.7	ND	15.8
C12-C28 Diesel Range Hydrocarbons		ND	15.7	ND	16.6	ND	16.9	ND	16.1	ND	15.7	ND	15.8
C28-C35 Oil Range Hydrocarbons		ND	15.7	ND	16.6	ND	16.9	ND	16.1	ND	15.7	ND	15.8
Total TPH		ND	15.7	ND	16.6	ND	16.9	ND	16.1	ND	15.7	ND	15.8

Kelsey Brooks
Project Manager

XENCO Laboratories

Certificate of Analysis Summary 490605

Conestoga Rovers & Associates, Midland, TX

Project Name: LPU#10

Project Id: 086497
Contact: Jacob Ferenz
Project Location: Lea County,NM

Date Received in Lab: Thu Jul-31-14 04:15 pm
Report Date: 19-AUG-14
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	490605-037		490605-038		490605-039		490605-040		490605-041		490605-042	
	Field Id:	086497-SB-8		086497-SB-8		086497-SB-8		086497-SB-8		086497-SB-8		086497-SB-9	
	Depth:	5 ft		10 ft		15 ft		25 ft		35 ft		5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-29-14 13:31		Jul-29-14 13:33		Jul-29-14 13:35		Jul-29-14 13:39		Jul-29-14 13:43		Jul-29-14 14:26	
BTEX by EPA 8021B	Extracted:	Aug-08-14 16:00		Aug-08-14 16:00		Aug-08-14 16:00		Aug-08-14 16:00		Aug-08-14 16:00		Aug-08-14 16:00	
	Analyzed:	Aug-08-14 22:55		Aug-08-14 23:12		Aug-08-14 23:28		Aug-08-14 23:45		Aug-09-14 00:33		Aug-09-14 00:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00112	ND	0.00111	ND	0.00106	ND	0.00106	ND	0.00106	ND	0.00102
Toluene		ND	0.00224	ND	0.00222	ND	0.00213	ND	0.00211	ND	0.00211	ND	0.00204
Ethylbenzene		ND	0.00112	ND	0.00111	ND	0.00106	ND	0.00106	ND	0.00106	ND	0.00102
m,p-Xylenes		ND	0.00224	ND	0.00222	ND	0.00213	ND	0.00211	ND	0.00211	ND	0.00204
o-Xylene		ND	0.00112	ND	0.00111	ND	0.00106	ND	0.00106	ND	0.00106	ND	0.00102
Total Xylenes		ND	0.00112	ND	0.00111	ND	0.00106	ND	0.00106	ND	0.00106	ND	0.00102
Total BTEX		ND	0.00112	ND	0.00111	ND	0.00106	ND	0.00106	ND	0.00106	ND	0.00102
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 11:30		Aug-07-14 17:00	
	Analyzed:	Aug-07-14 22:32		Aug-07-14 22:54		Aug-07-14 23:17		Aug-07-14 23:40		Aug-08-14 00:02		Aug-08-14 05:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		33.9	2.24	7.68	2.23	4.37	2.14	3.32	2.12	3.49	2.13	298	20.5
Percent Moisture	Extracted:												
	Analyzed:	Aug-05-14 16:10		Aug-05-14 16:10		Aug-05-14 16:10		Aug-05-14 16:10		Aug-07-14 00:00		Aug-07-14 00:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		10.9	1.00	10.3	1.00	6.35	1.00	5.76	1.00	5.93	1.00	2.28	1.00
TPH By SW8015 Mod	Extracted:	Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00		Aug-07-14 08:00	
	Analyzed:	Aug-07-14 20:08		Aug-07-14 20:32		Aug-07-14 20:56		Aug-07-14 21:20		Aug-07-14 21:44		Aug-07-14 22:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.8	ND	16.7	ND	16.0	ND	15.9	ND	15.9	ND	15.3
C12-C28 Diesel Range Hydrocarbons		ND	16.8	ND	16.7	ND	16.0	ND	15.9	ND	15.9	22.9	15.3
C28-C35 Oil Range Hydrocarbons		ND	16.8	ND	16.7	ND	16.0	ND	15.9	ND	15.9	ND	15.3
Total TPH		ND	16.8	ND	16.7	ND	16.0	ND	15.9	ND	15.9	22.9	15.3

Kelsey Brooks
Project Manager

XENCO Laboratories

Certificate of Analysis Summary 490605

Conestoga Rovers & Associates, Midland, TX

Project Name: LPU#10

Project Id: 086497
Contact: Jacob Ferenz
Project Location: Lea County,NM

Date Received in Lab: Thu Jul-31-14 04:15 pm
Report Date: 19-AUG-14
Project Manager: Kelsey Brooks

Analysis Requested															
	Lab Id:	490605-043		490605-044		490605-045		490605-046							
	Field Id:	086497-SB-9		086497-SB-9		086497-SB-9		086497-SB-9							
	Depth:	10 ft		15 ft		25 ft		35 ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL							
	Sampled:	Jul-29-14 14:28		Jul-29-14 14:30		Jul-29-14 14:34		Jul-29-14 14:38							
BTEX by EPA 8021B	Extracted:	Aug-08-14 16:00		Aug-08-14 16:00		Aug-08-14 16:00		Aug-08-14 16:00							
	Analyzed:	Aug-09-14 01:06		Aug-09-14 01:22		Aug-09-14 01:38		Aug-09-14 01:55							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		ND	0.00110	ND	0.00105	ND	0.00107	ND	0.00106						
Toluene		ND	0.00220	ND	0.00211	ND	0.00214	ND	0.00212						
Ethylbenzene		ND	0.00110	ND	0.00105	ND	0.00107	ND	0.00106						
m,p-Xylenes		ND	0.00220	ND	0.00211	ND	0.00214	ND	0.00212						
o-Xylene		ND	0.00110	ND	0.00105	ND	0.00107	ND	0.00106						
Total Xylenes		ND	0.00110	ND	0.00105	ND	0.00107	ND	0.00106						
Total BTEX		ND	0.00110	ND	0.00105	ND	0.00107	ND	0.00106						
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-07-14 17:00		Aug-07-14 17:00		Aug-07-14 17:00		Aug-07-14 17:00							
	Analyzed:	Aug-08-14 06:27		Aug-08-14 06:50		Aug-08-14 07:13		Aug-08-14 07:35							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		3.81	2.21	4.04	2.12	6.17	2.14	4.02	2.13						
Percent Moisture	Extracted:														
	Analyzed:	Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00		Aug-07-14 00:00							
	Units/RL:	%	RL	%	RL	%	RL	%	RL						
Percent Moisture		9.46	1.00	5.50	1.00	6.58	1.00	6.12	1.00						
TPH By SW8015 Mod	Extracted:	Aug-07-14 08:00		Aug-07-14 18:00		Aug-07-14 18:00		Aug-07-14 18:00							
	Analyzed:	Aug-07-14 22:31		Aug-07-14 22:55		Aug-07-14 23:19		Aug-08-14 02:40							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
C6-C12 Gasoline Range Hydrocarbons		ND	16.5	ND	15.9	ND	16.0	ND	15.9						
C12-C28 Diesel Range Hydrocarbons		ND	16.5	ND	15.9	ND	16.0	ND	15.9						
C28-C35 Oil Range Hydrocarbons		ND	16.5	ND	15.9	ND	16.0	ND	15.9						
Total TPH		ND	16.5	ND	15.9	ND	16.0	ND	15.9						

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947562 **Sample:** 490605-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/06/14 20:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.6	99.7	90	70-135	
o-Terphenyl	44.5	49.9	89	70-135	

Lab Batch #: 947562 **Sample:** 490605-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/06/14 21:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.6	99.8	92	70-135	
o-Terphenyl	46.5	49.9	93	70-135	

Lab Batch #: 947562 **Sample:** 490605-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/06/14 21:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.6	99.8	91	70-135	
o-Terphenyl	45.3	49.9	91	70-135	

Lab Batch #: 947562 **Sample:** 490605-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/06/14 22:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.2	99.8	90	70-135	
o-Terphenyl	45.5	49.9	91	70-135	

Lab Batch #: 947562 **Sample:** 490605-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/06/14 22:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.0	99.9	90	70-135	
o-Terphenyl	45.1	50.0	90	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947562 **Sample:** 490605-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/06/14 22:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.2	99.6	95	70-135	
o-Terphenyl	46.9	49.8	94	70-135	

Lab Batch #: 947562 **Sample:** 490605-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/06/14 23:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.4	99.8	91	70-135	
o-Terphenyl	46.2	49.9	93	70-135	

Lab Batch #: 947562 **Sample:** 490605-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/06/14 23:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.6	99.7	89	70-135	
o-Terphenyl	44.7	49.9	90	70-135	

Lab Batch #: 947562 **Sample:** 490605-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 00:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.3	99.9	92	70-135	
o-Terphenyl	46.2	50.0	92	70-135	

Lab Batch #: 947562 **Sample:** 490605-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 01:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.7	99.8	95	70-135	
o-Terphenyl	47.5	49.9	95	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947562 **Sample:** 490605-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 02:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.9	99.8	89	70-135	
o-Terphenyl	43.1	49.9	86	70-135	

Lab Batch #: 947562 **Sample:** 490605-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 02:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	99.9	94	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 947562 **Sample:** 490605-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 03:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	99.7	96	70-135	
o-Terphenyl	47.9	49.9	96	70-135	

Lab Batch #: 947562 **Sample:** 490605-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 03:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.2	99.6	93	70-135	
o-Terphenyl	45.9	49.8	92	70-135	

Lab Batch #: 947562 **Sample:** 490605-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 03:54

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.0	99.8	97	70-135	
o-Terphenyl	47.6	49.9	95	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947562 **Sample:** 490605-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 04:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	99.9	94	70-135	
o-Terphenyl	46.2	50.0	92	70-135	

Lab Batch #: 947577 **Sample:** 490605-026 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 13:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.6	99.8	92	70-135	
o-Terphenyl	51.6	49.9	103	70-135	

Lab Batch #: 947577 **Sample:** 490605-027 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 14:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	99.9	90	70-135	
o-Terphenyl	50.2	50.0	100	70-135	

Lab Batch #: 947577 **Sample:** 490605-028 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 15:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.7	99.6	91	70-135	
o-Terphenyl	50.6	49.8	102	70-135	

Lab Batch #: 947577 **Sample:** 490605-029 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 15:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.0	99.6	90	70-135	
o-Terphenyl	48.3	49.8	97	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947577 **Sample:** 490605-030 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 16:01

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.0	99.8	94	70-135	
o-Terphenyl	52.3	49.9	105	70-135	

Lab Batch #: 947577 **Sample:** 490605-031 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 17:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.9	99.7	90	70-135	
o-Terphenyl	50.3	49.9	101	70-135	

Lab Batch #: 947577 **Sample:** 490605-032 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 17:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.0	99.8	93	70-135	
o-Terphenyl	51.4	49.9	103	70-135	

Lab Batch #: 947577 **Sample:** 490605-033 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 18:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	99.8	96	70-135	
o-Terphenyl	51.8	49.9	104	70-135	

Lab Batch #: 947577 **Sample:** 490605-034 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 18:33

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.8	100	86	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947577 **Sample:** 490605-035 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 18:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.5	99.7	99	70-135	
o-Terphenyl	54.0	49.9	108	70-135	

Lab Batch #: 947577 **Sample:** 490605-036 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 19:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.5	99.9	87	70-135	
o-Terphenyl	47.2	50.0	94	70-135	

Lab Batch #: 947577 **Sample:** 490605-037 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 20:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.1	99.9	86	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 947577 **Sample:** 490605-038 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 20:32

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.1	99.6	91	70-135	
o-Terphenyl	49.1	49.8	99	70-135	

Lab Batch #: 947577 **Sample:** 490605-039 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 20:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.7	99.9	90	70-135	
o-Terphenyl	49.4	50.0	99	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947577 **Sample:** 490605-040 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 21:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.2	99.7	90	70-135	
o-Terphenyl	48.9	49.9	98	70-135	

Lab Batch #: 947577 **Sample:** 490605-041 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 21:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.9	99.8	91	70-135	
o-Terphenyl	50.3	49.9	101	70-135	

Lab Batch #: 947577 **Sample:** 490605-042 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 22:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.9	99.8	87	70-135	
o-Terphenyl	48.0	49.9	96	70-135	

Lab Batch #: 947577 **Sample:** 490605-043 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 22:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.8	99.8	92	70-135	
o-Terphenyl	52.3	49.9	105	70-135	

Lab Batch #: 947694 **Sample:** 490605-044 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 22:55

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.6	99.9	90	70-135	
o-Terphenyl	50.4	50.0	101	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947694 **Sample:** 490605-045 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 23:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.3	99.9	94	70-135	
o-Terphenyl	53.2	50.0	106	70-135	

Lab Batch #: 947828 **Sample:** 490605-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 00:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 947828 **Sample:** 490605-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 00:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 947828 **Sample:** 490605-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 00:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 947828 **Sample:** 490605-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 01:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947828 **Sample:** 490605-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 01:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 947694 **Sample:** 490605-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 01:47

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.0	99.7	98	70-135	
o-Terphenyl	55.5	49.9	111	70-135	

Lab Batch #: 947828 **Sample:** 490605-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 01:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 947694 **Sample:** 490605-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 02:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	99.8	90	70-135	
o-Terphenyl	49.7	49.9	100	70-135	

Lab Batch #: 947828 **Sample:** 490605-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 02:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947828 **Sample:** 490605-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 02:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 947694 **Sample:** 490605-046 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 02:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.8	99.7	86	70-135	
o-Terphenyl	48.7	49.9	98	70-135	

Lab Batch #: 947828 **Sample:** 490605-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 02:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 947828 **Sample:** 490605-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 03:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 947828 **Sample:** 490605-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 03:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947828 **Sample:** 490605-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 03:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 947691 **Sample:** 490605-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 12:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 947691 **Sample:** 490605-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 13:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 947691 **Sample:** 490605-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 13:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 947691 **Sample:** 490605-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 13:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947691 **Sample:** 490605-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 13:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 947691 **Sample:** 490605-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 14:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 947691 **Sample:** 490605-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 14:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 947691 **Sample:** 490605-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 14:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 947691 **Sample:** 490605-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 16:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947691 **Sample:** 490605-022 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 16:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 947691 **Sample:** 490605-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 16:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 947691 **Sample:** 490605-024 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 16:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 947691 **Sample:** 490605-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 17:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 947691 **Sample:** 490605-026 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 17:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947691 **Sample:** 490605-027 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 17:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 947691 **Sample:** 490605-028 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 18:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 947691 **Sample:** 490605-029 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 18:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 947691 **Sample:** 490605-030 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 18:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 947829 **Sample:** 490605-031 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 18:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947829 **Sample:** 490605-032 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 19:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 947829 **Sample:** 490605-033 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 21:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 947829 **Sample:** 490605-034 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 22:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 947829 **Sample:** 490605-035 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 22:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 947829 **Sample:** 490605-036 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 22:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947829 **Sample:** 490605-037 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 22:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 947829 **Sample:** 490605-038 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 23:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 947829 **Sample:** 490605-039 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 23:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

Lab Batch #: 947829 **Sample:** 490605-040 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 23:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 947829 **Sample:** 490605-041 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 00:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947829 **Sample:** 490605-042 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 00:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 947829 **Sample:** 490605-043 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 01:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 947829 **Sample:** 490605-044 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 01:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 947829 **Sample:** 490605-045 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 01:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 947829 **Sample:** 490605-046 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 01:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947831 **Sample:** 490605-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 03:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.3	99.7	86	70-135	
o-Terphenyl	47.2	49.9	95	70-135	

Lab Batch #: 947831 **Sample:** 490605-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 04:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.9	99.8	87	70-135	
o-Terphenyl	46.6	49.9	93	70-135	

Lab Batch #: 947831 **Sample:** 490605-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 04:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.8	99.9	89	70-135	
o-Terphenyl	48.9	50.0	98	70-135	

Lab Batch #: 947831 **Sample:** 490605-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 05:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.9	99.8	87	70-135	
o-Terphenyl	46.6	49.9	93	70-135	

Lab Batch #: 947831 **Sample:** 490605-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 05:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.8	99.8	91	70-135	
o-Terphenyl	47.3	49.9	95	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947831 **Sample:** 490605-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 05:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	99.9	90	70-135	
o-Terphenyl	48.3	50.0	97	70-135	

Lab Batch #: 947831 **Sample:** 490605-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 06:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.8	100	88	70-135	
o-Terphenyl	49.0	50.0	98	70-135	

Lab Batch #: 947562 **Sample:** 659597-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/06/14 19:48

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.8	100	92	70-135	
o-Terphenyl	46.3	50.0	93	70-135	

Lab Batch #: 947577 **Sample:** 659607-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/07/14 12:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.3	100	93	70-135	
o-Terphenyl	51.7	50.0	103	70-135	

Lab Batch #: 947828 **Sample:** 659767-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/07/14 20:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947694 **Sample:** 659702-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 00:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	100	93	70-135	
o-Terphenyl	52.1	50.0	104	70-135	

Lab Batch #: 947691 **Sample:** 659697-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 11:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 947829 **Sample:** 659771-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 20:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 947831 **Sample:** 659774-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 20:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.3	100	87	70-135	
o-Terphenyl	48.2	50.0	96	70-135	

Lab Batch #: 947562 **Sample:** 659597-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/06/14 20:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	57.6	50.0	115	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947577 **Sample:** 659607-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/07/14 12:32

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	62.5	50.0	125	70-135	

Lab Batch #: 947828 **Sample:** 659767-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/07/14 20:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 947694 **Sample:** 659702-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 00:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	62.4	50.0	125	70-135	

Lab Batch #: 947691 **Sample:** 659697-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 11:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

Lab Batch #: 947829 **Sample:** 659771-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 20:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947831 **Sample:** 659774-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 21:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	60.6	50.0	121	70-135	

Lab Batch #: 947562 **Sample:** 659597-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/06/14 20:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	59.5	50.0	119	70-135	

Lab Batch #: 947577 **Sample:** 659607-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/07/14 12:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	62.1	50.0	124	70-135	

Lab Batch #: 947828 **Sample:** 659767-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/07/14 21:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 947694 **Sample:** 659702-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 01:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	63.6	50.0	127	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947691 **Sample:** 659697-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 11:37

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	SURROGATE RECOVERY STUDY				
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 947829 **Sample:** 659771-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 20:45

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	SURROGATE RECOVERY STUDY				
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 947831 **Sample:** 659774-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/14 21:45

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	SURROGATE RECOVERY STUDY				
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	60.3	50.0	121	70-135	

Lab Batch #: 947562 **Sample:** 490605-018 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 00:40

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	SURROGATE RECOVERY STUDY				
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	59.6	50.0	119	70-135	

Lab Batch #: 947577 **Sample:** 490605-030 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 16:26

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	SURROGATE RECOVERY STUDY				
1-Chlorooctane	106	99.9	106	70-135	
o-Terphenyl	60.4	50.0	121	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947828 **Sample:** 490605-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 21:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 947694 **Sample:** 490605-046 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 03:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.9	110	70-135	
o-Terphenyl	62.7	50.0	125	70-135	

Lab Batch #: 947691 **Sample:** 490605-018 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 11:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0335	0.0300	112	80-120	

Lab Batch #: 947829 **Sample:** 490605-033 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 21:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 947831 **Sample:** 490605-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 03:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-135	
o-Terphenyl	59.6	49.9	119	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947562 **Sample:** 490605-018 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 01:03

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.9	116	70-135	
o-Terphenyl	62.3	50.0	125	70-135	

Lab Batch #: 947577 **Sample:** 490605-030 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 16:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.9	100	70-135	
o-Terphenyl	64.1	50.0	128	70-135	

Lab Batch #: 947828 **Sample:** 490605-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/07/14 21:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 947694 **Sample:** 490605-046 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 03:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.8	104	70-135	
o-Terphenyl	59.5	49.9	119	70-135	

Lab Batch #: 947691 **Sample:** 490605-018 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 12:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0323	0.0300	108	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: LPU#10

Work Orders : 490605, 490605 **Project ID:** 086497

Lab Batch #: 947829 **Sample:** 490605-033 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/08/14 21:18

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

Lab Batch #: 947831 **Sample:** 490605-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/14 03:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.7	102	70-135	
o-Terphenyl	58.4	49.9	117	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: LPU#10

Work Order #: 490605, 490605 **Project ID:** 086497

Analyst: ARM **Date Prepared:** 08/08/2014 **Date Analyzed:** 08/08/2014

Lab Batch ID: 947691 **Sample:** 659697-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0930	93	0.100	0.0952	95	2	70-130	35	
Toluene	<0.00200	0.100	0.0964	96	0.100	0.0983	98	2	70-130	35	
Ethylbenzene	<0.00100	0.100	0.0994	99	0.100	0.101	101	2	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.200	100	0.200	0.204	102	2	70-135	35	
o-Xylene	<0.00100	0.100	0.0969	97	0.100	0.0987	99	2	71-133	35	

Analyst: ARM **Date Prepared:** 08/07/2014 **Date Analyzed:** 08/07/2014

Lab Batch ID: 947828 **Sample:** 659767-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0898	90	0.100	0.0878	88	2	70-130	35	
Toluene	<0.00200	0.100	0.0912	91	0.100	0.0898	90	2	70-130	35	
Ethylbenzene	<0.00100	0.100	0.0930	93	0.100	0.0913	91	2	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.186	93	0.200	0.183	92	2	70-135	35	
o-Xylene	<0.00100	0.100	0.0917	92	0.100	0.0899	90	2	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: LPU#10

Work Order #: 490605, 490605 **Project ID:** 086497

Analyst: ARM **Date Prepared:** 08/08/2014 **Date Analyzed:** 08/08/2014

Lab Batch ID: 947829 **Sample:** 659771-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0971	97	0.100	0.0980	98	1	70-130	35	
Toluene	<0.00200	0.100	0.0993	99	0.100	0.0998	100	1	70-130	35	
Ethylbenzene	<0.00100	0.100	0.101	101	0.100	0.101	101	0	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.203	102	0.200	0.203	102	0	70-135	35	
o-Xylene	<0.00100	0.100	0.0994	99	0.100	0.0993	99	0	71-133	35	

Analyst: JUM **Date Prepared:** 08/05/2014 **Date Analyzed:** 08/05/2014

Lab Batch ID: 947424 **Sample:** 659465-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<2.00	50.0	47.9	96	50.0	48.0	96	0	80-120	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: LPU#10

Work Order #: 490605, 490605 **Project ID:** 086497

Analyst: JUM **Date Prepared:** 08/06/2014 **Date Analyzed:** 08/06/2014

Lab Batch ID: 947510 **Sample:** 659536-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<2.00	50.0	48.6	97	50.0	46.2	92	5	80-120	20	

Analyst: JUM **Date Prepared:** 08/07/2014 **Date Analyzed:** 08/07/2014

Lab Batch ID: 947596 **Sample:** 659628-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<2.00	50.0	47.4	95	50.0	47.2	94	0	80-120	20	

Analyst: JUM **Date Prepared:** 08/07/2014 **Date Analyzed:** 08/08/2014

Lab Batch ID: 947698 **Sample:** 659634-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<2.00	50.0	46.1	92	50.0	46.7	93	1	80-120	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: LPU#10

Work Order #: 490605, 490605 **Project ID:** 086497

Analyst: ARM **Date Prepared:** 08/06/2014 **Date Analyzed:** 08/06/2014

Lab Batch ID: 947562 **Sample:** 659597-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	811	81	1000	859	86	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	999	100	1000	1050	105	5	70-135	35	

Analyst: ARM **Date Prepared:** 08/07/2014 **Date Analyzed:** 08/07/2014

Lab Batch ID: 947577 **Sample:** 659607-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	822	82	1000	813	81	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1140	114	1000	1110	111	3	70-135	35	

Analyst: ARM **Date Prepared:** 08/07/2014 **Date Analyzed:** 08/08/2014

Lab Batch ID: 947694 **Sample:** 659702-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	820	82	1000	862	86	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1080	108	1000	1130	113	5	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: LPU#10

Work Order #: 490605, 490605 **Project ID:** 086497

Analyst: ARM **Date Prepared:** 08/08/2014 **Date Analyzed:** 08/08/2014

Lab Batch ID: 947831 **Sample:** 659774-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	884	88	1000	968	97	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1070	107	1000	1110	111	4	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: LPU#10

Work Order #: 490605

Lab Batch #: 947424 **Project ID:** 086497

Date Analyzed: 08/06/2014 **Date Prepared:** 08/05/2014 **Analyst:** JUM

QC- Sample ID: 490605-004 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	131	258	403	105	80-120	

Lab Batch #: 947424

Date Analyzed: 08/05/2014 **Date Prepared:** 08/05/2014 **Analyst:** JUM

QC- Sample ID: 490772-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	1980	5000	7370	108	80-120	

Lab Batch #: 947510

Date Analyzed: 08/06/2014 **Date Prepared:** 08/06/2014 **Analyst:** JUM

QC- Sample ID: 490904-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	5340	10200	15500	100	80-120	

Lab Batch #: 947510

Date Analyzed: 08/07/2014 **Date Prepared:** 08/06/2014 **Analyst:** JUM

QC- Sample ID: 490906-004 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	3140	6470	8430	82	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS Recoveries

Project Name: LPU#10

Work Order #: 490605

Lab Batch #: 947596 **Project ID:** 086497

Date Analyzed: 08/07/2014 **Date Prepared:** 08/07/2014 **Analyst:** JUM

QC- Sample ID: 490605-032 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	51.8	277	329	100	80-120	

Lab Batch #: 947596

Date Analyzed: 08/07/2014 **Date Prepared:** 08/07/2014 **Analyst:** JUM

QC- Sample ID: 490807-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	1430	5050	6500	100	80-120	

Lab Batch #: 947698

Date Analyzed: 08/08/2014 **Date Prepared:** 08/07/2014 **Analyst:** JUM

QC- Sample ID: 490539-004 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	5.24	42.4	43.5	90	80-120	

Lab Batch #: 947698

Date Analyzed: 08/08/2014 **Date Prepared:** 08/07/2014 **Analyst:** JUM

QC- Sample ID: 490605-042 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	298	409	750	111	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: LPU#10

Work Order # : 490605 **Project ID:** 086497

Lab Batch ID: 947691 **QC- Sample ID:** 490605-018 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/08/2014 **Date Prepared:** 08/08/2014 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00107	0.107	0.0946	88	0.108	0.0877	81	8	70-130	35	
Toluene	<0.00215	0.107	0.0978	91	0.108	0.0908	84	7	70-130	35	
Ethylbenzene	<0.00107	0.107	0.101	94	0.108	0.0934	86	8	71-129	35	
m,p-Xylenes	<0.00215	0.215	0.202	94	0.216	0.188	87	7	70-135	35	
o-Xylene	<0.00107	0.107	0.0987	92	0.108	0.0915	85	8	71-133	35	

Lab Batch ID: 947828 **QC- Sample ID:** 490605-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/07/2014 **Date Prepared:** 08/07/2014 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00106	0.106	0.0912	86	0.106	0.0913	86	0	70-130	35	
Toluene	<0.00213	0.106	0.0930	88	0.106	0.0929	88	0	70-130	35	
Ethylbenzene	<0.00106	0.106	0.0934	88	0.106	0.0933	88	0	71-129	35	
m,p-Xylenes	<0.00213	0.213	0.187	88	0.213	0.187	88	0	70-135	35	
o-Xylene	<0.00106	0.106	0.0916	86	0.106	0.0919	87	0	71-133	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: LPU#10

Work Order # : 490605 **Project ID:** 086497

Lab Batch ID: 947829 **QC- Sample ID:** 490605-033 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/08/2014 **Date Prepared:** 08/08/2014 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00113	0.113	0.101	89	0.113	0.0958	85	5	70-130	35	
Toluene	<0.00226	0.113	0.103	91	0.113	0.0982	87	5	70-130	35	
Ethylbenzene	<0.00113	0.113	0.104	92	0.113	0.0996	88	4	71-129	35	
m,p-Xylenes	<0.00226	0.226	0.209	92	0.225	0.199	88	5	70-135	35	
o-Xylene	<0.00113	0.113	0.102	90	0.113	0.0971	86	5	71-133	35	

Lab Batch ID: 947562 **QC- Sample ID:** 490605-018 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/07/2014 **Date Prepared:** 08/06/2014 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<16.2	1080	973	90	1080	1010	94	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.2	1080	1150	106	1080	1230	114	7	70-135	35	

Lab Batch ID: 947577 **QC- Sample ID:** 490605-030 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/07/2014 **Date Prepared:** 08/07/2014 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.8	1050	1120	107	1050	977	93	14	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.8	1050	1180	112	1050	1110	106	6	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: LPU#10

Work Order # : 490605 **Project ID:** 086497

Lab Batch ID: 947694 **QC- Sample ID:** 490605-046 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/08/2014 **Date Prepared:** 08/07/2014 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<16.0	1060	895	84	1060	890	84	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.0	1060	1180	111	1060	1170	110	1	70-135	35	

Lab Batch ID: 947831 **QC- Sample ID:** 490605-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/09/2014 **Date Prepared:** 08/08/2014 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<16.0	1070	930	87	1060	899	85	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.0	1070	1180	110	1060	1140	108	3	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: LPU#10

Work Order #: 490605

Lab Batch #: 947345 **Project ID:** 086497
Date Analyzed: 08/05/2014 15:00 **Date Prepared:** 08/05/2014 **Analyst:** WRU
QC- Sample ID: 490605-007 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	9.08	8.72	4	20	

Lab Batch #: 947345
Date Analyzed: 08/05/2014 15:00 **Date Prepared:** 08/05/2014 **Analyst:** WRU
QC- Sample ID: 490651-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	<1.00	0	20	U

Lab Batch #: 947451
Date Analyzed: 08/05/2014 16:10 **Date Prepared:** 08/05/2014 **Analyst:** WRU
QC- Sample ID: 490605-037 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	10.9	11.2	3	20	

Lab Batch #: 947490
Date Analyzed: 08/07/2014 00:00 **Date Prepared:** 08/07/2014 **Analyst:** MNR
QC- Sample ID: 490539-017 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.27	4.91	7	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Hall Environmental Laboratories

Sample Duplicate Recovery

Project Name: LPU#10

Work Order #: 490605

Lab Batch #: 947490 **Project ID:** 086497
Date Analyzed: 08/07/2014 00:00 **Date Prepared:** 08/07/2014 **Analyst:** MNR
QC- Sample ID: 490605-041 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.93	5.57	6	20	

Lab Batch #: 947505
Date Analyzed: 08/07/2014 00:00 **Date Prepared:** 08/07/2014 **Analyst:** WRU
QC- Sample ID: 490605-017 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.41	8.07	4	20	

Lab Batch #: 947505
Date Analyzed: 08/07/2014 00:00 **Date Prepared:** 08/07/2014 **Analyst:** WRU
QC- Sample ID: 490605-027 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.22	8.14	1	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

CHAIN OF CUSTODY

Page 1 Of 5

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Norcross, Georgia (770-449-8800)
Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)
www.xenco.com

Xenco Quote #
Xenco Job # 490605

Client / Reporting Information

Company Name / Branch: CRA
Company Address: 2135 S LOOP 250 W, MIDLAND TX 79703
Email: jferent@cra world.com
Phone No: (512) 922-5043
Project Contact: Chris Knight | Jake Ferent
Samplers's Name: JAKE FERENT

Project Information

Project Name/Number: LPU #10 | 086497
Project Location: LEA COUNTY, NM
Invoice To:
PO Number:

Analytical Information

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH (GRO + DRO)	Chlorides	Field Comments
1	086497 - SB-1	5'	7/29/14	10:05	S	1								X	X	X	X	
2	086497 - SB-1	10'	7/29/14	10:07	S	1								X	X	X	X	
3	086497 - SB-1	15'	7/29/14	10:10	S	1								X	X	X	X	
4	086497 - SB-1	25'	7/29/14	10:15	S	1								X	X	X	X	
5	086497 - SB-1	35'	7/29/14	10:20	S	1								X	X	X	X	
6	086497 - SB-2	5'	7/29/14	10:27	S	1								X	X	X	X	
7	086497 - SB-2	10'	7/29/14	10:28	S	1								X	X	X	X	
8	086497 - SB-2	15'	7/29/14	10:30	S	1								X	X	X	X	
9	086497 - SB-2	25'	7/29/14	10:37	S	1								X	X	X	X	
10	086497 - SB-2	35'	7/29/14	10:40	S	1								X	X	X	X	

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [x] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT — NO (F)
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Jake Ferent	7.30.14 12:30pm		2		2
3	Relinquished by:	Date Time: 7.31.14 4:15	Received By:	Relinquished By: 4	Date Time: 7/31/14 1615	Received By:
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X — Cooler Temp. — Thermo. Corr. Factor: 1

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negiotiated under a fully executed client contract.

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Norcross, Georgia (770-449-8800)
Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)
www.xenco.com

Xenco Quote #
Xenco Job # 490605

Client / Reporting Information

Company Name / Branch: CRA
Company Address: 2135 S Loop 250 W, Mid TX, 79703
Email: JFeuz@cramid.com
Phone No: 512 422-5043
Project Contact: JAKE FEUZ
Samplers's Name: JAKE FEUZ

Project Information

Project Name/Number: #10
Project Location:
Invoice To:
PO Number:

Analytical Information

BTEX
TPH (GRO + DRO)
Chlorides

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH (GRO + DRO)	Chlorides	Field Comments
1	086497 - SB-3	5'	7/29/14	11:05	S	1								X	X	X	X	
2	086497 - SB-3	10'		11:07														
3	086497 - SB-3	15'		11:10														
4	086497 - SB-3	25'		11:15														
5	086497 - SB-3	35'		11:20														
6	086497 - SB-4	5'		11:37														
7	086497 - SB-4	10'		11:39														
8	086497 - SB-4	15'		11:40														
9	086497 - SB-4	25'		11:44														
10	086497 - SB-4	35'		11:48														

Turnaround Time (Business days)

- [ ] Same Day TAT
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- [x] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

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- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	JAKE FEUZ	7/30/14 12:00		2		2
3		7-31-14 4:15		4	7/31/14 1615	
5						

Custody Seal # | Preserved where applicable | On Ice: X | Cooler Temp. | Thermo. Corr. Factor: —

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Dallas, Texas (214-902-0300) | Norcross, Georgia (770-449-8800) | Tampa, Florida (813-620-2000)

Service Center - San Antonio, Texas (210-509-3334) www.xenco.com

Xenco Quote # | Xenco Job # 410605

Client / Reporting Information

Company Name / Branch: CRA

Company Address: 2135 Sloop 250 W, MIDTX 79703

Email: JFerenz@cramuld.com Phone No: 512 922-5943

Project Contact: Jake Ferenz

Samplers's Name: Jake Ferenz

Project Information

Project Name/Number: #10

Project Location:

Invoice To:

PO Number:

Analytical Information

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH (GRO + DRO)	chlorides	Field Comments
1	086497 - SB-6	5'	7/29/14	12:46 pm	S	1								X	X	X	X	
2	086497 - SB-6	10'		12:48														
3	086497 - SB-6	15'		12:50														
4	086497 - SB-6	25'		12:54														
5	086497 - SB-6	35'		12:58														
6	086497 - SB-5	5'		12:07														
7	086497 - SB-5	10'		12:09														
8	086497 - SB-5	15'		12:11														
9	086497 - SB-5	25'		12:15														
10	086497 - SB-5	35'		12:19														

Turnaround Time (Business days)

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- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Jake Ferenz	7/30/14 12:00pm		2		2
3	Relinquished by:	Date Time: 7-31-14 4:12	Received By:	Relinquished By: 4	Date Time: 7/31/14	Received By: 4 1215
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X Cooler Temp. Thermo. Corr. Factor: -1

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Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)
www.xenco.com

Xenco Quote #
Xenco Job # 490605

Client / Reporting Information

Company Name / Branch: CRA
Company Address: 2135 S Loop 250 W, Midland TX 79703
Email: sfuentes@cramworld.com Phone No: 512 422-8143
Project Contact: Jah Fuentes
Samplers's Name: Jah Fuentes

Project Information

Project Name/Number: #10
Project Location:
Invoice To:
PO Number:

Analytical Information

BTEX
TPH (GRO + DRO)
Chlorides

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	086497 - SB-5	45'	7/29/14	12:30	S	1								X	
2	086497 - SB-7	5'		1:07											
3	086497 - SB-7	10'		1:09											
4	086497 - SB-7	15'		1:11											
5	086497 - SB-7	25'		1:15											
6	086497 - SB-7	35'		1:19											
7	086497 - SB-8	5'		1:31											
8	086497 - SB-8	10'		1:33											
9	086497 - SB-8	15'		1:35											
10	086497 - SB-8	25'		1:39											

Turnaround Time (Business days)

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Data Deliverable Information

- [ ] Level II Std QC
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- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Jah Fuentes	7/30/14 12:10pm		2		2
3	Relinquished by:	Date Time: 7.31.14 4:15	Received By: 3	Relinquished By: 4	Date Time: 7/31/14	Received By: 4 1615
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: Y

Cooler Temp. — Thermo. Corr. Factor —

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.

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Service Center - San Antonio, Texas (210-509-3334)

Odessa, Texas (432-563-1800)

Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

www.xenco.com

Xenco Quote #

Xenco Job # 490605

Client / Reporting Information

Company Name / Branch: CRA

Company Address: 2135 S Loop 250W Mid TX 79703

Email: jfrunt@crmwd.com Phone No: 512 422 5043

Project Contact: John Frunt

Samplers's Name: John Frunt

Project Information

Project Name/Number: #10

Project Location:

Invoice To:

PO Number:

Analytical Information

BTEX

TPH (GRO + DRO)

Chlorides

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	086497-SB-8	35'	7/29/14	1:43	S	1								X	
2	086497-SB-9	5'		2:26											
3	086497-SB-9	10'		2:28											
4	086497-SB-9	15'		2:30											
5	086497-SB-9	25'		2:34											
6	086497-SB-9	35'		2:38											
7															
8															
9															
10															

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
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- [X] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

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- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished By Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	John Frunt	7/30/14 12:10pm		2		2
3		7-31-14 4:15	WW Rios	4	7/31/14 1615	
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. Thermo. Corr. Factor —1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga Rovers & Associates

Date/ Time Received: 07/31/2014 04:15:00 PM

Work Order #: 490605

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**No**
#6 *Custody Seals Signed and dated?	**No**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**No**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	**N/A**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Kelsey Brooks Date: 08/01/2014

Checklist reviewed by: Date:

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 Repo

Name of Company Chevron (CEMC)	Contact Luke Welch
Address 1400 Smith Street, Houston Texas, 77002	Telephone No. (713) 372-0292
Facility Name Lovington Paddock Unit No. 10	Facility Type Produced Water Injection Well

Surface Owner State of New Mexico	Mineral Owner State of New Mexico	API No. 30-025-05377

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	08	17S	36E	660	North	1980	East	Lea

Latitude 32.884039 **Longitude** -103.288272

NATURE OF RELEASE

Type of Release Spill to Land	Volume of Release 52 bbls of Produced Water	Volume Recovered 45 bbls of Produced Water
Source of Release Flow Back Frac Tank	Date and Hour of Occurrence 7/26/13 and 11:00 p.m.	Date and Hour of Discovery 7/27/13 and 7:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mr. Geoffrey Leking	
By Whom? David Pagano	Date and Hour 7/27/13 and 6:10 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

Fluids were released through open ½-inch needle valve on LPU #10 injection well due to vandalism.

Describe Area Affected and Cleanup Action Taken.*

Release resulted in an approximate 200 x 4 foot pool of fluids down a path off of the well pad to the south west, an approximate 50 x 20 foot pool on the caliche well pad, and toward the south east corner of the well pad/pasture. A vacuum truck was dispatched and recovered 45 bbls of produced water. Visually impacted soils were excavated from approximately 12 to 18-inches below ground surface.

Six soil samples were collected to assess remedial excavation activities. These sampling results indicated the presence of chloride concentrations in shallow soils at levels of regulatory concern. In response, a comprehensive soil assessment was performed to confirm the extents of the soil impacts.

Results of the additional assessment activities are provided in the attached report.

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: Luke Welch	OIL CONSERVATION DIVISION
Printed Name: Luke Welch	Approved by Environmental Specialist: Ashley Maxwell
Title: Project Manager	Approval Date: 5/2/2023 Expiration Date:
E-mail Address: lwelch@chevron.com	Conditions of Approval: Attached ☐
Date: 11/20/14 Phone: (713) 372-0292	

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 207763

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 207763
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Historical document upload. Closure approved.	5/2/2023