



February 9, 2026

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Deferral Request
James Ranch Unit SWD Riser
Incident Number NAB1921934485
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document site assessment, delineation, and soil sampling activities at the James Ranch Unit SWD Riser, (Site). The purpose of the soil sampling activities was to assess for the presence or absence of impacts to soil following the release of produced water from a riser. Based on field observations, field screening activities, and laboratory analytical results, XTO is submitting this *Deferral Request*, describing activities that have occurred and requesting to complete final remediation when the riser is decommissioned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 21, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.381936°, -103.881954°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On July 13, 2019, a hole developed in the riser due to corrosion. Approximately 13.38 barrels (bbls) of produced water were released to the pipeline right-of-way (ROW), lease road, and nearby pasture area. No fluids were recovered. XTO submitted a Release Notification Form C-141 (Form C-141) on July 22, 2019 and the release was assigned Incident Number nAB1921934485.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are discussed below and potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on a recent soil boring for determination of regional groundwater depth. A water well (C-01916), permitted through the New Mexico Office of the State Engineer (NMOSE), was located approximately 0.24 miles south of the Site. According to the plugging plans, approved by the NMOSE in April 2013, the well was drilled to a depth of 188 feet bgs and static water levels were approximately 110 feet bgs. The approved well plugging plan is included as Appendix A.

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The closest continuously flowing or significant watercourse to the Site is a potential riverine, located approximately 881 feet northeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet from a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is underlain by unstable geology (high potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons: 100 mg/kg
- Chloride: 600 mg/kg

SUMMARY OF DEFERRAL REQUEST SUBMITTED NOVEMBER 26, 2019

On August 15, 2019, site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Five soil samples (SS01 through SS05) were collected within the release extent at a depth of 0.5 feet bgs. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation is included in Appendix B.

Between October 8 and October 15, 2019, delineation activities were completed to assess the extent of impacts to soil. Delineation boreholes (BH01 through BH11) were advanced via hand auger at eleven locations within and around the release extent to a maximum depth of 8 feet bgs. Discrete soil samples were collected from each borehole at depths ranging from 1 foot to 8 feet bgs. Soil from the boreholes was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations from each borehole were documented on lithologic/soil sampling logs, which are included as Appendix C.

All delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, data, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped under strict chain of custody procedures to Xenco Laboratories (Xenco) in Midland, Texas for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results indicated that chloride concentrations in delineation soil samples SS03 through SS05, and BH02, BH04, and BH05 collected at depths ranging from 0.5 feet to 4 feet bgs exceeded the Closure Criteria. As such, excavation of chloride impacted soil was warranted. Laboratory analytical results for all COCs in the remaining delineation soil samples were compliant with the Closure Criteria.

On October 14, 2019 excavation of impacted soil was completed, while maintaining compliance with the XTO safety policy regarding earth moving activities within 2 feet of active pipelines and production equipment, as indicated by delineation field screenings and laboratory analytical results. To direct excavation activities soil was field screened for VOCs and chloride and following removal of impacted soil

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confirmation soil samples were collected every 200 square feet from the sidewalls and floors of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW06 were collected from the sidewalls of the excavations at depths ranging from ground surface to 10 feet bgs. Composite soil samples FS01 through FS03 were collected from the floor of the excavations at depths ranging from 7 feet to 10 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above at Xenco in Midland, Texas. The excavation soil samples are depicted on Figure 3. The original excavation extent measured approximately 1,500 square feet and a total of approximately 500 cubic yards of soil were removed and properly disposed of at the R360 disposal facility in Hobbs, New Mexico.

Laboratory analytical results indicated COC concentrations in all confirmation soil samples, with the exception of SW05, collected from ground surface to 9 feet bgs and SW06, collected at 3 feet bgs, were compliant with the Closure Criteria. Laboratory analytical results for sidewalls SW05 and SW06 indicated chloride concentrations ranging from 5,840 mg/kg to 13,900 mg/kg remained in the soil immediately adjacent to the pipeline riser (SW05) and the pipeline (SW06). An estimated 75 cubic yards of impacted soil remained in place near the active production equipment, assuming a maximum 10-foot depth based on samples FS03 and SW04 collected at a maximum depth of 10 feet bgs that were compliant with the Closure Criteria. In addition, the excavation did not extend to the area represented by elevated chloride concentrations at BH05 at 4 feet bgs. The residual impacts could not be excavated due to the vicinity of the adjacent pipeline; however it is delineated vertically by soil samples collected deeper in BH05 and laterally by the excavation and boreholes BH09, BH10, and BH11. An estimated 99 cubic yards of impacted soil remains in place surrounding the pipeline at BH05, assuming a maximum 6 feet depth.

On November 26, 2019 a *Deferral Request* was submitted to the NMOCD documenting the previously described delineation and excavation activities and requesting deferral of the chloride impacted soil until any future major construction or alteration of the riser and pipeline or final abandonment, whichever occurred first. The *Deferral Request* was denied on January 21, 2020 and additional excavation near soil samples SW05, SW06, BH02, BH04, and BH05 were requested.

SUMMARY OF DEFERRAL REQUEST ADDENDUM SUBMITTED MARCH 31, 2020

Between February 27, and March 9, 2020 excavation crews returned to the Site to complete additional excavation along the pipeline and near the riser. In addition, soil was removed along the pipeline, however, the excavation was limited to the edge of the lease road. The lease road is near the entrance of a large pad to the west of the Site. At the time, active frac operations resulted in a high volume of traffic on the lease road. These activities prevented the road from being shut down to conduct the excavation safely. As such, soil was removed to the maximum extent practicable (MEP) utilizing a hydrovac truck and hand shovels in the vicinity of SW05 near the riser equipment and fencing and in the vicinity of SW06, BH02, BH04, and BH05 along the pipeline and adjacent to the lease road. To direct excavation activities the soil was screened for VOCs and chloride and following removal of impacted soil confirmation soil samples were collected according to the procedures described above. Composite soil sidewall samples SW07 through SW11 were collected from the sidewalls of the excavation at depths ranging from ground surface to 8 feet bgs. Composite soil floor samples FS04 and FS05 were collected from the floor of the excavation at 4.5 feet bgs. Laboratory analytical results for soil sample FS04 indicated chloride concentrations exceeded the Closure Criteria. As such, further excavation was conducted in that area and FS04A was collected at 6 feet bgs. The 2020 excavation extent and all confirmation soil sample locations are depicted on Figure 3. Photo documentation was conducted throughout the remediation activities and photographic documentation is included in Appendix B.

Following excavation, the Site was backfilled immediately due to the proximity to the high traffic lease road. Further excavation of the lease road was prohibited by XTO to ensure the safety of all personnel

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in the area. Laboratory analytical results indicated all COC concentrations were compliant with the Closure Criteria in all confirmation soil samples, with the exception of SW08, collected near the riser, and SW09 and SW10, collected along the lease road. Laboratory analytical results for sidewalls SW08 through SW10 indicated chloride concentrations ranging from 792 mg/kg to 4,120 mg/kg remained in the soil immediately adjacent to the pipeline riser (SW08) and the high-traffic lease road (SW09 and SW10).

An additional 16 cubic yards of impacted soil was removed in the immediate area surrounding the SWD riser. Nearly 200 cubic yards of impacted soil was removed in the area along the pipeline adjacent to the lease road. An additional 215 cubic yards of impacted soil was excavated from the Site; however, residual impacted soil was left in place in areas that, at the time, could not be excavated further. These areas are: the SWD riser, which cannot be excavated further without compromising the structural integrity; and, along the lease road, where further excavation was hindered by the traffic from the nearby operations which made closing the lease road impractical. An estimated 65 cubic yards of chloride-impacted soil remained in place assuming a maximum 4.5-foot depth near the lease road and 8-foot depth near the SWD riser equipment.

On March 31, 2020 a *Deferral Request Addendum (Addendum)* was submitted to the NMOCD documenting the previously described excavation activities and requesting deferral of the chloride impacted soil until any future major construction or alteration of the riser and pipeline or final abandonment, whichever occurred first. The *Addendum* was denied on May 7, 2020 with the following note from the NMOCD:

The release is overlying an area considered to have high potential for karst occurrence. The lease road cannot be deferred. More remediation efforts are needed @ sample points SW09 and SW10. OCD agrees that the area around the SWD riser cannot be excavated further without compromising the structural integrity so the deferral request will be approved.

As such, when nearby operations were reduced, XTO planned additional excavation activities.

ADDITIONAL DELINEATION AND EXCAVATION ACTIVITIES

Ensolum personnel reviewed the Site and the previously submitted reports and on October 9, 2025, advanced three potholes (PH01-PH03) via backhoe at accessible locations to a maximum depth of 5 feet bgs. Discrete delineation soil samples were collected from each pothole at depths ranging from 0.5 feet to 5 feet bgs to assess the vertical extent of impacts. Soil from the delineation samples was field screened for VOCs and chloride and field screening results and observations were documented on lithologic/soil sampling logs. The soil samples were handled and transported as described above to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the same COCs but Chloride was analyzed following Standard Method 4500.0.

Laboratory analytical results indicated chloride concentrations exceeding the Closure Criteria, existed in the area of the lease road near sidewall soil samples SW09 and SW10. As such, excavation of the impacted soil was warranted.

Between November 19 and November 20, 2025, chloride-impacted soil was excavated from the lease road with heavy equipment in the areas of sidewall soil samples SW09 and SW10 as well as the delineation soil samples PH01 through PH03. Following the removal of the impacted soil, 5-point composite confirmation soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. Confirmation soil samples FS06 through FS09 were collected from the floor of the excavation at a depth of 5 feet bgs and SW12 through SW14 were collected from the sidewalls of the excavation at depths ranging from ground surface to 5 feet bgs. The 5-point composite samples were

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collected by placing five equivalent aliquots of soil into a resealable plastic bag and homogenizing the samples by thoroughly mixing. Confirmation soil samples were handled and analyzed in the same manner as described above. All floor and sidewall excavation confirmation soil sample locations are depicted on Figure 3.

The 2025 excavation extent measured approximately 670 square feet. A total of approximately 125 cubic yards of impacted soil was removed during excavation activities and was properly disposed of at the R360 Landfill Facility in Hobbs, New Mexico.

Laboratory analytical results for the confirmation soil analytical results indicate all COCs were compliant with the Closure Criteria confirming successful removal of chloride-impacted soil along the lease road.

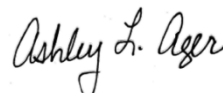
DEFERRAL REQUEST

A total of approximately 840 cubic yards of chloride-impacted soil were removed from the Site as a result of the produced water release. Excavation was completed to the MEP near the riser, where an estimated 60 cubic yards of soil remains in place. The deferral area and associated soil sample locations are depicted on Figure 4. As NMOCD previously stated, additional excavation cannot proceed in this area without compromising the structural integrity of the riser. XTO does not believe deferral will result in imminent risk to human health, the environment, or groundwater. Based on the proximity to the active riser and the complete lateral and vertical definition of the estimated 60 cubic yards of chloride-impacted soil remaining in place, XTO requests deferral of final remediation for Incident Number NAB1921934485 until major construction or final abandonment of the riser, whichever comes first. If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC



Tacoma Morrissey, P.G. (licensed in TX)
 Associate Principal



Ashley L. Ager, P.G.
 Principal

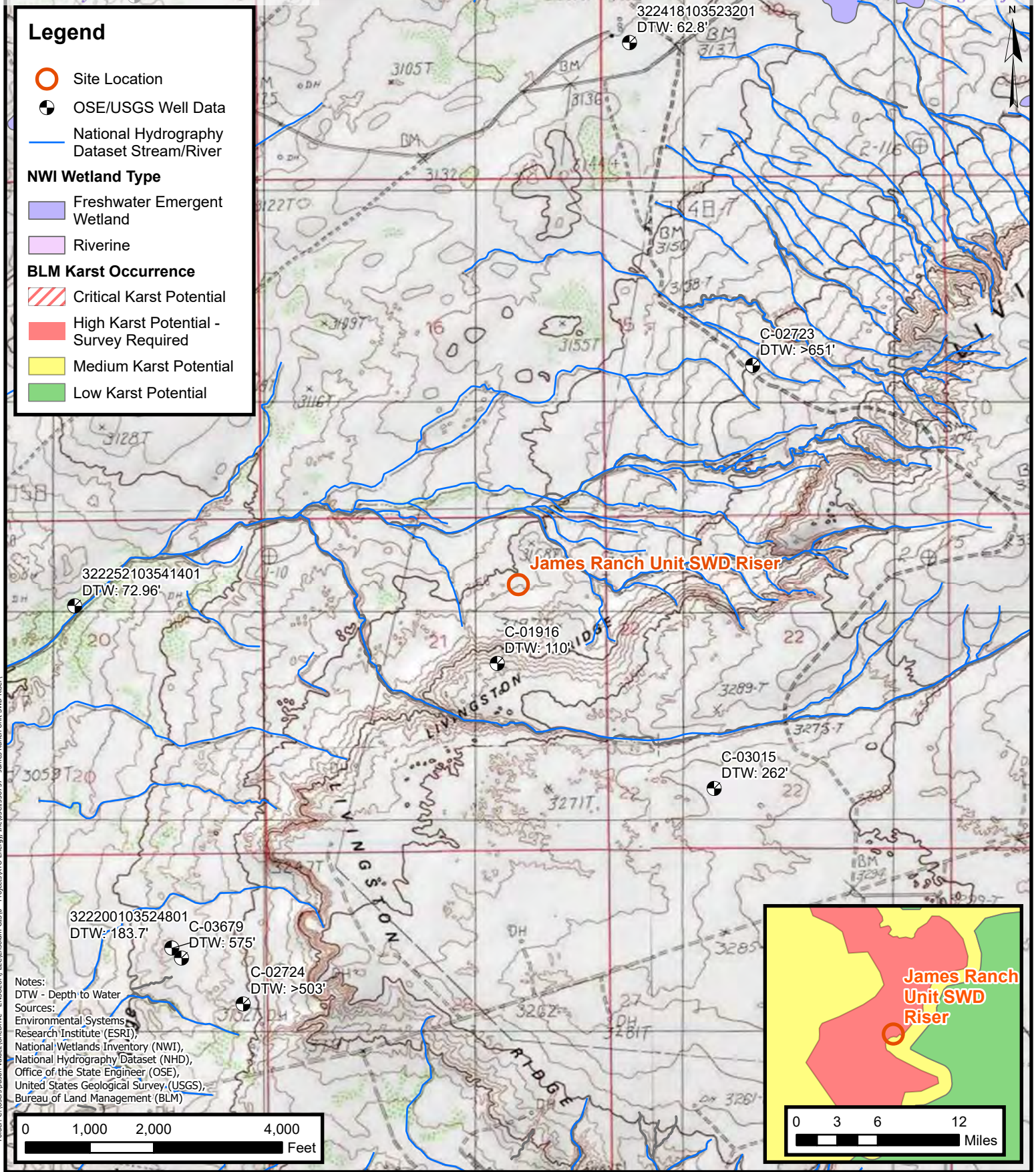
cc: Robert Woodall, XTO
 Richard Kotzur, XTO
 Bureau of Land Management

Appendices:

Figure 1 Site Receptor Map
 Figure 2 Delineation Soil Sample Locations
 Figure 3 Excavation Soil Sample Locations
 Figure 4 Deferral Area Map
 Table 1 Soil Sample Analytical Results
 Appendix A Referenced Well Records
 Appendix B Photographic Log
 Appendix C Lithologic Soil Sampling Logs
 Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation
 Appendix E NMOCD Correspondence



FIGURES



Site Receptor Map

XTO Energy, Inc.
 James Ranch Unit SWD Riser
 Incident Number: nAB1921934485
 Unit A, Section 21, T 22S, R 30E
 Eddy County, New Mexico

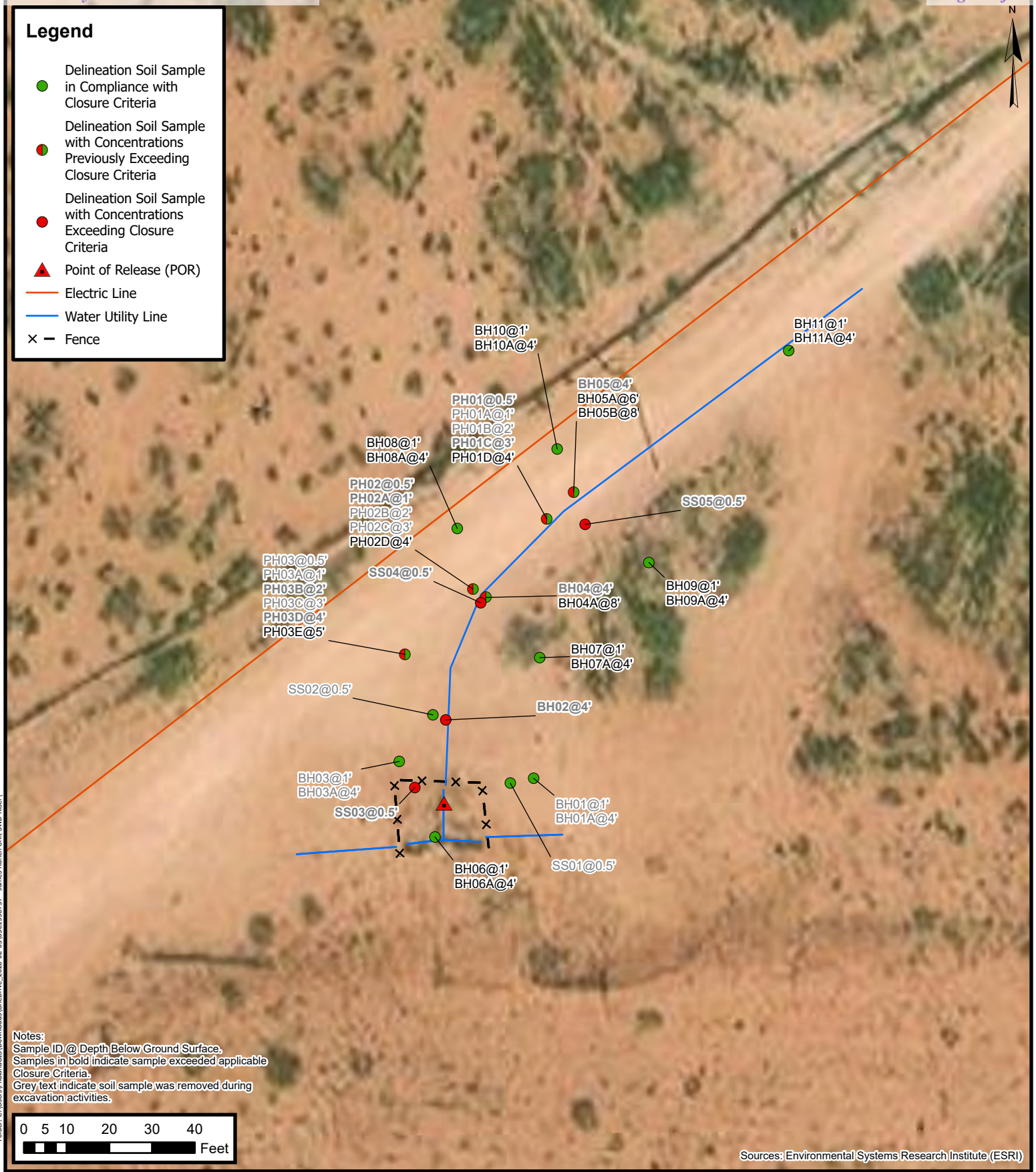
FIGURE

1



Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Delineation Soil Sample with Concentrations Exceeding Closure Criteria
- ▲ Point of Release (POR)
- Electric Line
- Water Utility Line
- X Fence



Folder: C:\Users\Milan\GIS\Downloads\OneDrive_2026-02-05\03C1588737 - James Ranch Unit SWD Riser\

Sources: Environmental Systems Research Institute (ESRI)

Delineation Soil Sample Locations

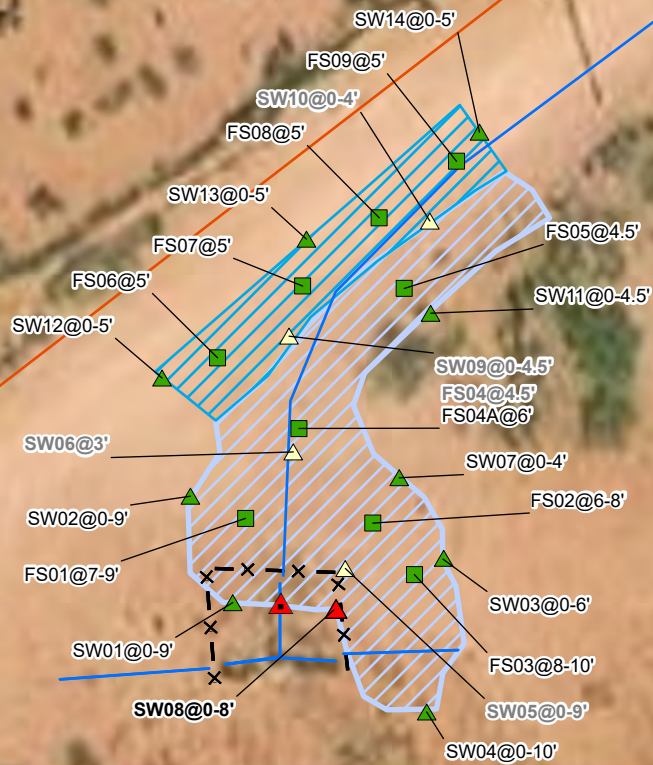
XTO Energy, Inc.
 James Ranch Unit SWD Riser
 Incident Number: nAB1921934485
 Unit A, Section 21, T 22S, R 30E
 Eddy County, New Mexico

FIGURE
2

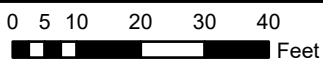


Legend

- ▲ Point of Release (POR)
- Excavation Floor Sample in Compliance with Closure Criteria
- ▲ Excavation Sidewall Sample in Compliance with Closure Criteria
- ▲ Excavation Sidewall Sample - Removed
- ▲ Excavation Sidewall Sample Exceeding Closure Criteria
- Electric Utility Line
- Water Utility Line
- x Fence
- 2020 Excavation Extent
- 2025 Excavation Extent



Notes:
 Sample ID @ Depth Below Ground Surface.
 Samples in bold indicate sample exceeded applicable Closure Criteria.
 Grey text indicate soil sample was removed during excavation activities.



Sources: Environmental Systems Research Institute (ESRI)

Confirmation Soil Sample Location

XTO Energy, Inc.
 James Ranch Unit SWD Riser
 Incident Number: nAB1921934485
 Unit A, Section 21, T 22S, R 30E
 Eddy County, New Mexico

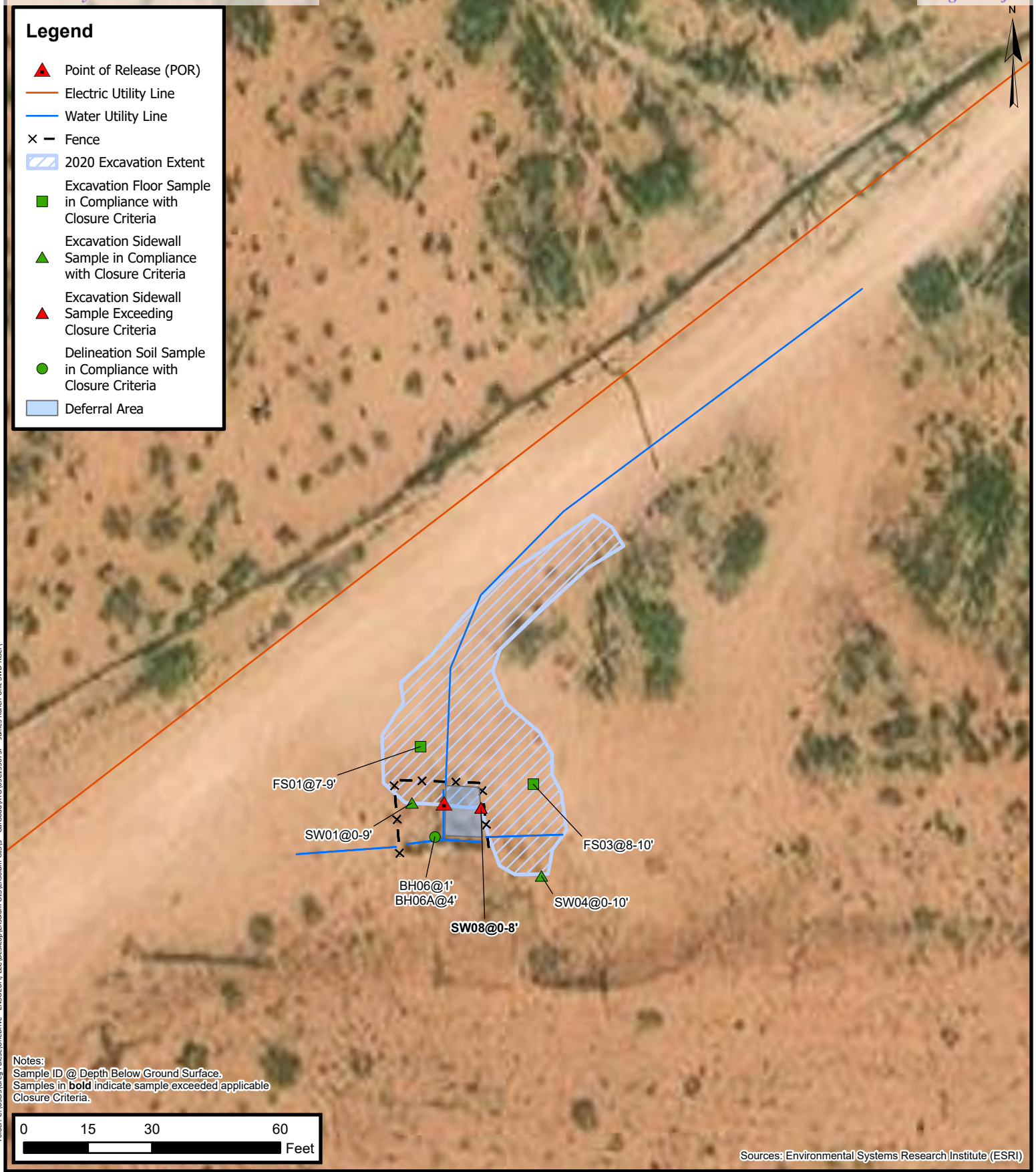
FIGURE

3

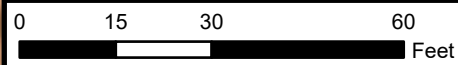


Legend

- ▲ Point of Release (POR)
- Electric Utility Line
- Water Utility Line
- X — Fence
- 2020 Excavation Extent
- Excavation Floor Sample in Compliance with Closure Criteria
- Excavation Sidewall Sample in Compliance with Closure Criteria
- ▲ Excavation Sidewall Sample Exceeding Closure Criteria
- Delineation Soil Sample in Compliance with Closure Criteria
- Deferral Area



Notes:
 Sample ID @ Depth Below Ground Surface.
 Samples in **bold** indicate sample exceeded applicable Closure Criteria.



Sources: Environmental Systems Research Institute (ESRI)



Deferral Area Map
 XTO Energy, Inc.
 James Ranch Unit SWD Riser
 Incident Number: nAB1921934485
 Unit A, Section 21, T 22S, R 30E
 Eddy County, New Mexico

FIGURE
4



TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 James Ranch Unit SWD Riser
 XTO Energy, Inc
 Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCDC Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
SS01	08/15/2019	0.5	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	149
SS02	08/15/2019	0.5	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	88
SS03	08/15/2019	0.5	<0.00198	<0.00198	<25.0	39.8	<25.0	39.8	39.8	2,570
SS04	08/15/2019	0.5	<0.00201	<0.00201	<25.0	<25.0	<25.0	<25.0	<25.0	2,740
SS05	08/15/2019	0.5	<0.00198	<0.00198	<25.0	<25.0	<25.0	<25.0	<25.0	6,600
BH01	10/08/2019	1	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	42.7
BH01A	10/08/2019	4	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	36.6
BH02	10/08/2019	4	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	1,980
BH03	10/08/2019	1	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	32.6
BH03A	10/08/2019	4	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	21.6
BH04	10/09/2019	4	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	1,790
BH04A	10/09/2019	8	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	387
BH05	10/09/2019	4	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	795
BH05A	10/09/2019	6	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	465
BH05B	10/09/2019	8	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	42.4
BH06	10/15/2019	1	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	12.5
BH06A	10/15/2019	4	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	160
BH07	10/15/2019	1	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	9.19
BH07A	10/15/2019	4	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	32.7
BH08	10/15/2019	1	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	10.9
BH08A	10/15/2019	4	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	19.4
BH09	10/15/2019	1	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	43.7
BH09A	10/15/2019	4	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	76.3
BH10	10/15/2019	1	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<5.02
BH10A	10/15/2019	4	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	175
BH11	10/15/2019	1	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	11.4
BH11A	10/15/2019	4	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	15.5



**TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
James Ranch Unit SWD Riser
XTO Energy, Inc
Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCDC Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
PH01	10/09/2025	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	974
PH01A	10/09/2025	4	<0.00204	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	480
PH01B	10/09/2025	2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	253
PH01C	10/09/2025	3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	797
PH01D	10/09/2025	4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	442
PH02	10/09/2025	0.5	<0.00204	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	627
PH02A	10/09/2025	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	653
PH02B	10/09/2025	2	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	357
PH02C	10/09/2025	3	<0.00204	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	408
PH02D	10/09/2025	4	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	459
PH03	10/09/2025	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	174
PH03A	10/09/2025	4	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	554
PH03B	10/09/2025	2	<0.00204	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	624
PH03C	10/09/2025	3	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	145
PH03D	10/09/2025	4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	639
PH03E	10/09/2025	5	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	352
Confirmation Soil Samples										
FS01	10/14/2019	7-9	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	153
FS02	10/14/2019	6-8	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	105
FS03	10/14/2019	8-10	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	216
FS04	03/03/2020	4.5	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	926
FS04A	03/09/2020	6	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	240
FS05	03/03/2020	4.5	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	430
FS06	11/19/2025	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	432
FS07	11/20/2025	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
FS08	11/20/2025	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
FS09	11/20/2025	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448



**TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
James Ranch Unit SWD Riser
XTO Energy, Inc
Eddy County, New Mexico**

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
SW01	10/14/2019	0-9	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	92.0
SW02	10/14/2019	0-9	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	69.1
SW03	10/14/2019	0-6	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	34.0
SW04	10/14/2019	0-10	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	138
SW05	10/14/2019	0-9	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	5,840
SW06	10/14/2019	3	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	13,900
SW07	02/28/2020	0-4	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	249
SW08	02/28/2020	0-8	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	3,350
SW09	03/03/2020	0-4.5	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	792
SW10	03/03/2020	0-4	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	4,120
SW11	03/03/2020	0-4.5	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	<49.8
SW12	11/19/2025	0-5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368
SW13	11/20/2025	0-5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
SW14	11/20/2025	0-5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	304

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities

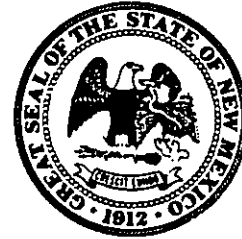


APPENDIX A

Referenced Well Records



WELL PLUGGING PLAN OF OPERATIONS



NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP:

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: C 01916

Name of well owner: BOPCO L.P.

Mailing address: P.O. Box 2760

City: Midland State: Texas Zip code: 79702

Phone number: 432- 556 -8730 E-mail: TASavoie@Basspet.com

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: Straub Corporation – Raymond Straub

New Mexico Well Driller License No.: WD-1478 Expiration Date: June-2013

IV. WELL INFORMATION:

Note: A copy of the existing Well Record for the well to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: 32 deg, 22 min, 54.42 sec
Longitude: -103 deg, 53 min, 00.57 sec, NAD83

2) Reason(s) for plugging well: Water well is in the path of new construction. Water quality is below useable quality.

3) Was well used for any type of monitoring program? NO If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? YES If yes, provide additional detail, including analytical results and/or laboratory report(s): See Attachments

5) Static water level: ~ 110 feet below land surface / feet above land surface (circle one)

6) Depth of the well: 188 feet

Well Plugging Plan
Version: December, 2011
Page 1 of 5

C-1916
41057710

STATE ENGINEER OFFICE
ROSEN
2013 APR - 1 10 11 19

- 7) Inside diameter of innermost casing: 5 inches.
- 8) Casing material: Steel
- 9) The well was constructed with:
UNKWN an open-hole production interval, state the open interval: _____
UNKWN a well screen or perforated pipe, state the screened interval(s): _____
- 10) What annular interval surrounding the artesian casing of this well is cement-grouted? NA
- 11) Was the well built with surface casing? UNKWN If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? _____ If yes, please describe: _____
- 12) Has all pumping equipment and associated piping been removed from the well? yes If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING:

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal.

- 1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well: The casing will be cut off below ground surface. A tremie line will be install and a Portland Type II/ V Cement grout will be placed from the bottom to within 5' of the surface. A concrete cap will be placed from 5' to 1' and the remainder will be filled with soil.
- 2) Will well head be cut-off below land surface after plugging? yes

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant

- 1) For plugging intervals that employ cement grout, complete and attach Table A.
- 2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.
- 3) Theoretical volume of grout required to plug the well to land surface: 20 Sacks
- 4) Type of Cement proposed: See Attached Conditions of Approval C.G
5% Fullers Earth / Type II/V Cement
- 5) Proposed cement grout mix: 8 gallons of water per 94 pound sack of Portland cement. See Attached Conditions of Approval C.G
- 6) Will the grout be: _____ batch-mixed and delivered to the site
X mixed on site

7) Grout additives requested, and percent by dry weight relative to cement: Salt water gel – The use of Fuller’s Earth is to help with leak-off to the formation. Since the formation water is high in chlorides, Volclay Sodium Bentonite will not be acceptable. 5 LBS. of Gel per 94 LBS. of cement

SEE Attached Conditions of Approval C.G.

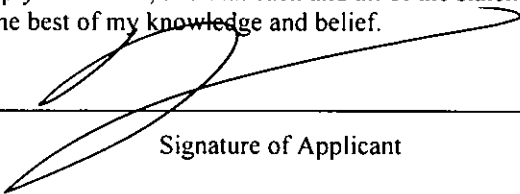
8) Additional notes and calculations: ((dia.² * 0.005454)*Depth)/ 1.25 cuft-bag

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

The Public Land Survey is Section 21, Township 22 South, Range 30 East.

VIII. SIGNATURE:

I, Raymond L Straub Jr., P.G., say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.



Signature of Applicant

03/28/2013

STATE ENGINEER OFFICE
ROSWELL
2013 APR - 1 P 1:19

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is:

- Approved subject to the attached conditions.
- Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 17th day of April, 13

Scott A. Verhines, State Engineer

By: Tim Williams
Tim Williams
Carlsbad Basin Watermaster

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)			5 feet
Bottom of proposed interval of grout placement (ft bgl)			188 feet
Theoretical volume of grout required per interval (gallons)			20 Sacks
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement			8 gallons
Mixed on-site or batch-mixed and delivered?			On-site
Grout additive 1 requested			5% Saltwater Bentonite
Additive 1 percent by dry weight relative to cement			5 LBS.
Grout additive 2 requested			
Additive 2 percent by dry weight relative to cement			

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 RINSWORTH
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TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)			
Bottom of proposed sealant or grout placement (ft bgl)			
Theoretical volume of sealant required per interval (gallons)			
Proposed abandonment sealant (manufacturer and trade name)			

STATE ENGINEER OFFICE
 ROSWELL DIVISION
 2013 APR - 1 P 1:19



STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

Scott A. Verhines, P.E.
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

April 17, 2013

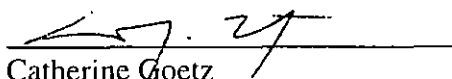
BOPCO, L.P.
P.O. Box 2760
Midland, Texas 79702

RE: *Well Plugging Plan of Operations* for C-1916

Greetings:

Enclosed is your copy of the Well Plugging Plan for the above referenced project. The attached Conditions of Approval modify your Plan in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted August 31, 2005 by the State Engineer. Should you have any questions about the Plan or Conditions of Approval please do not hesitate to contact our office.

Sincerely,


Catherine Goetz
Water Resource Specialist
District II Office of the State Engineer

Enclosures

cc: Office of the State Engineer Santa Fe
Straub Corporation

**Analytical Laboratory Report for:
BOPCO**



Account Representative:
Willis Mossman

Production Water Analysis

Listed below please find water analysis report from: **Perry R Bass Wsw, WATER SUPPLY WELL**

Lab Test Number	Sample Date
201301003615	02/13/2013

Specific Gravity: 1.100
TDS: 153402
pH: 6.65

Cations	mg/L
Calcium as Ca ⁺⁺	2669
Magnesium as Mg ⁺⁺	2188
Sodium as Na ⁺	52812
Iron as Fe ⁺⁺	9.49
Potassium as K ⁺	7466.0
Barium as Ba ⁺⁺	0.28
Strontium as Sr ⁺⁺	86.46
Manganese as Mn ⁺⁺	0.46

Anions	mg/L
Bicarbonate as HCO ₃ ⁻	171
Sulfate as SO ₄ ⁼	6500
Chloride as Cl ⁻	81500

Gases	mg/L
Carbon Dioxide as CO ₂	30
Hydrogen Sulfide as H ₂ S	0.0

Lab Comments:
SURFACE TEMP.=65.7°F

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 ROSWELL, GEORGIA
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**Analytical Laboratory Report for:
BOPCO**



Account Representative:
Willis Mossman

DownHole SAT™ Scale Prediction @ 250 deg. F

Lab Test Number	Sample Date	Location
201301003615	02/13/2013	WATER SUPPLY WELL

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	0.46	-0.05
Strontianite (SrCO3)	0.00	-25.80
Anhydrite (CaSO4)	6.85	1699.09
Gypsum (CaSO4*2H2O)	1.55	710.25
Barite (BaSO4)	0.07	-6.67
Celestite (SrSO4)	0.23	-487.80
Siderite (FeCO3)	3.44	0.04
Halite (NaCl)	0.04	-545840.63
Iron sulfide (FeS)	0.00	-1.34

Interpretation of DHSat Results:

The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) to positive (precipitating) values. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

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New Mexico Office of the State Engineer Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 199433

Transaction Desc: C 01916

File Date: 07/31/1980

Primary Status: EXP Expired Permit

Secondary Status: EXP Expired

Person Assigned: mvigil

Applicant: PERRY R. BASS

Events

Date	Type	Description	Comment	Processed By
07/31/1980	APP	Application Received	*	mvigil
08/04/1980	FIN	Final Action on application		mvigil
08/04/1980	WAP	General Approval Letter		mvigil
09/01/1981	EXP	Expired Permit (well log late)		mvigil

Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
C 01916		3		PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
**Point of Diversion				
C 01916		605068	358294*	

An () after northing value indicates UTM location was derived from PLSS - see Help

Remarks

WATER SUPPLY WELL FOR THE DRILLING OF JAMES RANCH UNIT #12.

Conditions

- 3 Appropriation and use of water under this permit shall not exceed a period of one year from the date of approval.
- 5A A totalizing meter shall be installed before the first branch of the discharge line from the well and the installation shall be acceptable to the State Engineer; the Engineer shall be advised of the make, model, serial number, date of installation, and initial reading of the meter prior to appropriation of water; pumping records shall be submitted to the District Supervisor for each calendar month on or before the 10th day of the following month.
- 6 The well shall be plugged upon completion of the permitted use, and a plugging report shall be filed with the State Engineer within 10 days.

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ROSWELL
2013 APR - 1 P 1:19

Action of the State Engineer

Approval Code: A - Approved

Action Date: 08/04/1980

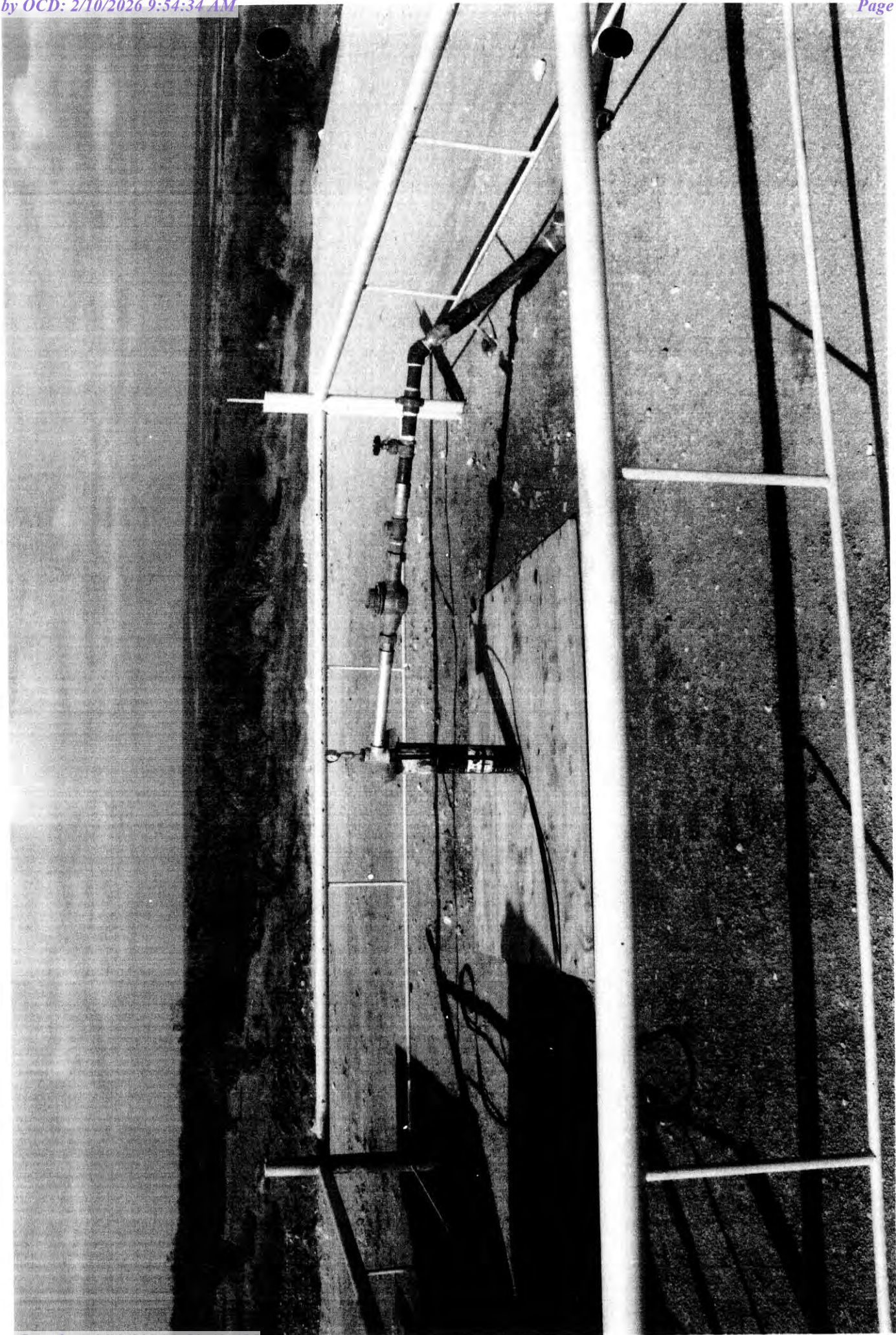
Log Due Date: 08/31/1981

State Engineer:

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

Conditions of Approval for C-1916 abandonment:

- 1) Plugging operations will be conducted in accordance with NMED, NMOCD, or other State or Federal agency having oversight for the above described project.
- 2) The well shall be plugged using a cement slurry (5.2 gals water per 94lb bag of Portland cement). It is understood that due to the high sulfate content Type V cement will be used as the data provided on water quality indicates 6,500 ppm sulfates. The cement grout will be pumped via tremie line from bottom up.
- 3) By item 2 above, the plan meets OSE requirements for tremie/grout abandonment, however, well records are not available to confirm well design/annular seals.






APPENDIX B

Photographic Log




Eastern view of release area during site assessment activities.

Project: 012919158	XTO Energy, Inc. James Ranch Unit SWD #105	 Advancing Opportunity
October 8, 2019	Photographic Log	



Northern view of final excavation extent during confirmation soil sampling activities.

Project: 012919158	XTO Energy, Inc. James Ranch Unit SWD #105	 <i>Advancing Opportunity</i>
October 15, 2019	Photographic Log	

PHOTOGRAPHIC LOG



Photograph 1: View southeast of the above ground production equipment adjacent to sidewall SW08.



Photograph 2: View southeast of the above ground production equipment adjacent to sidewall SW08.

PHOTOGRAPHIC LOG



Photograph 3: View northwest of excavation along the lease road. The excavation was disruptive of nearby operations.



Photograph 4: View south of excavation along the lease road. Note the SWD riser equipment and the frac operation visible on the adjacent pad in the background.

James Ranch Unit SWD Riser # 105
Incident Number NAB1921934485
Photographs Taken: March 3, 2020

PHOTOGRAPHIC LOG



Photograph 1: Backfill off-pad.



Photograph 2: Backfill off-pad.



Photograph 3: Backfill off-pad.



Photograph 4: Backfill off-pad.

JRU SWD Riser #105
32.381936, -103.881954
Photographs Taken: March 11, 2020

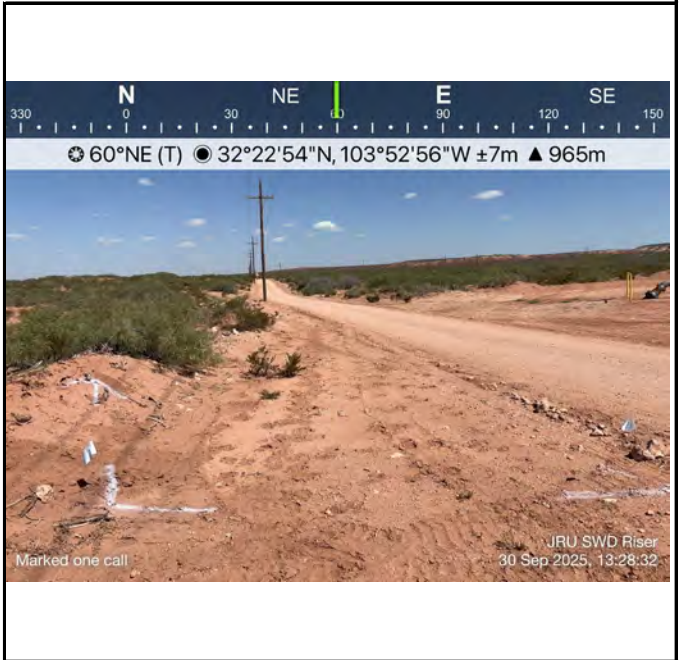


Photographic Log

XTO Energy, Inc.
James Ranch Unit SWD Riser
Incident Number NAB1921934485



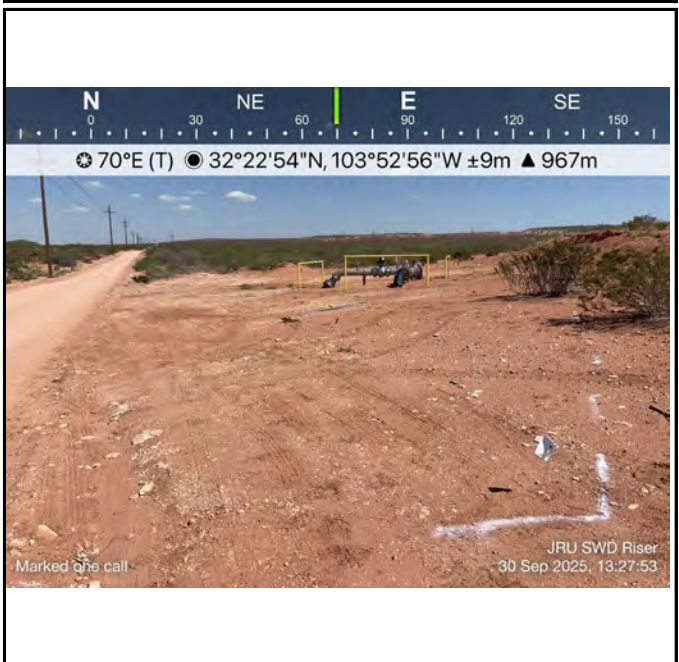
Photograph: 1 Date: 9/30/2025
Description: Access road, SWD riser.
View: East



Photograph: 2 Date: 9/30/2025
Description: Access road, one call area.
View: Northeast



Photograph: 3 Date: 9/30/2025
Description: Access road, SWD riser.
View: Northeast



Photograph: 4 Date: 9/30/2025
Description: Access road, SWD riser.
View: East



Photographic Log

XTO Energy, Inc.
James Ranch Unit SWD Riser
Incident Number NAB1921934485



Photograph: 5 Date: 10/09/2025
Description: Delineation activities near PH03
View: North



Photograph: 6 Date: 11/18/2025
Description: Excavation area near FS06
View: East



Photograph: 7 Date: 11/20/2025
Description: Backfill near FS06
View: South



Photograph: 8 Date: 11/20/2025
Description: Excavation activities near FS07
View: East



APPENDIX C

Lithologic Soil Sampling Logs



LT Environmental, Inc.
 508 West Stevens Street
 Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier:

BH01

Date:

10/8/19

Project Name:

SRU SWD Riser
105

RP Number:

2RP-5557

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

CTS/PID

Logged By: GG

Method: HA

Hole Diameter:

Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1120	D 180	0.0	N	BH01	1			silt, brown, low plasticity
1125	D 180	0	N		2			silt, brown, low plasticity
1130	D 180	0	N		3			silt, reddish brown, low plasticity
1135	D 180	0	N	BH01A	4			silt, reddish brown, low plasticity
					6			
					8			
					10			
					12			
					14			
					16			
					18			
					20			
					22			



LT Environmental, Inc.
 508 West Stevens Street
 Carlsbad, New Mexico 88220

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Identifier: BH02	Date: 10/08/19
Project Name: SRU SWD Riser 105	RP Number: ZRP5557
Logged By: GG	Method: HA
Hole Diameter:	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: Field Screening: **LTS/PID**

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	2180	0	N		1			brown, silt, med plasticity
D	2180	0	N		2			reddish brown, med plasticity
D	1848	0	N		3			reddish brown, med plasticity, silt
D	3488	0	N	BH02	4			Dark reddish brown silt, high plasticity
					6			
					8			
					10			
					12			
					14			
					16			
					18			
					20			
					22			



LT Environmental, Inc.
 508 West Stevens Street
 Carlsbad, New Mexico 88220

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Identifier: **BH03** Date: **10/09/19**
 Project Name: **JRUSWD Riser 105** RP Number: **ZRP 5557**

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: **GG** Method: **HA**
 Hole Diameter: Total Depth: **4**

Lat/Long: Field Screening: **CTS/PID**

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1230	D	2150	0	N	BH03	1		reddish brown, silt, low plasticity
1235	D	2180	0	N		2		reddish brown, silt, low plasticity
1240	D	2150	0	N		3		reddish brown, mod plasticity
1245	D	2180	0	N	BH03A	4		reddish brown silt, mod plasticity
						6		
						8		
						10		
						12		
						14		
						16		
						18		
						20		
						22		



LT Environmental, Inc.
 508 West Stevens Street
 Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: **BH04** Date: **10/08/19 - 10/09/19**
 Project Name: **JAU SWD Riser 105** RP Number: **2RP-5557**

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: _____ Field Screening: **LTS/PID** Logged By: **GG** Method: **HA**
 Hole Diameter: _____ Total Depth: **8'**

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1300	D >3488	0	N		1			reddish brown, silt, high plasticity
1305	D >3488	0	N		2			reddish brown silt, med plasticity
1310 10/9	D 386	0	N		3			light reddish brown silt, low plasticity
1105	D 2632	0	N	BH04	4			Brown silt, low plasticity
1110	D 991	0	N		6			Brown silt, low plasticity
1115	O 991	0	N		7			Brown silt, low plasticity
1170	D 616	0	N		8			Brown silt, low plasticity
					10			
					12			
					14			
					16			
					18			
					20			
					22			



LT Environmental, Inc.
 508 West Stevens Street
 Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: BH05	Date: 10/08-10/09/2014
Project Name: 2RP5557	RP Number: 2RP5557
Logged By: GG	Method: HA
Hole Diameter:	Total Depth: 7

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: Field Screening: **CTS/PID**

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1330	23488	0			1			Red silt, high plasticity
1335	2960	0			2			reddish brown, silt, low plasticity
1340	991	0			3			reddish brown silt, low plasticity
1345	991	0			4			Brown silt, low plasticity
10/9/14	991	0			5			Brown silt, low plasticity
1250	991	0			6			Brown silt, med plasticity
1255	616	0			7			Brown silt, med plasticity
1300	386	0			8			
					10			
					12			
					14			
					16			
					18			
					20			
					22			



LT Environmental, Inc.
 508 West Stevens Street
 Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation


Identifier: **BH06** Date: **10/15/19**
 Project Name: **SBU SWD Riser 105** RP Number: **2RP-5557**

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: _____ Field Screening: **CTS/PID** Logged By: **GG** Method: **HA**
 Hole Diameter: _____ Total Depth: **4'**

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1015	D	<180	0		1			Reddish brown silt/sand, low plasticity
1020	D	<180	0		2			Reddish brown, silt, med plasticity
1025	D	<180	0		3			Brown silt, med plasticity
1030	D	<180	6		4			Brown silt, high plasticity
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 <p style="text-align: center;">LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation</p>		Identifier: BH07	Date: 10/15/19					
		Project Name: SRUSA Δ Riser 105	RP Number: 2BP-5557					
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening: CTS/PID	Logged By: GG					
		Hole Diameter:	Method: HA					
Total Depth:								
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1100	D	2180	0	N	BH07	1		Reddish brown, silt, med plasticity loam
1110	D	2180	0	N		2		Reddish brown, silt loam, med plasticity
1115	D	2180	0	N		3		brown, silt loam, med plasticity
1120	D	2180	0	N	BH07A	4		brown, silt loam, med plasticity
						5		
						6		
						7		
						8		
						9		
						10		



LT Environmental, Inc.
 508 West Stevens Street
 Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: **BH08**

Date: **10/15/2019**

Project Name: **SRUSWD Biser 105**

RP Number: **2RP-5557**

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: **CTS/AID**

Logged By: **GG**

Method: **HA**

Hole Diameter:

Total Depth: **4'**

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1230	D 2180	0	N	BH08	1			Reddish brown, silt loam, high plasticity
1235	D 2180	0	N		2			Reddish brown silt loam, med plasticity
1240	D 2180	0	N		3			brown, silt loam, med plasticity
1245	D 2180	0	N	BH08A	4			brown, silt loam, low plasticity
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



LT Environmental, Inc.
 508 West Stevens Street
 Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: BH09	Date: 10/15/2019
Project Name: JBU SWA Riser 105	RP Number: 2RP-5557
Logged By: GG	Method: HA
Hole Diameter:	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: _____ Field Screening: **CTS/PID**

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1300	D <150	0	N	BH09	1			Reddish brown silt loam, med plasticity
1305	D <150	0	N		2			brown silt loam, med plasticity
1310	D <150	0	N		3			brown silt loam, med plasticity
1315	D <150	0	N	BH09A	4			brown silt loam, low plasticity
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



LT Environmental, Inc.
 508 West Stevens Street
 Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: **BH10**

Date: **10/15/2019**

Project Name: **TRUSWD Riser 105**

RP Number: **ZRP-5557**

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: **CTS/PID**

Logged By: **GG**

Method: **HA**

Hole Diameter: .

Total Depth: **4'**

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1330	D 2180	O	N	BH10	1			Reddish Brown, silt loam, med plasticity
1335	D 2180	O	N		2			Reddish Brown, silt loam, med plasticity
1340	D 2180	O	N		3			Brown silt loam, low plasticity
1345	D 2180	O	N	BH10A	4			Brown silt loam, low plasticity
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



LT Environmental, Inc.
 508 West Stevens Street
 Carlsbad, New Mexico 88220


Compliance · Engineering · Remediation


Identifier: BH11	Date: 10/15/2019
Project Name: JRU SWΔR: ser 105	RP Number: 2RP-5557


LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening: CIS/PID	Logged By: GG	Method: HA
Comments:		Hole Diameter:	Total Depth: 4'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1405	D	<180	0	N	BH11	1		light reddish brown silt loam med plasticity
1410	D	<180	0	N		2		Brown, silt loam, med plasticity
1415	D	<180	0	N		3		Brown silt loam, med plasticity
1420	D	<180	0	N	BH11A	4		Brown silt loam low plasticity
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

							Sample Name: PH01		Date: 10/09/2025	
							Site Name: James Ranch Unit SWD Riser			
							Incident Number: NAB1921934485			
							Job Number: 03C1558737			
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: Evan Roe		Method: Backhoe	
Coordinates: 32.382096, -103.881876							Hole Diameter: 2 feet		Total Depth:	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor for chlorides is included.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
Dry	795	0.0	N	PH01	0.5	0	SM + CALICHE	(0-0.5') SAND & CALICHE. Red-brown and grey. Uniform with small stones. No staining, no odor. (0.5-4') SAND. Uniform with small stones. Red-brown. No staining, no odor.		
Dry	526	0.0	N	PH01A	1	1				
Dry	162	0.1	N	PH01B	2	2	SM			
Dry	588	0.0	N	PH01C	3	3				
Dry	414	0.1	N	PH01D	4	4				
							Final Depth @ 4 Feet			

					Sample Name: PH02		Date: 10/09/2025	
					Site Name: James Ranch Unit SWD Riser			
					Incident Number: NAB1921934485			
					Job Number: 03C1558737			
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: Evan Roe		Method: Backhoe	
Coordinates: 32.382051, -103.881933					Hole Diameter: 2 feet		Total Depth:	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor for chlorides is included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	526	0.2	N	PH02	0.5	0	SM	(0-0.5') SAND. Light brown. Uniform with small stones. Organic/top soil smell. No staining
Dry	722	0.5	N	PH02A	1	1		
Dry	229	0.1	N	PH02B	2	2		
Dry	414	0.1	N	PH02C	3	3		
Dry	414	0.3	N	PH02D	4	4		
						Final Depth @ 4 Feet		

							Sample Name: PH03		Date: 10/09/2025	
							Site Name: James Ranch Unit SWD Riser			
							Incident Number: NAB1921934485			
							Job Number: 03C1558737			
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: Evan Roe		Method: Backhoe	
Coordinates: 32.382010, -103.881985							Hole Diameter: 2 feet		Total Depth:	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% correction factor for chlorides is included.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
						0		(0-0.5') CLAYEY SAND. Brown. Uniform. No odor, no staining (0.5-4') SAND. Light brown. Uniform. No odor, no staining.		
Dry	<162	0.6	N	PH03	0.5		SC			
Dry	795	0.3	N	PH03A	1	1				
Dry	655	0.4	N	PH03B	2	2				
Dry	470	0.6	N	PH03C	3	3	SM			
Dry	588	0.7	N	PH03D	4	4				
Dry	229	0.6	N	PH03E	5	5				
						Final Depth @ 5 Feet				



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

Analytical Report 634301

for
LT Environmental, Inc.

Project Manager: Dan Moir

JRU SWD Riser #105

21-AUG-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)



21-AUG-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **634301**
JRU SWD Riser #105
Project Address:

Dan Moir:

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) 634301. 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. 634301 will be filed for 45 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,

Jessica Kramer
Project Assistant

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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS 01	S	08-15-19 13:50	.5 ft	634301-001
SS 02	S	08-15-19 13:55	.5 ft	634301-002
SS 03	S	08-15-19 14:05	.5 ft	634301-003
SS 04	S	08-15-19 14:10	.5 ft	634301-004
SS 05	S	08-15-19 14:15	.5 ft	634301-005



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU SWD Riser #105

Project ID:

Work Order Number(s): 634301

Report Date: 21-AUG-19

Date Received: 08/15/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099158 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 634291-001 S, 634291-001 SD, 634301-001.



Certificate of Analysis Summary 634301

LT Environmental, Inc., Arvada, CO

Project Name: JRU SWD Riser #105

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu Aug-15-19 04:45 pm

Report Date: 21-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	634301-001	634301-002	634301-003	634301-004	634301-005	
	<i>Field Id:</i>	SS 01	SS 02	SS 03	SS 04	SS 05	
	<i>Depth:</i>	.5- ft	.5- ft	.5- ft	.5- ft	.5- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Aug-15-19 13:50	Aug-15-19 13:55	Aug-15-19 14:05	Aug-15-19 14:10	Aug-15-19 14:15	
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Aug-17-19 12:30	Aug-17-19 12:30	Aug-17-19 12:30	Aug-17-19 12:30	Aug-17-19 12:30	
	<i>Analyzed:</i>	Aug-20-19 06:54	Aug-20-19 07:14	Aug-20-19 07:34	Aug-20-19 07:54	Aug-20-19 09:12	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
	Benzene	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198	
Toluene	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198		
Ethylbenzene	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198		
m,p-Xylenes	<0.00399 0.00399	<0.00399 0.00399	<0.00397 0.00397	<0.00402 0.00402	<0.00397 0.00397		
o-Xylene	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198		
Total Xylenes	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198		
Total BTEX	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00198 0.00198		
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Aug-19-19 12:10	Aug-19-19 12:10	Aug-19-19 12:10	Aug-19-19 12:10	Aug-19-19 12:10	
	<i>Analyzed:</i>	Aug-19-19 15:21	Aug-19-19 15:27	Aug-19-19 15:44	Aug-19-19 15:50	Aug-19-19 15:56	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride	149 25.2	88.4 50.1	2570 24.9	2740 50.5	6600 50.5		
TPH by SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Aug-19-19 13:00	Aug-19-19 13:00	Aug-19-19 13:00	Aug-19-19 15:08	Aug-19-19 15:08	
	<i>Analyzed:</i>	Aug-20-19 05:11	Aug-20-19 06:09	Aug-20-19 06:28	Aug-21-19 07:21	Aug-21-19 07:43	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
	Gasoline Range Hydrocarbons (GRO)	<25.0 25.0	<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	
	Diesel Range Organics (DRO)	<25.0 25.0	<24.9 24.9	39.8 25.0	<25.0 25.0	<25.0 25.0	
Motor Oil Range Hydrocarbons (MRO)	<25.0 25.0	<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0		
Total TPH	<25.0 25.0	<24.9 24.9	39.8 25.0	<25.0 25.0	<25.0 25.0		
Total GRO-DRO	<25.0 25.0	<24.9 24.9	39.8 25.0	<25.0 25.0	<25.0 25.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant



Certificate of Analytical Results 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SS 01	Matrix: Soil	Date Received: 08.15.19 16.45
Lab Sample Id: 634301-001	Date Collected: 08.15.19 13.50	Sample Depth: .5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 08.19.19 12.10	Basis: Wet Weight
Seq Number: 3099008		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	149	25.2	mg/kg	08.19.19 15.21		5

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 08.19.19 13.00	Basis: Wet Weight
Seq Number: 3099047		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.20.19 05.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.20.19 05.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.20.19 05.11	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.20.19 05.11	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.20.19 05.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.20.19 05.11	
o-Terphenyl	84-15-1	95	%	70-135	08.20.19 05.11	



Certificate of Analytical Results 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SS 01	Matrix: Soil	Date Received: 08.15.19 16.45
Lab Sample Id: 634301-001	Date Collected: 08.15.19 13.50	Sample Depth: .5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: AMB	Date Prep: 08.17.19 12.30	Basis: Wet Weight
Seq Number: 3099158		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.20.19 06.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.20.19 06.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.20.19 06.54	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.20.19 06.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.20.19 06.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.20.19 06.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.20.19 06.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	140	%	70-130	08.20.19 06.54	**	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.20.19 06.54		



Certificate of Analytical Results 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SS 02	Matrix: Soil	Date Received:08.15.19 16.45
Lab Sample Id: 634301-002	Date Collected: 08.15.19 13.55	Sample Depth: .5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 08.19.19 12.10	Basis: Wet Weight
Seq Number: 3099008		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	88.4	50.1	mg/kg	08.19.19 15.27		10

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 08.19.19 13.00	Basis: Wet Weight
Seq Number: 3099047		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 06.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 06.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 06.09	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 06.09	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 06.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.20.19 06.09	
o-Terphenyl	84-15-1	101	%	70-135	08.20.19 06.09	



Certificate of Analytical Results 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SS 02	Matrix: Soil	Date Received: 08.15.19 16.45
Lab Sample Id: 634301-002	Date Collected: 08.15.19 13.55	Sample Depth: .5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: AMB	Date Prep: 08.17.19 12.30	Basis: Wet Weight
Seq Number: 3099158		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.20.19 07.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.20.19 07.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.20.19 07.14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.20.19 07.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.20.19 07.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.20.19 07.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.20.19 07.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.20.19 07.14		
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.20.19 07.14		



Certificate of Analytical Results 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SS 03	Matrix: Soil	Date Received: 08.15.19 16.45
Lab Sample Id: 634301-003	Date Collected: 08.15.19 14.05	Sample Depth: .5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 08.19.19 12.10	Basis: Wet Weight
Seq Number: 3099008		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2570	24.9	mg/kg	08.19.19 15.44		5

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 08.19.19 13.00	Basis: Wet Weight
Seq Number: 3099047		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.20.19 06.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	39.8	25.0	mg/kg	08.20.19 06.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.20.19 06.28	U	1
Total TPH	PHC635	39.8	25.0	mg/kg	08.20.19 06.28		1
Total GRO-DRO	PHC628	39.8	25.0	mg/kg	08.20.19 06.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.20.19 06.28	
o-Terphenyl	84-15-1	97	%	70-135	08.20.19 06.28	



Certificate of Analytical Results 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SS 03	Matrix: Soil	Date Received: 08.15.19 16.45
Lab Sample Id: 634301-003	Date Collected: 08.15.19 14.05	Sample Depth: .5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: AMB	Date Prep: 08.17.19 12.30	Basis: Wet Weight
Seq Number: 3099158		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.20.19 07.34	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.20.19 07.34	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.20.19 07.34	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.20.19 07.34	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.20.19 07.34	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.20.19 07.34	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.20.19 07.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	123	%	70-130	08.20.19 07.34		
1,4-Difluorobenzene	540-36-3	79	%	70-130	08.20.19 07.34		



Certificate of Analytical Results 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SS 04	Matrix: Soil	Date Received: 08.15.19 16.45
Lab Sample Id: 634301-004	Date Collected: 08.15.19 14.10	Sample Depth: .5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 08.19.19 12.10	Basis: Wet Weight
Seq Number: 3099008		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2740	50.5	mg/kg	08.19.19 15.50		10

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 08.19.19 15.08	Basis: Wet Weight
Seq Number: 3099194		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.21.19 07.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.21.19 07.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.21.19 07.21	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.21.19 07.21	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.21.19 07.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.21.19 07.21	
o-Terphenyl	84-15-1	109	%	70-135	08.21.19 07.21	



Certificate of Analytical Results 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SS 04	Matrix: Soil	Date Received: 08.15.19 16.45
Lab Sample Id: 634301-004	Date Collected: 08.15.19 14.10	Sample Depth: .5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: AMB	Date Prep: 08.17.19 12.30	Basis: Wet Weight
Seq Number: 3099158		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.20.19 07.54	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.20.19 07.54	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.20.19 07.54	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.20.19 07.54	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.20.19 07.54	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.20.19 07.54	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.20.19 07.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	123	%	70-130	08.20.19 07.54		
1,4-Difluorobenzene	540-36-3	83	%	70-130	08.20.19 07.54		



Certificate of Analytical Results 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SS 05	Matrix: Soil	Date Received: 08.15.19 16.45
Lab Sample Id: 634301-005	Date Collected: 08.15.19 14.15	Sample Depth: .5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 08.19.19 12.10	Basis: Wet Weight
Seq Number: 3099008		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6600	50.5	mg/kg	08.19.19 15.56		10

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 08.19.19 15.08	Basis: Wet Weight
Seq Number: 3099194		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.21.19 07.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.21.19 07.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.21.19 07.43	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.21.19 07.43	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.21.19 07.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.21.19 07.43	
o-Terphenyl	84-15-1	93	%	70-135	08.21.19 07.43	



Certificate of Analytical Results 634301

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SS 05	Matrix: Soil	Date Received: 08.15.19 16.45
Lab Sample Id: 634301-005	Date Collected: 08.15.19 14.15	Sample Depth: .5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: AMB	Date Prep: 08.17.19 12.30	Basis: Wet Weight
Seq Number: 3099158		SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.20.19 09.12	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.20.19 09.12	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.20.19 09.12	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.20.19 09.12	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.20.19 09.12	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.20.19 09.12	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.20.19 09.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.20.19 09.12		
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.20.19 09.12		



QC Summary 634301

LT Environmental, Inc.
JRU SWD Riser #105

Analytical Method: Chloride by EPA 300

Seq Number: 3099008
MB Sample Id: 7684488-1-BLK

Matrix: Solid
LCS Sample Id: 7684488-1-BKS

Prep Method: E300P
Date Prep: 08.19.19
LCSD Sample Id: 7684488-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	245	98	240	96	90-110	2	20	mg/kg	08.19.19 14:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3099008
Parent Sample Id: 634340-001

Matrix: Soil
MS Sample Id: 634340-001 S

Prep Method: E300P
Date Prep: 08.19.19
MSD Sample Id: 634340-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	75.1	251	351	110	351	110	90-110	0	20	mg/kg	08.19.19 14:58	

Analytical Method: Chloride by EPA 300

Seq Number: 3099008
Parent Sample Id: 634403-001

Matrix: Soil
MS Sample Id: 634403-001 S

Prep Method: E300P
Date Prep: 08.19.19
MSD Sample Id: 634403-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.6	248	285	109	284	109	90-110	0	20	mg/kg	08.19.19 16:19	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3099047
MB Sample Id: 7684493-1-BLK

Matrix: Solid
LCS Sample Id: 7684493-1-BKS

Prep Method: TX1005P
Date Prep: 08.19.19
LCSD Sample Id: 7684493-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	959	96	936	94	70-135	2	20	mg/kg	08.20.19 04:33	
Diesel Range Organics (DRO)	<25.0	1000	1000	100	977	98	70-135	2	20	mg/kg	08.20.19 04:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		122		119		70-135	%	08.20.19 04:33
o-Terphenyl	100		103		100		70-135	%	08.20.19 04:33

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 634301

LT Environmental, Inc.
JRU SWD Riser #105

Analytical Method: TPH by SW8015 Mod

Seq Number: 3099194

MB Sample Id: 7684522-1-BLK

Matrix: Solid

LCS Sample Id: 7684522-1-BKS

Prep Method: TX1005P

Date Prep: 08.19.19

LCSD Sample Id: 7684522-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	859	86	879	88	70-135	2	20	mg/kg	08.20.19 22:59	
Diesel Range Organics (DRO)	<25.0	1000	901	90	1070	107	70-135	17	20	mg/kg	08.20.19 22:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		77		97		70-135	%	08.20.19 22:59
o-Terphenyl	98		81		106		70-135	%	08.20.19 22:59

Analytical Method: TPH by SW8015 Mod

Seq Number: 3099047

Parent Sample Id: 634301-001

Matrix: Soil

MS Sample Id: 634301-001 S

Prep Method: TX1005P

Date Prep: 08.19.19

MSD Sample Id: 634301-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	973	97	976	98	70-135	0	20	mg/kg	08.20.19 05:30	
Diesel Range Organics (DRO)	<25.0	998	1020	102	1030	103	70-135	1	20	mg/kg	08.20.19 05:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		118		70-135	%	08.20.19 05:30
o-Terphenyl	105		106		70-135	%	08.20.19 05:30

Analytical Method: TPH by SW8015 Mod

Seq Number: 3099194

Parent Sample Id: 634513-061

Matrix: Soil

MS Sample Id: 634513-061 S

Prep Method: TX1005P

Date Prep: 08.20.19

MSD Sample Id: 634513-061 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	838	84	847	85	70-135	1	20	mg/kg	08.21.19 00:04	
Diesel Range Organics (DRO)	<25.0	998	990	99	964	97	70-135	3	20	mg/kg	08.21.19 00:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		89		70-135	%	08.21.19 00:04
o-Terphenyl	97		94		70-135	%	08.21.19 00:04

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 634301

LT Environmental, Inc.
JRU SWD Riser #105

Analytical Method: BTEX by EPA 8021B

Seq Number: 3099158

MB Sample Id: 7684441-1-BLK

Matrix: Solid

LCS Sample Id: 7684441-1-BKS

Prep Method: SW5030B

Date Prep: 08.17.19

LCSD Sample Id: 7684441-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0898	90	0.0909	91	70-130	1	35	mg/kg	08.20.19 02:53	
Toluene	<0.000456	0.100	0.0945	95	0.0982	98	70-130	4	35	mg/kg	08.20.19 02:53	
Ethylbenzene	<0.00200	0.100	0.0946	95	0.102	102	70-130	8	35	mg/kg	08.20.19 02:53	
m,p-Xylenes	<0.00101	0.200	0.181	91	0.196	98	70-130	8	35	mg/kg	08.20.19 02:53	
o-Xylene	<0.000344	0.100	0.0951	95	0.103	103	70-130	8	35	mg/kg	08.20.19 02:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		95		95		70-130	%	08.20.19 02:53
4-Bromofluorobenzene	102		107		109		70-130	%	08.20.19 02:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3099158

Parent Sample Id: 634291-001

Matrix: Soil

MS Sample Id: 634291-001 S

Prep Method: SW5030B

Date Prep: 08.17.19

MSD Sample Id: 634291-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00139	0.0998	0.0611	60	0.0563	55	70-130	8	35	mg/kg	08.20.19 03:33	X
Toluene	0.0373	0.0998	0.0644	27	0.0547	17	70-130	16	35	mg/kg	08.20.19 03:33	X
Ethylbenzene	0.0180	0.0998	0.0518	34	0.0291	11	70-130	56	35	mg/kg	08.20.19 03:33	XF
m,p-Xylenes	0.0673	0.200	0.0652	0	0.0640	0	70-130	2	35	mg/kg	08.20.19 03:33	X
o-Xylene	0.107	0.0998	0.118	11	0.111	4	70-130	6	35	mg/kg	08.20.19 03:33	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	08.20.19 03:33
4-Bromofluorobenzene	186	**	207	**	70-130	%	08.20.19 03:33

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Chain of Custody

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432-704-5440) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Work Order No: 1021301

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Project Manager: Dan Moir
 Company Name: LT Environmental, Inc., Permian office
 Address: 3300 North A Street
 City, State ZIP: Midland, TX 79705
 Phone: 432.704.5178
 Email: ggreen@ltenv.com ; dmoir@ltenv.com

Bill to: (if different) Kyle Littrell
 Company Name: XTO
 Address:
 City, State ZIP: Midland, Tx 79705

Program: UST/PST PRP Brownfields RC Superfund
 State of Project:
 Reporting Level II Level III ST/UST RRP Level IV
 Deliverables: EDD ADaPT Other:

Project Name: FRUSWD Riser #105 Turn Around
 Project Number: 7RP-5557 Routine
 P.O. Number: Garrett Green Rush:
 Sampler's Name: Garrett Green Due Date:

SAMPLE RECEIPT Temp Blank: Yes No Wet Ice: Yes No
 Temperature (°C): 1.0 Thermometer ID
 Received Intact: Yes No
 Cooler Custody Seals: Yes No Correction Factor: 1.001
 Sample Custody Seals: Yes No Total Containers: 5

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
5501	S	8/5/19	1350	1.5'	1	X	X	X		
5502	S	8/5/19	1355	1	1	X	X	X		
5503	S	8/5/19	1405	1	1	X	X	X		
5504	S	8/5/19	1410	1	1	X	X	X		
5505	S	8/5/19	1415	1	1	X	X	X		

Total **200.7 / 6010** **200.8 / 6020:** 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature) [Signature] Received by: (Signature) [Signature] Date/Time 8/5/19 16:45

Relinquished by: (Signature) [Signature] Received by: (Signature) [Signature] Date/Time [Blank]



Inter-Office Shipment

IOS Number 46438

Date/Time: 08/16/19 11:23

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 7760 0892 0480

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
634301-001	S	SS 01	08/15/19 13:50	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634301-001	S	SS 01	08/15/19 13:50	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	
634301-001	S	SS 01	08/15/19 13:50	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634301-002	S	SS 02	08/15/19 13:55	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634301-002	S	SS 02	08/15/19 13:55	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634301-002	S	SS 02	08/15/19 13:55	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	
634301-003	S	SS 03	08/15/19 14:05	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634301-003	S	SS 03	08/15/19 14:05	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634301-003	S	SS 03	08/15/19 14:05	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	
634301-004	S	SS 04	08/15/19 14:10	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634301-004	S	SS 04	08/15/19 14:10	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	
634301-004	S	SS 04	08/15/19 14:10	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634301-005	S	SS 05	08/15/19 14:15	SW8021B	BTEX by EPA 8021B	08/21/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634301-005	S	SS 05	08/15/19 14:15	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634301-005	S	SS 05	08/15/19 14:15	E300_CL	Chloride by EPA 300	08/21/19	02/11/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Date Relinquished: 08/16/2019

Received By:

Katie Lowe

Date Received: 08/17/2019 12:15

Cooler Temperature: 3.8



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 46438

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Elizabeth McClellan

Date Sent: 08/16/2019 11:23 AM

Received By: Katie Lowe

Date Received: 08/17/2019 12:15 PM

Sample Receipt Checklist

Comments

- #1 *Temperature of cooler(s)? 3.8
- #2 *Shipping container in good condition? Yes
- #3 *Samples received with appropriate temperature? Yes
- #4 *Custody Seals intact on shipping container/ cooler? N/A
- #5 *Custody Seals Signed and dated for Containers/coolers N/A
- #6 *IOS present? Yes
- #7 Any missing/extra samples? No
- #8 IOS agrees with sample label(s)/matrix? Yes
- #9 Sample matrix/ properties agree with IOS? Yes
- #10 Samples in proper container/ bottle? Yes
- #11 Samples properly preserved? Yes
- #12 Sample container(s) intact? Yes
- #13 Sufficient sample amount for indicated test(s)? Yes
- #14 All samples received within hold time? Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Katie Lowe

Date: 08/17/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/15/2019 04:45:00 PM

Work Order #: 634301

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : T-NM-007

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.6	
#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?	N/A	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	Yes	Subbed to Xenco Midland.
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 08/16/2019

Checklist reviewed by:

Jessica Kramer

Date: 08/20/2019

Analytical Report 639592

for
LT Environmental, Inc.

Project Manager: Dan Moir
JRU SWD Slowriser 105

16-OCT-19

Collected By: Client



1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



16-OCT-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **639592**
JRU SWD Slowriser 105
Project Address:

Dan Moir:

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) 639592. 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. 639592 will be filed for 45 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,

Jessica Kramer

Project Assistant

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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	10-08-19 11:20	1 ft	639592-001
BH01A	S	10-08-19 11:35	4 ft	639592-002
BH02	S	10-08-19 12:10	4 ft	639592-003
BH03	S	10-08-19 12:30	1 ft	639592-004
BH03A	S	10-08-19 12:45	4 ft	639592-005
BH04	S	10-09-19 11:05	4 ft	639592-006
BH04A	S	10-09-19 11:20	8 ft	639592-007
BH05	S	10-09-19 12:45	4 ft	639592-008
BH05A	S	10-09-19 12:55	6 ft	639592-009
BH05B	S	10-09-19 13:00	8 ft	639592-010



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU SWD Slowriser 105

Project ID:
Work Order Number(s): 639592

Report Date: 16-OCT-19
Date Received: 10/10/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3104153 Chloride by EPA 300

Lab Sample ID 639592-010 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 639592-008, -009, -010.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3104363 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Lab Sample ID 639592-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 639592-001, -002, -005, -006, -007, -008, -009, -010.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3104439 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 639592

LT Environmental, Inc., Arvada, CO

Project Name: JRU SWD Slowriser 105

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu Oct-10-19 10:41 am

Report Date: 16-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	639592-001	639592-002	639592-003	639592-004	639592-005	639592-006
	<i>Field Id:</i>	BH01	BH01A	BH02	BH03	BH03A	BH04
	<i>Depth:</i>	1- ft	4- ft	4- ft	1- ft	4- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-08-19 11:20	Oct-08-19 11:35	Oct-08-19 12:10	Oct-08-19 12:30	Oct-08-19 12:45	Oct-09-19 11:05
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Oct-14-19 17:00	Oct-14-19 17:00	Oct-15-19 15:02	Oct-15-19 15:02	Oct-14-19 17:00	Oct-14-19 17:00
	<i>Analyzed:</i>	Oct-15-19 02:16	Oct-15-19 02:36	Oct-16-19 10:34	Oct-16-19 10:55	Oct-15-19 05:54	Oct-15-19 06:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00400 0.00400	<0.00397 0.00397	<0.00398 0.00398	<0.00402 0.00402	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-11-19 18:00	Oct-11-19 18:00	Oct-11-19 18:00	Oct-11-19 18:00	Oct-11-19 18:00	Oct-11-19 18:00
	<i>Analyzed:</i>	Oct-12-19 00:02	Oct-12-19 00:12	Oct-12-19 00:22	Oct-12-19 00:32	Oct-12-19 00:42	Oct-12-19 00:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		42.7 4.98	36.6 5.00	1980 50.3	32.6 4.96	21.6 5.00	1790 25.0
TPH by SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-13-19 12:00	Oct-13-19 12:00	Oct-13-19 12:00	Oct-13-19 12:00	Oct-13-19 12:00	Oct-13-19 12:00
	<i>Analyzed:</i>	Oct-13-19 22:49	Oct-13-19 23:51	Oct-14-19 00:12	Oct-14-19 00:33	Oct-14-19 00:54	Oct-14-19 01:15
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Total GRO-DRO		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Total TPH		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 639592

LT Environmental, Inc., Arvada, CO

Project Name: JRU SWD Slowriser 105

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Thu Oct-10-19 10:41 am

Report Date: 16-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	639592-007	639592-008	639592-009	639592-010		
	<i>Field Id:</i>	BH04A	BH05	BH05A	BH05B		
	<i>Depth:</i>	8- ft	4- ft	6- ft	8- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Oct-09-19 11:20	Oct-09-19 12:45	Oct-09-19 12:55	Oct-09-19 13:00		
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Oct-14-19 17:00	Oct-14-19 17:00	Oct-14-19 17:00	Oct-14-19 17:00		
	<i>Analyzed:</i>	Oct-15-19 06:35	Oct-15-19 06:55	Oct-15-19 07:15	Oct-15-19 07:35		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200		
Toluene		<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200		
Ethylbenzene		<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200		
m,p-Xylenes		<0.00399 0.00399	<0.00403 0.00403	<0.00402 0.00402	<0.00400 0.00400		
o-Xylene		<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200		
Total Xylenes		<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200		
Total BTEX		<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200		
Chloride by EPA 300 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-11-19 18:00	Oct-11-19 18:30	Oct-11-19 18:30	Oct-11-19 18:30		
	<i>Analyzed:</i>	Oct-12-19 01:02	Oct-12-19 02:02	Oct-12-19 02:42	Oct-12-19 04:22		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		387 50.0	795 5.00	465 4.98	42.4 5.00		
TPH by SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-13-19 12:00	Oct-13-19 12:00	Oct-13-19 12:00	Oct-13-19 12:00		
	<i>Analyzed:</i>	Oct-14-19 01:36	Oct-14-19 01:57	Oct-14-19 02:17	Oct-14-19 02:38		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9		
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9		
Total GRO-DRO		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9		
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9		

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Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH01	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-001	Date Collected: 10.08.19 11.20	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.11.19 18.00	Basis: Wet Weight
Seq Number: 3104150		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.7	4.98	mg/kg	10.12.19 00.02		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.13.19 12.00	Basis: Wet Weight
Seq Number: 3104226		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.13.19 22.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.13.19 22.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.13.19 22.49	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.13.19 22.49	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.13.19 22.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	10.13.19 22.49	
o-Terphenyl	84-15-1	75	%	70-135	10.13.19 22.49	



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH01	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-001	Date Collected: 10.08.19 11.20	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.14.19 17.00	Basis: Wet Weight
Seq Number: 3104363		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.15.19 02.16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.15.19 02.16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.15.19 02.16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.15.19 02.16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.15.19 02.16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.15.19 02.16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.15.19 02.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	122	%	70-130	10.15.19 02.16		
1,4-Difluorobenzene	540-36-3	81	%	70-130	10.15.19 02.16		



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH01A	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-002	Date Collected: 10.08.19 11.35	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.11.19 18.00	Basis: Wet Weight
Seq Number: 3104150		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.6	5.00	mg/kg	10.12.19 00.12		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.13.19 12.00	Basis: Wet Weight
Seq Number: 3104226		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.13.19 23.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.13.19 23.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.13.19 23.51	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.13.19 23.51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.13.19 23.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	10.13.19 23.51	
o-Terphenyl	84-15-1	71	%	70-135	10.13.19 23.51	



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH01A	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-002	Date Collected: 10.08.19 11.35	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.14.19 17.00	Basis: Wet Weight
Seq Number: 3104363		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.15.19 02.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.15.19 02.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.15.19 02.36	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.15.19 02.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.15.19 02.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.15.19 02.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.15.19 02.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	10.15.19 02.36		
1,4-Difluorobenzene	540-36-3	91	%	70-130	10.15.19 02.36		



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH02	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-003	Date Collected: 10.08.19 12.10	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.11.19 18.00	Basis: Wet Weight
Seq Number: 3104150		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1980	50.3	mg/kg	10.12.19 00.22		10

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.13.19 12.00	Basis: Wet Weight
Seq Number: 3104226		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.14.19 00.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.14.19 00.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.14.19 00.12	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.14.19 00.12	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.14.19 00.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-135	10.14.19 00.12	
o-Terphenyl	84-15-1	72	%	70-135	10.14.19 00.12	



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH02	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-003	Date Collected: 10.08.19 12.10	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.15.19 15.02	Basis: Wet Weight
Seq Number: 3104439		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.16.19 10.34	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.16.19 10.34	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.16.19 10.34	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.16.19 10.34	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.16.19 10.34	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.16.19 10.34	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.16.19 10.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	10.16.19 10.34		
1,4-Difluorobenzene	540-36-3	86	%	70-130	10.16.19 10.34		



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH03	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-004	Date Collected: 10.08.19 12.30	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.11.19 18.00	Basis: Wet Weight
Seq Number: 3104150		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.6	4.96	mg/kg	10.12.19 00.32		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.13.19 12.00	Basis: Wet Weight
Seq Number: 3104226		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.14.19 00.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.14.19 00.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.14.19 00.33	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.14.19 00.33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.14.19 00.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	10.14.19 00.33	
o-Terphenyl	84-15-1	72	%	70-135	10.14.19 00.33	



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH03	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-004	Date Collected: 10.08.19 12.30	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.15.19 15.02	Basis: Wet Weight
Seq Number: 3104439		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.16.19 10.55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.16.19 10.55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.16.19 10.55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.16.19 10.55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.16.19 10.55	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.16.19 10.55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.16.19 10.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	10.16.19 10.55		
1,4-Difluorobenzene	540-36-3	91	%	70-130	10.16.19 10.55		



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH03A	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-005	Date Collected: 10.08.19 12.45	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.11.19 18.00	Basis: Wet Weight
Seq Number: 3104150		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.6	5.00	mg/kg	10.12.19 00.42		1

Analytical Method: TPH by SW8015 Mod	Prep Method: SW8015P
Tech: DVM	% Moisture:
Analyst: ARM	Date Prep: 10.13.19 12.00
Seq Number: 3104226	Basis: Wet Weight
	SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.14.19 00.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.14.19 00.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.14.19 00.54	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.14.19 00.54	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.14.19 00.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	10.14.19 00.54	
o-Terphenyl	84-15-1	70	%	70-135	10.14.19 00.54	



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LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH03A	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-005	Date Collected: 10.08.19 12.45	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.14.19 17.00	Basis: Wet Weight
Seq Number: 3104363		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.15.19 05.54	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.15.19 05.54	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.15.19 05.54	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.15.19 05.54	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.15.19 05.54	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.15.19 05.54	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.15.19 05.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	10.15.19 05.54		
1,4-Difluorobenzene	540-36-3	85	%	70-130	10.15.19 05.54		



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH04	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-006	Date Collected: 10.09.19 11.05	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.11.19 18.00	Basis: Wet Weight
Seq Number: 3104150		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1790	25.0	mg/kg	10.12.19 00.52		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.13.19 12.00	Basis: Wet Weight
Seq Number: 3104226		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.14.19 01.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.14.19 01.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.14.19 01.15	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.14.19 01.15	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.14.19 01.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	10.14.19 01.15	
o-Terphenyl	84-15-1	71	%	70-135	10.14.19 01.15	



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LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH04	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-006	Date Collected: 10.09.19 11.05	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.14.19 17.00	Basis: Wet Weight
Seq Number: 3104363		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.15.19 06.14	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.15.19 06.14	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.15.19 06.14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.15.19 06.14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.15.19 06.14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.15.19 06.14	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.15.19 06.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	10.15.19 06.14		
1,4-Difluorobenzene	540-36-3	91	%	70-130	10.15.19 06.14		



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH04A	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-007	Date Collected: 10.09.19 11.20	Sample Depth: 8 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.11.19 18.00	Basis: Wet Weight
Seq Number: 3104150		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	387	50.0	mg/kg	10.12.19 01.02		10

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.13.19 12.00	Basis: Wet Weight
Seq Number: 3104226		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.14.19 01.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.14.19 01.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.14.19 01.36	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.14.19 01.36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.14.19 01.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	10.14.19 01.36	
o-Terphenyl	84-15-1	70	%	70-135	10.14.19 01.36	



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH04A	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-007	Date Collected: 10.09.19 11.20	Sample Depth: 8 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.14.19 17.00	Basis: Wet Weight
Seq Number: 3104363		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.15.19 06.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.15.19 06.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.15.19 06.35	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.15.19 06.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.15.19 06.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.15.19 06.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.15.19 06.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	83	%	70-130	10.15.19 06.35		
1,4-Difluorobenzene	540-36-3	88	%	70-130	10.15.19 06.35		



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH05	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-008	Date Collected: 10.09.19 12.45	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.11.19 18.30	Basis: Wet Weight
Seq Number: 3104153		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	795	5.00	mg/kg	10.12.19 02.02		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.13.19 12.00	Basis: Wet Weight
Seq Number: 3104226		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.14.19 01.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.14.19 01.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.14.19 01.57	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.14.19 01.57	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.14.19 01.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	10.14.19 01.57	
o-Terphenyl	84-15-1	71	%	70-135	10.14.19 01.57	



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH05	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-008	Date Collected: 10.09.19 12.45	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.14.19 17.00	Basis: Wet Weight
Seq Number: 3104363		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.15.19 06.55	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.15.19 06.55	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.15.19 06.55	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.15.19 06.55	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.15.19 06.55	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.15.19 06.55	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.15.19 06.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	10.15.19 06.55		
4-Bromofluorobenzene	460-00-4	96	%	70-130	10.15.19 06.55		



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LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH05A	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-009	Date Collected: 10.09.19 12.55	Sample Depth: 6 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.11.19 18.30	Basis: Wet Weight
Seq Number: 3104153		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	465	4.98	mg/kg	10.12.19 02.42		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.13.19 12.00	Basis: Wet Weight
Seq Number: 3104226		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.14.19 02.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.14.19 02.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.14.19 02.17	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.14.19 02.17	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.14.19 02.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-135	10.14.19 02.17	
o-Terphenyl	84-15-1	71	%	70-135	10.14.19 02.17	



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH05A	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-009	Date Collected: 10.09.19 12.55	Sample Depth: 6 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.14.19 17.00	Basis: Wet Weight
Seq Number: 3104363		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.15.19 07.15	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.15.19 07.15	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.15.19 07.15	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.15.19 07.15	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.15.19 07.15	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.15.19 07.15	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.15.19 07.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	10.15.19 07.15		
4-Bromofluorobenzene	460-00-4	94	%	70-130	10.15.19 07.15		



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH05B	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-010	Date Collected: 10.09.19 13.00	Sample Depth: 8 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.11.19 18.30	Basis: Wet Weight
Seq Number: 3104153		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.4	5.00	mg/kg	10.12.19 04.22		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.13.19 12.00	Basis: Wet Weight
Seq Number: 3104226		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.14.19 02.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.14.19 02.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.14.19 02.38	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.14.19 02.38	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.14.19 02.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	10.14.19 02.38	
o-Terphenyl	84-15-1	75	%	70-135	10.14.19 02.38	



Certificate of Analytical Results 639592

LT Environmental, Inc., Arvada, CO

JRU SWD Slowriser 105

Sample Id: BH05B	Matrix: Soil	Date Received: 10.10.19 10.41
Lab Sample Id: 639592-010	Date Collected: 10.09.19 13.00	Sample Depth: 8 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.14.19 17.00	Basis: Wet Weight
Seq Number: 3104363		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.15.19 07.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.15.19 07.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.15.19 07.35	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.15.19 07.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.15.19 07.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.15.19 07.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.15.19 07.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	87	%	70-130	10.15.19 07.35		
1,4-Difluorobenzene	540-36-3	89	%	70-130	10.15.19 07.35		



QC Summary 639592

LT Environmental, Inc.
JRU SWD Slowriser 105

Analytical Method: Chloride by EPA 300

Seq Number: 3104150
MB Sample Id: 7687994-1-BLK

Matrix: Solid
LCS Sample Id: 7687994-1-BKS

Prep Method: E300P
Date Prep: 10.11.19
LCSD Sample Id: 7687994-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	244	98	243	97	90-110	0	20	mg/kg	10.11.19 20:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3104153
MB Sample Id: 7687995-1-BLK

Matrix: Solid
LCS Sample Id: 7687995-1-BKS

Prep Method: E300P
Date Prep: 10.11.19
LCSD Sample Id: 7687995-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	242	97	244	98	90-110	1	20	mg/kg	10.12.19 01:42	

Analytical Method: Chloride by EPA 300

Seq Number: 3104150
Parent Sample Id: 639585-002

Matrix: Soil
MS Sample Id: 639585-002 S

Prep Method: E300P
Date Prep: 10.11.19
MSD Sample Id: 639585-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	262	253	507	97	502	95	90-110	1	20	mg/kg	10.11.19 20:33	

Analytical Method: Chloride by EPA 300

Seq Number: 3104150
Parent Sample Id: 639585-003

Matrix: Soil
MS Sample Id: 639585-003 S

Prep Method: E300P
Date Prep: 10.11.19
MSD Sample Id: 639585-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	320	248	553	94	555	95	90-110	0	20	mg/kg	10.11.19 23:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3104153
Parent Sample Id: 639592-008

Matrix: Soil
MS Sample Id: 639592-008 S

Prep Method: E300P
Date Prep: 10.11.19
MSD Sample Id: 639592-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	795	250	1000	82	998	81	90-110	0	20	mg/kg	10.12.19 02:12	X

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * | (C-E) / (C+E) |$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 639592

LT Environmental, Inc.
JRU SWD Slowriser 105

Analytical Method: Chloride by EPA 300

Seq Number: 3104153
Parent Sample Id: 639592-010

Matrix: Soil
MS Sample Id: 639592-010 S

Prep Method: E300P
Date Prep: 10.11.19
MSD Sample Id: 639592-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	42.4	250	299	103	298	102	90-110	0	20	mg/kg	10.12.19 04:32	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104226
MB Sample Id: 7688030-1-BLK

Matrix: Solid
LCS Sample Id: 7688030-1-BKS

Prep Method: SW8015P
Date Prep: 10.13.19
LCSD Sample Id: 7688030-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	899	90	983	98	70-135	9	20	mg/kg	10.13.19 22:07	
Diesel Range Organics (DRO)	<15.0	1000	937	94	889	89	70-135	5	20	mg/kg	10.13.19 22:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	73		81		90		70-135	%	10.13.19 22:07
o-Terphenyl	82		79		91		70-135	%	10.13.19 22:07

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104226

Matrix: Solid
MB Sample Id: 7688030-1-BLK

Prep Method: SW8015P
Date Prep: 10.13.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.13.19 21:46	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104226
Parent Sample Id: 639592-001

Matrix: Soil
MS Sample Id: 639592-001 S

Prep Method: SW8015P
Date Prep: 10.13.19
MSD Sample Id: 639592-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	16.9	999	1010	99	853	84	70-135	17	20	mg/kg	10.13.19 23:09	
Diesel Range Organics (DRO)	<15.0	999	1000	100	878	88	70-135	13	20	mg/kg	10.13.19 23:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		77		70-135	%	10.13.19 23:09
o-Terphenyl	88		72		70-135	%	10.13.19 23:09

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * | (C-E) / (C+E) |$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 639592

LT Environmental, Inc.
JRU SWD Slowriser 105

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104363

MB Sample Id: 7688101-1-BLK

Matrix: Solid

LCS Sample Id: 7688101-1-BKS

Prep Method: SW5030B

Date Prep: 10.14.19

LCSD Sample Id: 7688101-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0850	85	0.0838	84	70-130	1	35	mg/kg	10.15.19 10:14	
Toluene	<0.00200	0.100	0.0900	90	0.0869	87	70-130	4	35	mg/kg	10.15.19 10:14	
Ethylbenzene	<0.00200	0.100	0.0883	88	0.0849	85	70-130	4	35	mg/kg	10.15.19 10:14	
m,p-Xylenes	<0.00400	0.200	0.174	87	0.169	85	70-130	3	35	mg/kg	10.15.19 10:14	
o-Xylene	<0.00200	0.100	0.0940	94	0.0887	89	70-130	6	35	mg/kg	10.15.19 10:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		86		88		70-130	%	10.15.19 10:14
4-Bromofluorobenzene	92		93		91		70-130	%	10.15.19 10:14

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104439

MB Sample Id: 7688165-1-BLK

Matrix: Solid

LCS Sample Id: 7688165-1-BKS

Prep Method: SW5030B

Date Prep: 10.15.19

LCSD Sample Id: 7688165-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0779	78	0.0822	82	70-130	5	35	mg/kg	10.15.19 08:54	
Toluene	<0.00200	0.100	0.0833	83	0.0880	88	70-130	5	35	mg/kg	10.15.19 08:54	
Ethylbenzene	<0.00200	0.100	0.0828	83	0.0873	87	70-130	5	35	mg/kg	10.15.19 08:54	
m,p-Xylenes	<0.00400	0.200	0.163	82	0.170	85	70-130	4	35	mg/kg	10.15.19 08:54	
o-Xylene	<0.00200	0.100	0.0854	85	0.0911	91	70-130	6	35	mg/kg	10.15.19 08:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		89		88		70-130	%	10.15.19 08:54
4-Bromofluorobenzene	87		98		99		70-130	%	10.15.19 08:54

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104363

Parent Sample Id: 639592-001

Matrix: Soil

MS Sample Id: 639592-001 S

Prep Method: SW5030B

Date Prep: 10.14.19

MSD Sample Id: 639592-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0638	64	0.0634	64	70-130	1	35	mg/kg	10.15.19 10:55	X
Toluene	<0.00200	0.100	0.0642	64	0.0637	64	70-130	1	35	mg/kg	10.15.19 10:55	X
Ethylbenzene	<0.00200	0.100	0.0638	64	0.0613	61	70-130	4	35	mg/kg	10.15.19 10:55	X
m,p-Xylenes	<0.00400	0.200	0.127	64	0.122	61	70-130	4	35	mg/kg	10.15.19 10:55	X
o-Xylene	<0.00200	0.100	0.0651	65	0.0681	68	70-130	5	35	mg/kg	10.15.19 10:55	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		90		70-130	%	10.15.19 10:55
4-Bromofluorobenzene	97		101		70-130	%	10.15.19 10:55

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 639592

LT Environmental, Inc.
JRU SWD Slowriser 105

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104439

Parent Sample Id: 639797-001

Matrix: Soil

MS Sample Id: 639797-001 S

Prep Method: SW5030B

Date Prep: 10.15.19

MSD Sample Id: 639797-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0807	80	0.0886	89	70-130	9	35	mg/kg	10.16.19 02:14	
Toluene	<0.00202	0.101	0.0866	86	0.0956	96	70-130	10	35	mg/kg	10.16.19 02:14	
Ethylbenzene	<0.00202	0.101	0.0855	85	0.0949	95	70-130	10	35	mg/kg	10.16.19 02:14	
m,p-Xylenes	<0.00403	0.202	0.171	85	0.186	93	70-130	8	35	mg/kg	10.16.19 02:14	
o-Xylene	<0.00202	0.101	0.0932	92	0.104	104	70-130	11	35	mg/kg	10.16.19 02:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		93		70-130	%	10.16.19 02:14
4-Bromofluorobenzene	106		106		70-130	%	10.16.19 02:14

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Inter-Office Shipment

IOS Number 49853

Date/Time: 10/10/19 12:12

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
639592-001	S	BH01	10/08/19 11:20	SW8021B	BTEX by EPA 8021B	10/16/19	10/22/19	JKR	BR4FBZ BZ BZME EBZ X	
639592-001	S	BH01	10/08/19 11:20	SW8015MOD_NM	TPH by SW8015 Mod	10/16/19	10/22/19	JKR	GRO-DRO PHCC10C28 PI	
639592-001	S	BH01	10/08/19 11:20	E300_CL	Chloride by EPA 300	10/16/19	04/05/20	JKR	CL	
639592-002	S	BH01A	10/08/19 11:35	SW8021B	BTEX by EPA 8021B	10/16/19	10/22/19	JKR	BR4FBZ BZ BZME EBZ X	
639592-002	S	BH01A	10/08/19 11:35	E300_CL	Chloride by EPA 300	10/16/19	04/05/20	JKR	CL	
639592-002	S	BH01A	10/08/19 11:35	SW8015MOD_NM	TPH by SW8015 Mod	10/16/19	10/22/19	JKR	GRO-DRO PHCC10C28 PI	
639592-003	S	BH02	10/08/19 12:10	SW8021B	BTEX by EPA 8021B	10/16/19	10/22/19	JKR	BR4FBZ BZ BZME EBZ X	
639592-003	S	BH02	10/08/19 12:10	E300_CL	Chloride by EPA 300	10/16/19	04/05/20	JKR	CL	
639592-003	S	BH02	10/08/19 12:10	SW8015MOD_NM	TPH by SW8015 Mod	10/16/19	10/22/19	JKR	GRO-DRO PHCC10C28 PI	
639592-004	S	BH03	10/08/19 12:30	SW8021B	BTEX by EPA 8021B	10/16/19	10/22/19	JKR	BR4FBZ BZ BZME EBZ X	
639592-004	S	BH03	10/08/19 12:30	SW8015MOD_NM	TPH by SW8015 Mod	10/16/19	10/22/19	JKR	GRO-DRO PHCC10C28 PI	
639592-004	S	BH03	10/08/19 12:30	E300_CL	Chloride by EPA 300	10/16/19	04/05/20	JKR	CL	
639592-005	S	BH03A	10/08/19 12:45	SW8021B	BTEX by EPA 8021B	10/16/19	10/22/19	JKR	BR4FBZ BZ BZME EBZ X	
639592-005	S	BH03A	10/08/19 12:45	SW8015MOD_NM	TPH by SW8015 Mod	10/16/19	10/22/19	JKR	GRO-DRO PHCC10C28 PI	
639592-005	S	BH03A	10/08/19 12:45	E300_CL	Chloride by EPA 300	10/16/19	04/05/20	JKR	CL	
639592-006	S	BH04	10/09/19 11:05	SW8021B	BTEX by EPA 8021B	10/16/19	10/23/19	JKR	BR4FBZ BZ BZME EBZ X	
639592-006	S	BH04	10/09/19 11:05	E300_CL	Chloride by EPA 300	10/16/19	04/06/20	JKR	CL	
639592-006	S	BH04	10/09/19 11:05	SW8015MOD_NM	TPH by SW8015 Mod	10/16/19	10/23/19	JKR	GRO-DRO PHCC10C28 PI	
639592-007	S	BH04A	10/09/19 11:20	SW8021B	BTEX by EPA 8021B	10/16/19	10/23/19	JKR	BR4FBZ BZ BZME EBZ X	
639592-007	S	BH04A	10/09/19 11:20	E300_CL	Chloride by EPA 300	10/16/19	04/06/20	JKR	CL	
639592-007	S	BH04A	10/09/19 11:20	SW8015MOD_NM	TPH by SW8015 Mod	10/16/19	10/23/19	JKR	GRO-DRO PHCC10C28 PI	
639592-008	S	BH05	10/09/19 12:45	E300_CL	Chloride by EPA 300	10/16/19	04/06/20	JKR	CL	
639592-008	S	BH05	10/09/19 12:45	SW8021B	BTEX by EPA 8021B	10/16/19	10/23/19	JKR	BR4FBZ BZ BZME EBZ X	
639592-008	S	BH05	10/09/19 12:45	SW8015MOD_NM	TPH by SW8015 Mod	10/16/19	10/23/19	JKR	GRO-DRO PHCC10C28 PI	
639592-009	S	BH05A	10/09/19 12:55	SW8015MOD_NM	TPH by SW8015 Mod	10/16/19	10/23/19	JKR	GRO-DRO PHCC10C28 PI	



Inter-Office Shipment

IOS Number 49853

Date/Time: 10/10/19 12:12

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
639592-009	S	BH05A	10/09/19 12:55	E300_CL	Chloride by EPA 300	10/16/19	04/06/20	JKR	CL	
639592-009	S	BH05A	10/09/19 12:55	SW8021B	BTEX by EPA 8021B	10/16/19	10/23/19	JKR	BR4FBZ BZ BZME EBZ X	
639592-010	S	BH05B	10/09/19 13:00	SW8021B	BTEX by EPA 8021B	10/16/19	10/23/19	JKR	BR4FBZ BZ BZME EBZ X	
639592-010	S	BH05B	10/09/19 13:00	E300_CL	Chloride by EPA 300	10/16/19	04/06/20	JKR	CL	
639592-010	S	BH05B	10/09/19 13:00	SW8015MOD_NM	TPH by SW8015 Mod	10/16/19	10/23/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Date Relinquished:

10/10/2019

Received By:

Date Received:

Cooler Temperature:



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 49853

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 10/10/2019 12:12 PM

Received By:

Date Received:

Sample Receipt Checklist

Comments

- #1 *Temperature of cooler(s)? _____
- #2 *Shipping container in good condition? _____
- #3 *Samples received with appropriate temperature? _____
- #4 *Custody Seals intact on shipping container/ cooler? _____
- #5 *Custody Seals Signed and dated for Containers/coolers _____
- #6 *IOS present? _____
- #7 Any missing/extra samples? _____
- #8 IOS agrees with sample label(s)/matrix? _____
- #9 Sample matrix/ properties agree with IOS? _____
- #10 Samples in proper container/ bottle? _____
- #11 Samples properly preserved? _____
- #12 Sample container(s) intact? _____
- #13 Sufficient sample amount for indicated test(s)? _____
- #14 All samples received within hold time? _____

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by: _____ Date: _____

Analytical Report 640096

for
LT Environmental, Inc.

Project Manager: Dan Moir

JRU SWD Riser 105

26-NOV-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



26-NOV-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **640096**
JRU SWD Riser 105
Project Address:

Dan Moir:

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) 640096. 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. 640096 will be filed for 45 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,

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	10-14-19 09:55	0 - 9 ft	640096-001
SW02	S	10-14-19 10:00	0 - 9 ft	640096-002
SW03	S	10-14-19 10:05	0 - 6 ft	640096-003
SW04	S	10-14-19 10:10	0 - 10 ft	640096-004
SW05	S	10-14-19 10:45	0 - 9 ft	640096-005
SW06	S	10-14-19 10:50	3 ft	640096-006
FS01	S	10-14-19 11:30	7 - 9 ft	640096-007
FS02	S	10-14-19 11:35	6 - 8 ft	640096-008
FS03	S	10-14-19 11:40	8 - 10 ft	640096-009



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU SWD Riser 105

Project ID:

Work Order Number(s): 640096

Report Date: 26-NOV-19

Date Received: 10/15/2019

Sample receipt non conformances and comments:

Corrected sample 005 (SW05) depth to read 0-6' NEW VERSION GENERATED JK 11/26/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3104823 BTEX by EPA 8021B

Surrogate 1,4-Difluorobenzene, Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 640096-001.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 640096

LT Environmental, Inc., Arvada, CO

Project Name: JRU SWD Riser 105

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue Oct-15-19 04:39 pm

Report Date: 26-NOV-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	640096-001	640096-002	640096-003	640096-004	640096-005	640096-006
	Field Id:	SW01	SW02	SW03	SW04	SW05	SW06
	Depth:	0-9 ft	0-9 ft	0-6 ft	0-10 ft	0-9 ft	3- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Oct-14-19 09:55	Oct-14-19 10:00	Oct-14-19 10:05	Oct-14-19 10:10	Oct-14-19 10:45	Oct-14-19 10:50
BTEX by EPA 8021B SUB: T104704400-19-19	Extracted:	Oct-17-19 17:15	Oct-17-19 17:15	Oct-17-19 17:15	Oct-17-19 17:15	Oct-17-19 17:15	Oct-17-19 17:15
	Analyzed:	Oct-17-19 23:43	Oct-18-19 02:04	Oct-18-19 02:24	Oct-18-19 02:45	Oct-18-19 04:03	Oct-18-19 04:23
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198
Toluene		<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198
Ethylbenzene		<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198
m,p-Xylenes		<0.00398 0.00398	<0.00402 0.00402	<0.00398 0.00398	<0.00398 0.00398	<0.00402 0.00402	<0.00397 0.00397
o-Xylene		<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198
Total Xylenes		<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198
Total BTEX		<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198
Chloride by EPA 300 SUB: T104704400-19-19	Extracted:	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00
	Analyzed:	Oct-17-19 19:53	Oct-17-19 19:59	Oct-17-19 20:05	Oct-17-19 20:58	Oct-17-19 20:11	Oct-17-19 20:28
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		92.0 4.98	69.1 4.99	34.0 4.96	138 5.00	5840 50.4	13900 99.2
TPH by SW8015 Mod SUB: T104704400-19-19	Extracted:	Oct-17-19 12:00	Oct-17-19 12:00	Oct-17-19 12:00	Oct-17-19 12:00	Oct-17-19 12:00	Oct-17-19 12:00
	Analyzed:	Oct-17-19 14:02	Oct-17-19 14:58	Oct-17-19 15:17	Oct-17-19 15:36	Oct-17-19 15:55	Oct-17-19 16:13
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9
Total GRO-DRO		<50.0 50.0	<50.0 50.0	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<50.0 50.0	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 640096

LT Environmental, Inc., Arvada, CO

Project Name: JRU SWD Riser 105

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue Oct-15-19 04:39 pm

Report Date: 26-NOV-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	640096-007	640096-008	640096-009			
	<i>Field Id:</i>	FS01	FS02	FS03			
	<i>Depth:</i>	7-9 ft	6-8 ft	8-10 ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Oct-14-19 11:30	Oct-14-19 11:35	Oct-14-19 11:40			
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Oct-17-19 17:15	Oct-17-19 17:15	Oct-17-19 17:15			
	<i>Analyzed:</i>	Oct-18-19 04:43	Oct-18-19 05:03	Oct-18-19 05:23			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
	Benzene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200			
Toluene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200				
Ethylbenzene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200				
m,p-Xylenes	<0.00399 0.00399	<0.00400 0.00400	<0.00401 0.00401				
o-Xylene	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200				
Total Xylenes	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200				
Total BTEX	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200				
Chloride by EPA 300 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00			
	<i>Analyzed:</i>	Oct-17-19 20:34	Oct-17-19 20:40	Oct-17-19 20:46			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride	153 25.0	105 24.9	216 50.3				
TPH by SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-17-19 12:00	Oct-17-19 12:00	Oct-17-19 12:00			
	<i>Analyzed:</i>	Oct-17-19 16:32	Oct-17-19 16:51	Oct-17-19 17:10			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
	Gasoline Range Hydrocarbons (GRO)	<50.0 50.0	<50.0 50.0	<49.9 49.9			
	Diesel Range Organics (DRO)	<50.0 50.0	<50.0 50.0	<49.9 49.9			
Motor Oil Range Hydrocarbons (MRO)	<50.0 50.0	<50.0 50.0	<49.9 49.9				
Total GRO-DRO	<50.0 50.0	<50.0 50.0	<49.9 49.9				
Total TPH	<50.0 50.0	<50.0 50.0	<49.9 49.9				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW01	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-001	Date Collected: 10.14.19 09.55	Sample Depth: 0 - 9 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	92.0	4.98	mg/kg	10.17.19 19.53		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 12.00	Basis: Wet Weight
Seq Number: 3104730		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.17.19 14.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.17.19 14.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.17.19 14.02	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.17.19 14.02	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.17.19 14.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.17.19 14.02	
o-Terphenyl	84-15-1	91	%	70-135	10.17.19 14.02	



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW01	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-001	Date Collected: 10.14.19 09.55	Sample Depth: 0 - 9 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.17.19 23.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.17.19 23.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.17.19 23.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.17.19 23.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.17.19 23.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.17.19 23.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.17.19 23.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	45	%	70-130	10.17.19 23.43	**	
1,4-Difluorobenzene	540-36-3	65	%	70-130	10.17.19 23.43	**	



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW02	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-002	Date Collected: 10.14.19 10.00	Sample Depth: 0 - 9 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	69.1	4.99	mg/kg	10.17.19 19.59		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 12.00	Basis: Wet Weight
Seq Number: 3104730		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.17.19 14.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.17.19 14.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.17.19 14.58	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.17.19 14.58	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.17.19 14.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	10.17.19 14.58	
o-Terphenyl	84-15-1	95	%	70-135	10.17.19 14.58	



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW02	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-002	Date Collected: 10.14.19 10.00	Sample Depth: 0 - 9 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.18.19 02.04	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.18.19 02.04	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.18.19 02.04	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.18.19 02.04	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.18.19 02.04	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.18.19 02.04	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.18.19 02.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	10.18.19 02.04		
4-Bromofluorobenzene	460-00-4	115	%	70-130	10.18.19 02.04		



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW03	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-003	Date Collected: 10.14.19 10.05	Sample Depth: 0 - 6 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	34.0	4.96	mg/kg	10.17.19 20.05		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 12.00	Basis: Wet Weight
Seq Number: 3104730		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.17.19 15.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.17.19 15.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.17.19 15.17	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.17.19 15.17	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.17.19 15.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.17.19 15.17	
o-Terphenyl	84-15-1	95	%	70-135	10.17.19 15.17	



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW03	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-003	Date Collected: 10.14.19 10.05	Sample Depth: 0 - 6 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.18.19 02.24	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.18.19 02.24	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.18.19 02.24	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.18.19 02.24	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.18.19 02.24	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.18.19 02.24	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.18.19 02.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	10.18.19 02.24		
1,4-Difluorobenzene	540-36-3	87	%	70-130	10.18.19 02.24		



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW04	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-004	Date Collected: 10.14.19 10.10	Sample Depth: 0 - 10 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	138	5.00	mg/kg	10.17.19 20.58		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 12.00	Basis: Wet Weight
Seq Number: 3104730		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.17.19 15.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.17.19 15.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.17.19 15.36	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.17.19 15.36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.17.19 15.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.17.19 15.36	
o-Terphenyl	84-15-1	93	%	70-135	10.17.19 15.36	



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW04	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-004	Date Collected: 10.14.19 10.10	Sample Depth: 0 - 10 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.18.19 02.45	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.18.19 02.45	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.18.19 02.45	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.18.19 02.45	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.18.19 02.45	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.18.19 02.45	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.18.19 02.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	10.18.19 02.45		
1,4-Difluorobenzene	540-36-3	88	%	70-130	10.18.19 02.45		



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW05	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-005	Date Collected: 10.14.19 10.45	Sample Depth: 0 - 9 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5840	50.4	mg/kg	10.17.19 20.11		10

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 12.00	Basis: Wet Weight
Seq Number: 3104730		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.17.19 15.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.17.19 15.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.17.19 15.55	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.17.19 15.55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.17.19 15.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.17.19 15.55	
o-Terphenyl	84-15-1	96	%	70-135	10.17.19 15.55	



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW05	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-005	Date Collected: 10.14.19 10.45	Sample Depth: 0 - 9 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.18.19 04.03	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.18.19 04.03	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.18.19 04.03	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.18.19 04.03	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.18.19 04.03	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.18.19 04.03	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.18.19 04.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	10.18.19 04.03		
4-Bromofluorobenzene	460-00-4	103	%	70-130	10.18.19 04.03		



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW06	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-006	Date Collected: 10.14.19 10.50	Sample Depth: 3 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13900	99.2	mg/kg	10.17.19 20.28		20

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 12.00	Basis: Wet Weight
Seq Number: 3104730		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.17.19 16.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.17.19 16.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.17.19 16.13	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.17.19 16.13	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.17.19 16.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	10.17.19 16.13	
o-Terphenyl	84-15-1	100	%	70-135	10.17.19 16.13	



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LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: SW06	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-006	Date Collected: 10.14.19 10.50	Sample Depth: 3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.18.19 04.23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.18.19 04.23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.18.19 04.23	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.18.19 04.23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.18.19 04.23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.18.19 04.23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.18.19 04.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	10.18.19 04.23		
1,4-Difluorobenzene	540-36-3	89	%	70-130	10.18.19 04.23		



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LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: FS01	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-007	Date Collected: 10.14.19 11.30	Sample Depth: 7 - 9 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	153	25.0	mg/kg	10.17.19 20.34		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 12.00	Basis: Wet Weight
Seq Number: 3104730		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.17.19 16.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.17.19 16.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.17.19 16.32	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.17.19 16.32	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.17.19 16.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.17.19 16.32	
o-Terphenyl	84-15-1	94	%	70-135	10.17.19 16.32	



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: FS01	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-007	Date Collected: 10.14.19 11.30	Sample Depth: 7 - 9 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.18.19 04.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.18.19 04.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.18.19 04.43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.18.19 04.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.18.19 04.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.18.19 04.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.18.19 04.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	10.18.19 04.43		
1,4-Difluorobenzene	540-36-3	91	%	70-130	10.18.19 04.43		



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: FS02	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-008	Date Collected: 10.14.19 11.35	Sample Depth: 6 - 8 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	105	24.9	mg/kg	10.17.19 20.40		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 12.00	Basis: Wet Weight
Seq Number: 3104730		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.17.19 16.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.17.19 16.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.17.19 16.51	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.17.19 16.51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.17.19 16.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.17.19 16.51	
o-Terphenyl	84-15-1	96	%	70-135	10.17.19 16.51	



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: FS02	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-008	Date Collected: 10.14.19 11.35	Sample Depth: 6 - 8 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.18.19 05.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.18.19 05.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.18.19 05.03	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.18.19 05.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.18.19 05.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.18.19 05.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.18.19 05.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	10.18.19 05.03		
1,4-Difluorobenzene	540-36-3	90	%	70-130	10.18.19 05.03		



Certificate of Analytical Results 640096

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: FS03	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-009	Date Collected: 10.14.19 11.40	Sample Depth: 8 - 10 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	216	50.3	mg/kg	10.17.19 20.46		10

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 12.00	Basis: Wet Weight
Seq Number: 3104730		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.17.19 17.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.17.19 17.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.17.19 17.10	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.17.19 17.10	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.17.19 17.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	10.17.19 17.10	
o-Terphenyl	84-15-1	100	%	70-135	10.17.19 17.10	



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LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: FS03	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640096-009	Date Collected: 10.14.19 11.40	Sample Depth: 8 - 10 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.18.19 05.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.18.19 05.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.18.19 05.23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.18.19 05.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.18.19 05.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.18.19 05.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.18.19 05.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	10.18.19 05.23		
1,4-Difluorobenzene	540-36-3	87	%	70-130	10.18.19 05.23		



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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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



QC Summary 640096

LT Environmental, Inc.
JRU SWD Riser 105

Analytical Method: Chloride by EPA 300

Seq Number: 3104671
MB Sample Id: 7688365-1-BLK

Matrix: Solid
LCS Sample Id: 7688365-1-BKS

Prep Method: E300P
Date Prep: 10.17.19
LCSD Sample Id: 7688365-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	253	101	254	102	90-110	0	20	mg/kg	10.17.19 19:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3104671
Parent Sample Id: 640096-004

Matrix: Soil
MS Sample Id: 640096-004 S

Prep Method: E300P
Date Prep: 10.17.19
MSD Sample Id: 640096-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	138	250	386	99	383	98	90-110	1	20	mg/kg	10.17.19 21:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3104671
Parent Sample Id: 640162-003

Matrix: Soil
MS Sample Id: 640162-003 S

Prep Method: E300P
Date Prep: 10.17.19
MSD Sample Id: 640162-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	351	248	582	93	581	93	90-110	0	20	mg/kg	10.17.19 19:41	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104730
MB Sample Id: 7688340-1-BLK

Matrix: Solid
LCS Sample Id: 7688340-1-BKS

Prep Method: SW8015P
Date Prep: 10.17.19
LCSD Sample Id: 7688340-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1060	106	1190	119	70-135	12	20	mg/kg	10.17.19 13:06	
Diesel Range Organics (DRO)	<15.0	1000	945	95	1060	106	70-135	11	20	mg/kg	10.17.19 13:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		115		125		70-135	%	10.17.19 13:06
o-Terphenyl	85		101		107		70-135	%	10.17.19 13:06

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104730

Matrix: Solid
MB Sample Id: 7688340-1-BLK

Prep Method: SW8015P
Date Prep: 10.17.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.17.19 12:47	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 640096

LT Environmental, Inc.
JRU SWD Riser 105

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104730

Parent Sample Id: 640096-001

Matrix: Soil

MS Sample Id: 640096-001 S

Prep Method: SW8015P

Date Prep: 10.17.19

MSD Sample Id: 640096-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	1160	116	1190	119	70-135	3	20	mg/kg	10.17.19 14:21	
Diesel Range Organics (DRO)	<15.0	998	1110	111	1120	112	70-135	1	20	mg/kg	10.17.19 14:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		129		70-135	%	10.17.19 14:21
o-Terphenyl	105		107		70-135	%	10.17.19 14:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104823

MB Sample Id: 7688493-1-BLK

Matrix: Solid

LCS Sample Id: 7688493-1-BKS

Prep Method: SW5030B

Date Prep: 10.17.19

LCSD Sample Id: 7688493-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0844	84	0.0915	92	70-130	8	35	mg/kg	10.17.19 21:43	
Toluene	<0.00200	0.100	0.0886	89	0.0977	98	70-130	10	35	mg/kg	10.17.19 21:43	
Ethylbenzene	<0.00200	0.100	0.0991	99	0.110	110	70-130	10	35	mg/kg	10.17.19 21:43	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.221	111	70-130	11	35	mg/kg	10.17.19 21:43	
o-Xylene	<0.00200	0.100	0.105	105	0.118	118	70-130	12	35	mg/kg	10.17.19 21:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		90		91		70-130	%	10.17.19 21:43
4-Bromofluorobenzene	103		118		125		70-130	%	10.17.19 21:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104823

Parent Sample Id: 640096-001

Matrix: Soil

MS Sample Id: 640096-001 S

Prep Method: SW5030B

Date Prep: 10.17.19

MSD Sample Id: 640096-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0753	75	0.0726	73	70-130	4	35	mg/kg	10.17.19 22:24	
Toluene	<0.00200	0.0998	0.0768	77	0.0808	81	70-130	5	35	mg/kg	10.17.19 22:24	
Ethylbenzene	<0.00200	0.0998	0.0835	84	0.0933	93	70-130	11	35	mg/kg	10.17.19 22:24	
m,p-Xylenes	<0.00399	0.200	0.165	83	0.187	94	70-130	13	35	mg/kg	10.17.19 22:24	
o-Xylene	<0.00200	0.0998	0.0876	88	0.0999	100	70-130	13	35	mg/kg	10.17.19 22:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		89		70-130	%	10.17.19 22:24
4-Bromofluorobenzene	114		132	**	70-130	%	10.17.19 22:24

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Inter-Office Shipment

IOS Number 50225

Date/Time: 10/16/19 09:59

Created by: Elizabeth Mcclellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776737745954

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
640096-001	S	SW01	10/14/19 09:55	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/28/19	JKR	GRO-DRO PHCC10C28 PI	
640096-001	S	SW01	10/14/19 09:55	SW8021B	BTEX by EPA 8021B	10/21/19	10/28/19	JKR	BR4FBZ BZ BZME EBZ X	
640096-001	S	SW01	10/14/19 09:55	E300_CL	Chloride by EPA 300	10/21/19	04/11/20	JKR	CL	
640096-002	S	SW02	10/14/19 10:00	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/28/19	JKR	GRO-DRO PHCC10C28 PI	
640096-002	S	SW02	10/14/19 10:00	SW8021B	BTEX by EPA 8021B	10/21/19	10/28/19	JKR	BR4FBZ BZ BZME EBZ X	
640096-002	S	SW02	10/14/19 10:00	E300_CL	Chloride by EPA 300	10/21/19	04/11/20	JKR	CL	
640096-003	S	SW03	10/14/19 10:05	SW8021B	BTEX by EPA 8021B	10/21/19	10/28/19	JKR	BR4FBZ BZ BZME EBZ X	
640096-003	S	SW03	10/14/19 10:05	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/28/19	JKR	GRO-DRO PHCC10C28 PI	
640096-003	S	SW03	10/14/19 10:05	E300_CL	Chloride by EPA 300	10/21/19	04/11/20	JKR	CL	
640096-004	S	SW04	10/14/19 10:10	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/28/19	JKR	GRO-DRO PHCC10C28 PI	
640096-004	S	SW04	10/14/19 10:10	E300_CL	Chloride by EPA 300	10/21/19	04/11/20	JKR	CL	
640096-004	S	SW04	10/14/19 10:10	SW8021B	BTEX by EPA 8021B	10/21/19	10/28/19	JKR	BR4FBZ BZ BZME EBZ X	
640096-005	S	SW05	10/14/19 10:45	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/28/19	JKR	GRO-DRO PHCC10C28 PI	
640096-005	S	SW05	10/14/19 10:45	E300_CL	Chloride by EPA 300	10/21/19	04/11/20	JKR	CL	
640096-005	S	SW05	10/14/19 10:45	SW8021B	BTEX by EPA 8021B	10/21/19	10/28/19	JKR	BR4FBZ BZ BZME EBZ X	
640096-006	S	SW06	10/14/19 10:50	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/28/19	JKR	GRO-DRO PHCC10C28 PI	
640096-006	S	SW06	10/14/19 10:50	E300_CL	Chloride by EPA 300	10/21/19	04/11/20	JKR	CL	
640096-006	S	SW06	10/14/19 10:50	SW8021B	BTEX by EPA 8021B	10/21/19	10/28/19	JKR	BR4FBZ BZ BZME EBZ X	
640096-007	S	FS01	10/14/19 11:30	E300_CL	Chloride by EPA 300	10/21/19	04/11/20	JKR	CL	
640096-007	S	FS01	10/14/19 11:30	SW8021B	BTEX by EPA 8021B	10/21/19	10/28/19	JKR	BR4FBZ BZ BZME EBZ X	
640096-007	S	FS01	10/14/19 11:30	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/28/19	JKR	GRO-DRO PHCC10C28 PI	
640096-008	S	FS02	10/14/19 11:35	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/28/19	JKR	GRO-DRO PHCC10C28 PI	
640096-008	S	FS02	10/14/19 11:35	E300_CL	Chloride by EPA 300	10/21/19	04/11/20	JKR	CL	
640096-008	S	FS02	10/14/19 11:35	SW8021B	BTEX by EPA 8021B	10/21/19	10/28/19	JKR	BR4FBZ BZ BZME EBZ X	
640096-009	S	FS03	10/14/19 11:40	E300_CL	Chloride by EPA 300	10/21/19	04/11/20	JKR	CL	



Inter-Office Shipment

IOS Number 50225

Date/Time: 10/16/19 09:59

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street


Lab# To: **Midland**

Air Bill No.: 776737745954

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
640096-009	S	FS03	10/14/19 11:40	SW8021B	BTEX by EPA 8021B	10/21/19	10/28/19	JKR	BR4FBZ BZ BZME EBZ X	
640096-009	S	FS03	10/14/19 11:40	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/28/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: 

 Elizabeth McClellan

Date Relinquished: 10/16/2019

Received By: 

 Amanda Levario

Date Received: 10/17/2019 11:19

Cooler Temperature: 3.3



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 50225

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 10/16/2019 09:59 AM

Received By: Amanda Levario

Date Received: 10/17/2019 11:19 AM

Sample Receipt Checklist

Comments

- #1 *Temperature of cooler(s)? 3.3
- #2 *Shipping container in good condition? Yes
- #3 *Samples received with appropriate temperature? Yes
- #4 *Custody Seals intact on shipping container/ cooler? N/A
- #5 *Custody Seals Signed and dated for Containers/coolers N/A
- #6 *IOS present? Yes
- #7 Any missing/extra samples? No
- #8 IOS agrees with sample label(s)/matrix? Yes
- #9 Sample matrix/ properties agree with IOS? Yes
- #10 Samples in proper container/ bottle? Yes
- #11 Samples properly preserved? Yes
- #12 Sample container(s) intact? Yes
- #13 Sufficient sample amount for indicated test(s)? Yes
- #14 All samples received within hold time? Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Amanda Levario

Date: 10/17/2019



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

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

Date/ Time Received: 10/15/2019 04:39:00 PM

Temperature Measuring device used : T-NM-007

Work Order #: 640096

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2	
#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?	N/A	
#6 *Custody Seals Signed and dated?	N/A	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	Yes	Subbed to Midland.
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 10/16/2019

Checklist reviewed by:

Jessica Kramer

Date: 10/17/2019

Analytical Report 640098

for
LT Environmental, Inc.

Project Manager: Dan Moir

JRU SWD Riser 105

21-OCT-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



21-OCT-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **640098**
JRU SWD Riser 105
Project Address:

Dan Moir:

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) 640098. 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. 640098 will be filed for 45 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,

Jessica Kramer

Project Assistant

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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH06	S	10-15-19 10:15	1 ft	640098-001
BH06A	S	10-15-19 10:30	4 ft	640098-002
BH07	S	10-15-19 11:00	1 ft	640098-003
BH07A	S	10-15-19 11:20	4 ft	640098-004
BH08	S	10-15-19 12:30	1 ft	640098-005
BH08A	S	10-15-19 12:45	4 ft	640098-006
BH09	S	10-15-19 13:00	1 ft	640098-007
BH09A	S	10-15-19 13:15	4 ft	640098-008
BH10	S	10-15-19 13:30	1 ft	640098-009
BH10A	S	10-15-19 13:45	4 ft	640098-010
BH11	S	10-15-19 14:05	1 ft	640098-011
BH11A	S	10-15-19 14:20	4 ft	640098-012



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU SWD Riser 105

Project ID:
Work Order Number(s): 640098

Report Date: 21-OCT-19
Date Received: 10/15/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3104736 TPH by SW8015 Mod

Lab Sample ID 640098-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 640098-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.

The Laboratory Control Sample for Gasoline Range Hydrocarbons (GRO), Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3104823 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 640096-001 SD.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3104855 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 640098

LT Environmental, Inc., Arvada, CO

Project Name: JRU SWD Riser 105

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue Oct-15-19 04:39 pm

Report Date: 21-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	640098-001	640098-002	640098-003	640098-004	640098-005	640098-006
	<i>Field Id:</i>	BH06	BH06A	BH07	BH07A	BH08	BH08A
	<i>Depth:</i>	1- ft	4- ft	1- ft	4- ft	1- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-15-19 10:15	Oct-15-19 10:30	Oct-15-19 11:00	Oct-15-19 11:20	Oct-15-19 12:30	Oct-15-19 12:45
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Oct-17-19 17:15	Oct-17-19 17:15	Oct-17-19 17:15	Oct-17-19 17:15	Oct-18-19 16:30	Oct-18-19 16:30
	<i>Analyzed:</i>	Oct-18-19 05:44	Oct-18-19 08:28	Oct-18-19 08:48	Oct-18-19 09:09	Oct-19-19 01:16	**** **
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00399 0.00399	<0.00401 0.00401	<0.00398 0.00398	<0.00402 0.00402
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Chloride by EPA 300 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00
	<i>Analyzed:</i>	Oct-18-19 08:07	Oct-17-19 21:16	Oct-17-19 21:22	Oct-17-19 21:40	Oct-17-19 21:46	Oct-17-19 21:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		12.5 5.01	160 4.96	9.19 4.99	32.7 4.98	10.9 5.04	19.4 4.97
TPH by SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00
	<i>Analyzed:</i>	Oct-17-19 23:22	Oct-18-19 00:25	Oct-18-19 00:46	Oct-18-19 01:07	Oct-18-19 01:28	Oct-18-19 01:49
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Total GRO-DRO		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 640098

LT Environmental, Inc., Arvada, CO

Project Name: JRU SWD Riser 105

Project Id:

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue Oct-15-19 04:39 pm

Report Date: 21-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	640098-007	640098-008	640098-009	640098-010	640098-011	640098-012
	<i>Field Id:</i>	BH09	BH09A	BH10	BH10A	BH11	BH11A
	<i>Depth:</i>	1- ft	4- ft	1- ft	4- ft	1- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-15-19 13:00	Oct-15-19 13:15	Oct-15-19 13:30	Oct-15-19 13:45	Oct-15-19 14:05	Oct-15-19 14:20
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Oct-18-19 16:30	Oct-18-19 16:30	Oct-18-19 16:30	Oct-18-19 16:30	Oct-18-19 16:30	Oct-18-19 16:30
	<i>Analyzed:</i>	*****	*****	*****	*****	*****	*****
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
m,p-Xylenes		<0.00401 0.00401	<0.00398 0.00398	<0.00399 0.00399	<0.00398 0.00398	<0.00399 0.00399	<0.00403 0.00403
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Chloride by EPA 300 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:15	Oct-17-19 14:15
	<i>Analyzed:</i>	Oct-17-19 21:58	Oct-17-19 22:04	Oct-17-19 22:10	Oct-17-19 22:16	Oct-17-19 19:46	Oct-17-19 20:01
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		43.7 4.99	76.3 5.00	<5.02 5.02	175 4.98	11.4 5.00	15.5 5.04
TPH by SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00	Oct-17-19 14:00
	<i>Analyzed:</i>	Oct-18-19 02:09	Oct-18-19 02:30	Oct-18-19 02:51	Oct-18-19 03:12	Oct-18-19 03:54	Oct-18-19 04:15
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9
Total GRO-DRO		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH06	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-001	Date Collected: 10.15.19 10.15	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.5	5.01	mg/kg	10.18.19 08.07		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.17.19 23.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.17.19 23.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.17.19 23.22	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.17.19 23.22	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.17.19 23.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	10.17.19 23.22	
o-Terphenyl	84-15-1	118	%	70-135	10.17.19 23.22	



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH06	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-001	Date Collected: 10.15.19 10.15	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.18.19 05.44	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.18.19 05.44	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.18.19 05.44	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.18.19 05.44	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.18.19 05.44	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.18.19 05.44	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.18.19 05.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	10.18.19 05.44		
1,4-Difluorobenzene	540-36-3	88	%	70-130	10.18.19 05.44		



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH06A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-002	Date Collected: 10.15.19 10.30	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	160	4.96	mg/kg	10.17.19 21.16		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.18.19 00.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.18.19 00.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.18.19 00.25	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.18.19 00.25	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.18.19 00.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	10.18.19 00.25	
o-Terphenyl	84-15-1	110	%	70-135	10.18.19 00.25	



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH06A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-002	Date Collected: 10.15.19 10.30	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.18.19 08.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.18.19 08.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.18.19 08.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.18.19 08.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.18.19 08.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.18.19 08.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.18.19 08.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	10.18.19 08.28		
4-Bromofluorobenzene	460-00-4	120	%	70-130	10.18.19 08.28		



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH07	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-003	Date Collected: 10.15.19 11.00	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.19	4.99	mg/kg	10.17.19 21.22		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.18.19 00.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.18.19 00.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.18.19 00.46	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.18.19 00.46	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.18.19 00.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	10.18.19 00.46	
o-Terphenyl	84-15-1	109	%	70-135	10.18.19 00.46	



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH07	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-003	Date Collected: 10.15.19 11.00	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.18.19 08.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.18.19 08.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.18.19 08.48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.18.19 08.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.18.19 08.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.18.19 08.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.18.19 08.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	10.18.19 08.48		
1,4-Difluorobenzene	540-36-3	85	%	70-130	10.18.19 08.48		



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH07A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-004	Date Collected: 10.15.19 11.20	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.7	4.98	mg/kg	10.17.19 21.40		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.18.19 01.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.18.19 01.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.18.19 01.07	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.18.19 01.07	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.18.19 01.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	10.18.19 01.07	
o-Terphenyl	84-15-1	110	%	70-135	10.18.19 01.07	



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH07A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-004	Date Collected: 10.15.19 11.20	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.17.19 17.15	Basis: Wet Weight
Seq Number: 3104823		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.18.19 09.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.18.19 09.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.18.19 09.09	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.18.19 09.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.18.19 09.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.18.19 09.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.18.19 09.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	10.18.19 09.09		
1,4-Difluorobenzene	540-36-3	88	%	70-130	10.18.19 09.09		



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH08	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-005	Date Collected: 10.15.19 12.30	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.9	5.04	mg/kg	10.17.19 21.46		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.18.19 01.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.18.19 01.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.18.19 01.28	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.18.19 01.28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.18.19 01.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	10.18.19 01.28	
o-Terphenyl	84-15-1	105	%	70-135	10.18.19 01.28	



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH08	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-005	Date Collected: 10.15.19 12.30	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.18.19 16.30	Basis: Wet Weight
Seq Number: 3104855		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.19.19 01.16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.19.19 01.16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.19.19 01.16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.19.19 01.16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.19.19 01.16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.19.19 01.16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.19.19 01.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	93	%	70-130	10.19.19 01.16		
4-Bromofluorobenzene	460-00-4	99	%	70-130	10.19.19 01.16		



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH08A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-006	Date Collected: 10.15.19 12.45	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.4	4.97	mg/kg	10.17.19 21.52		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.18.19 01.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.18.19 01.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.18.19 01.49	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.18.19 01.49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.18.19 01.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	10.18.19 01.49	
o-Terphenyl	84-15-1	110	%	70-135	10.18.19 01.49	



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH08A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-006	Date Collected: 10.15.19 12.45	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.18.19 16.30	Basis: Wet Weight
Seq Number: 3104855		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.18.19 08.16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.18.19 08.16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.18.19 08.16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.18.19 08.16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.18.19 08.16	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.18.19 08.16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.18.19 08.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	10.18.19 08.16		
1,4-Difluorobenzene	540-36-3	95	%	70-130	10.18.19 08.16		



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH09	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-007	Date Collected: 10.15.19 13.00	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	43.7	4.99	mg/kg	10.17.19 21.58		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.18.19 02.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.18.19 02.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.18.19 02.09	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.18.19 02.09	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.18.19 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	10.18.19 02.09	
o-Terphenyl	84-15-1	106	%	70-135	10.18.19 02.09	



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH09	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-007	Date Collected: 10.15.19 13.00	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.18.19 16.30	Basis: Wet Weight
Seq Number: 3104855		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.18.19 08.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.18.19 08.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.18.19 08.36	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.18.19 08.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.18.19 08.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.18.19 08.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.18.19 08.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	10.18.19 08.36		
1,4-Difluorobenzene	540-36-3	91	%	70-130	10.18.19 08.36		



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH09A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-008	Date Collected: 10.15.19 13.15	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	76.3	5.00	mg/kg	10.17.19 22.04		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.18.19 02.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.18.19 02.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.18.19 02.30	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.18.19 02.30	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.18.19 02.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	10.18.19 02.30	
o-Terphenyl	84-15-1	102	%	70-135	10.18.19 02.30	



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LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH09A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-008	Date Collected: 10.15.19 13.15	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.18.19 16.30	Basis: Wet Weight
Seq Number: 3104855		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.18.19 08.56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.18.19 08.56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.18.19 08.56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.18.19 08.56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.18.19 08.56	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.18.19 08.56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.18.19 08.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	10.18.19 08.56		
1,4-Difluorobenzene	540-36-3	89	%	70-130	10.18.19 08.56		



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH10	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-009	Date Collected: 10.15.19 13.30	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	10.17.19 22.10	U	1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.18.19 02.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.18.19 02.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.18.19 02.51	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.18.19 02.51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.18.19 02.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	10.18.19 02.51	
o-Terphenyl	84-15-1	100	%	70-135	10.18.19 02.51	



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH10	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-009	Date Collected: 10.15.19 13.30	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.18.19 16.30	Basis: Wet Weight
Seq Number: 3104855		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.18.19 09.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.18.19 09.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.18.19 09.16	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.18.19 09.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.18.19 09.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.18.19 09.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.18.19 09.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	80	%	70-130	10.18.19 09.16		
1,4-Difluorobenzene	540-36-3	83	%	70-130	10.18.19 09.16		



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LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH10A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-010	Date Collected: 10.15.19 13.45	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104671		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	175	4.98	mg/kg	10.17.19 22.16		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.18.19 03.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.18.19 03.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.18.19 03.12	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.18.19 03.12	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.18.19 03.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	10.18.19 03.12	
o-Terphenyl	84-15-1	109	%	70-135	10.18.19 03.12	



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LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH10A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-010	Date Collected: 10.15.19 13.45	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.18.19 16.30	Basis: Wet Weight
Seq Number: 3104855		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.18.19 10.16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.18.19 10.16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.18.19 10.16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.18.19 10.16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.18.19 10.16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.18.19 10.16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.18.19 10.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	93	%	70-130	10.18.19 10.16		
4-Bromofluorobenzene	460-00-4	89	%	70-130	10.18.19 10.16		



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH11	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-011	Date Collected: 10.15.19 14.05	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.15	Basis: Wet Weight
Seq Number: 3104674		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.4	5.00	mg/kg	10.17.19 19.46		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.18.19 03.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.18.19 03.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.18.19 03.54	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.18.19 03.54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.18.19 03.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	10.18.19 03.54	
o-Terphenyl	84-15-1	103	%	70-135	10.18.19 03.54	



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH11	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-011	Date Collected: 10.15.19 14.05	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.18.19 16.30	Basis: Wet Weight
Seq Number: 3104855		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.18.19 10.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.18.19 10.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.18.19 10.55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.18.19 10.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.18.19 10.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.18.19 10.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.18.19 10.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	86	%	70-130	10.18.19 10.55		
1,4-Difluorobenzene	540-36-3	88	%	70-130	10.18.19 10.55		



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH11A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-012	Date Collected: 10.15.19 14.20	Sample Depth: 4 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.17.19 14.15	Basis: Wet Weight
Seq Number: 3104674		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.5	5.04	mg/kg	10.17.19 20.01		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.17.19 14.00	Basis: Wet Weight
Seq Number: 3104736		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.18.19 04.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.18.19 04.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.18.19 04.15	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.18.19 04.15	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.18.19 04.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	10.18.19 04.15	
o-Terphenyl	84-15-1	109	%	70-135	10.18.19 04.15	



Certificate of Analytical Results 640098

LT Environmental, Inc., Arvada, CO

JRU SWD Riser 105

Sample Id: BH11A	Matrix: Soil	Date Received: 10.15.19 16.39
Lab Sample Id: 640098-012	Date Collected: 10.15.19 14.20	Sample Depth: 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 10.18.19 16.30	Basis: Wet Weight
Seq Number: 3104855		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.18.19 11.15	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.18.19 11.15	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.18.19 11.15	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.18.19 11.15	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.18.19 11.15	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.18.19 11.15	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.18.19 11.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	89	%	70-130	10.18.19 11.15		
4-Bromofluorobenzene	460-00-4	91	%	70-130	10.18.19 11.15		



QC Summary 640098

LT Environmental, Inc.
JRU SWD Riser 105

Analytical Method: Chloride by EPA 300

Seq Number: 3104671
MB Sample Id: 7688365-1-BLK

Matrix: Solid
LCS Sample Id: 7688365-1-BKS

Prep Method: E300P
Date Prep: 10.17.19
LCSD Sample Id: 7688365-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	253	101	254	102	90-110	0	20	mg/kg	10.17.19 19:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3104674
MB Sample Id: 7688366-1-BLK

Matrix: Solid
LCS Sample Id: 7688366-1-BKS

Prep Method: E300P
Date Prep: 10.17.19
LCSD Sample Id: 7688366-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	266	106	265	106	90-110	0	20	mg/kg	10.17.19 19:36	

Analytical Method: Chloride by EPA 300

Seq Number: 3104671
Parent Sample Id: 640096-004

Matrix: Soil
MS Sample Id: 640096-004 S

Prep Method: E300P
Date Prep: 10.17.19
MSD Sample Id: 640096-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	138	250	386	99	383	98	90-110	1	20	mg/kg	10.17.19 21:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3104671
Parent Sample Id: 640162-003

Matrix: Soil
MS Sample Id: 640162-003 S

Prep Method: E300P
Date Prep: 10.17.19
MSD Sample Id: 640162-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	351	248	582	93	581	93	90-110	0	20	mg/kg	10.17.19 19:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3104674
Parent Sample Id: 640098-011

Matrix: Soil
MS Sample Id: 640098-011 S

Prep Method: E300P
Date Prep: 10.17.19
MSD Sample Id: 640098-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.4	250	258	99	261	100	90-110	1	20	mg/kg	10.17.19 19:51	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * | (C-E) / (C+E) |$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 640098

LT Environmental, Inc.
JRU SWD Riser 105

Analytical Method: Chloride by EPA 300

Seq Number: 3104674
Parent Sample Id: 640269-006

Matrix: Soil
MS Sample Id: 640269-006 S

Prep Method: E300P
Date Prep: 10.17.19
MSD Sample Id: 640269-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	298	250	533	94	535	95	90-110	0	20	mg/kg	10.17.19 21:01	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104736
MB Sample Id: 7688387-1-BLK

Matrix: Solid
LCS Sample Id: 7688387-1-BKS

Prep Method: SW8015P
Date Prep: 10.17.19
LCSD Sample Id: 7688387-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1180	118	1170	117	70-135	1	20	mg/kg	10.17.19 22:41	
Diesel Range Organics (DRO)	<15.0	1000	1130	113	1090	109	70-135	4	20	mg/kg	10.17.19 22:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		114		111		70-135	%	10.17.19 22:41
o-Terphenyl	99		105		105		70-135	%	10.17.19 22:41

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104736

Matrix: Solid
MB Sample Id: 7688387-1-BLK

Prep Method: SW8015P
Date Prep: 10.17.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.17.19 22:20	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104736
Parent Sample Id: 640098-001

Matrix: Soil
MS Sample Id: 640098-001 S

Prep Method: SW8015P
Date Prep: 10.17.19
MSD Sample Id: 640098-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	1460	146	1430	143	70-135	2	20	mg/kg	10.17.19 23:44	X
Diesel Range Organics (DRO)	<15.0	999	1400	140	1410	141	70-135	1	20	mg/kg	10.17.19 23:44	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		125		70-135	%	10.17.19 23:44
o-Terphenyl	122		122		70-135	%	10.17.19 23:44

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 640098

LT Environmental, Inc.
JRU SWD Riser 105

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104823

MB Sample Id: 7688493-1-BLK

Matrix: Solid

LCS Sample Id: 7688493-1-BKS

Prep Method: SW5030B

Date Prep: 10.17.19

LCSD Sample Id: 7688493-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0844	84	0.0915	92	70-130	8	35	mg/kg	10.17.19 21:43	
Toluene	<0.00200	0.100	0.0886	89	0.0977	98	70-130	10	35	mg/kg	10.17.19 21:43	
Ethylbenzene	<0.00200	0.100	0.0991	99	0.110	110	70-130	10	35	mg/kg	10.17.19 21:43	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.221	111	70-130	11	35	mg/kg	10.17.19 21:43	
o-Xylene	<0.00200	0.100	0.105	105	0.118	118	70-130	12	35	mg/kg	10.17.19 21:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		90		91		70-130	%	10.17.19 21:43
4-Bromofluorobenzene	103		118		125		70-130	%	10.17.19 21:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104855

MB Sample Id: 7688520-1-BLK

Matrix: Solid

LCS Sample Id: 7688520-1-BKS

Prep Method: SW5030B

Date Prep: 10.18.19

LCSD Sample Id: 7688520-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000730	0.100	0.0978	98	0.103	103	70-130	5	35	mg/kg	10.18.19 04:15	
Toluene	<0.00200	0.100	0.109	109	0.105	105	70-130	4	35	mg/kg	10.18.19 04:15	
Ethylbenzene	<0.00200	0.100	0.0997	100	0.104	104	70-130	4	35	mg/kg	10.18.19 04:15	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.204	102	70-130	3	35	mg/kg	10.18.19 04:15	
o-Xylene	<0.00200	0.100	0.101	101	0.106	106	70-130	5	35	mg/kg	10.18.19 04:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		88		93		70-130	%	10.18.19 04:15
4-Bromofluorobenzene	70		98		102		70-130	%	10.18.19 04:15

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104823

Parent Sample Id: 640096-001

Matrix: Soil

MS Sample Id: 640096-001 S

Prep Method: SW5030B

Date Prep: 10.17.19

MSD Sample Id: 640096-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0753	75	0.0726	73	70-130	4	35	mg/kg	10.17.19 22:24	
Toluene	<0.00200	0.0998	0.0768	77	0.0808	81	70-130	5	35	mg/kg	10.17.19 22:24	
Ethylbenzene	<0.00200	0.0998	0.0835	84	0.0933	93	70-130	11	35	mg/kg	10.17.19 22:24	
m,p-Xylenes	<0.00399	0.200	0.165	83	0.187	94	70-130	13	35	mg/kg	10.17.19 22:24	
o-Xylene	<0.00200	0.0998	0.0876	88	0.0999	100	70-130	13	35	mg/kg	10.17.19 22:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		89		70-130	%	10.17.19 22:24
4-Bromofluorobenzene	114		132	**	70-130	%	10.17.19 22:24

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 640098

LT Environmental, Inc.
JRU SWD Riser 105

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104855

Parent Sample Id: 640269-001

Matrix: Soil

MS Sample Id: 640269-001 S

Prep Method: SW5030B

Date Prep: 10.18.19

MSD Sample Id: 640269-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0716	72	0.0727	73	70-130	2	35	mg/kg	10.18.19 04:55	
Toluene	<0.00199	0.0996	0.0797	80	0.0782	78	70-130	2	35	mg/kg	10.18.19 04:55	
Ethylbenzene	<0.00199	0.0996	0.0846	85	0.0813	81	70-130	4	35	mg/kg	10.18.19 04:55	
m,p-Xylenes	<0.00398	0.199	0.157	79	0.161	81	70-130	3	35	mg/kg	10.18.19 04:55	
o-Xylene	<0.00199	0.0996	0.0819	82	0.0871	87	70-130	6	35	mg/kg	10.18.19 04:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		92		70-130	%	10.18.19 04:55
4-Bromofluorobenzene	107		96		70-130	%	10.18.19 04:55

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Chain of Custody

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432-704-5440) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Work Order No: 1040098

www.xenco.com Page 1 of 2

Project Manager: Dan Moir
 Company Name: LT Environmental, Inc., Permian office
 Address: 3300 North A Street
 City, State ZIP: Midland, TX 79705
 Phone: 432.704.5178
 Email: ggreen@ltenv.com, dmoir@ltenv.com

Bill to: (if different) Kyle Littlell
 Company Name: XTO
 Address:
 City, State ZIP: Midland, Tx 79705

Program: USTR/PST PRP Brownfields RC Superfund
 State of Project:
 Reporting Level: Level II Level III PST/UST RRP Level IV
 Deliverables: EDD ADAPT Other:

Project Name: SRU SWDR, Ser 105 Turn Around
 Project Number: ZRP-5557 Routine
 P.O. Number: ZRP-5557 Rush:
 Sampler's Name: Garrett Green Due Date:

SAMPLE RECEIPT
 Temp Blank: Yes No Wet Ice: Yes No
 Temperature (°C): 2.0 Thermometer ID
 Received Intact: Yes No Correction Factor: T-NM-007
 Cooler Custody Seals: Yes No N/A Total Containers: 12
 Sample Custody Seals: Yes No N/A

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST										Work Order Notes
BH06	S	10/5/19	1015	1'	1	X	X	X											
BH06A	1		1030	4'	1	X	X	X											
BH07	1		1100	1'	1	X	X	X											
BH07A	1		1120	4'	1	X	X	X											
BH08	1		1230	1'	1	X	X	X											
BH08A	1		1245	4'	1	X	X	X											
BH09	1		1300	1'	1	X	X	X											
BH09A	1		1315	4'	1	X	X	X											
BH10	1		1330	1'	1	X	X	X											
BH10A	1		1345	4'	1	X	X	X											

Total **200.7 / 6010** **200.8 / 6020:** 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature) [Signature] Received by: (Signature) [Signature] Date/Time 10/15/19 10:39

Relinquished by: (Signature) [Signature] Received by: (Signature) [Signature] Date/Time [Blank]



Inter-Office Shipment

IOS Number 50228

Date/Time: 10/16/19 10:16

Created by: Elizabeth Mcclellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776737745954

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
640098-001	S	BH06	10/15/19 10:15	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-001	S	BH06	10/15/19 10:15	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-001	S	BH06	10/15/19 10:15	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PF	
640098-002	S	BH06A	10/15/19 10:30	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PF	
640098-002	S	BH06A	10/15/19 10:30	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-002	S	BH06A	10/15/19 10:30	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-003	S	BH07	10/15/19 11:00	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-003	S	BH07	10/15/19 11:00	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PF	
640098-003	S	BH07	10/15/19 11:00	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-004	S	BH07A	10/15/19 11:20	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-004	S	BH07A	10/15/19 11:20	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PF	
640098-004	S	BH07A	10/15/19 11:20	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-005	S	BH08	10/15/19 12:30	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-005	S	BH08	10/15/19 12:30	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PF	
640098-005	S	BH08	10/15/19 12:30	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-006	S	BH08A	10/15/19 12:45	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-006	S	BH08A	10/15/19 12:45	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PF	
640098-006	S	BH08A	10/15/19 12:45	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-007	S	BH09	10/15/19 13:00	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-007	S	BH09	10/15/19 13:00	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-007	S	BH09	10/15/19 13:00	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PF	
640098-008	S	BH09A	10/15/19 13:15	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PF	
640098-008	S	BH09A	10/15/19 13:15	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-008	S	BH09A	10/15/19 13:15	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-009	S	BH10	10/15/19 13:30	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PF	



Inter-Office Shipment

IOS Number 50228

Date/Time: 10/16/19 10:16

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776737745954

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
640098-009	S	BH10	10/15/19 13:30	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-009	S	BH10	10/15/19 13:30	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-010	S	BH10A	10/15/19 13:45	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-010	S	BH10A	10/15/19 13:45	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-010	S	BH10A	10/15/19 13:45	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PI	
640098-011	S	BH11	10/15/19 14:05	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	
640098-011	S	BH11	10/15/19 14:05	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-011	S	BH11	10/15/19 14:05	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PI	
640098-012	S	BH11A	10/15/19 14:20	SW8015MOD_NM	TPH by SW8015 Mod	10/21/19	10/29/19	JKR	GRO-DRO PHCC10C28 PI	
640098-012	S	BH11A	10/15/19 14:20	E300_CL	Chloride by EPA 300	10/21/19	04/12/20	JKR	CL	
640098-012	S	BH11A	10/15/19 14:20	SW8021B	BTEX by EPA 8021B	10/21/19	10/29/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By: 
 Elizabeth McClellan

Received By: 
 Amanda Levario

Date Relinquished: 10/16/2019

Date Received: 10/17/2019 11:19

Cooler Temperature: 3.3



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 50228

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 10/16/2019 10:16 AM

Received By: Amanda Levario

Date Received: 10/17/2019 11:19 AM

Sample Receipt Checklist

Comments

- #1 *Temperature of cooler(s)? 3.3
- #2 *Shipping container in good condition? Yes
- #3 *Samples received with appropriate temperature? Yes
- #4 *Custody Seals intact on shipping container/ cooler? N/A
- #5 *Custody Seals Signed and dated for Containers/coolers N/A
- #6 *IOS present? Yes
- #7 Any missing/extra samples? No
- #8 IOS agrees with sample label(s)/matrix? Yes
- #9 Sample matrix/ properties agree with IOS? Yes
- #10 Samples in proper container/ bottle? Yes
- #11 Samples properly preserved? Yes
- #12 Sample container(s) intact? Yes
- #13 Sufficient sample amount for indicated test(s)? Yes
- #14 All samples received within hold time? Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Amanda Levario

Date: 10/17/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 10/15/2019 04:39:00 PM

Work Order #: 640098

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2	
#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?	N/A	
#6* Custody Seals Signed and dated?	N/A	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	Yes	Subbed to Midland.
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 10/17/2019

Checklist reviewed by:

Jessica Kramer

Date: 10/17/2019

Analytical Report 654571

for
LT Environmental, Inc.

Project Manager: Dan Moir

JRU SWD Riser #105

012919158

05-MAR-20

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



05-MAR-20

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **654571**
JRU SWD Riser #105
Project Address:

Dan Moir:

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) 654571. 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. 654571 will be filed for 45 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,

Jessica Kramer
Project Assistant

*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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS04	S	03-03-20 11:30	4.5 ft	654571-001
FS05	S	03-03-20 11:35	4.5 ft	654571-002
SW09	S	03-03-20 14:00	0 - 4.5 ft	654571-003
SW10	S	03-03-20 10:45	0 - 4 ft	654571-004
SW11	S	03-03-20 10:40	0 - 4.5 ft	654571-005



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU SWD Riser #105

Project ID: 012919158
Work Order Number(s): 654571

Report Date: 05-MAR-20
Date Received: 03/04/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118585 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 654571

LT Environmental, Inc., Arvada, CO

Project Name: JRU SWD Riser #105

Project Id: 012919158
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Mar-04-20 12:40 pm
Report Date: 05-MAR-20
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	654571-001	654571-002	654571-003	654571-004	654571-005	
	<i>Field Id:</i>	FS04	FS05	SW09	SW10	SW11	
	<i>Depth:</i>	4.5- ft	4.5- ft	0-4.5 ft	0-4 ft	0-4.5 ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Mar-03-20 11:30	Mar-03-20 11:35	Mar-03-20 14:00	Mar-03-20 10:45	Mar-03-20 10:40	
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-04-20 15:00	Mar-04-20 15:00	Mar-04-20 15:00	Mar-04-20 15:00	Mar-04-20 15:00	
	<i>Analyzed:</i>	Mar-04-20 19:26	Mar-04-20 19:46	Mar-04-20 20:06	Mar-04-20 20:27	Mar-04-20 20:47	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
	Benzene	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	
	Toluene	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	
	Ethylbenzene	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	
	m,p-Xylenes	<0.00399 0.00399	<0.00398 0.00398	<0.00398 0.00398	<0.00399 0.00399	<0.00398 0.00398	
	o-Xylene	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	
Total Xylenes	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199		
Total BTEX	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199		
Chloride by EPA 300	<i>Extracted:</i>	Mar-04-20 15:00	Mar-04-20 15:00	Mar-04-20 15:00	Mar-04-20 15:00	Mar-04-20 15:00	
	<i>Analyzed:</i>	Mar-04-20 19:10	Mar-04-20 19:29	Mar-04-20 19:48	Mar-04-20 19:54	Mar-04-20 20:00	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride	926 9.98	430 10.0	792 49.7	4120 49.9	<49.8 49.8		
TPH by SW8015 Mod	<i>Extracted:</i>	Mar-04-20 16:00	Mar-04-20 16:00	Mar-04-20 16:00	Mar-04-20 16:00	Mar-04-20 16:00	
	<i>Analyzed:</i>	Mar-04-20 16:41	Mar-04-20 17:01	Mar-04-20 17:21	Mar-04-20 18:02	Mar-04-20 18:22	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
	Gasoline Range Hydrocarbons (GRO)	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.3 50.3	
	Diesel Range Organics (DRO)	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.3 50.3	
Motor Oil Range Hydrocarbons (MRO)	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.3 50.3		
Total GRO-DRO	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.3 50.3		
Total TPH	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.3 50.3		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: **FS04** Matrix: Soil Date Received: 03.04.20 12.40
 Lab Sample Id: 654571-001 Date Collected: 03.03.20 11.30 Sample Depth: 4.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.04.20 15.00 Basis: Wet Weight
 Seq Number: 3118583

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	926	9.98	mg/kg	03.04.20 19.10		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 03.04.20 16.00 Basis: Wet Weight
 Seq Number: 3118601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.04.20 16.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.04.20 16.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.04.20 16.41	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.04.20 16.41	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.04.20 16.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.04.20 16.41	
o-Terphenyl	84-15-1	104	%	70-135	03.04.20 16.41	



Certificate of Analytical Results 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: FS04	Matrix: Soil	Date Received: 03.04.20 12.40
Lab Sample Id: 654571-001	Date Collected: 03.03.20 11.30	Sample Depth: 4.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 03.04.20 15.00	Basis: Wet Weight
Seq Number: 3118585		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.04.20 19.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.04.20 19.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.04.20 19.26	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.04.20 19.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.04.20 19.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.04.20 19.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.04.20 19.26	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.04.20 19.26		
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.04.20 19.26		



Certificate of Analytical Results 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: **FS05** Matrix: Soil Date Received: 03.04.20 12.40
 Lab Sample Id: 654571-002 Date Collected: 03.03.20 11.35 Sample Depth: 4.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.04.20 15.00 Basis: Wet Weight
 Seq Number: 3118583

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	430	10.0	mg/kg	03.04.20 19.29		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 03.04.20 16.00 Basis: Wet Weight
 Seq Number: 3118601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.04.20 17.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.04.20 17.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.04.20 17.01	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.04.20 17.01	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.04.20 17.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.04.20 17.01	
o-Terphenyl	84-15-1	103	%	70-135	03.04.20 17.01	



Certificate of Analytical Results 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: FS05	Matrix: Soil	Date Received: 03.04.20 12.40
Lab Sample Id: 654571-002	Date Collected: 03.03.20 11.35	Sample Depth: 4.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 03.04.20 15.00	Basis: Wet Weight
Seq Number: 3118585		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.04.20 19.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.04.20 19.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.04.20 19.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.04.20 19.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.04.20 19.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.04.20 19.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.04.20 19.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.04.20 19.46		
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.04.20 19.46		



Certificate of Analytical Results 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: **SW09** Matrix: Soil Date Received: 03.04.20 12.40
 Lab Sample Id: 654571-003 Date Collected: 03.03.20 14.00 Sample Depth: 0 - 4.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.04.20 15.00 Basis: Wet Weight
 Seq Number: 3118583

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	792	49.7	mg/kg	03.04.20 19.48		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 03.04.20 16.00 Basis: Wet Weight
 Seq Number: 3118601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.04.20 17.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.04.20 17.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.04.20 17.21	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.04.20 17.21	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.04.20 17.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.04.20 17.21	
o-Terphenyl	84-15-1	103	%	70-135	03.04.20 17.21	



Certificate of Analytical Results 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SW09	Matrix: Soil	Date Received: 03.04.20 12.40
Lab Sample Id: 654571-003	Date Collected: 03.03.20 14.00	Sample Depth: 0 - 4.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 03.04.20 15.00	Basis: Wet Weight
Seq Number: 3118585		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.04.20 20.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.04.20 20.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.04.20 20.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.04.20 20.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.04.20 20.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.04.20 20.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.04.20 20.06	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.04.20 20.06		
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.04.20 20.06		



Certificate of Analytical Results 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: **SW10** Matrix: Soil Date Received: 03.04.20 12.40
 Lab Sample Id: 654571-004 Date Collected: 03.03.20 10.45 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.04.20 15.00 Basis: Wet Weight
 Seq Number: 3118583

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4120	49.9	mg/kg	03.04.20 19.54		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 03.04.20 16.00 Basis: Wet Weight
 Seq Number: 3118601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.04.20 18.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.04.20 18.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.04.20 18.02	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.04.20 18.02	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.04.20 18.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.04.20 18.02	
o-Terphenyl	84-15-1	107	%	70-135	03.04.20 18.02	



Certificate of Analytical Results 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SW10	Matrix: Soil	Date Received: 03.04.20 12.40
Lab Sample Id: 654571-004	Date Collected: 03.03.20 10.45	Sample Depth: 0 - 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 03.04.20 15.00	Basis: Wet Weight
Seq Number: 3118585		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.04.20 20.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.04.20 20.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.04.20 20.27	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.04.20 20.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.04.20 20.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.04.20 20.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.04.20 20.27	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.04.20 20.27		
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.04.20 20.27		



Certificate of Analytical Results 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: **SW11** Matrix: Soil Date Received: 03.04.20 12.40
 Lab Sample Id: 654571-005 Date Collected: 03.03.20 10.40 Sample Depth: 0 - 4.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.04.20 15.00 Basis: Wet Weight
 Seq Number: 3118583

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<49.8	49.8	mg/kg	03.04.20 20.00	U	5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 03.04.20 16.00 Basis: Wet Weight
 Seq Number: 3118601

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.04.20 18.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.04.20 18.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.04.20 18.22	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.04.20 18.22	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.04.20 18.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	03.04.20 18.22	
o-Terphenyl	84-15-1	89	%	70-135	03.04.20 18.22	



Certificate of Analytical Results 654571

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SW11	Matrix: Soil	Date Received: 03.04.20 12.40
Lab Sample Id: 654571-005	Date Collected: 03.03.20 10.40	Sample Depth: 0 - 4.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 03.04.20 15.00	Basis: Wet Weight
Seq Number: 3118585		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.04.20 20.47	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.04.20 20.47	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.04.20 20.47	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.04.20 20.47	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.04.20 20.47	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.04.20 20.47	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.04.20 20.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.04.20 20.47		
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.04.20 20.47		



LT Environmental, Inc.

JRU SWD Riser #105

Analytical Method: Chloride by EPA 300

Seq Number: 3118583

MB Sample Id: 7698069-1-BLK

Matrix: Solid

LCS Sample Id: 7698069-1-BKS

Prep Method: E300P

Date Prep: 03.04.20

LCSD Sample Id: 7698069-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	245	98	260	104	90-110	6	20	mg/kg	03.04.20 17:31	

Analytical Method: Chloride by EPA 300

Seq Number: 3118583

Parent Sample Id: 654483-007

Matrix: Soil

MS Sample Id: 654483-007 S

Prep Method: E300P

Date Prep: 03.04.20

MSD Sample Id: 654483-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	854	200	1060	103	1060	103	90-110	0	20	mg/kg	03.04.20 17:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3118583

Parent Sample Id: 654571-001

Matrix: Soil

MS Sample Id: 654571-001 S

Prep Method: E300P

Date Prep: 03.04.20

MSD Sample Id: 654571-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	926	200	1130	102	1130	102	90-110	0	20	mg/kg	03.04.20 19:16	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118601

MB Sample Id: 7698123-1-BLK

Matrix: Solid

LCS Sample Id: 7698123-1-BKS

Prep Method: SW8015P

Date Prep: 03.04.20

LCSD Sample Id: 7698123-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	872	87	839	84	70-135	4	35	mg/kg	03.04.20 13:20	
Diesel Range Organics (DRO)	<50.0	1000	852	85	814	81	70-135	5	35	mg/kg	03.04.20 13:20	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		99		95		70-135	%	03.04.20 13:20
o-Terphenyl	112		107		102		70-135	%	03.04.20 13:20

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118601

MB Sample Id: 7698123-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 03.04.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.04.20 13:00	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



LT Environmental, Inc.

JRU SWD Riser #105

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118601

Parent Sample Id: 654483-002

Matrix: Soil

MS Sample Id: 654483-002 S

Prep Method: SW8015P

Date Prep: 03.04.20

MSD Sample Id: 654483-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	990	99	987	98	70-135	0	35		mg/kg	03.04.20 14:20	
Diesel Range Organics (DRO)	<49.9	998	965	97	974	96	70-135	1	35		mg/kg	03.04.20 14:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		109		70-135	%	03.04.20 14:20
o-Terphenyl	121		118		70-135	%	03.04.20 14:20

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118585

MB Sample Id: 7698065-1-BLK

Matrix: Solid

LCS Sample Id: 7698065-1-BKS

Prep Method: SW5030B

Date Prep: 03.04.20

LCSD Sample Id: 7698065-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.127	127	0.126	126	70-130	1	35		mg/kg	03.04.20 13:39	
Toluene	<0.00200	0.100	0.117	117	0.116	116	70-130	1	35		mg/kg	03.04.20 13:39	
Ethylbenzene	<0.00200	0.100	0.111	111	0.110	110	71-129	1	35		mg/kg	03.04.20 13:39	
m,p-Xylenes	<0.00400	0.200	0.218	109	0.215	108	70-135	1	35		mg/kg	03.04.20 13:39	
o-Xylene	<0.00200	0.100	0.110	110	0.109	109	71-133	1	35		mg/kg	03.04.20 13:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		112		111		70-130	%	03.04.20 13:39
4-Bromofluorobenzene	93		90		89		70-130	%	03.04.20 13:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118585

Parent Sample Id: 654483-002

Matrix: Soil

MS Sample Id: 654483-002 S

Prep Method: SW5030B

Date Prep: 03.04.20

MSD Sample Id: 654483-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.126	127	0.124	123	70-130	2	35		mg/kg	03.04.20 14:20	
Toluene	<0.00199	0.0994	0.125	126	0.121	120	70-130	3	35		mg/kg	03.04.20 14:20	
Ethylbenzene	<0.00199	0.0994	0.118	119	0.123	122	71-129	4	35		mg/kg	03.04.20 14:20	
m,p-Xylenes	<0.00398	0.199	0.229	115	0.258	128	70-135	12	35		mg/kg	03.04.20 14:20	
o-Xylene	<0.00199	0.0994	0.114	115	0.129	128	71-133	12	35		mg/kg	03.04.20 14:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		70-130	%	03.04.20 14:20
4-Bromofluorobenzene	88		89		70-130	%	03.04.20 14:20

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.04.2020 12.40.00 PM

Work Order #: 654571

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : T-NM-007


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?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.04.2020

Checklist reviewed by:


Jessica Kramer

Date: 03.05.2020

Analytical Report 655088

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU SWD Riser #105

012919158

11-MAR-20

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



11-MAR-20

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **655088**
JRU SWD Riser #105
Project Address:

Dan Moir:

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) 655088. 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. 655088 will be filed for 45 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,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, slightly slanted style.

Jessica Kramer
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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 655088

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS04A	S	03-09-20 13:30	6 ft	655088-001



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU SWD Riser #105

Project ID: 012919158
Work Order Number(s): 655088

Report Date: 11-MAR-20
Date Received: 03/10/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119165 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 655088

LT Environmental, Inc., Arvada, CO

Project Name: JRU SWD Riser #105

Project Id: 012919158

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue Mar-10-20 08:45 am

Report Date: 11-MAR-20

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	655088-001				
	Field Id:	FS04A				
	Depth:	6- ft				
	Matrix:	SOIL				
	Sampled:	Mar-09-20 13:30				
BTEX by EPA 8021B	Extracted:	Mar-10-20 10:30				
	Analyzed:	Mar-10-20 18:25				
	Units/RL:	mg/kg RL				
	Benzene	<0.00202 0.00202				
	Toluene	<0.00202 0.00202				
	Ethylbenzene	<0.00202 0.00202				
	m,p-Xylenes	<0.00404 0.00404				
	o-Xylene	<0.00202 0.00202				
Total Xylenes	<0.00202 0.00202					
Total BTEX	<0.00202 0.00202					
Chloride by EPA 300	Extracted:	Mar-10-20 11:22				
	Analyzed:	Mar-10-20 13:27				
	Units/RL:	mg/kg RL				
Chloride	240 50.1					
TPH by SW8015 Mod	Extracted:	Mar-10-20 13:30				
	Analyzed:	Mar-10-20 21:06				
	Units/RL:	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<49.8 49.8				
	Diesel Range Organics (DRO)	<49.8 49.8				
	Motor Oil Range Hydrocarbons (MRO)	<49.8 49.8				
	Total GRO-DRO	<49.8 49.8				
Total TPH	<49.8 49.8					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Manager



Certificate of Analytical Results 655088

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: **FS04A** Matrix: Soil Date Received: 03.10.20 08.45
 Lab Sample Id: 655088-001 Date Collected: 03.09.20 13.30 Sample Depth: 6 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 03.10.20 11.22 Basis: Wet Weight
 Seq Number: 3119170

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	240	50.1	mg/kg	03.10.20 13.27		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 03.10.20 13.30 Basis: Wet Weight
 Seq Number: 3119178

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.10.20 21.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.10.20 21.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.10.20 21.06	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.10.20 21.06	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.10.20 21.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.10.20 21.06	
o-Terphenyl	84-15-1	101	%	70-135	03.10.20 21.06	



Certificate of Analytical Results 655088

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: FS04A	Matrix: Soil	Date Received: 03.10.20 08.45
Lab Sample Id: 655088-001	Date Collected: 03.09.20 13.30	Sample Depth: 6 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 03.10.20 10.30	Basis: Wet Weight
Seq Number: 3119165		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.10.20 18.25	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.10.20 18.25	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.10.20 18.25	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	03.10.20 18.25	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.10.20 18.25	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.10.20 18.25	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.10.20 18.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.10.20 18.25		
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.10.20 18.25		



LT Environmental, Inc.

JRU SWD Riser #105

Analytical Method: Chloride by EPA 300

Seq Number: 3119170

MB Sample Id: 7698479-1-BLK

Matrix: Solid

LCS Sample Id: 7698479-1-BKS

Prep Method: E300P

Date Prep: 03.10.20

LCSD Sample Id: 7698479-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	259	104	259	104	90-110	0	20	mg/kg	03.10.20 11:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3119170

Parent Sample Id: 655087-001

Matrix: Soil

MS Sample Id: 655087-001 S

Prep Method: E300P

Date Prep: 03.10.20

MSD Sample Id: 655087-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<9.98	200	212	106	210	105	90-110	1	20	mg/kg	03.10.20 11:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3119170

Parent Sample Id: 655087-011

Matrix: Soil

MS Sample Id: 655087-011 S

Prep Method: E300P

Date Prep: 03.10.20

MSD Sample Id: 655087-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	249	200	463	107	460	106	90-110	1	20	mg/kg	03.10.20 13:10	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119178

MB Sample Id: 7698526-1-BLK

Matrix: Solid

LCS Sample Id: 7698526-1-BKS

Prep Method: SW8015P

Date Prep: 03.10.20

LCSD Sample Id: 7698526-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	895	90	949	95	70-135	6	35	mg/kg	03.10.20 15:03	
Diesel Range Organics (DRO)	<50.0	1000	881	88	875	88	70-135	1	35	mg/kg	03.10.20 15:03	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		104		101		70-135	%	03.10.20 15:03
o-Terphenyl	105		110		101		70-135	%	03.10.20 15:03

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119178

Matrix: Solid

MB Sample Id: 7698526-1-BLK

Prep Method: SW8015P

Date Prep: 03.10.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.10.20 14:43	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



LT Environmental, Inc.

JRU SWD Riser #105

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119178

Parent Sample Id: 655087-001

Matrix: Soil

MS Sample Id: 655087-001 S

Prep Method: SW8015P

Date Prep: 03.10.20

MSD Sample Id: 655087-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	888	89	894	89	70-135	1	35	mg/kg	03.10.20 16:11	
Diesel Range Organics (DRO)	<50.2	1000	958	96	993	99	70-135	4	35	mg/kg	03.10.20 16:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		108		70-135	%	03.10.20 16:11
o-Terphenyl	99		106		70-135	%	03.10.20 16:11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119165

MB Sample Id: 7698474-1-BLK

Matrix: Solid

LCS Sample Id: 7698474-1-BKS

Prep Method: SW5030B

Date Prep: 03.10.20

LCSD Sample Id: 7698474-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.110	110	0.111	111	70-130	1	35	mg/kg	03.10.20 11:57	
Toluene	<0.00200	0.100	0.106	106	0.108	108	70-130	2	35	mg/kg	03.10.20 11:57	
Ethylbenzene	<0.00200	0.100	0.101	101	0.103	103	71-129	2	35	mg/kg	03.10.20 11:57	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.213	107	70-135	2	35	mg/kg	03.10.20 11:57	
o-Xylene	<0.00200	0.100	0.104	104	0.106	106	71-133	2	35	mg/kg	03.10.20 11:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		108		108		70-130	%	03.10.20 11:57
4-Bromofluorobenzene	98		94		92		70-130	%	03.10.20 11:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119165

Parent Sample Id: 655087-001

Matrix: Soil

MS Sample Id: 655087-001 S

Prep Method: SW5030B

Date Prep: 03.10.20

MSD Sample Id: 655087-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.113	114	0.115	116	70-130	2	35	mg/kg	03.10.20 12:38	
Toluene	<0.00198	0.0992	0.110	111	0.112	113	70-130	2	35	mg/kg	03.10.20 12:38	
Ethylbenzene	<0.00198	0.0992	0.106	107	0.107	108	71-129	1	35	mg/kg	03.10.20 12:38	
m,p-Xylenes	<0.00397	0.198	0.219	111	0.220	111	70-135	0	35	mg/kg	03.10.20 12:38	
o-Xylene	<0.00198	0.0992	0.108	109	0.109	110	71-133	1	35	mg/kg	03.10.20 12:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		70-130	%	03.10.20 12:38
4-Bromofluorobenzene	95		92		70-130	%	03.10.20 12:38

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.10.2020 08.45.00 AM

Work Order #: 655088

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : T-NM-007

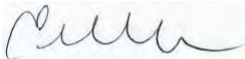
Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 03.10.2020

Checklist reviewed by:


Jessica Kramer

Date: 03.10.2020

Analytical Report 654162

for
LT Environmental, Inc.

Project Manager: Dan Moir

JRU SWD Riser #105

03-MAR-20

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



03-MAR-20

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **654162**
JRU SWD Riser #105
Project Address:

Dan Moir:

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) 654162. 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. 654162 will be filed for 45 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,

Jessica Kramer
Project Assistant

*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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 654162

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW07	S	02-28-20 11:20	0 - 4 ft	654162-001
SW08	S	02-28-20 11:30	0 - 8 ft	654162-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU SWD Riser #105

Project ID:
Work Order Number(s): 654162

Report Date: 03-MAR-20
Date Received: 02/28/2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118153 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 654162

LT Environmental, Inc., Arvada, CO

Project Name: JRU SWD Riser #105

Project Id:
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Feb-28-20 03:26 pm
Report Date: 03-MAR-20
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	654162-001	654162-002			
	<i>Field Id:</i>	SW07	SW08			
	<i>Depth:</i>	0-4 ft	0-8 ft			
	<i>Matrix:</i>	SOIL	SOIL			
	<i>Sampled:</i>	Feb-28-20 11:20	Feb-28-20 11:30			
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-28-20 18:00	Feb-28-20 18:00			
	<i>Analyzed:</i>	Feb-29-20 03:05	Feb-29-20 03:25			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00201 0.00201			
Toluene		<0.00200 0.00200	<0.00201 0.00201			
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201			
m,p-Xylenes		<0.00401 0.00401	<0.00402 0.00402			
o-Xylene		<0.00200 0.00200	<0.00201 0.00201			
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201			
Total BTEX		<0.00200 0.00200	<0.00201 0.00201			
Chloride by EPA 300	<i>Extracted:</i>	Feb-28-20 17:00	Feb-28-20 17:00			
	<i>Analyzed:</i>	Feb-28-20 22:10	Feb-28-20 22:15			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Chloride		249 9.92	3350 49.6			
TPH by SW8015 Mod	<i>Extracted:</i>	Feb-28-20 19:09	Feb-28-20 19:09			
	<i>Analyzed:</i>	Feb-29-20 08:42	Feb-29-20 09:41			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0			
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0			
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0			
Total GRO-DRO		<50.0 50.0	<50.0 50.0			
Total TPH		<50.0 50.0	<50.0 50.0			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.9%

Jessica Kramer
 Project Assistant



Certificate of Analytical Results 654162

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: **SW07** Matrix: Soil Date Received: 02.28.20 15.26
 Lab Sample Id: 654162-001 Date Collected: 02.28.20 11.20 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.28.20 17.00 Basis: Wet Weight
 Seq Number: 3118170

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	249	9.92	mg/kg	02.28.20 22.10		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.28.20 19.09 Basis: Wet Weight
 Seq Number: 3118192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.29.20 08.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.29.20 08.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.29.20 08.42	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.29.20 08.42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.29.20 08.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	02.29.20 08.42	
o-Terphenyl	84-15-1	121	%	70-135	02.29.20 08.42	



Certificate of Analytical Results 654162

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SW07	Matrix: Soil	Date Received: 02.28.20 15.26
Lab Sample Id: 654162-001	Date Collected: 02.28.20 11.20	Sample Depth: 0 - 4 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 02.28.20 18.00	Basis: Wet Weight
Seq Number: 3118153		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.29.20 03.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.29.20 03.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.29.20 03.05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.29.20 03.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.29.20 03.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.29.20 03.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.29.20 03.05	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86		%	70-130	02.29.20 03.05	
1,4-Difluorobenzene	540-36-3	101		%	70-130	02.29.20 03.05	



Certificate of Analytical Results 654162

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: **SW08** Matrix: Soil Date Received: 02.28.20 15.26
 Lab Sample Id: 654162-002 Date Collected: 02.28.20 11.30 Sample Depth: 0 - 8 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.28.20 17.00 Basis: Wet Weight
 Seq Number: 3118170

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3350	49.6	mg/kg	02.28.20 22.15		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.28.20 19.09 Basis: Wet Weight
 Seq Number: 3118192

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.29.20 09.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.29.20 09.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.29.20 09.41	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.29.20 09.41	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.29.20 09.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	02.29.20 09.41	
o-Terphenyl	84-15-1	122	%	70-135	02.29.20 09.41	



Certificate of Analytical Results 654162

LT Environmental, Inc., Arvada, CO

JRU SWD Riser #105

Sample Id: SW08	Matrix: Soil	Date Received: 02.28.20 15.26
Lab Sample Id: 654162-002	Date Collected: 02.28.20 11.30	Sample Depth: 0 - 8 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 02.28.20 18.00	Basis: Wet Weight
Seq Number: 3118153		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.29.20 03.25	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.29.20 03.25	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.29.20 03.25	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.29.20 03.25	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.29.20 03.25	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.29.20 03.25	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.29.20 03.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.29.20 03.25		
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.29.20 03.25		



LT Environmental, Inc.

JRU SWD Riser #105

Analytical Method: Chloride by EPA 300

Seq Number: 3118170

MB Sample Id: 7697767-1-BLK

Matrix: Solid

LCS Sample Id: 7697767-1-BKS

Prep Method: E300P

Date Prep: 02.28.20

LCSD Sample Id: 7697767-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	251	100	225	90	90-110	11	20	mg/kg	02.28.20 20:45	

Analytical Method: Chloride by EPA 300

Seq Number: 3118170

Parent Sample Id: 654052-001

Matrix: Soil

MS Sample Id: 654052-001 S

Prep Method: E300P

Date Prep: 02.28.20

MSD Sample Id: 654052-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	45.5	200	258	106	260	107	90-110	1	20	mg/kg	02.28.20 21:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3118170

Parent Sample Id: 654164-001

Matrix: Soil

MS Sample Id: 654164-001 S

Prep Method: E300P

Date Prep: 02.28.20

MSD Sample Id: 654164-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	216	199	420	103	423	104	90-110	1	20	mg/kg	02.28.20 22:27	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118192

MB Sample Id: 7697771-1-BLK

Matrix: Solid

LCS Sample Id: 7697771-1-BKS

Prep Method: SW8015P

Date Prep: 02.28.20

LCSD Sample Id: 7697771-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	885	89	910	91	70-135	3	35	mg/kg	02.29.20 06:24	
Diesel Range Organics (DRO)	<50.0	1000	961	96	987	99	70-135	3	35	mg/kg	02.29.20 06:24	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		111		113		70-135	%	02.29.20 06:24
o-Terphenyl	108		109		111		70-135	%	02.29.20 06:24

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118192

MB Sample Id: 7697771-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.28.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.29.20 06:05	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



LT Environmental, Inc.

JRU SWD Riser #105

Analytical Method: TPH by SW8015 Mod

Seq Number: 3118192

Parent Sample Id: 654051-029

Matrix: Soil

MS Sample Id: 654051-029 S

Prep Method: SW8015P

Date Prep: 02.28.20

MSD Sample Id: 654051-029 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.5	1010	964	95	906	91	70-135	6	35	mg/kg	03.02.20 12:44	
Diesel Range Organics (DRO)	<50.5	1010	1190	118	1020	102	70-135	15	35	mg/kg	03.02.20 12:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		115		70-135	%	03.02.20 12:44
o-Terphenyl	128		114		70-135	%	03.02.20 12:44

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118153

MB Sample Id: 7697768-1-BLK

Matrix: Solid

LCS Sample Id: 7697768-1-BKS

Prep Method: SW5030B

Date Prep: 02.28.20

LCSD Sample Id: 7697768-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.119	119	0.116	116	70-130	3	35	mg/kg	02.28.20 22:19	
Toluene	<0.00200	0.100	0.108	108	0.106	106	70-130	2	35	mg/kg	02.28.20 22:19	
Ethylbenzene	<0.00200	0.100	0.103	103	0.101	101	71-129	2	35	mg/kg	02.28.20 22:19	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.198	99	70-135	2	35	mg/kg	02.28.20 22:19	
o-Xylene	<0.00200	0.100	0.103	103	0.101	101	71-133	2	35	mg/kg	02.28.20 22:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		111		110		70-130	%	02.28.20 22:19
4-Bromofluorobenzene	92		88		88		70-130	%	02.28.20 22:19

Analytical Method: BTEX by EPA 8021B

Seq Number: 3118153

Parent Sample Id: 654051-024

Matrix: Soil

MS Sample Id: 654051-024 S

Prep Method: SW5030B

Date Prep: 02.28.20

MSD Sample Id: 654051-024 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.113	114	0.104	104	70-130	8	35	mg/kg	02.28.20 23:00	
Toluene	<0.00199	0.0994	0.104	105	0.0941	94	70-130	10	35	mg/kg	02.28.20 23:00	
Ethylbenzene	<0.00199	0.0994	0.0990	100	0.0878	88	71-129	12	35	mg/kg	02.28.20 23:00	
m,p-Xylenes	<0.00398	0.199	0.192	96	0.170	85	70-135	12	35	mg/kg	02.28.20 23:00	
o-Xylene	<0.00199	0.0994	0.0973	98	0.0873	87	71-133	11	35	mg/kg	02.28.20 23:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		109		70-130	%	02.28.20 23:00
4-Bromofluorobenzene	92		89		70-130	%	02.28.20 23:00

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/28/2020 03:26:00 PM

Work Order #: 654162

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : T-NM-007

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?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 02/28/2020

Checklist reviewed by:

Jessica Kramer

Date: 02/28/2020



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

November 25, 2025

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JRJ SWD RISER

Enclosed are the results of analyses for samples received by the laboratory on 11/20/25 14:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder".

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	11/20/2025	Sampling Date:	11/19/2025
Reported:	11/25/2025	Sampling Type:	Soil
Project Name:	JRU SWD RISER	Sampling Condition:	Cool & Intact
Project Number:	03C1558737	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.381936-103.881954		

Sample ID: FS06 5' (H257303-01)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/21/2025	ND	2.08	104	2.00	4.47		
Toluene*	<0.050	0.050	11/21/2025	ND	2.04	102	2.00	4.71		
Ethylbenzene*	<0.050	0.050	11/21/2025	ND	1.97	98.3	2.00	5.50		
Total Xylenes*	<0.150	0.150	11/21/2025	ND	5.97	99.5	6.00	5.07		
Total BTEX	<0.300	0.300	11/21/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	11/21/2025	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/21/2025	ND	181	90.7	200	1.92		
DRO >C10-C28*	<10.0	10.0	11/21/2025	ND	191	95.3	200	4.14		
EXT DRO >C28-C36	<10.0	10.0	11/21/2025	ND						

Surrogate: 1-Chlorooctane 77.9 % 52.4-130

Surrogate: 1-Chlorooctadecane 77.8 % 39.9-141

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	11/20/2025	Sampling Date:	11/19/2025
Reported:	11/25/2025	Sampling Type:	Soil
Project Name:	JRU SWD RISER	Sampling Condition:	Cool & Intact
Project Number:	03C1558737	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.381936-103.881954		

Sample ID: SW 12 0-5' (H257303-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/21/2025	ND	2.08	104	2.00	4.47	
Toluene*	<0.050	0.050	11/21/2025	ND	2.04	102	2.00	4.71	
Ethylbenzene*	<0.050	0.050	11/21/2025	ND	1.97	98.3	2.00	5.50	
Total Xylenes*	<0.150	0.150	11/21/2025	ND	5.97	99.5	6.00	5.07	
Total BTEX	<0.300	0.300	11/21/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	11/21/2025	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/21/2025	ND	181	90.7	200	1.92	
DRO >C10-C28*	<10.0	10.0	11/21/2025	ND	191	95.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	11/21/2025	ND					

Surrogate: 1-Chlorooctane 75.3 % 52.4-130

Surrogate: 1-Chlorooctadecane 73.3 % 39.9-141

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1-1

Company Name: Ensolum, LLC		BILL TO		ANALYSIS REQUEST	
Project Manager: Ben Bellill		P.O. #:			
Address: 601 N Marientfield Street, Suite 400		Company: XTO Energy, Inc			
City: Midland		Attn: Dale Woodall			
Phone #: (989) 854-0852		Address: 3014 E Greene St			
State: TX Zip: 79701		City: Carlsbad			
Project #: 03C1558737		State: NM Zip: 88220			
Project Owner: XTO Energy, Inc.		Phone #:			
Project Name: JRU SWD Riser		Fax #:			
Project Location: 32.381936, -103.881954					
Sampler Name: Trevor Wargo					

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H257303	FS06	5	C	1							11/19/25	11:09			
	SM12	0-5	↓	↓											

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the

NO Labels

affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *Trevor Wargo* Date: *11/20/25* Received By: *Maria Delgado* Date: *11/20/25*

Delivered By: (Circle One) Observed Temp. °C: *0.5* Sample Condition: Intact Cool Intact Yes No

Corrected Temp. °C: *0.8* CHECKED BY: (Initials) *TD*

Turnaround Time: Standard Rush *1790*

Thermometer ID # *13* *16.5c* Bacteria (only) Sample Condition: Cool Intact Yes No

Corrected Temp. °C: *0.5* Corrected Temp. °C: *0.5*

REMARKS: Incident Number: A1921934485 Cost Center: 1081711001 GFCM: 48605000

Verbal Result: Yes No Add'l Phone #: *575.1120725*

All Results are emailed. Please provide Email address: TWargo@ensolum.com, BBellill@ensolum.com, TMorrissey@ensolum.com, THillard@ensolum.com, KThomason@ensolum.com



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

December 02, 2025

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JRJ SWD RISER

Enclosed are the results of analyses for samples received by the laboratory on 11/24/25 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	11/24/2025	Sampling Date:	11/20/2025
Reported:	12/02/2025	Sampling Type:	Soil
Project Name:	JRU SWD RISER	Sampling Condition:	Cool & Intact
Project Number:	03C1558737	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.381936-103.881954		

Sample ID: FS 07 5' (H257377-01)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/26/2025	ND	1.78	89.1	2.00	6.32		
Toluene*	<0.050	0.050	11/26/2025	ND	1.92	95.9	2.00	4.30		
Ethylbenzene*	<0.050	0.050	11/26/2025	ND	1.89	94.7	2.00	2.76		
Total Xylenes*	<0.150	0.150	11/26/2025	ND	5.69	94.9	6.00	1.14		
Total BTEX	<0.300	0.300	11/26/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 70.4-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	11/25/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/26/2025	ND	196	98.2	200	3.16		
DRO >C10-C28*	<10.0	10.0	11/26/2025	ND	185	92.5	200	5.00		
EXT DRO >C28-C36	<10.0	10.0	11/26/2025	ND						

Surrogate: 1-Chlorooctane 77.2 % 52.4-130

Surrogate: 1-Chlorooctadecane 75.2 % 39.9-141

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	11/24/2025	Sampling Date:	11/20/2025
Reported:	12/02/2025	Sampling Type:	Soil
Project Name:	JRU SWD RISER	Sampling Condition:	Cool & Intact
Project Number:	03C1558737	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.381936-103.881954		

Sample ID: FS 08 5' (H257377-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/26/2025	ND	1.78	89.1	2.00	6.32	
Toluene*	<0.050	0.050	11/26/2025	ND	1.92	95.9	2.00	4.30	
Ethylbenzene*	<0.050	0.050	11/26/2025	ND	1.89	94.7	2.00	2.76	
Total Xylenes*	<0.150	0.150	11/26/2025	ND	5.69	94.9	6.00	1.14	
Total BTEX	<0.300	0.300	11/26/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	11/25/2025	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/26/2025	ND	196	98.2	200	3.16	
DRO >C10-C28*	<10.0	10.0	11/26/2025	ND	185	92.5	200	5.00	
EXT DRO >C28-C36	<10.0	10.0	11/26/2025	ND					

Surrogate: 1-Chlorooctane 83.0 % 52.4-130

Surrogate: 1-Chlorooctadecane 81.7 % 39.9-141

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	11/24/2025	Sampling Date:	11/20/2025
Reported:	12/02/2025	Sampling Type:	Soil
Project Name:	JRU SWD RISER	Sampling Condition:	Cool & Intact
Project Number:	03C1558737	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.381936-103.881954		

Sample ID: FS 09 5' (H257377-03)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/26/2025	ND	1.78	89.1	2.00	6.32		
Toluene*	<0.050	0.050	11/26/2025	ND	1.92	95.9	2.00	4.30		
Ethylbenzene*	<0.050	0.050	11/26/2025	ND	1.89	94.7	2.00	2.76		
Total Xylenes*	<0.150	0.150	11/26/2025	ND	5.69	94.9	6.00	1.14		
Total BTEX	<0.300	0.300	11/26/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	11/25/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/26/2025	ND	196	98.2	200	3.16		
DRO >C10-C28*	<10.0	10.0	11/26/2025	ND	185	92.5	200	5.00		
EXT DRO >C28-C36	<10.0	10.0	11/26/2025	ND						

Surrogate: 1-Chlorooctane 84.2 % 52.4-130

Surrogate: 1-Chlorooctadecane 81.7 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	11/24/2025	Sampling Date:	11/20/2025
Reported:	12/02/2025	Sampling Type:	Soil
Project Name:	JRU SWD RISER	Sampling Condition:	Cool & Intact
Project Number:	03C1558737	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.381936-103.881954		

Sample ID: SW 13 0-5' (H257377-04)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/26/2025	ND	1.78	89.1	2.00	6.32		
Toluene*	<0.050	0.050	11/26/2025	ND	1.92	95.9	2.00	4.30		
Ethylbenzene*	<0.050	0.050	11/26/2025	ND	1.89	94.7	2.00	2.76		
Total Xylenes*	<0.150	0.150	11/26/2025	ND	5.69	94.9	6.00	1.14		
Total BTEX	<0.300	0.300	11/26/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	11/25/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/26/2025	ND	196	98.2	200	3.16		
DRO >C10-C28*	<10.0	10.0	11/26/2025	ND	185	92.5	200	5.00		
EXT DRO >C28-C36	<10.0	10.0	11/26/2025	ND						

Surrogate: 1-Chlorooctane 78.6 % 52.4-130

Surrogate: 1-Chlorooctadecane 77.3 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 BEN BELILL
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received:	11/24/2025	Sampling Date:	11/20/2025
Reported:	12/02/2025	Sampling Type:	Soil
Project Name:	JRU SWD RISER	Sampling Condition:	Cool & Intact
Project Number:	03C1558737	Sample Received By:	Alyssa Parras
Project Location:	XTO 32.381936-103.881954		

Sample ID: SW 14 0-5' (H257377-05)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/26/2025	ND	1.78	89.1	2.00	6.32		
Toluene*	<0.050	0.050	11/26/2025	ND	1.92	95.9	2.00	4.30		
Ethylbenzene*	<0.050	0.050	11/26/2025	ND	1.89	94.7	2.00	2.76		
Total Xylenes*	<0.150	0.150	11/26/2025	ND	5.69	94.9	6.00	1.14		
Total BTEX	<0.300	0.300	11/26/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 70.4-141

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	11/25/2025	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/26/2025	ND	196	98.2	200	3.16		
DRO >C10-C28*	<10.0	10.0	11/26/2025	ND	185	92.5	200	5.00		
EXT DRO >C28-C36	<10.0	10.0	11/26/2025	ND						

Surrogate: 1-Chlorooctane 88.1 % 52.4-130

Surrogate: 1-Chlorooctadecane 86.6 % 39.9-141

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1-1

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC
 Project Manager: Ben Bellill
 Address: 601 N Marientfeld Street, Suite 400
 City: Midland State: TX Zip: 79701
 Phone #: (989) 854-0852 Fax #: _____
 Project #: 03C1558737 Project Owner: XTO Energy, Inc.
 Project Name: JRU SWD Riser - SPILLS
 Project Location: 32.381936,-103.881954
 Sampler Name: Trevor Wargo
 P.O. #: _____
 Company: XTO Energy, Inc
 Attn: Dale Woodall
 Address: 3014 E Greene St
 City: Carlsbad State: NM Zip: 88220
 Phone #: _____ Fax #: _____

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
HS7377	FS07	5	C	1								11/20/25	12:34			
	FS08	↓											12:35			
	FS09	↓											11:54			
	SM13	0-5											12:55			
	SM14	↓											12:58			

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Verbal Result: Yes No Add'l Phone #: _____

Relinquished By: _____ Date: _____ Received By: _____
 Relinquished By: *Trevor Wargo* Date: _____ Received By: *DP*
 Time: _____
 Turnaround Time: Standard Rush
 Thermometer ID: #113 Corrected Temp. °C: 4.8
 Bacteria (only) Sample Condition: Cool Intact Yes No
 Corrected Temp. °C: _____

Delivered By: (Circle One) UPS Other: _____
 Corrected Temp. °C: 4.8
 Sample Condition: Cool Intact Yes No
 CHECKED BY: (Initials) *DP*
 REMARKS: Incident Number: NAB1921934485
 Cost Center: 1081711001
 GFCM: 48605000



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum

601 N. Marienfeld St.
Suite 400

Midland, Texas 79701

Generated 10/14/2025 2:13:01 PM

JOB DESCRIPTION

JRU SWD RISER
03C1558737

JOB NUMBER

890-8949-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
10/14/2025 2:13:01 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

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Client: Ensolum
Project/Site: JRU SWD RISER

Laboratory Job ID: 890-8949-1
SDG: 03C1558737

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Definitions/Glossary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project: JRU SWD RISER

Job ID: 890-8949-1

Job ID: 890-8949-1

Eurofins Carlsbad

Job Narrative 890-8949-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 10/10/2025 12:22 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C.

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-121053 and analytical batch 880-121035 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01 (890-8949-1), PH01A (890-8949-2), PH01B (890-8949-3), PH01C (890-8949-4), (LCS 880-121053/1-A), (LCSD 880-121053/2-A), (890-8949-A-1-G MS) and (890-8949-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-121053 and analytical batch 880-121035 was outside the upper control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Client Sample ID: PH01

Lab Sample ID: 890-8949-1

Date Collected: 10/09/25 10:28

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 13:13	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 13:13	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 13:13	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		10/13/25 11:08	10/13/25 13:13	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 13:13	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		10/13/25 11:08	10/13/25 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	148	S1+	70 - 130	10/13/25 11:08	10/13/25 13:13	1
1,4-Difluorobenzene (Surr)	92		70 - 130	10/13/25 11:08	10/13/25 13:13	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/13/25 13:13	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/25 19:18	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 19:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 19:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 19:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	10/13/25 08:45	10/13/25 19:18	1
o-Terphenyl	89		70 - 130	10/13/25 08:45	10/13/25 19:18	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	971		49.7	mg/Kg			10/13/25 17:29	5

Client Sample ID: PH01A

Lab Sample ID: 890-8949-2

Date Collected: 10/09/25 10:35

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 13:33	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 13:33	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 13:33	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/13/25 11:08	10/13/25 13:33	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 13:33	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/13/25 11:08	10/13/25 13:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	141	S1+	70 - 130	10/13/25 11:08	10/13/25 13:33	1

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Client Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Client Sample ID: PH01A

Lab Sample ID: 890-8949-2

Date Collected: 10/09/25 10:35

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	79		70 - 130	10/13/25 11:08	10/13/25 13:33	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/13/25 13:33	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/25 20:03	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 20:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 20:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 20:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	10/13/25 08:45	10/13/25 20:03	1
o-Terphenyl	91		70 - 130	10/13/25 08:45	10/13/25 20:03	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	480		9.92	mg/Kg			10/13/25 17:45	1

Client Sample ID: PH01B

Lab Sample ID: 890-8949-3

Date Collected: 10/09/25 10:38

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 2

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 13:54	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 13:54	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 13:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/13/25 11:08	10/13/25 13:54	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 13:54	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/13/25 11:08	10/13/25 13:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130	10/13/25 11:08	10/13/25 13:54	1
1,4-Difluorobenzene (Surr)	84		70 - 130	10/13/25 11:08	10/13/25 13:54	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/13/25 13:54	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/25 20:18	1

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Client Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Client Sample ID: PH01B

Lab Sample ID: 890-8949-3

Date Collected: 10/09/25 10:38

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 2

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 20:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 20:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 20:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130			10/13/25 08:45	10/13/25 20:18	1
o-Terphenyl	94		70 - 130			10/13/25 08:45	10/13/25 20:18	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	253		9.96	mg/Kg			10/13/25 17:50	1

Client Sample ID: PH01C

Lab Sample ID: 890-8949-4

Date Collected: 10/09/25 10:43

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 3

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 14:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 14:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 14:14	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		10/13/25 11:08	10/13/25 14:14	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 14:14	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		10/13/25 11:08	10/13/25 14:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130			10/13/25 11:08	10/13/25 14:14	1
1,4-Difluorobenzene (Surr)	88		70 - 130			10/13/25 11:08	10/13/25 14:14	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/13/25 14:14	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/13/25 20:33	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 20:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 20:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 20:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130			10/13/25 08:45	10/13/25 20:33	1
o-Terphenyl	87		70 - 130			10/13/25 08:45	10/13/25 20:33	1

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Client Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Client Sample ID: PH01C
Date Collected: 10/09/25 10:43
Date Received: 10/10/25 12:22
Sample Depth: 3

Lab Sample ID: 890-8949-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	797		49.6	mg/Kg			10/13/25 17:55	5

Client Sample ID: PH01D
Date Collected: 10/09/25 10:50
Date Received: 10/10/25 12:22
Sample Depth: 4

Lab Sample ID: 890-8949-5
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 14:35	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 14:35	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 14:35	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/13/25 11:08	10/13/25 14:35	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 14:35	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/13/25 11:08	10/13/25 14:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130			10/13/25 11:08	10/13/25 14:35	1
1,4-Difluorobenzene (Surr)	83		70 - 130			10/13/25 11:08	10/13/25 14:35	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/13/25 14:35	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/25 20:48	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 20:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 20:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 20:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	86		70 - 130			10/13/25 08:45	10/13/25 20:48	1
o-Terphenyl	93		70 - 130			10/13/25 08:45	10/13/25 20:48	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	442		9.94	mg/Kg			10/13/25 18:00	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-8949-1	PH01	148 S1+	92
890-8949-1 MS	PH01	146 S1+	89
890-8949-1 MSD	PH01	147 S1+	89
890-8949-2	PH01A	141 S1+	79
890-8949-3	PH01B	136 S1+	84
890-8949-4	PH01C	136 S1+	88
890-8949-5	PH01D	128	83
LCS 880-121053/1-A	Lab Control Sample	143 S1+	77
LCS 880-121053/2-A	Lab Control Sample Dup	153 S1+	82
MB 880-121053/5-A	Method Blank	140 S1+	81

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-8949-1	PH01	88	89
890-8949-1 MS	PH01	95	92
890-8949-1 MSD	PH01	95	87
890-8949-2	PH01A	90	91
890-8949-3	PH01B	93	94
890-8949-4	PH01C	86	87
890-8949-5	PH01D	86	93
LCS 880-121033/2-A	Lab Control Sample	79	89
LCS 880-121033/3-A	Lab Control Sample Dup	96	90
MB 880-121033/1-A	Method Blank	75	75

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-121053/5-A
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121053

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/13/25 11:08	10/13/25 12:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	140	S1+	70 - 130	10/13/25 11:08	10/13/25 12:51	1
1,4-Difluorobenzene (Surr)	81		70 - 130	10/13/25 11:08	10/13/25 12:51	1

Lab Sample ID: LCS 880-121053/1-A
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09097		mg/Kg		91	70 - 130
Toluene	0.100	0.1063		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1138		mg/Kg		114	70 - 130
m-Xylene & p-Xylene	0.200	0.2467		mg/Kg		123	70 - 130
o-Xylene	0.100	0.1268		mg/Kg		127	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	143	S1+	70 - 130
1,4-Difluorobenzene (Surr)	77		70 - 130

Lab Sample ID: LCSD 880-121053/2-A
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09498		mg/Kg		95	70 - 130	4	35
Toluene	0.100	0.1024		mg/Kg		102	70 - 130	4	35
Ethylbenzene	0.100	0.1116		mg/Kg		112	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2325		mg/Kg		116	70 - 130	6	35
o-Xylene	0.100	0.1174		mg/Kg		117	70 - 130	8	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	153	S1+	70 - 130
1,4-Difluorobenzene (Surr)	82		70 - 130

Lab Sample ID: 890-8949-1 MS
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.1188		mg/Kg		119	70 - 130
Toluene	<0.00200	U	0.100	0.1235		mg/Kg		124	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-8949-1 MS
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.1233		mg/Kg		123	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2576		mg/Kg		129	70 - 130
o-Xylene	<0.00200	U	0.100	0.1273		mg/Kg		127	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Lab Sample ID: 890-8949-1 MSD
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.1075		mg/Kg		108	70 - 130	10	35
Toluene	<0.00200	U	0.100	0.1115		mg/Kg		112	70 - 130	10	35
Ethylbenzene	<0.00200	U	0.100	0.1155		mg/Kg		116	70 - 130	7	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2475		mg/Kg		124	70 - 130	4	35
o-Xylene	<0.00200	U	0.100	0.1221		mg/Kg		122	70 - 130	4	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
4-Bromofluorobenzene (Surr)	147	S1+	70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-121033/1-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121033

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:44	10/13/25 15:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:44	10/13/25 15:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:44	10/13/25 15:28	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	75		70 - 130	10/13/25 08:44	10/13/25 15:28	1
o-Terphenyl	75		70 - 130	10/13/25 08:44	10/13/25 15:28	1

Lab Sample ID: LCS 880-121033/2-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	889.2		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	1000	896.2		mg/Kg		90	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-121033/2-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121033

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	79		70 - 130
o-Terphenyl	89		70 - 130

Lab Sample ID: LCSD 880-121033/3-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	885.4		mg/Kg		89	70 - 130	0		20
Diesel Range Organics (Over C10-C28)	1000	837.7		mg/Kg		84	70 - 130	7		20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	96		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: 890-8949-1 MS
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	815.2		mg/Kg		80	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	998	893.3		mg/Kg		90	70 - 130	

Surrogate	MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	95		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 890-8949-1 MSD
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: PH01
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	810.4		mg/Kg		80	70 - 130	1		20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	814.2		mg/Kg		82	70 - 130	9		20

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	95		70 - 130
o-Terphenyl	87		70 - 130

QC Sample Results

Client: Ensolum
 Project/Site: JRU SWD RISER

Job ID: 890-8949-1
 SDG: 03C1558737

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-121023/1-A
 Matrix: Solid
 Analysis Batch: 121080

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0	mg/Kg			10/13/25 17:13	1

Lab Sample ID: LCS 880-121023/2-A
 Matrix: Solid
 Analysis Batch: 121080

Client Sample ID: Lab Control Sample
 Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	252.7		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-121023/3-A
 Matrix: Solid
 Analysis Batch: 121080

Client Sample ID: Lab Control Sample Dup
 Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	253.7		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 890-8949-1 MS
 Matrix: Solid
 Analysis Batch: 121080

Client Sample ID: PH01
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	971		1240	2168		mg/Kg		96	90 - 110

Lab Sample ID: 890-8949-1 MSD
 Matrix: Solid
 Analysis Batch: 121080

Client Sample ID: PH01
 Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	971		1240	2170		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

GC VOA

Analysis Batch: 121035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8949-1	PH01	Total/NA	Solid	8021B	121053
890-8949-2	PH01A	Total/NA	Solid	8021B	121053
890-8949-3	PH01B	Total/NA	Solid	8021B	121053
890-8949-4	PH01C	Total/NA	Solid	8021B	121053
890-8949-5	PH01D	Total/NA	Solid	8021B	121053
MB 880-121053/5-A	Method Blank	Total/NA	Solid	8021B	121053
LCS 880-121053/1-A	Lab Control Sample	Total/NA	Solid	8021B	121053
LCSD 880-121053/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	121053
890-8949-1 MS	PH01	Total/NA	Solid	8021B	121053
890-8949-1 MSD	PH01	Total/NA	Solid	8021B	121053

Prep Batch: 121053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8949-1	PH01	Total/NA	Solid	5035	
890-8949-2	PH01A	Total/NA	Solid	5035	
890-8949-3	PH01B	Total/NA	Solid	5035	
890-8949-4	PH01C	Total/NA	Solid	5035	
890-8949-5	PH01D	Total/NA	Solid	5035	
MB 880-121053/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-121053/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-121053/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-8949-1 MS	PH01	Total/NA	Solid	5035	
890-8949-1 MSD	PH01	Total/NA	Solid	5035	

Analysis Batch: 121173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8949-1	PH01	Total/NA	Solid	Total BTEX	
890-8949-2	PH01A	Total/NA	Solid	Total BTEX	
890-8949-3	PH01B	Total/NA	Solid	Total BTEX	
890-8949-4	PH01C	Total/NA	Solid	Total BTEX	
890-8949-5	PH01D	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 121033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8949-1	PH01	Total/NA	Solid	8015NM Prep	
890-8949-2	PH01A	Total/NA	Solid	8015NM Prep	
890-8949-3	PH01B	Total/NA	Solid	8015NM Prep	
890-8949-4	PH01C	Total/NA	Solid	8015NM Prep	
890-8949-5	PH01D	Total/NA	Solid	8015NM Prep	
MB 880-121033/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-121033/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-121033/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-8949-1 MS	PH01	Total/NA	Solid	8015NM Prep	
890-8949-1 MSD	PH01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 121109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8949-1	PH01	Total/NA	Solid	8015B NM	121033
890-8949-2	PH01A	Total/NA	Solid	8015B NM	121033

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

GC Semi VOA (Continued)

Analysis Batch: 121109 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8949-3	PH01B	Total/NA	Solid	8015B NM	121033
890-8949-4	PH01C	Total/NA	Solid	8015B NM	121033
890-8949-5	PH01D	Total/NA	Solid	8015B NM	121033
MB 880-121033/1-A	Method Blank	Total/NA	Solid	8015B NM	121033
LCS 880-121033/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	121033
LCSD 880-121033/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	121033
890-8949-1 MS	PH01	Total/NA	Solid	8015B NM	121033
890-8949-1 MSD	PH01	Total/NA	Solid	8015B NM	121033

Analysis Batch: 121155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8949-1	PH01	Total/NA	Solid	8015 NM	
890-8949-2	PH01A	Total/NA	Solid	8015 NM	
890-8949-3	PH01B	Total/NA	Solid	8015 NM	
890-8949-4	PH01C	Total/NA	Solid	8015 NM	
890-8949-5	PH01D	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 121023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8949-1	PH01	Soluble	Solid	DI Leach	
890-8949-2	PH01A	Soluble	Solid	DI Leach	
890-8949-3	PH01B	Soluble	Solid	DI Leach	
890-8949-4	PH01C	Soluble	Solid	DI Leach	
890-8949-5	PH01D	Soluble	Solid	DI Leach	
MB 880-121023/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-121023/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-121023/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-8949-1 MS	PH01	Soluble	Solid	DI Leach	
890-8949-1 MSD	PH01	Soluble	Solid	DI Leach	

Analysis Batch: 121080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8949-1	PH01	Soluble	Solid	300.0	121023
890-8949-2	PH01A	Soluble	Solid	300.0	121023
890-8949-3	PH01B	Soluble	Solid	300.0	121023
890-8949-4	PH01C	Soluble	Solid	300.0	121023
890-8949-5	PH01D	Soluble	Solid	300.0	121023
MB 880-121023/1-A	Method Blank	Soluble	Solid	300.0	121023
LCS 880-121023/2-A	Lab Control Sample	Soluble	Solid	300.0	121023
LCSD 880-121023/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	121023
890-8949-1 MS	PH01	Soluble	Solid	300.0	121023
890-8949-1 MSD	PH01	Soluble	Solid	300.0	121023

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Client Sample ID: PH01

Lab Sample ID: 890-8949-1

Date Collected: 10/09/25 10:28

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 13:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121173	10/13/25 13:13	SA	EET MID
Total/NA	Analysis	8015 NM		1			121155	10/13/25 19:18	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 19:18	FC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		5			121080	10/13/25 17:29	CS	EET MID

Client Sample ID: PH01A

Lab Sample ID: 890-8949-2

Date Collected: 10/09/25 10:35

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 13:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121173	10/13/25 13:33	SA	EET MID
Total/NA	Analysis	8015 NM		1			121155	10/13/25 20:03	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 20:03	FC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 17:45	CS	EET MID

Client Sample ID: PH01B

Lab Sample ID: 890-8949-3

Date Collected: 10/09/25 10:38

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 13:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121173	10/13/25 13:54	SA	EET MID
Total/NA	Analysis	8015 NM		1			121155	10/13/25 20:18	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 20:18	FC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 17:50	CS	EET MID

Client Sample ID: PH01C

Lab Sample ID: 890-8949-4

Date Collected: 10/09/25 10:43

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 14:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121173	10/13/25 14:14	SA	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
 Project/Site: JRU SWD RISER

Job ID: 890-8949-1
 SDG: 03C1558737

Client Sample ID: PH01C

Lab Sample ID: 890-8949-4

Date Collected: 10/09/25 10:43

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			121155	10/13/25 20:33	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 20:33	FC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		5			121080	10/13/25 17:55	CS	EET MID

Client Sample ID: PH01D

Lab Sample ID: 890-8949-5

Date Collected: 10/09/25 10:50

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 14:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121173	10/13/25 14:35	SA	EET MID
Total/NA	Analysis	8015 NM		1			121155	10/13/25 20:48	SA	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 20:48	FC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 18:00	CS	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
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Method Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440



Sample Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8949-1
SDG: 03C1558737

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-8949-1	PH01	Solid	10/09/25 10:28	10/10/25 12:22	0.5
890-8949-2	PH01A	Solid	10/09/25 10:35	10/10/25 12:22	1
890-8949-3	PH01B	Solid	10/09/25 10:38	10/10/25 12:22	2
890-8949-4	PH01C	Solid	10/09/25 10:43	10/10/25 12:22	3
890-8949-5	PH01D	Solid	10/09/25 10:50	10/10/25 12:22	4

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Environment Testing Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296, Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody



890-8949 Chain of Custody

Project Manager:	Ben Bellill	Bill to: (if different)	Colton Brown
Company Name:	Ensolium	Company Name:	XTO Energy, Inc
Address:	3122 National Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	Kihomason, Tmorrissey, Tthillard, Jleich, Bbellill @ensolium.com

Work Order Comments	
Program: UST/PST	<input type="checkbox"/> RP <input type="checkbox"/> Rowfields <input type="checkbox"/> RC <input type="checkbox"/> perfund
State of Project:	
Reporting: Level II	<input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV
Deliverables: EDD	<input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	JRU SWD Riser	Turn Around	Pres. Code	ANALYSIS REQUEST	Preservative Codes
Project Number:	03C1558737	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush			None: NO DI Water: H ₂ O
Project Location:	32.382098, -103.881869	Due Date:	48hr		Cool: Cool MeOH: Me
Sampler's Name:	Evan roe	TAT starts the day received by the lab, if received by 4:30pm			HCL: HC HNO ₃ : HN
PO #:		Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		H ₂ SO ₄ : H ₂ NaOH: Na
SAMPLE RECEIPT	Temp Blank: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet Ice:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		H ₃ PO ₄ : HP
Samples Received Intact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Thermometer ID:	77-100-7		NaHSO ₄ : NABIS
Cooler Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Correction Factor:	6.2		Na ₂ S ₂ O ₃ : NaSO ₃
Sample Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Temperature Reading:	5.2		Zn Acetate+NaOH: Zn
Total Containers:		Corrected Temperature:	5.0		NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH	BTEX
PH01	Soil	10/9/2025	1028	0.5	Grab	1	✓	✓	✓
PH01A	Soil	10/9/2025	1035	1	Grab	1	✓	✓	✓
PH01B	Soil	10/9/2025	1038	2	Grab	1	✓	✓	✓
PH01C	Soil	10/9/2025	1043	3	Grab	1	✓	✓	✓
PH01D	Soil	10/9/2025	1050	4	Grab	1	✓	✓	✓

Total: 200-7-6010 200-8 / 6020- 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$95.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		12:22 PM			

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8949-1

SDG Number: 03C1558737

Login Number: 8949

List Number: 1

Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	N/A	Refer to Job Narrative for details.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8949-1

SDG Number: 03C1558737

Login Number: 8949

List Number: 2

Creator: Laing, Edmundo

List Source: Eurofins Midland

List Creation: 10/13/25 08:58 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701
Generated 10/14/2025 2:13:01 PM

JOB DESCRIPTION

JRU SWD Riser
03C1558737

JOB NUMBER

890-8950-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
10/14/2025 2:13:01 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

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Client: Ensolum
Project/Site: JRU SWD Riser

Laboratory Job ID: 890-8950-1
SDG: 03C1558737

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Definitions/Glossary

Client: Ensolum
 Project/Site: JRU SWD Riser

Job ID: 890-8950-1
 SDG: 03C1558737

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project: JRU SWD Riser

Job ID: 890-8950-1

Job ID: 890-8950-1

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Job Narrative 890-8950-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 10/10/2025 12:22 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH02 (890-8950-1), PH02A (890-8950-2), PH02B (890-8950-3), PH02C (890-8950-4) and PH02D (890-8950-5).

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-121053 and analytical batch 880-121035 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH02 (890-8950-1), PH02A (890-8950-2), PH02B (890-8950-3), PH02C (890-8950-4), PH02D (890-8950-5), (LCS 880-121053/1-A), (LCSD 880-121053/2-A), (890-8949-A-1-I), (890-8949-A-1-G MS) and (890-8949-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-121053 and analytical batch 880-121035 was outside the upper control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Client Sample ID: PH02

Lab Sample ID: 890-8950-1

Date Collected: 10/09/25 11:29

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 14:55	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 14:55	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 14:55	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/13/25 11:08	10/13/25 14:55	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 14:55	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/13/25 11:08	10/13/25 14:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130	10/13/25 11:08	10/13/25 14:55	1
1,4-Difluorobenzene (Surr)	85		70 - 130	10/13/25 11:08	10/13/25 14:55	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/13/25 14:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/13/25 21:03	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 21:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 21:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 21:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	10/13/25 08:45	10/13/25 21:03	1
o-Terphenyl	90		70 - 130	10/13/25 08:45	10/13/25 21:03	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	627		9.92	mg/Kg			10/13/25 18:16	1

Client Sample ID: PH02A

Lab Sample ID: 890-8950-2

Date Collected: 10/09/25 11:30

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 15:16	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 15:16	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 15:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/13/25 11:08	10/13/25 15:16	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 15:16	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/13/25 11:08	10/13/25 15:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	148	S1+	70 - 130	10/13/25 11:08	10/13/25 15:16	1

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Client Sample Results

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Client Sample ID: PH02A

Lab Sample ID: 890-8950-2

Date Collected: 10/09/25 11:30

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	86		70 - 130	10/13/25 11:08	10/13/25 15:16	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/13/25 15:16	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/25 21:19	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 21:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 21:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 21:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	10/13/25 08:45	10/13/25 21:19	1
o-Terphenyl	90		70 - 130	10/13/25 08:45	10/13/25 21:19	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	653		9.96	mg/Kg			10/13/25 18:21	1

Client Sample ID: PH02B

Lab Sample ID: 890-8950-3

Date Collected: 10/09/25 11:31

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 2

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 15:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 15:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 15:36	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		10/13/25 11:08	10/13/25 15:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 15:36	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		10/13/25 11:08	10/13/25 15:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	67	S1-	70 - 130	10/13/25 11:08	10/13/25 15:36	1
1,4-Difluorobenzene (Surr)	77		70 - 130	10/13/25 11:08	10/13/25 15:36	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/13/25 15:36	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/13/25 21:33	1

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Client Sample Results

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Client Sample ID: PH02B

Lab Sample ID: 890-8950-3

Date Collected: 10/09/25 11:31

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 2

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 21:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 21:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 21:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130			10/13/25 08:45	10/13/25 21:33	1
o-Terphenyl	86		70 - 130			10/13/25 08:45	10/13/25 21:33	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	357		10.0	mg/Kg			10/13/25 18:27	1

Client Sample ID: PH02C

Lab Sample ID: 890-8950-4

Date Collected: 10/09/25 11:32

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 3

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 15:56	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 15:56	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 15:56	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/13/25 11:08	10/13/25 15:56	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 15:56	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/13/25 11:08	10/13/25 15:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130			10/13/25 11:08	10/13/25 15:56	1
1,4-Difluorobenzene (Surr)	80		70 - 130			10/13/25 11:08	10/13/25 15:56	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/13/25 15:56	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/13/25 21:49	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 21:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 21:49	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 21:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130			10/13/25 08:45	10/13/25 21:49	1
o-Terphenyl	94		70 - 130			10/13/25 08:45	10/13/25 21:49	1

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Client Sample Results

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Client Sample ID: PH02C

Lab Sample ID: 890-8950-4

Date Collected: 10/09/25 11:32

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 3

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	408		10.0	mg/Kg			10/13/25 18:32	1

Client Sample ID: PH02D

Lab Sample ID: 890-8950-5

Date Collected: 10/09/25 11:35

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 4

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		10/13/25 11:08	10/13/25 16:17	1
Toluene	<0.00202	U	0.00202	mg/Kg		10/13/25 11:08	10/13/25 16:17	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		10/13/25 11:08	10/13/25 16:17	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		10/13/25 11:08	10/13/25 16:17	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		10/13/25 11:08	10/13/25 16:17	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		10/13/25 11:08	10/13/25 16:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	144	S1+	70 - 130	10/13/25 11:08	10/13/25 16:17	1
1,4-Difluorobenzene (Surr)	80		70 - 130	10/13/25 11:08	10/13/25 16:17	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			10/13/25 16:17	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/25 22:04	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 22:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 22:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 22:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130	10/13/25 08:45	10/13/25 22:04	1
o-Terphenyl	88		70 - 130	10/13/25 08:45	10/13/25 22:04	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	459		10.0	mg/Kg			10/13/25 18:37	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-8949-A-1-G MS	Matrix Spike	146 S1+	89
890-8949-A-1-H MSD	Matrix Spike Duplicate	147 S1+	89
890-8950-1	PH02	133 S1+	85
890-8950-2	PH02A	148 S1+	86
890-8950-3	PH02B	67 S1-	77
890-8950-4	PH02C	135 S1+	80
890-8950-5	PH02D	144 S1+	80
LCS 880-121053/1-A	Lab Control Sample	143 S1+	77
LCS 880-121053/2-A	Lab Control Sample Dup	153 S1+	82
MB 880-121053/5-A	Method Blank	140 S1+	81

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-8949-A-1-E MS	Matrix Spike	95	92
890-8949-A-1-F MSD	Matrix Spike Duplicate	95	87
890-8950-1	PH02	88	90
890-8950-2	PH02A	88	90
890-8950-3	PH02B	85	86
890-8950-4	PH02C	89	94
890-8950-5	PH02D	88	88
LCS 880-121033/2-A	Lab Control Sample	79	89
LCS 880-121033/3-A	Lab Control Sample Dup	96	90
MB 880-121033/1-A	Method Blank	75	75

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-121053/5-A
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121053

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/13/25 11:08	10/13/25 12:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	140	S1+	70 - 130	10/13/25 11:08	10/13/25 12:51	1
1,4-Difluorobenzene (Surr)	81		70 - 130	10/13/25 11:08	10/13/25 12:51	1

Lab Sample ID: LCS 880-121053/1-A
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09097		mg/Kg		91	70 - 130
Toluene	0.100	0.1063		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1138		mg/Kg		114	70 - 130
m-Xylene & p-Xylene	0.200	0.2467		mg/Kg		123	70 - 130
o-Xylene	0.100	0.1268		mg/Kg		127	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	143	S1+	70 - 130
1,4-Difluorobenzene (Surr)	77		70 - 130

Lab Sample ID: LCSD 880-121053/2-A
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	0.100	0.09498		mg/Kg		95	70 - 130	4	35
Toluene	0.100	0.1024		mg/Kg		102	70 - 130	4	35
Ethylbenzene	0.100	0.1116		mg/Kg		112	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2325		mg/Kg		116	70 - 130	6	35
o-Xylene	0.100	0.1174		mg/Kg		117	70 - 130	8	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	153	S1+	70 - 130
1,4-Difluorobenzene (Surr)	82		70 - 130

Lab Sample ID: 890-8949-A-1-G MS
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.1188		mg/Kg		119	70 - 130
Toluene	<0.00200	U	0.100	0.1235		mg/Kg		124	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-8949-A-1-G MS
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Ethylbenzene	<0.00200	U	0.100	0.1233		mg/Kg		123	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2576		mg/Kg		129	70 - 130
o-Xylene	<0.00200	U	0.100	0.1273		mg/Kg		127	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Lab Sample ID: 890-8949-A-1-H MSD
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Benzene	<0.00200	U	0.100	0.1075		mg/Kg		108	70 - 130	10	35
Toluene	<0.00200	U	0.100	0.1115		mg/Kg		112	70 - 130	10	35
Ethylbenzene	<0.00200	U	0.100	0.1155		mg/Kg		116	70 - 130	7	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2475		mg/Kg		124	70 - 130	4	35
o-Xylene	<0.00200	U	0.100	0.1221		mg/Kg		122	70 - 130	4	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	147	S1+	70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-121033/1-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121033

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:44	10/13/25 15:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:44	10/13/25 15:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:44	10/13/25 15:28	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	75		70 - 130	10/13/25 08:44	10/13/25 15:28	1
o-Terphenyl	75		70 - 130	10/13/25 08:44	10/13/25 15:28	1

Lab Sample ID: LCS 880-121033/2-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	1000	889.2		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	1000	896.2		mg/Kg		90	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-121033/2-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121033

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	79		70 - 130
o-Terphenyl	89		70 - 130

Lab Sample ID: LCSD 880-121033/3-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	885.4		mg/Kg		89	70 - 130	0		20
Diesel Range Organics (Over C10-C28)	1000	837.7		mg/Kg		84	70 - 130	7		20

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	96		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: 890-8949-A-1-E MS
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	815.2		mg/Kg		80	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	998	893.3		mg/Kg		90	70 - 130	

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	95		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 890-8949-A-1-F MSD
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	810.4		mg/Kg		80	70 - 130	1		20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	814.2		mg/Kg		82	70 - 130	9		20

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	95		70 - 130
o-Terphenyl	87		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-121023/1-A
Matrix: Solid
Analysis Batch: 121080

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0	mg/Kg			10/13/25 17:13	1

Lab Sample ID: LCS 880-121023/2-A
Matrix: Solid
Analysis Batch: 121080

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	252.7		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-121023/3-A
Matrix: Solid
Analysis Batch: 121080

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	253.7		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 890-8951-A-1-B MS
Matrix: Solid
Analysis Batch: 121080

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	174		249	427.8		mg/Kg		102	90 - 110

Lab Sample ID: 890-8951-A-1-C MSD
Matrix: Solid
Analysis Batch: 121080

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	174		249	428.5		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

GC VOA

Analysis Batch: 121035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8950-1	PH02	Total/NA	Solid	8021B	121053
890-8950-2	PH02A	Total/NA	Solid	8021B	121053
890-8950-3	PH02B	Total/NA	Solid	8021B	121053
890-8950-4	PH02C	Total/NA	Solid	8021B	121053
890-8950-5	PH02D	Total/NA	Solid	8021B	121053
MB 880-121053/5-A	Method Blank	Total/NA	Solid	8021B	121053
LCS 880-121053/1-A	Lab Control Sample	Total/NA	Solid	8021B	121053
LCSD 880-121053/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	121053
890-8949-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	121053
890-8949-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	121053

Prep Batch: 121053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8950-1	PH02	Total/NA	Solid	5035	
890-8950-2	PH02A	Total/NA	Solid	5035	
890-8950-3	PH02B	Total/NA	Solid	5035	
890-8950-4	PH02C	Total/NA	Solid	5035	
890-8950-5	PH02D	Total/NA	Solid	5035	
MB 880-121053/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-121053/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-121053/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-8949-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-8949-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 121174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8950-1	PH02	Total/NA	Solid	Total BTEX	
890-8950-2	PH02A	Total/NA	Solid	Total BTEX	
890-8950-3	PH02B	Total/NA	Solid	Total BTEX	
890-8950-4	PH02C	Total/NA	Solid	Total BTEX	
890-8950-5	PH02D	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 121033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8950-1	PH02	Total/NA	Solid	8015NM Prep	
890-8950-2	PH02A	Total/NA	Solid	8015NM Prep	
890-8950-3	PH02B	Total/NA	Solid	8015NM Prep	
890-8950-4	PH02C	Total/NA	Solid	8015NM Prep	
890-8950-5	PH02D	Total/NA	Solid	8015NM Prep	
MB 880-121033/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-121033/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-121033/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-8949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-8949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 121109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8950-1	PH02	Total/NA	Solid	8015B NM	121033
890-8950-2	PH02A	Total/NA	Solid	8015B NM	121033

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QC Association Summary

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

GC Semi VOA (Continued)

Analysis Batch: 121109 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8950-3	PH02B	Total/NA	Solid	8015B NM	121033
890-8950-4	PH02C	Total/NA	Solid	8015B NM	121033
890-8950-5	PH02D	Total/NA	Solid	8015B NM	121033
MB 880-121033/1-A	Method Blank	Total/NA	Solid	8015B NM	121033
LCS 880-121033/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	121033
LCSD 880-121033/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	121033
890-8949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	121033
890-8949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	121033

Analysis Batch: 121156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8950-1	PH02	Total/NA	Solid	8015 NM	
890-8950-2	PH02A	Total/NA	Solid	8015 NM	
890-8950-3	PH02B	Total/NA	Solid	8015 NM	
890-8950-4	PH02C	Total/NA	Solid	8015 NM	
890-8950-5	PH02D	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 121023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8950-1	PH02	Soluble	Solid	DI Leach	
890-8950-2	PH02A	Soluble	Solid	DI Leach	
890-8950-3	PH02B	Soluble	Solid	DI Leach	
890-8950-4	PH02C	Soluble	Solid	DI Leach	
890-8950-5	PH02D	Soluble	Solid	DI Leach	
MB 880-121023/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-121023/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-121023/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-8951-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-8951-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 121080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8950-1	PH02	Soluble	Solid	300.0	121023
890-8950-2	PH02A	Soluble	Solid	300.0	121023
890-8950-3	PH02B	Soluble	Solid	300.0	121023
890-8950-4	PH02C	Soluble	Solid	300.0	121023
890-8950-5	PH02D	Soluble	Solid	300.0	121023
MB 880-121023/1-A	Method Blank	Soluble	Solid	300.0	121023
LCS 880-121023/2-A	Lab Control Sample	Soluble	Solid	300.0	121023
LCSD 880-121023/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	121023
890-8951-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	121023
890-8951-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	121023

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Lab Chronicle

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Client Sample ID: PH02

Lab Sample ID: 890-8950-1

Date Collected: 10/09/25 11:29

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 14:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121174	10/13/25 14:55	SA	EET MID
Total/NA	Analysis	8015 NM		1			121156	10/13/25 21:03	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 21:03	FC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 18:16	CS	EET MID

Client Sample ID: PH02A

Lab Sample ID: 890-8950-2

Date Collected: 10/09/25 11:30

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 15:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121174	10/13/25 15:16	SA	EET MID
Total/NA	Analysis	8015 NM		1			121156	10/13/25 21:19	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 21:19	FC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 18:21	CS	EET MID

Client Sample ID: PH02B

Lab Sample ID: 890-8950-3

Date Collected: 10/09/25 11:31

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 15:36	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121174	10/13/25 15:36	SA	EET MID
Total/NA	Analysis	8015 NM		1			121156	10/13/25 21:33	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 21:33	FC	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 18:27	CS	EET MID

Client Sample ID: PH02C

Lab Sample ID: 890-8950-4

Date Collected: 10/09/25 11:32

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 15:56	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121174	10/13/25 15:56	SA	EET MID

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Lab Chronicle

Client: Ensolum
 Project/Site: JRU SWD Riser

Job ID: 890-8950-1
 SDG: 03C1558737

Client Sample ID: PH02C

Lab Sample ID: 890-8950-4

Date Collected: 10/09/25 11:32

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			121156	10/13/25 21:49	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 21:49	FC	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 18:32	CS	EET MID

Client Sample ID: PH02D

Lab Sample ID: 890-8950-5

Date Collected: 10/09/25 11:35

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 16:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121174	10/13/25 16:17	SA	EET MID
Total/NA	Analysis	8015 NM		1			121156	10/13/25 22:04	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 22:04	FC	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 18:37	CS	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

- EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440



Sample Summary

Client: Ensolum
Project/Site: JRU SWD Riser

Job ID: 890-8950-1
SDG: 03C1558737

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-8950-1	PH02	Solid	10/09/25 11:29	10/10/25 12:22	0.5
890-8950-2	PH02A	Solid	10/09/25 11:30	10/10/25 12:22	1
890-8950-3	PH02B	Solid	10/09/25 11:31	10/10/25 12:22	2
890-8950-4	PH02C	Solid	10/09/25 11:32	10/10/25 12:22	3
890-8950-5	PH02D	Solid	10/09/25 11:35	10/10/25 12:22	4

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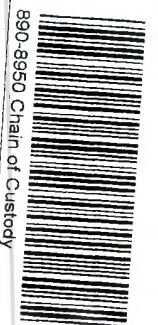


Environment Testing
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

W



890-8950 Chain of Custody

www.xenco.com Page 1 of 1

Project Manager:	Ben Bellill	Bill to: (if different)	Colton Brown
Company Name:	Ensolum	Company Name:	XTO Energy, Inc
Address:	3122 National Parks Hwy	Address:	3104 E Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	Kihomason.Timorisey; Thillard.Jreich; Bbellill@ensolum.com

Program: UST/PST	<input type="checkbox"/> RP	<input type="checkbox"/> Rowfields	<input type="checkbox"/> RC	<input type="checkbox"/> Pertund
State of Project:				
Reporting: Level II	<input type="checkbox"/>	Level III	<input type="checkbox"/>	PST/UST
TRRP	<input type="checkbox"/>	Level IV	<input type="checkbox"/>	
Deliverables: EDD	<input type="checkbox"/>	ADAPT	<input type="checkbox"/>	Other:

Project Name:	JRU SWD Riser	Turn Around		Pres. Code	ANALYSIS REQUEST											Preservative Codes					
		<input type="checkbox"/> Routine	<input checked="" type="checkbox"/> Rush													None: NO	DI Water: H ₂ O				
Project Number:	03C1558737	Due Date: 48hr														Cool: Cool	MeOH: Me				
Project Location:	32.382098, -103.881869	TAT starts the day received by the lab, if received by 4:30pm														HCL: HC	HNO ₃ : HN				
Sampler's Name:	Evan roe	Thermometer ID: TM1007														H ₂ SO ₄ : H ₂	NaOH: Na				
PO #:		Wet Ice: Yes No														H ₃ PO ₄ : HP					
SAMPLE RECEIPT	Temp Blank: Yes No	Correction Factor: 0.2														NaHSO ₄ : NABIS					
Samples Received In tact:	Yes No	Temperature Reading: 5.2														Na ₂ S ₂ O ₃ : N ₂ S ₃					
Cooler Custody Seals:	Yes No	Corrected Temperature: 5.0														Zn Acetate+NaOH: Zn					
Sampler Custody Seals:	Yes No															NaOH+Ascorbic Acid: S _{APC}					
Total Containers:																					
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH	BTEX												Sample Comments
PH02	Soil	10/9/2025	1129	0.5	Grab	1	✓	✓	✓												Incident ID: NAB1921934485
PH02A	Soil	10/9/2025	1130	1	Grab	1	✓	✓	✓												CC: 1081711001
PH02B	Soil	10/9/2025	1131	2	Grab	1	✓	✓	✓												GFCM: 48605000
PH02C	Soil	10/9/2025	1132	3	Grab	1	✓	✓	✓												
PH02D	Soil	10/9/2025	1135	4	Grab	1	✓	✓	✓												

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$95.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	12/22/2025	<i>[Signature]</i>	<i>[Signature]</i>	12/22/2025

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8950-1

SDG Number: 03C1558737

Login Number: 8950

List Number: 1

Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8950-1

SDG Number: 03C1558737

Login Number: 8950

List Number: 2

Creator: Laing, Edmundo

List Source: Eurofins Midland

List Creation: 10/13/25 08:58 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
 Ensolum
 601 N. Marienfeld St.
 Suite 400
 Midland, Texas 79701
 Generated 10/14/2025 2:13:46 PM

JOB DESCRIPTION

JRU SWD RISER
 03C1558737

JOB NUMBER

890-8951-1

Eurofins Carlsbad
 1089 N Canal St.
 Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
10/14/2025 2:13:46 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

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Client: Ensolum
Project/Site: JRU SWD RISER

Laboratory Job ID: 890-8951-1
SDG: 03C1558737

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Definitions/Glossary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project: JRU SWD RISER

Job ID: 890-8951-1

Job ID: 890-8951-1

Eurofins Carlsbad

Job Narrative 890-8951-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 10/10/2025 12:22 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C.

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: PH03 (890-8951-1), PH03A (890-8951-2), PH03B (890-8951-3), PH03C (890-8951-4), PH03D (890-8951-5) and PH03E (890-8951-6).

GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-121053 and analytical batch 880-121035 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH03 (890-8951-1), PH03B (890-8951-3), PH03C (890-8951-4), PH03D (890-8951-5), PH03E (890-8951-6), (CCV 880-121035/29), (LCS 880-121053/1-A), (LCSD 880-121053/2-A), (890-8949-A-1-I), (890-8949-A-1-G MS) and (890-8949-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-121053 and analytical batch 880-121035 was outside the upper control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Client Sample ID: PH03

Lab Sample ID: 890-8951-1

Date Collected: 10/09/25 13:07

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 17:51	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 17:51	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 17:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/13/25 11:08	10/13/25 17:51	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 17:51	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/13/25 11:08	10/13/25 17:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	153	S1+	70 - 130	10/13/25 11:08	10/13/25 17:51	1
1,4-Difluorobenzene (Surr)	90		70 - 130	10/13/25 11:08	10/13/25 17:51	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/13/25 17:51	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/13/25 22:34	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 22:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 22:34	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 22:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	10/13/25 08:45	10/13/25 22:34	1
o-Terphenyl	97		70 - 130	10/13/25 08:45	10/13/25 22:34	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	174		9.96	mg/Kg			10/13/25 18:42	1

Client Sample ID: PH03A

Lab Sample ID: 890-8951-2

Date Collected: 10/09/25 13:08

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 18:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 18:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 18:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		10/13/25 11:08	10/13/25 18:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 18:11	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		10/13/25 11:08	10/13/25 18:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	124		70 - 130	10/13/25 11:08	10/13/25 18:11	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Client Sample ID: PH03A

Lab Sample ID: 890-8951-2

Date Collected: 10/09/25 13:08

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	105		70 - 130	10/13/25 11:08	10/13/25 18:11	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/13/25 18:11	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/25 22:49	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 22:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 22:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 22:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	10/13/25 08:45	10/13/25 22:49	1
o-Terphenyl	94		70 - 130	10/13/25 08:45	10/13/25 22:49	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	551		9.92	mg/Kg			10/13/25 18:58	1

Client Sample ID: PH03B

Lab Sample ID: 890-8951-3

Date Collected: 10/09/25 13:10

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 2

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 18:31	1
Toluene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 18:31	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 18:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		10/13/25 11:08	10/13/25 18:31	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		10/13/25 11:08	10/13/25 18:31	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		10/13/25 11:08	10/13/25 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130	10/13/25 11:08	10/13/25 18:31	1
1,4-Difluorobenzene (Surr)	78		70 - 130	10/13/25 11:08	10/13/25 18:31	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			10/13/25 18:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			10/13/25 23:04	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Client Sample ID: PH03B

Lab Sample ID: 890-8951-3

Date Collected: 10/09/25 13:10

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 2

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 23:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 23:04	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		10/13/25 08:45	10/13/25 23:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130	10/13/25 08:45	10/13/25 23:04	1
o-Terphenyl	86		70 - 130	10/13/25 08:45	10/13/25 23:04	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	621		9.94	mg/Kg			10/13/25 19:03	1

Client Sample ID: PH03C

Lab Sample ID: 890-8951-4

Date Collected: 10/09/25 13:11

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 3

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		10/13/25 11:08	10/13/25 18:52	1
Toluene	<0.00202	U	0.00202	mg/Kg		10/13/25 11:08	10/13/25 18:52	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		10/13/25 11:08	10/13/25 18:52	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		10/13/25 11:08	10/13/25 18:52	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		10/13/25 11:08	10/13/25 18:52	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		10/13/25 11:08	10/13/25 18:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	67	S1-	70 - 130	10/13/25 11:08	10/13/25 18:52	1
1,4-Difluorobenzene (Surr)	80		70 - 130	10/13/25 11:08	10/13/25 18:52	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			10/13/25 18:52	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/25 23:19	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 23:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 23:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 23:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130	10/13/25 08:45	10/13/25 23:19	1
o-Terphenyl	88		70 - 130	10/13/25 08:45	10/13/25 23:19	1

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Client Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Client Sample ID: PH03C

Lab Sample ID: 890-8951-4

Date Collected: 10/09/25 13:11

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 3

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	145		10.0	mg/Kg			10/13/25 19:19	1

Client Sample ID: PH03D

Lab Sample ID: 890-8951-5

Date Collected: 10/09/25 13:13

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 4

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 19:12	1
Toluene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 19:12	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 19:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		10/13/25 11:08	10/13/25 19:12	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		10/13/25 11:08	10/13/25 19:12	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		10/13/25 11:08	10/13/25 19:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130	10/13/25 11:08	10/13/25 19:12	1
1,4-Difluorobenzene (Surr)	81		70 - 130	10/13/25 11:08	10/13/25 19:12	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			10/13/25 19:12	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			10/13/25 23:33	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 23:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 23:33	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:45	10/13/25 23:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130	10/13/25 08:45	10/13/25 23:33	1
o-Terphenyl	90		70 - 130	10/13/25 08:45	10/13/25 23:33	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	639		10.0	mg/Kg			10/13/25 19:24	1

Client Sample Results

Client: Ensolum
 Project/Site: JRU SWD RISER

Job ID: 890-8951-1
 SDG: 03C1558737

Client Sample ID: PH03E

Lab Sample ID: 890-8951-6

Date Collected: 10/09/25 13:38

Matrix: Solid

Date Received: 10/10/25 12:22

Sample Depth: 5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 19:33	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 19:33	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 19:33	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		10/13/25 11:08	10/13/25 19:33	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 19:33	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		10/13/25 11:08	10/13/25 19:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130	10/13/25 11:08	10/13/25 19:33	1
1,4-Difluorobenzene (Surr)	82		70 - 130	10/13/25 11:08	10/13/25 19:33	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			10/13/25 19:33	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			10/13/25 23:49	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		10/13/25 08:45	10/13/25 23:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		10/13/25 08:45	10/13/25 23:49	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		10/13/25 08:45	10/13/25 23:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	10/13/25 08:45	10/13/25 23:49	1
o-Terphenyl	92		70 - 130	10/13/25 08:45	10/13/25 23:49	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	352		10.1	mg/Kg			10/13/25 19:29	1

Surrogate Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BFB1 (70-130)	DFBZ1 (70-130)
890-8949-A-1-G MS	Matrix Spike	146 S1+	89
890-8949-A-1-H MSD	Matrix Spike Duplicate	147 S1+	89
890-8951-1	PH03	153 S1+	90
890-8951-2	PH03A	124	105
890-8951-3	PH03B	131 S1+	78
890-8951-4	PH03C	67 S1-	80
890-8951-5	PH03D	135 S1+	81
890-8951-6	PH03E	137 S1+	82
LCS 880-121053/1-A	Lab Control Sample	143 S1+	77
LCSD 880-121053/2-A	Lab Control Sample Dup	153 S1+	82
MB 880-121053/5-A	Method Blank	140 S1+	81

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO1 (70-130)	OTPH1 (70-130)
890-8949-A-1-E MS	Matrix Spike	95	92
890-8949-A-1-F MSD	Matrix Spike Duplicate	95	87
890-8951-1	PH03	96	97
890-8951-2	PH03A	89	94
890-8951-3	PH03B	84	86
890-8951-4	PH03C	83	88
890-8951-5	PH03D	89	90
890-8951-6	PH03E	92	92
LCS 880-121033/2-A	Lab Control Sample	79	89
LCSD 880-121033/3-A	Lab Control Sample Dup	96	90
MB 880-121033/1-A	Method Blank	75	75

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-121053/5-A
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121053

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		10/13/25 11:08	10/13/25 12:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		10/13/25 11:08	10/13/25 12:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	140	S1+	70 - 130	10/13/25 11:08	10/13/25 12:51	1
1,4-Difluorobenzene (Surr)	81		70 - 130	10/13/25 11:08	10/13/25 12:51	1

Lab Sample ID: LCS 880-121053/1-A
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09097		mg/Kg		91	70 - 130
Toluene	0.100	0.1063		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1138		mg/Kg		114	70 - 130
m-Xylene & p-Xylene	0.200	0.2467		mg/Kg		123	70 - 130
o-Xylene	0.100	0.1268		mg/Kg		127	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	143	S1+	70 - 130
1,4-Difluorobenzene (Surr)	77		70 - 130

Lab Sample ID: LCSD 880-121053/2-A
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09498		mg/Kg		95	70 - 130	4	35
Toluene	0.100	0.1024		mg/Kg		102	70 - 130	4	35
Ethylbenzene	0.100	0.1116		mg/Kg		112	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2325		mg/Kg		116	70 - 130	6	35
o-Xylene	0.100	0.1174		mg/Kg		117	70 - 130	8	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	153	S1+	70 - 130
1,4-Difluorobenzene (Surr)	82		70 - 130

Lab Sample ID: 890-8949-A-1-G MS
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.1188		mg/Kg		119	70 - 130
Toluene	<0.00200	U	0.100	0.1235		mg/Kg		124	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-8949-A-1-G MS
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Ethylbenzene	<0.00200	U	0.100	0.1233		mg/Kg		123	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2576		mg/Kg		129	70 - 130
o-Xylene	<0.00200	U	0.100	0.1273		mg/Kg		127	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Lab Sample ID: 890-8949-A-1-H MSD
Matrix: Solid
Analysis Batch: 121035

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 121053

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Benzene	<0.00200	U	0.100	0.1075		mg/Kg		108	70 - 130	10	35
Toluene	<0.00200	U	0.100	0.1115		mg/Kg		112	70 - 130	10	35
Ethylbenzene	<0.00200	U	0.100	0.1155		mg/Kg		116	70 - 130	7	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2475		mg/Kg		124	70 - 130	4	35
o-Xylene	<0.00200	U	0.100	0.1221		mg/Kg		122	70 - 130	4	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	147	S1+	70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-121033/1-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121033

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		10/13/25 08:44	10/13/25 15:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		10/13/25 08:44	10/13/25 15:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		10/13/25 08:44	10/13/25 15:28	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1-Chlorooctane	75		70 - 130	10/13/25 08:44	10/13/25 15:28	1
o-Terphenyl	75		70 - 130	10/13/25 08:44	10/13/25 15:28	1

Lab Sample ID: LCS 880-121033/2-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Gasoline Range Organics (GRO)-C6-C10	1000	889.2		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	1000	896.2		mg/Kg		90	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-121033/2-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121033

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	79		70 - 130
o-Terphenyl	89		70 - 130

Lab Sample ID: LCSD 880-121033/3-A
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	1000	885.4		mg/Kg		89	70 - 130	0		20
Diesel Range Organics (Over C10-C28)	1000	837.7		mg/Kg		84	70 - 130	7		20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	96		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: 890-8949-A-1-E MS
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	815.2		mg/Kg		80	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	998	893.3		mg/Kg		90	70 - 130	

Surrogate	MS		Limits
	%Recovery	Qualifier	
1-Chlorooctane	95		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 890-8949-A-1-F MSD
Matrix: Solid
Analysis Batch: 121109

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 121033

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	810.4		mg/Kg		80	70 - 130	1		20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	814.2		mg/Kg		82	70 - 130	9		20

Surrogate	MSD		Limits
	%Recovery	Qualifier	
1-Chlorooctane	95		70 - 130
o-Terphenyl	87		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-121023/1-A
Matrix: Solid
Analysis Batch: 121080

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0	mg/Kg			10/13/25 17:13	1

Lab Sample ID: LCS 880-121023/2-A
Matrix: Solid
Analysis Batch: 121080

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	252.7		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-121023/3-A
Matrix: Solid
Analysis Batch: 121080

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	253.7		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 890-8951-1 MS
Matrix: Solid
Analysis Batch: 121080

Client Sample ID: PH03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	174		249	427.8		mg/Kg		102	90 - 110

Lab Sample ID: 890-8951-1 MSD
Matrix: Solid
Analysis Batch: 121080

Client Sample ID: PH03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	174		249	428.5		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

GC VOA

Analysis Batch: 121035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8951-1	PH03	Total/NA	Solid	8021B	121053
890-8951-2	PH03A	Total/NA	Solid	8021B	121053
890-8951-3	PH03B	Total/NA	Solid	8021B	121053
890-8951-4	PH03C	Total/NA	Solid	8021B	121053
890-8951-5	PH03D	Total/NA	Solid	8021B	121053
890-8951-6	PH03E	Total/NA	Solid	8021B	121053
MB 880-121053/5-A	Method Blank	Total/NA	Solid	8021B	121053
LCS 880-121053/1-A	Lab Control Sample	Total/NA	Solid	8021B	121053
LCSD 880-121053/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	121053
890-8949-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	121053
890-8949-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	121053

Prep Batch: 121053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8951-1	PH03	Total/NA	Solid	5035	
890-8951-2	PH03A	Total/NA	Solid	5035	
890-8951-3	PH03B	Total/NA	Solid	5035	
890-8951-4	PH03C	Total/NA	Solid	5035	
890-8951-5	PH03D	Total/NA	Solid	5035	
890-8951-6	PH03E	Total/NA	Solid	5035	
MB 880-121053/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-121053/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-121053/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-8949-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-8949-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 121175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8951-1	PH03	Total/NA	Solid	Total BTEX	
890-8951-2	PH03A	Total/NA	Solid	Total BTEX	
890-8951-3	PH03B	Total/NA	Solid	Total BTEX	
890-8951-4	PH03C	Total/NA	Solid	Total BTEX	
890-8951-5	PH03D	Total/NA	Solid	Total BTEX	
890-8951-6	PH03E	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 121033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8951-1	PH03	Total/NA	Solid	8015NM Prep	
890-8951-2	PH03A	Total/NA	Solid	8015NM Prep	
890-8951-3	PH03B	Total/NA	Solid	8015NM Prep	
890-8951-4	PH03C	Total/NA	Solid	8015NM Prep	
890-8951-5	PH03D	Total/NA	Solid	8015NM Prep	
890-8951-6	PH03E	Total/NA	Solid	8015NM Prep	
MB 880-121033/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-121033/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-121033/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-8949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-8949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Eurofins Carlsbad

QC Association Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

GC Semi VOA

Analysis Batch: 121109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8951-1	PH03	Total/NA	Solid	8015B NM	121033
890-8951-2	PH03A	Total/NA	Solid	8015B NM	121033
890-8951-3	PH03B	Total/NA	Solid	8015B NM	121033
890-8951-4	PH03C	Total/NA	Solid	8015B NM	121033
890-8951-5	PH03D	Total/NA	Solid	8015B NM	121033
890-8951-6	PH03E	Total/NA	Solid	8015B NM	121033
MB 880-121033/1-A	Method Blank	Total/NA	Solid	8015B NM	121033
LCS 880-121033/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	121033
LCSD 880-121033/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	121033
890-8949-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	121033
890-8949-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	121033

Analysis Batch: 121157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8951-1	PH03	Total/NA	Solid	8015 NM	
890-8951-2	PH03A	Total/NA	Solid	8015 NM	
890-8951-3	PH03B	Total/NA	Solid	8015 NM	
890-8951-4	PH03C	Total/NA	Solid	8015 NM	
890-8951-5	PH03D	Total/NA	Solid	8015 NM	
890-8951-6	PH03E	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 121023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8951-1	PH03	Soluble	Solid	DI Leach	
890-8951-2	PH03A	Soluble	Solid	DI Leach	
890-8951-3	PH03B	Soluble	Solid	DI Leach	
890-8951-4	PH03C	Soluble	Solid	DI Leach	
890-8951-5	PH03D	Soluble	Solid	DI Leach	
890-8951-6	PH03E	Soluble	Solid	DI Leach	
MB 880-121023/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-121023/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-121023/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-8951-1 MS	PH03	Soluble	Solid	DI Leach	
890-8951-1 MSD	PH03	Soluble	Solid	DI Leach	

Analysis Batch: 121080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8951-1	PH03	Soluble	Solid	300.0	121023
890-8951-2	PH03A	Soluble	Solid	300.0	121023
890-8951-3	PH03B	Soluble	Solid	300.0	121023
890-8951-4	PH03C	Soluble	Solid	300.0	121023
890-8951-5	PH03D	Soluble	Solid	300.0	121023
890-8951-6	PH03E	Soluble	Solid	300.0	121023
MB 880-121023/1-A	Method Blank	Soluble	Solid	300.0	121023
LCS 880-121023/2-A	Lab Control Sample	Soluble	Solid	300.0	121023
LCSD 880-121023/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	121023
890-8951-1 MS	PH03	Soluble	Solid	300.0	121023
890-8951-1 MSD	PH03	Soluble	Solid	300.0	121023

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Client Sample ID: PH03

Lab Sample ID: 890-8951-1

Date Collected: 10/09/25 13:07

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 17:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121175	10/13/25 17:51	SA	EET MID
Total/NA	Analysis	8015 NM		1			121157	10/13/25 22:34	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 22:34	FC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 18:42	CS	EET MID

Client Sample ID: PH03A

Lab Sample ID: 890-8951-2

Date Collected: 10/09/25 13:08

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 18:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121175	10/13/25 18:11	SA	EET MID
Total/NA	Analysis	8015 NM		1			121157	10/13/25 22:49	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 22:49	FC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 18:58	CS	EET MID

Client Sample ID: PH03B

Lab Sample ID: 890-8951-3

Date Collected: 10/09/25 13:10

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 18:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121175	10/13/25 18:31	SA	EET MID
Total/NA	Analysis	8015 NM		1			121157	10/13/25 23:04	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 23:04	FC	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 19:03	CS	EET MID

Client Sample ID: PH03C

Lab Sample ID: 890-8951-4

Date Collected: 10/09/25 13:11

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 18:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121175	10/13/25 18:52	SA	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
 Project/Site: JRU SWD RISER

Job ID: 890-8951-1
 SDG: 03C1558737

Client Sample ID: PH03C

Lab Sample ID: 890-8951-4

Date Collected: 10/09/25 13:11

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			121157	10/13/25 23:19	SA	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 23:19	FC	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 19:19	CS	EET MID

Client Sample ID: PH03D

Lab Sample ID: 890-8951-5

Date Collected: 10/09/25 13:13

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 19:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121175	10/13/25 19:12	SA	EET MID
Total/NA	Analysis	8015 NM		1			121157	10/13/25 23:33	SA	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 23:33	FC	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 19:24	CS	EET MID

Client Sample ID: PH03E

Lab Sample ID: 890-8951-6

Date Collected: 10/09/25 13:38

Matrix: Solid

Date Received: 10/10/25 12:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	121053	10/13/25 11:08	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	121035	10/13/25 19:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			121175	10/13/25 19:33	SA	EET MID
Total/NA	Analysis	8015 NM		1			121157	10/13/25 23:49	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	121033	10/13/25 08:45	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	121109	10/13/25 23:49	FC	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	121023	10/13/25 08:08	SA	EET MID
Soluble	Analysis	300.0		1			121080	10/13/25 19:29	CS	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
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Method Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

- EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440



Sample Summary

Client: Ensolum
Project/Site: JRU SWD RISER

Job ID: 890-8951-1
SDG: 03C1558737

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-8951-1	PH03	Solid	10/09/25 13:07	10/10/25 12:22	0.5
890-8951-2	PH03A	Solid	10/09/25 13:08	10/10/25 12:22	1
890-8951-3	PH03B	Solid	10/09/25 13:10	10/10/25 12:22	2
890-8951-4	PH03C	Solid	10/09/25 13:11	10/10/25 12:22	3
890-8951-5	PH03D	Solid	10/09/25 13:13	10/10/25 12:22	4
890-8951-6	PH03E	Solid	10/09/25 13:38	10/10/25 12:22	5

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Environment Testing Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 302-0300, Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296, Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Chain of Custody

Project Manager: Ben Belli, Company Name: Ensolum, Address: 3122 National Parks Hwy, City: Carlsbad, NM 88220, Phone: 989-854-0852, Bill to: Colton Brown, Company Name: XTO Energy, Inc, Address: 3104 E Greene St, City: Carlsbad, NM 88220, Email: khomason@ensolum.com

Program: UST/PST, State of Project: Reporting: Level II, Deliverables: EDD, ADAPT, Other: Preservative Codes: DI Water: H2O, MeOH: Me, HNO3: HN, NaOH: Na



Table with columns: Sample Identification, Matrix, Date Sampled, Time Sampled, Depth, Grab/Comp, # of Cont, ANALYSIS REQUEST (CHLORIDES, TPH, BTEX), Preservative Codes, Sample Comments. Includes sample data for PH03, PH03A, PH03B, PH03C, PH03D, PH03E.

Total 200.7/6010 200.8/6020: 8RCRA-13PPM-Texas-11-Al-Sb-As-Ba-Be-B-Cd-Ga-Cr-Co-Cu-Fe-Pb-Mn-Mo-Ni-K-Se-Ag-SiO2-Na-Sr-Ti-Sn-U-V-Zn

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$65.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature) Received by: (Signature) Date/Time

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8951-1

SDG Number: 03C1558737

Login Number: 8951

List Number: 1

Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8951-1

SDG Number: 03C1558737

Login Number: 8951

List Number: 2

Creator: Laing, Edmundo

List Source: Eurofins Midland

List Creation: 10/13/25 08:58 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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APPENDIX E

NMOCD Notifications

Location:	JRU SWD riser 105 (30-015-43607 JRU DI1 161H)	
Spill Date:	7/13/2019	

Approximate Area=	1,002.00	ft ²
Average Saturation (or depth) of Spill=	4.50	inches

Approximate Oil %	-	
Average Porosity Factor=	0.20	
Approximate Volume Recovered=	0	bbls

VOLUME OF LEAK		
Total Produced Water=	13.38	barrels

Venegas, Victoria, EMNRD

From: Venegas, Victoria, EMNRD
Sent: Tuesday, October 15, 2019 7:11 AM
To: 'Kalei Jennings'; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD
Cc: Littrell, Kyle; Ashley Ager; 'Tacoma Morrissey'; Baker, Adrian
Subject: RE: Extension Request- James Ranch Unit SWD Riser #105 nearest JRU DI1 #161H (2RP-5557)

RE: Extension Request- James Ranch Unit SWD Riser #105 nearest JRU DI1 #161H (2RP-5557)

Ms. Jennings ,
OCD approves your requested extension to November 26, 2019 for - James Ranch Unit SWD Riser #105 nearest JRU DI1 #161H (**2RP-5557**).
Regards

Victoria Venegas
EMNRD
OCD-District II
Artesia NM
Victoria.Venegas@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

From: Kalei Jennings <kjennings@ltenv.com>
Sent: Friday, October 11, 2019 12:22 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>
Subject: [EXT] RE: Extension Request- James Ranch Unit SWD Riser #105 nearest JRU DI1 #161H (2RP-5557)

Good morning,

I wanted to follow up to my email that was sent a couple days ago. I haven't received a response. Please let me know if you have any questions.

Thank you,

Kalei Jennings
Project Environmental Scientist
(432) 214-9472 cell

From: Kalei Jennings
Sent: Wednesday, October 9, 2019 3:49 PM
To: 'Bratcher, Mike, EMNRD' <mike.bratcher@state.nm.us>; 'Hamlet, Robert, EMNRD' <Robert.Hamlet@state.nm.us>; 'Venegas, Victoria, EMNRD' <Victoria.Venegas@state.nm.us>
Cc: 'Littrell, Kyle' <Kyle.Littrell@xtoenergy.com>; 'Baker, Adrian' <Adrian.Baker@xtoenergy.com>; Ashley Ager <aager@ltenv.com>; Dan Moir <dmoir@ltenv.com>; Tacoma Morrissey <tmorrissey@ltenv.com>
Subject: RE: Extension Request- James Ranch Unit SWD Riser #105 nearest JRU DI1 #161H (2RP-5557)

XTO requests a 45-day extension of the current deadline until **November 26, 2019**.

Kalei Jennings
Project Environmental Scientist
(432) 214-9472 cell

From: Kalei Jennings
Sent: Wednesday, October 9, 2019 3:41 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>
Cc: Littrell, Kyle <Kyle_Littrell@xtoenergy.com>; Baker, Adrian <Adrian_Baker@xtoenergy.com>; Ashley Ager <aager@ltenv.com>; Dan Moir <dmoir@ltenv.com>; Tacoma Morrissey <tmorrissey@ltenv.com>
Subject: Extension Request- James Ranch Unit SWD Riser #105 nearest JRU DI1 #161H (2RP-5557)

All,

XTO is requesting an extension to the current deadline of October 11, 2019 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at the James Ranch Unit SWD Riser #105 nearest JRU DI1 #161H (2RP-5557). The release was discovered July 13, 2019 and initial site assessment began August 15, 2019. Further site assessment and remediation work has been ongoing since August. Analytical results indicated the need for further excavation at the site. Final confirmation samples are expected to be collected next week. To provide enough time to finalize remediation work, review analytical results, and complete a remediation work plan or closure report, XTO requests a 45-day extension of the current deadline until November 26, 2020.

Thank you,



Kalei Jennings
Project Environmental Scientist
(432) 214-9472 cell
3300 North "A" Street Bldg 1, Unit 103 Midland, TX 79705
www.ltenv.com



Think before you print. [Click for our email disclosure.](#)

Hamlet, Robert, EMNRD

From: Hamlet, Robert, EMNRD
Sent: Tuesday, January 21, 2020 11:24 AM
To: Littrell, Kyle; Ashley Ager; Baker, Adrian
Cc: Bratcher, Mike, EMNRD; Venegas, Victoria, EMNRD; Eads, Cristina, EMNRD
Subject: Deferral Denied - XTO - James Ranch Unit SWD Riser #105 - (2RP-5557) 7-13-2019
Attachments: Deferral Denied - XTO - James Ranch Unit SWD Riser #105 - (2RP-5557).pdf

Kyle,

We have received your Deferral Request for **2RP-5557 James Ranch Unit SWD Riser #105**, thank you. This Deferral Request is denied.

- Please use a hydrovac to safely excavate sidewall sample points SW05 and SW06 until they are under 600 mg/kg for chlorides
- Please use a hydrovac to safely excavate sample point BH02 until it is under 600 mg/kg for chlorides
- Please use a hydrovac to safely excavate sample point BH04 to 8' below ground surface
- Please use a hydrovac to safely excavate sample point BH05 to 6' below ground surface

A quick reminder: deferrals can only be granted on an active well pad around production equipment that could cause a major facility deconstruction. Deferrals will not be granted on roads or in pasture areas.

Please let me know if you have any further questions.

Regards,

Robert J Hamlet
State of New Mexico
Energy, Minerals, and Natural Resources
Oil Conservation Division
811 S. First St., Artesia NM 88210
(575) 748-1283
Robert.Hamlet@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Venegas, Victoria, EMNRD

From: Venegas, Victoria, EMNRD
Sent: Thursday, May 7, 2020 3:27 PM
To: Littrell, Kyle; Hamlet, Robert, EMNRD; Bratcher, Mike, EMNRD; Eads, Cristina, EMNRD
Cc: CFO_Spill, BLM_NM; Baker, Adrian; Ashley Ager
Subject: NAB1921934485 JAMES RANCH UNIT SWD RISER @ FAB1921933161 2RP-5557
Attachments: (C-141 Remediation Plan) NAB1921934485 JAMES RANCH UNIT SWD RISER @ FAB1921933161 2RP-5557.pdf

NAB1921934485 JAMES RANCH UNIT SWD RISER @FAB1921933161 2RP-5557

Mr. Littrell,

The OCD has denied the submitted Deferral Request/Closure Plan C-141 for incident # NAB1921934485 JAMES RANCH UNIT SWD RISER @FAB1921933161 2RP-5557

for the following reasons:

- The release is overlying an area considered to have high potential for karst occurrence. The lease road cannot be deferred. More remediation efforts are needed @ sample points SW09 and SW10. OCD agrees that the area around the SWD riser cannot be excavated further without compromising the structural integrity so the deferral request will be approved.

The Denied C-141 can be found in the online image file. Please review and make the required correction prior to resubmitting through the fee portal.

Thank you,

Victoria Venegas
State of New Mexico
Energy, Minerals, and Natural Resources
Oil Conservation Division
811 S. First St., Artesia NM 88210
(575) 748-1283
Victoria.Venegas@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS

Action 552264

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 552264
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAB1921934485
Incident Name	NAB1921934485 JAMES RANCH UNIT SWD RISER @ FAB1921933161
Incident Type	Produced Water Release
Incident Status	Deferral Request Received
Incident Facility	[fAB1921933161] JAMES RANCH UNIT SWD RISER

Location of Release Source	
<i>Please answer all the questions in this group.</i>	
Site Name	JAMES RANCH UNIT SWD RISER
Date Release Discovered	07/13/2019
Surface Owner	Federal

Incident Details	
<i>Please answer all the questions in this group.</i>	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
<i>Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.</i>	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion Other (Specify) Produced Water Released: 13 BBL Recovered: 0 BBL Lost: 13 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 552264

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 552264
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	<i>Unavailable.</i>

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	<i>Not answered.</i>

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEEnvNotifications@exxonmobil.com Date: 02/10/2026
--	--

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QUESTIONS, Page 3

Action 552264

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 552264
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Site Characterization
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	OCD Imaging Records Lookup
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 500 and 1000 (ft.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	High
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	3350
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	0
GRO+DRO (EPA SW-846 Method 8015M)	0
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	10/08/2019
On what date will (or did) the final sampling or liner inspection occur	11/20/2025
On what date will (or was) the remediation complete(d)	11/20/2025
What is the estimated surface area (in square feet) that will be reclaimed	2170
What is the estimated volume (in cubic yards) that will be reclaimed	322
What is the estimated surface area (in square feet) that will be remediated	2170
What is the estimated volume (in cubic yards) that will be remediated	840

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed. The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 552264

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 552264
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Remediation Plan (continued)

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:

(Select all answers below that apply.)

(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEnvNotifications@exxonmobil.com Date: 02/10/2026
--	---

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 5

Action 552264

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 552264
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Deferral Requests Only	
<i>Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	Pipeline riser. Undermining the support and stability of the pipeline riser
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	98
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	60
<i>Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.</i>	
Enter the facility ID (f#) on which this deferral should be granted	fAB1921933161 JAMES RANCH UNIT SWD RISER
Enter the well API (30-) on which this deferral should be granted	Not answered.
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
I hereby agree and sign off to the above statement	Name: Richard Kotzur Title: Senior Project Manager Email: NMEnvNotifications@exxonmobil.com Date: 02/10/2026

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**State of New Mexico
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QUESTIONS, Page 6

Action 552264

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 552264
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	525974
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/21/2025
What was the (estimated) number of samples that were to be gathered	15
What was the sampling surface area in square feet	3000

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
Requesting a remediation closure approval with this submission	No

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State of New Mexico
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CONDITIONS

Action 552264

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 552264
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Deferral request is approved. Deferral of SW-08 (0'-8') is approved until the MEP riser is decommissioned, deconstructed or no longer in use, whichever comes first. A complete and accurate remediation report and/or reclamation report will need to be submitted at that time.	2/23/2026