

March 25, 2025

**New Mexico Oil Conservation Division** 

New Mexico Energy, Minerals, and Natural Resources Department 1220 South Street, Francis Drive Santa Fe, New Mexico 87505

Re: Closure Request Addendum
PLU Big Sinks 25 Federal Battery
Incident Number NAB1921742793
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Closure Request Addendum (2025 Addendum)* to the April 14, 2023 *Closure Request Supplement (Supplement)*, September 24, 2021 *Closure Request Addendum (2021 Addendum)*, June 26, 2020 *Closure Request Addendum (2020 Addendum)* and January 22, 2020 *Closure Request* detailing delineation and remediations activities at the Poker Lake Unit (PLU) Big Sinks 25 Federal Battery (Site). This *2025 Addendum* provides an update to additional Site activities completed at the Site in response to the denial by the New Mexico Oil Conservation Division (NMOCD) of the fourth, previously submitted *Closure Request.* In the denial, NMOCD stated that the release should be accurately defined within 1-2 feet of the mapped extent. Based on the deliniation sampling activities described below, XTO is again requesting no further action (NFA) for Incident Number NAB1921742793.

## **RELEASE BACKGROUND**

The Site is located in Unit O, Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.181451°, -103.833297°; Figure 1) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM). The release occurred at the southernmost portion of the pad that is owned by the New Mexico State Land Office (NMSLO). The majority of the impacts were reported on land owned by BLM.

On July 7, 2019, a release occurred from a corrosion hole in a pipeline riser, resulting in the release of approximately 67.65 barrels (bbls) of produced water onto the caliche well pad and onto the adjacent developed right-of-way (ROW). Approximately 55 bbls of produced water were recovered via hydrovac trucks. XTO reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 17, 2019. The release was assigned Incident Number NAB1921742793.

In 2019 and 2020, eight preliminary soil samples (SS01 through SS08) were collected from within the release extent from a depth of approximately 0.5 feet below ground surface (bgs) to assess the lateral extent of impacted soil. Potholes PH01 through PH08 were advanced to further assess the vertical extent of impacted soil at preliminary soil sample locations SS01 through SS08. Two delineation soil samples were collected from each pothole at depths ranging from 2 feet to 4 feet bgs. Excavation occurred in the southern area of the release extent, in the developed ROW south of the point of release.

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Four sidewall samples (SW01 through SW04) and two floor samples (FS01 and FS02) were collected from the excavation in the ROW. Based on field screening results, visual observations, and laboratory analytical results for preliminary soil sample SS02, excavation activities appeared to be warranted on-pad. Scraping of the pad occurred in the area of preliminary soil sample SS02 and one composite floor sample (FS03) was collected from a depth of approximately 0.5 feet bgs to confirm the presence or absence of impacts. The final excavation extent in the ROW measured approximately 340 square feet in area and reached a depth of 5 feet bgs, and the scraped area on-pad measured approximately 200 square feet in area. A total of approximately 60 cubic yards of impacted soil were removed from the excavations. Laboratory analytical results indicated that chemicals of concern (COCs) were compliant with the Closure Criteria in excavation soil samples so NFA was requested for the release in the January 22, 2020 *Closure Request* that is included as Appendix A.

On March 16, 2020, NMOCD denied the initial *Closure Request* for Incident Number NAB1921742793 for the following reasons:

- Depth to groundwater is not adequately identified. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to groundwater within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for groundwater at a depth of 50 feet or less.
- For the on-pad area, samples are representative of more than 200 square feet. Please collect more confirmation samples, representing no more than 200 square feet, unless XTO chooses to provide a sampling plan for approval prior to conduction additional sampling.

The 2020 Addendum was submitted on June 26, 2020, documenting additional excavation sampling and a more detailed justification of depth to groundwater using existing data from water wells in all directions surrounding the Site. Those data indicated depth to groundwater is greater than 400 feet bgs in the region and a potentiometric surface map was provided showing a regional trend of deep groundwater flowing southwest toward the Pecos River. Additional confirmation sampling was conducted such that floor and sidewall samples collected from an on-pad excavation in the ROW and a separate on-pad scraped area represented no more than 200 square feet of remediated area. All confirmation soil samples met the Closure Criteria so NFA was requested. Additional details of this sampling event are summarized in the 2020 Addendum that is included as Appendix B.

On July 20, 2021, NMOCD denied the 2020 Addendum for the following reasons:

- Horizontal delineation submitted was incomplete and did not meet the requirements of 19.15.29.11 NMAC. The values for determination of horizontal impact are derived by either approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less. This is especially important for "on-pad" releases to ensure the release did not extend to the "off-pad"/pasture area. A visual footprint on the surface is not sufficient to assess the horizontal extent of the release. Laboratory data must be provided as evidence of delineation efforts. Any sample exceeding approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less requires additional samples for horizontal delineation.
- The depth to groundwater has not been adequately determined. When nearby wells are used to
  determine depth to groundwater, the wells should be no further than ½ mile away from the site,
  and data should be no more than 25 years old, and well construction information should be



provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.

Following the second denial, additional depth to groundwater determination and horizontal delineation sampling activities were completed at the Site. A dry borehole was drilled 600 feet from the release location. The dry borehole confirmed the depth to groundwater estimate, which had been previously justified using regional water well information. In addition, four delineation samples (SS01 through SS04) were collected at the edge of any disturbed areas, in the pasture to the south and west of the release to confirm the release did not reach these undisturbed areas, as requested. All delineation samples collected at 0.5 feet bgs were compliant with the strictest Table I Closure Criteria, confirming the lateral extent of the release. XTO submitted a second NFA request in the 2021 Addendum submitted on September 24, 2021 detailing the work and laboratory analytical results. The 2021 Addendum is included as Appendix C.

On March 14, 2022, NMOCD, denied the 2021 Addendum stating the following:

• Inadequate confirmation sampling of impacted material on the edge of the release. The release has not been horizontally delineated. Delineation of edges/sidewalls of a release on-pad requires clean samples equal to or less than 600 mg/kg for chlorides and less than 100 mg/kg for TPH. If the edge of the spill has been visually identified and is on-pad, samples will need to be pulled from the clean side on-pad to prove extent. Once that is accomplished, you can excavate to the table 1 criteria on the pad. This will define the edge of the release and ensure the release did not leave the pad. If the release exited the pad, all sidewalls from the excavation need to meet the strictest criteria standards in the top 4 feet of surface material.

In response to the denial of the *2021 Addendum*, additional horizontal definition soil samples were collected to confirm the release did not "leave the pad." Four soil samples (SS01 through SS04) were collected at a depth of 0.2 feet bgs around the south and west edges of the pad to confirm the lateral extent of the release. One additional lateral delineation soil sample (SS05) was collected at 0.5 feet bgs, which was situated to the northeast of the historical release extent. All samples were collected on-pad. Laboratory analytical results for soil samples SS01 through SS05 indicated all COC concentrations were compliant with Closure Criteria and provided lateral delineation to below the most stringent Table I Closure Criteria. For the fourth time, XTO respectfully requested NFA for Incident Number NAB1921742793 in the *Supplement* dated April 14, 2023. The *Supplement* detailing soil sampling conducted in 2022 and 2023 is attached as Appendix D.

On September 19, 2023, the NMOCD denied the *Supplement* for the following reason:

• The "step-out" samples on pad to verify the edge of the release should only be a maximum of 1-2 feet from the observed edge of the release. Stepping out away from the release area to conduct horizontal delineation samples may tell us whether or not the release left the active well pad, but it does not tell us where the actual edge of the release is located. Please make sure that the edge of the release extent is accurately defined. Additionally, when equipment is located in and around the release area, samples must come from the sidewalls of the release area excavation. The OCD needs to know if the release went in, around, or under equipment/tanks/pipelines. Not having sidewall samples from the actual excavation won't give us those sampling data points that we need. "Step-out" samples should never be conducted if equipment is in the vicinity of the release area.



## **CLOSURE CRITERIA**

Based on the results of the Site Characterization presented in the 2021 Addendum, the following NMOCD Table I Closure Criteria were applied:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

In accordance with the denial of the *2021 Addendum*, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of areas to be immediately reclaimed. Additionally, impacts on-pad must be delineated to the reclamation requirement, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following Site decommissioning.

## NMSLO CULTURAL RESOURCES AND BIOLOGICAL REVIEW

## **Cultural Properties Protection**

Since the release occurred on the well pad and ROW, the site is exempt from the Cultural Properties Protection Rule (CPP). As such, no additional cultural resource surveys were completed in connection with this release.

## Biological Review

Ensolum personnel conducted a desktop review to establish if the Site is within an area of possible threatened, endangered, and sensitive wildlife and plant species, environmentally sensitive areas, surface waters, and sensitive soils.

- The Site is within the historical range of the Lesser Prairie-Chicken habitat, and the southern extent of the pad is within the Current Management Area of the Lesser Prairie-Chicken habitat. From March 1 through June 15, no remediation activities will occur between the hours of 3 am to 9 am to protect any Lesser Prairie-Chickens within the area.
- A review of the U.S. Fish and Wildlife Services Information for Planning and Consultation (IPaC) resources indicated there are no potential critical habitats at the Site.
- No environmentally sensitive receptors were located near the Site, as determined by the Site Characterization.
- The Natural Resources Conservation Service (NRCS) Web Soil Survey classifies the soil type at the Site as Berino complex, which is not classified as a sensitive soil.

## ADDITIONAL DELINEATION AND RESAMPLING SOIL ACTIVITIES

Following the denial of the *Supplement*, previous delineation and excavation soil sampling results were reviewed to determine areas where waste-containing soil was not fully defined to the reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH that applies to the top 4 feet of soil. Lateral delineation to the reclamation requirement for chloride was needed at previous sampling locations SW01



through SW03 collected from the ROW excavation. Vertical delineation of chloride to the reclamation requirement was necessary below previous sampling locations PH03 through PH05, PH07 and PH08.

From December 4 through December 9, 2024, additional soil sampling activities occurred at the Site in order to determine current impacts as a result of the 2019 produced water release. Five-point composite soil samples were collected at least every 200 square feet within the release extent. Forty composite soil samples (CS01 through CS40) were collected at a depth of 0.5 feet bgs across the estimated 7,550 square foot release extent. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing.

Previous sampling locations PH03 through PH05, PH07 and PH08 located within the release extent were advanced via a backhoe to 4 feet bgs, and a discrete sample was collected from 4 feet bgs to vertically delineate chloride impacts to reclamation requirements. Sampling locations PH09 through PH14 were potholed using a backhoe to depths ranging from 2 feet to 4 feet bgs surrounding the release extent as allowable at the active Site to accurately define the extent of impacts at the Site. BH01 was advanced via hand auger in the southwest corner of the pad to a depth of 4 feet bgs. Discrete soil samples were collected at depths of 0.5 feet and 2 feet bgs from PH09. Discrete samples were collected at depths of 0.5 feet and 4 feet bgs from PH10 through PH14 and BH01. Boring logs for BH01, PH03 through PH05, and PH09 through PH14 are attached in Appendix E.

Composite excavation sidewall sampling locations SW01 through SW03 were resampled using a hand auger at depths ranging from ground surface to 4 feet bgs to determine if chloride impacts above the reclamation requirement were still present more than 5 years after the release. The 5-point composite samples were collected using the above-described methodology.

Soil was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following COCs: BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit. The delineation soil sampling locations are depicted on Figure 2, and the excavation soil resample locations are illustrated on Figure 3. A photographic log of sampling activities is included as Appendix F.

## ADDITIONAL EXCAVATION AND CONFIRMATION SAMPLING ACTIVITIES

On January 23, 2025, approximately 100 square feet surrounding CS06 were excavated to 4 feet bgs utilizing a backhoe to remove waste-containing soil impacts. Following excavation activities, two 5-point composite soil samples were collected from the floor (FS06) and sidewall (SW05). Soil samples were field screened, submitted for laboratory analysis, and mapped using methods described above. Figure 3 illustrates the excavation extents, excavation soil sample locations, and subsurface utilities at the Site.

Due to the presence of numerous subsurface utilities observed while potholing, XTO determined that due to safety reasons, further remediation of waste-containing soil on-pad will be completed following Site decommissioning during reclamation activities.



Approximately 20 cubic yards of impacted soil were removed from the 2025 excavation. The impacted soil was transported and properly disposed of at the Owl landfill facility located in Jal, New Mexico. The excavation was backfilled in February 2025 using locally procured material, and the Site was recontoured to match pre-existing site conditions. Photographic documentation of excavation activities are included in Appendix F.

## LABORATORY ANALYTICAL RESULTS

Following excavation and sampling activities, laboratory analytical results confirm that impacted soil exceeding Closure Criteria was removed and waste-containing soil was fully defined to the reclamation requirement as requested by NMOCD in the denial responses. The current and historical laboratory analytical results are summarized on Table 1, and the 2024 and 2025 laboratory analytical reports are included in Appendix G.

## **CLOSURE REQUEST**

Soil delineation sampling, excavation activities, and confirmation sampling were conducted at the Site to address the July 7, 2019 release of produced water. Following excavation, laboratory analytical results from delineation and confirmation sampling indicate that all COC concentrations were in compliance with the Closure Criteria and waste-containing soil were fully defined to the reclamation standard in the top 4 feet of soil.

Due to the presence of multiple utilities at the active Site, the release was remediated on-pad to Closure Criteria for safety reasons. Following the delineation and excavation activities conducted in 2025, approximately 6,650 square feet of waste-containing soil was delineated within the top 4 feet of soil and present at sample locations CS01 through CS05, CS07 through CS18, CS19 through CS32, CS34 through CS39, and PH01 through PH08. Following Site decommissioning, an estimated 985 cubic yards of waste-containing soil will be reclaimed. The presence of the waste-containing soil present on-pad does not cause an imminent risk to human health, the environment, or groundwater. XTO will reclaim this soil reporting COC concentrations exceeding reclamation requirement but below Closure Criteria during final Site reclamation.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs, and no other sensitive receptors were identified near the release extent. XTO believes these remedial actions are protective of human health, the environment, and groundwater. As such, XTO respectfully requests closure for Incident Number NAB1921742793. If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or

tmorrissey@ensolum.com.

Sincerely, **Ensolum, LLC** 

Katt Kol-

Katherine Kahn, P.G. Senior Managing Geologist Tacoma Morrissey, MS Associate Principal

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cc: Colton Brown, XTO Kaylan Dirkx, XTO



## Bureau of Land Management New Mexico State Land Office

## Appendices:

Figure 1 Site Location Map

Figure 2 Delineation Soil Sample Locations
Figure 3 Excavation Soil Sample Locations
Table 1 Soil Sample Analytical Results
Appendix A January 22, 2020 Closure Request

Appendix B June 26, 2020 Closure Request Addendum
Appendix C September 24, 2021 Closure Request Addendum

Appendix D April 14, 2023 Closure Request Supplement

Appendix E Boring Logs (2024)

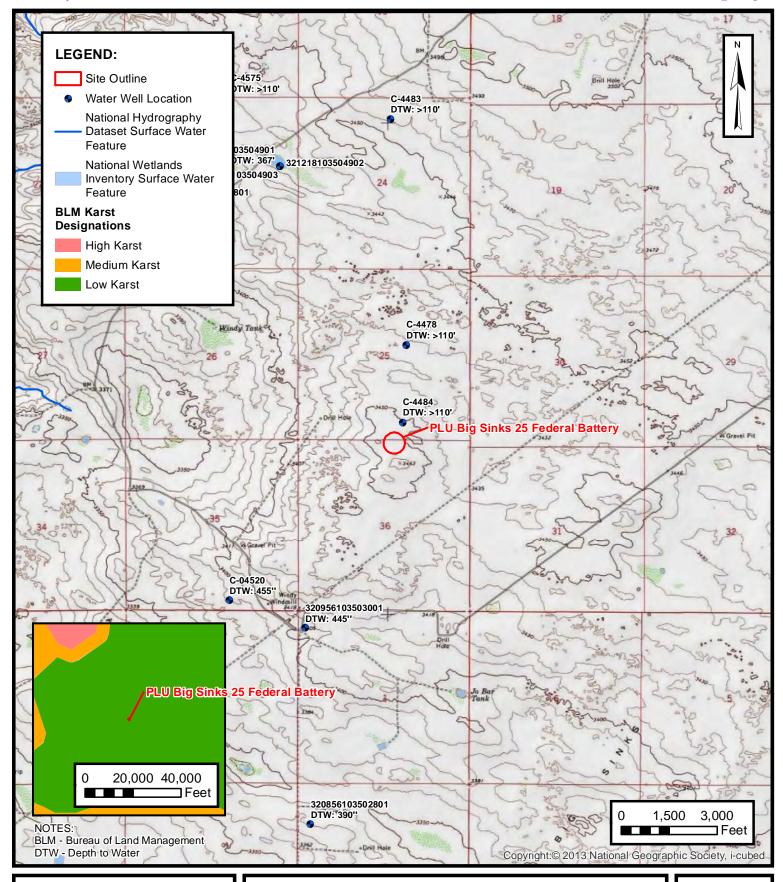
Appendix F Photographic Log (2024 & 2025)

Appendix G Laboratory Analytical Reports (2024 & 2025)





**FIGURES** 





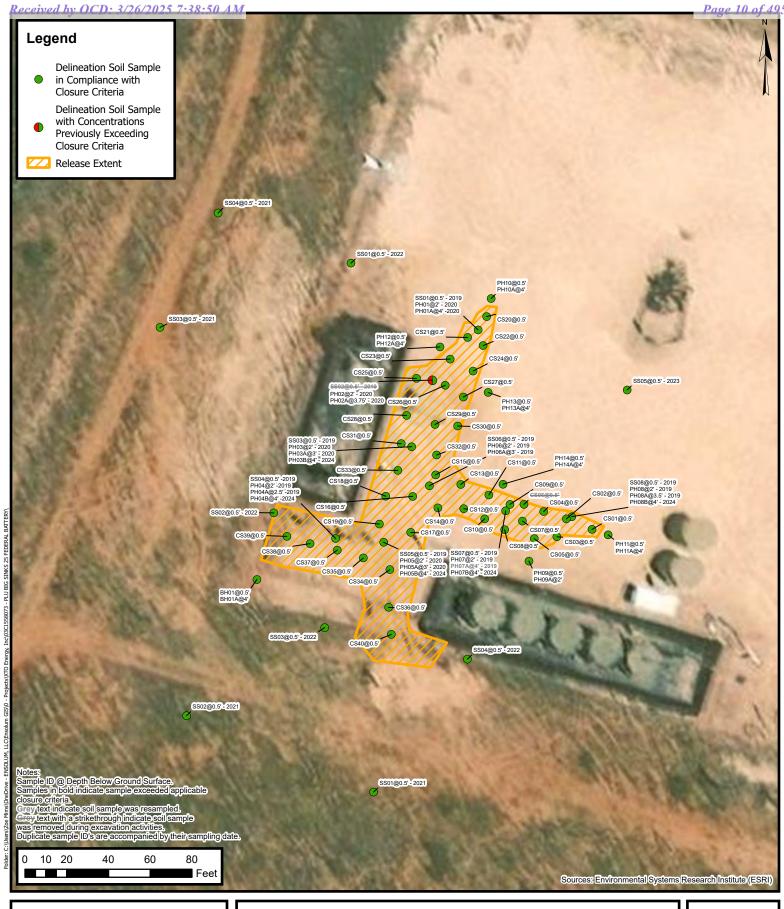
## SITE RECEPTOR MAP

XTO ENERGY, INC
PLU BIG SINKS 25 FEDERAL BATTERY
NAB1921742793
Unit O. Sec 25, T245, R30F

Unit O, Sec 25, T24S, R30E Eddy County, New Mexico **FIGURE** 

1

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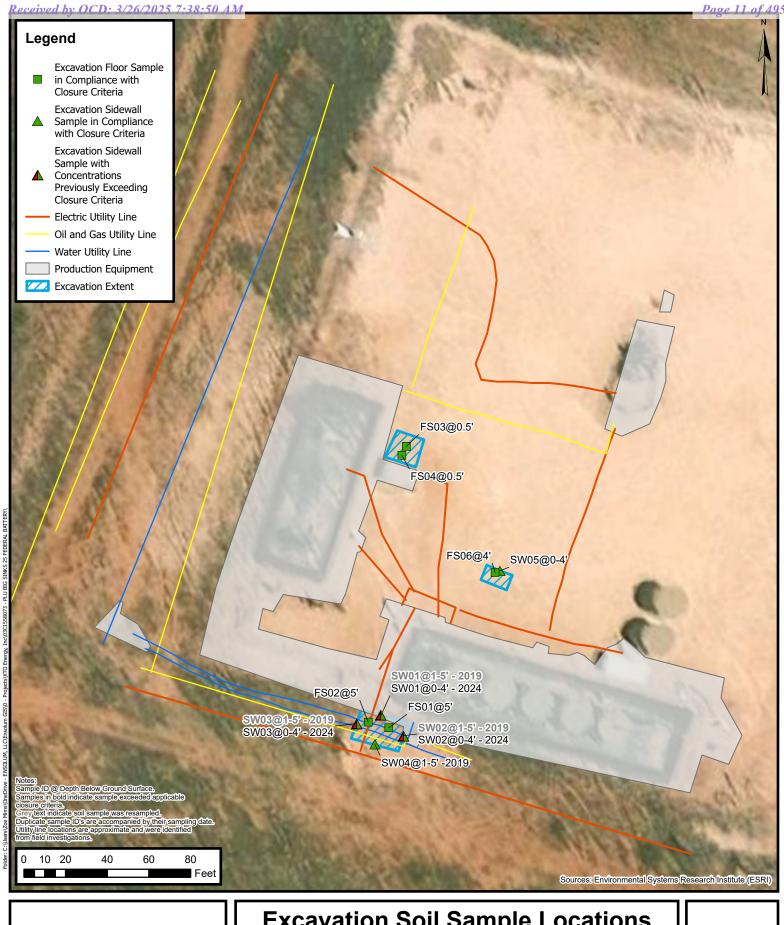




## **Delineation Soil Sample Locations**

XTO Energy, Inc
PLU BIG SINKS 25 FEDERAL BATTERY
Incident Number: NAB1921742793 (2RP-5551)
Unit B, Section 36, T 24S, R 30E
Eddy County, New Mexico

FIGURE 2





## **Excavation Soil Sample Locations**

XTO Energy, Inc PLU BIG SINKS 25 FEDERAL BATTERY Incident Number: NAB1921742793 (2RP-5551) Unit B, Section 36, T 24S, R 30E Eddy County, New Mexico

**FIGURE** 3

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**TABLE** 



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 C	losure Criteria (l	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
		<u> </u>		Del	ineation Soil San	nnles			<u> </u>	
SS01	7/9/2019	0.5	<0.00197	<0.00197	<15.0	26.9	<15.0	26.9	26.9	12,700
PH01	1/9/2020	2	<0.00197	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	283
PH01A	1/9/2020	4	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.5 <50.1	<50.1	195
\$\$02	7/9/2019	0.5	<0.00200 <0.00200	<0.00200 <0.00200	17.3	1,210	90.1	1,230	1,320	7.800
PH02	1/9/2020	2	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	1,960
PH02A	1/9/2020	3.75	<0.00198	<0.00198	<50.0	<50.2	<50.2	<50.2	<50.2	544
SS03	7/9/2019	0.5	<0.00198	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	9,500
PH03	1/9/2020	2	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	1,300
PH03A	1/9/2020	3	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	2,250
PH03B	12/06/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SS04	7/9/2019	0.5	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	11,100
PH04	12/20/2019	2	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	6,740
PH04A	12/20/2019	2.5	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	5,460
PH04B	12/06/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS05	7/9/2019	0.5	<0.00196	<0.00196	<15.0	<15.0	<15.0	<15.0	<15.0	9,840
PH05	1/9/2020	2	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	3,000
PH05A	1/9/2020	3	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	1,790
PH05B	12/06/2024	4	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS06	7/9/2019	0.5	<0.00200	0.0392	<15.0	43.3	<15.0	43.3	43.3	14,600
PH06	12/20/2019	2	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	932
PH06A	12/20/2019	3	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	567
SS07	7/9/2019	0.5	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	11,100
PH07	12/20/2019	2	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	903
PH07A	12/20/2019	4	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	1,360
PH07B	12/05/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS08	7/9/2019	0.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	9,840
PH08	12/20/2019	2	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	1,190
PH08A	12/20/2019	3.5	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	1,270
PH08B	12/05/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
PH09	12/05/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
PH09A	12/05/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176



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 Cl	losure Criteria (I	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
PH10	12/05/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
PH10A	12/05/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
PH11	12/05/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
PH11A	12/05/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
PH12	12/05/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
PH12A	12/05/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
PH13	12/05/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
PH13A	12/05/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
PH14	12/06/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
PH14A	12/06/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
BH01	12/06/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
BH01A	12/06/2024	4	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS01	8/12/2021	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	21.9
SS02	8/12/2021	0.5	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	24.0
SS03	8/12/2021	0.5	<0.00200	< 0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	60.6
SS04	8/12/2021	0.5	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	24.3
SS01	7/28/2022	0.2	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	180
SS02	7/28/2022	0.2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	40.5
SS03	7/28/2022	0.2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	57.8
SS04	7/28/2022	0.2	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	51.1
SS05	3/2/2023	0.5	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	273
CS01	12/4/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,090
CS02	12/4/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,840
CS03	12/4/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,160
CS04	12/4/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,920
CS05	12/4/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,800
CS06	12/4/2024	0.5	<0.050	<del>&lt;0.300</del>	<10.0	< <del>10.0</del>	<del>&lt;10.0</del>	<del>&lt;10.0</del>	<10.0	3,200
CS07	12/4/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,800
CS08	12/4/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,960
CS09	12/4/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,640
CS10	12/4/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,880
CS11	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,000
CS12	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,000



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 CI	osure Criteria (I	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
CS13	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,080
CS14	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,360
CS15	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,240
CS16	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,520
CS17	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,480
CS18	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	576
CS19	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,160
CS20	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	960
CS21	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,620
CS22	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,250
CS23	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	768
CS24	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	896
CS25	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,600
CS26	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	832
CS27	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	992
CS28	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,020
CS29	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	912
CS30	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,080
CS31	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,710
CS32	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	608
CS33	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	400
CS34	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,200
CS35	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,760
CS36	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,960
CS37	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,000
CS38	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,240
CS39	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,040
CS40	12/9/2024	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
	Excavation Soil Samples									
FS01	10/22/2019	5	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	96.6
FS02	10/22/2019	5	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,000

Ensolum 3 of 4



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 C	Closure Criteria (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
SW01	10/22/2019	1 - 5	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	4,430
SW01	12/06/2024	0 - 4	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
SW02	10/22/2019	1 - 5	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	633
SW02	12/06/2024	0 - 4	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW03	10/22/2019	1 - 5	< 0.00199	< 0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	1,030
SW03	12/06/2024	0 - 4	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW04	10/22/2019	1 - 5	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	572
FS03	1/17/2020	0.5	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	3,430
FS04	5/12/2020	0.5	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	613
FS06	1/23/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,360
SW05	1/23/2025	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,600

#### 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

standard where applicable.

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

-Grey text indicates soil sample removed during excavation activities

Grey text indicates soil location resampled



**APPENDIX A** 

January 22, 2020 Closure Request District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	NAB1921742793
District RP	2RP-5551
Facility ID	
Application ID	pAB1921742256

## **Release Notification**

## **Responsible Party**

Responsible P	arty XTC	) Energy		OGRID	OGRID 5380			
Contact Name Kyle Littrell					Contact Telephone 432-221-7331			
Contact email	Kyle_Lit	ttrell@xtoenergy.co	om	Incident #	(assigned by OCD) NAB1921742793			
Contact mailir	ng address	522 W. Mermod,	Carlsbad, NM 882	220				
			T	CD 1 C				
22.4	04.4500		Location	of Release So				
atitude 32.1	81450°		445	Longitude	-103.833297°			
			(NAD 83 in deci	mal degrees to 5 decim	nal places)			
		ks 25 Federal Batte	ery	Site Type	Bulk Storage and Separation Facility			
Date Release D	Discovered	7/7/2019		API# (if app	olicable) 30-015-39018 (PLU CVX JV BS 5H)			
Unit Letter	Section	Township	Range	Coun	atu.			
0	25	248	30E	Edd	ly			
urface Owner:		Federal Tri	ibal  Private (N	State (Rel	ease flows onto BLM Surface)			
		ion lists as a Fe						
	. с. с с с		Nature and	Volume of I	Release			
	Matazia	Vol Balance d (Colont all	at a simple and asset a		funtification for the nature resulted below			
Crude Oil	Materia	Volume Released		acculations of specific	Volume Recovered (bbls)			
➤ Produced V	Vater	Volume Release	d (bbls) 67.65		Volume Recovered (bbls) 55			
			ion of total dissolv vater >10,000 mg/		☐ Yes ☐ No			
Condensate	e	Volume Released			Volume Recovered (bbls)			
Natural Ga	s	Volume Release	d (Mcf)		Volume Recovered (Mcf)			
Other (describe) Volume/Weight Released (provide unit.			Released (provide	units)	) Volume/Weight Recovered (provide units)			
Cause of Relea	ase							
	A hole	developed in a line	riser due to corros	sion at the south si	ide of the tank battery. Fluids were released to the v			
	pad and	l to a small area of	ROW near the sou	irce. A vacuum tr	ruck recovered free fluids from the ground surface.			
			•		and scheduled for repair. Additional third party			
	resourc	es have been retain	ed to assist with re	emediation.				

Form C-141 Page 2

## State of New Mexico Oil Conservation Division

Incident ID	NAB1921742793	
District RP	2RP-5551	
Facility ID		
Application ID	pAB1921742256	

Was this a major	If YES, for what reason(s) does the response	nsible party consider this a major release?
release as defined by 19.15.29.7(A) NMAC?	An arranda sina dan la sana Garantana a Ga	
	An unauthorized release of a volume of 2.	b barrels or more
Yes No		
Notice provided by Amy		hom? When and by what means (phone, email, etc)? ria Venegas, and Jim Griswold (NMOCD), Jim Amos and Deborah
	Initial R	esponse
The responsible	party must undertake the following actions immediate	ly unless they could create a safety hazard that would result in injury
The source of the rele	ease has been stopped.	
The impacted area ha	as been secured to protect human health and	the environment.
Released materials ha	ave been contained via the use of berms or	dikes, absorbent pads, or other containment devices.
All free liquids and r	recoverable materials have been removed ar	d managed appropriately.
If all the actions describe	ed above have not been undertaken, explain	why:
N/A		
		remediation immediately after discovery of a release. If remediation
		efforts have been successfully completed or if the release occurred please attach all information needed for closure evaluation.
		best of my knowledge and understand that pursuant to OCD rules and
regulations all operators are	required to report and/or file certain release not	ifications and perform corrective actions for releases which may endanger
		OCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In
addition, OCD acceptance of		responsibility for compliance with any other federal, state, or local laws
and/or regulations.		
Printed Name: Kyle Litti	rell	Title: SH&E Supervisor
Signature:	Reduct	Date:
email: Kyle Littrell@xto	oenergy.com	Telephone: 432-221-7331
OCD Only		
Received by: Ama	alia Bustamante	Date: 8/5/2019
		· · · · · ·

e of New Mexico

Incident ID	NAB1921742793
District RP	2RP-5551
Facility ID	
Application ID	pAB1921742256

## **Site Assessment/Characterization**

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?	>100(ft bgs)				
Did this release impact groundwater or surface water?	☐ Yes ⊠ No				
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No				
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?					
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No				
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?					
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?					
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No				
Are the lateral extents of the release within 300 feet of a wetland?					
Are the lateral extents of the release overlying a subsurface mine?					
Are the lateral extents of the release overlying an unstable area such as karst geology? ☐ Yes ☒					
Are the lateral extents of the release within a 100-year floodplain?					
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?					
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.					
Characterization Report Checklist: Each of the following items must be included in the report.					
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> <li>Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> <li>Boring or excavation logs</li> <li>Photographs including date and GIS information</li> <li>Topographic/Aerial maps</li> </ul>					
☐ Laboratory data including chain of custody					

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Received by OCD: 3/26/2025 7:38:5024M1 State of New Mexico Page 4 Oil Conservation Division

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Incident ID	NAB1921742793
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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.					
Printed Name: Kyle Littrell	Title: SH&E Supervisor				
Printed Name: Kyle Littrell  Signature:	Date: <u>01/22/2020</u>				
email: Kyle Littrell@xtoenergy.com	Telephone: (432)-221-7331				
OCD Only					
Received by: Cristina Eads	Date: <u>03/16/2020</u>				

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Incident ID	NAB1921742793
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Facility ID	
Application ID	pAB1921742256

## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following it	tems must be inc	luded in the closure report.							
A scaled site and sampling diagram as described in 19.15.29.11 NMAC									
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)									
☐ Laboratory analyses of final sampling (Note: appropriate ODC	C District office n	nust be notified 2 days prior to final sampling)							
Description of remediation activities									
I hereby certify that the information given above is true and complete and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rendaman health or the environment. In addition, OCD acceptance of a compliance with any other federal, state, or local laws and/or regular restore, reclaim, and re-vegetate the impacted surface area to the confaccordance with 19.15.29.13 NMAC including notification to the O	n release notificate a C-141 report by nediate contamina C-141 report do tions. The responditions that exist	tions and perform corrective actions for releases which by the OCD does not relieve the operator of liability ation that pose a threat to groundwater, surface water, we not relieve the operator of responsibility for ensible party acknowledges they must substantially ted prior to the release or their final land use in							
Printed Name: Kyle Littrell	Title:	SH&E Supervisor							
Printed Name: Kyle Littrell Signature:	Date:01/	22/2020							
email: Kyle Littrell@xtoenergy.com	Telephone:	432-221-7331							
OCD Only									
Received by:Cristina Eads	Date:	03/16/2020							
Closure approval by the OCD does not relieve the responsible party remediate contamination that poses a threat to groundwater, surface variety of compliance with any other federal, state, or local laws and/o	water, human hea								
Closure Approved by:	Date:	03/16/2020							
Printed Name: Cristina Eads	_ Title:	Environmental Specialist							



LT Environmental, Inc.

3300 North "A" Street Building 1, Unit 222 Midland, Texas 79705 432.704.5178

January 22, 2020

Mr. Mike Bratcher New Mexico Oil Conservation Division 811 South First Street Artesia, New Mexico 88210

**RE:** Closure Request

Poker Lake Unit Big Sinks 25 Federal Battery Remediation Permit Number 2RP-5551 Incident Number NAB1921742793 Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Poker Lake Unit (PLU) Big Sinks 25 Federal Battery (Site) located in Unit O, Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following a release of produced water at the Site. Based on the results of the soil sampling events, XTO is submitting this Closure Request and requesting no further action (NFA) for Remediation Permit (RP) Number 2RP-5551.

## **RELEASE BACKGROUND**

On July 7, 2019, a hole developed in a line riser due to corrosion at the south side of the tank battery, resulting in the release of 67.65 barrels (bbls) of produced water onto the caliche well pad and onto the adjacent developed right-of-way (ROW). The point of release is located on state-owned land and the release flowed north onto federally-owned land. A vacuum truck was dispatched to the Site to recover freestanding fluids and approximately 55 bbls of produced water were recovered. The damaged section of the riser was removed for repair. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 17, 2019 and was assigned RP Number 2RP-5551.

## SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest permitted groundwater





well with depth to groundwater data is the New Mexico Office of State Engineers (NMOSE) well C 03716 located approximately 1.33 miles southwest of the Site (Figure 1). NMOSE wells C 03894, C 03558, and C 03702 are closer to the Site, however, these wells were not used because depth to groundwater data was unavailable. The NMOSE well C 03716 has a depth to groundwater of 425 feet bgs and a total depth of 600 feet bgs. Ground surface elevation at the groundwater well location is 3,405 feet above mean sea level (amsl), which is approximately 54 feet lower in elevation than the Site. The closest continuously-flowing water or significant watercourse to the Site is a freshwater emergent wetland located approximately 1.23 miles northwest 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 to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low potential karst area.

## **CLOSURE CRITERIA**

Based on the results of the site characterization, the following NMOCD Table 1 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 (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

## SITE ASSESSMENT, EXCAVATION, AND DELINEATION ACTIVITIES

On July 9, 2019, LTE personnel inspected the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected eight preliminary soil samples (SS01 through SS08) from within the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was conducted during excavation activities. Photographs are included in Attachment 1.

The preliminary soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC)





procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-oil range organics (ORO) following EPA Method 8015M/D, and chloride following EPA Method 300.0.

Based on field screening results, visual observations, and laboratory analytical results for preliminary soil sample SS02, excavation activities appeared to be warranted. Laboratory analytical results for the preliminary soil samples are presented on Figure 2 and summarized in Table 1.

On October 22, 2019, LTE personnel oversaw excavation of impacted soil based on visual staining. Excavation occurred in the southern area of the release extent, in the developed ROW south of the point of release, via track-mounted backhoe. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. The extent of the excavation is presented on Figure 3. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. Four sidewall samples (SW01 through SW04) and two floor samples (FS01 and FS02) were collected. 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. The excavation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico. The excavation extent and excavation soil sample locations are depicted on Figure 3.

On December 20, 2019, and January 9, 2020, LTE personnel returned to the Site to oversee additional soil assessment activities on pad. Eight delineation potholes were advanced at preliminary soil sample locations SS01 through SS08 via track-mounted backhoe. Potholes PH01 through PH08 were advanced to depths of approximately three feet to four feet bgs to further assess the lateral extent of impacted soil. Two delineation soil samples were collected from each potholes at depths ranging from two feet to four feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each pothole were documented on lithologic/soil sampling logs and are included as Attachment 2. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico. The potholes were backfilled with the soil removed. The delineation soil sample locations are depicted on Figure 4.

Additionally, LTE personnel oversaw the scraping of the pad in the area of preliminary soil sample SS02 via a track-mounted backhoe on January 17, 2020. One composite floor sample (FS03) was collected from the scraped area from a depth of approximately 0.5 feet bgs to confirm the presence or absence of impacts. The 5-point composite sample was collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the sample by thoroughly mixing. The excavation soil sample was collected, handled, and analyzed as described above at



Xenco in Carlsbad, New Mexico. The scraped area and soil sample location are depicted on Figure 3.

The final excavation extent in the ROW measured approximately 340 square feet in area and the scraped area on pad measured approximately 200 square feet in area. A total of approximately 60 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico.

### **ANALYTICAL RESULTS**

Field screening results and visual observations indicated that excavation activities appeared to be warranted in the southern area of the release extent, south of the point of release. Laboratory analytical results indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS01 and SS03 through SS08. Laboratory analytical results for preliminary soil sample SS02 indicated that TPH-GRO and TPH-DRO concentrations exceeded the Closure Criteria, with a concentration of 1,230 mg/kg.

Following the excavation and scraping of impacted soil, LTE collected confirmation soil samples within the excavation extent and scraped area. Laboratory analytical results indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in excavation soil samples SW01 through SW04 and FS01 through FS03. Laboratory analytical results are summarized in Table 1. The complete laboratory analytical reports are included as Attachment 3.

### **CONCLUSIONS**

During site assessment activities, soil in the southern area of the release extent, south of the point of release, was determined to be impacted based on visual observations and field screening results. Additionally, preliminary soil sample SSO2 was collected from within the release extent at a depth of 0.5 feet bgs to assess the presence or absence of impacted soil. Laboratory analytical results indicated that TPH-GRO and TPH-DRO concentrations exceeded the Closure Criteria.

Soil in the southern area of the release extent was removed to a depth of approximately five feet bgs. Surficial soil in the area of preliminary soil sample SSO2 was scraped. Following the remediation activities in these areas, LTE collected confirmation soil samples at depths ranging from approximately 0.5 foot to five feet bgs. Laboratory analytical results indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in excavation soil samples SW01 through SW03 and FS01 through FS03.

Initial response effort and excavation activities have mitigated impacts at this Site. XTO requests NFA for RP Number 2RP-5551.





If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley

Staff Geologist

Ushley L. Ager, P.G.

Senior Geologist

cc: Kyle Littrell, XTO

Ryann Mann – State Land Office

U.S. Bureau of Land Management – New Mexico Office

Robert Hamlet, NMOCD Victoria Venegas, NMOCD

Appendices:

Figure 1 Site Location Map

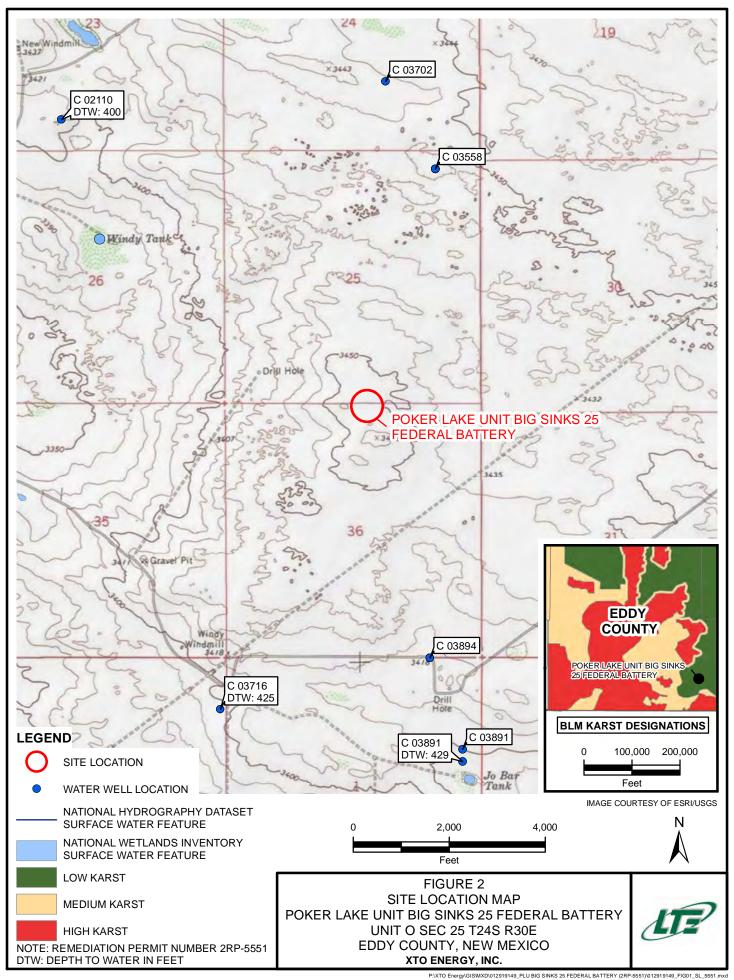
Figure 2 Preliminary Soil Sample Locations
Figure 3 Excavation Soil Sample Locations
Figure 4 Delineation Soil Sample Locations

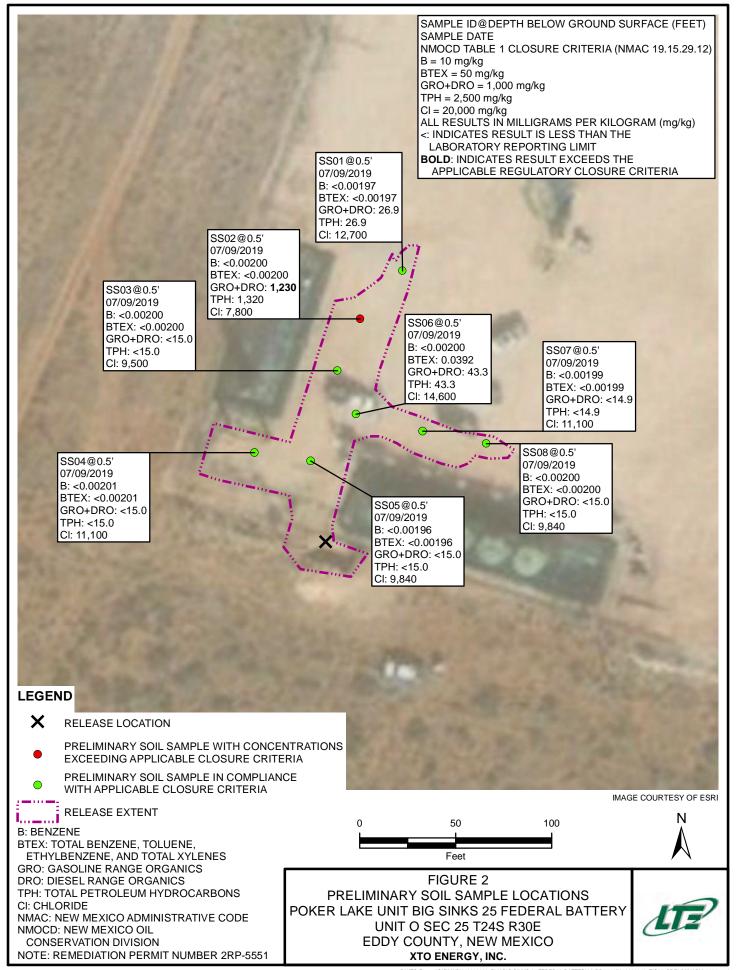
Table 1 Soil Analytical Results

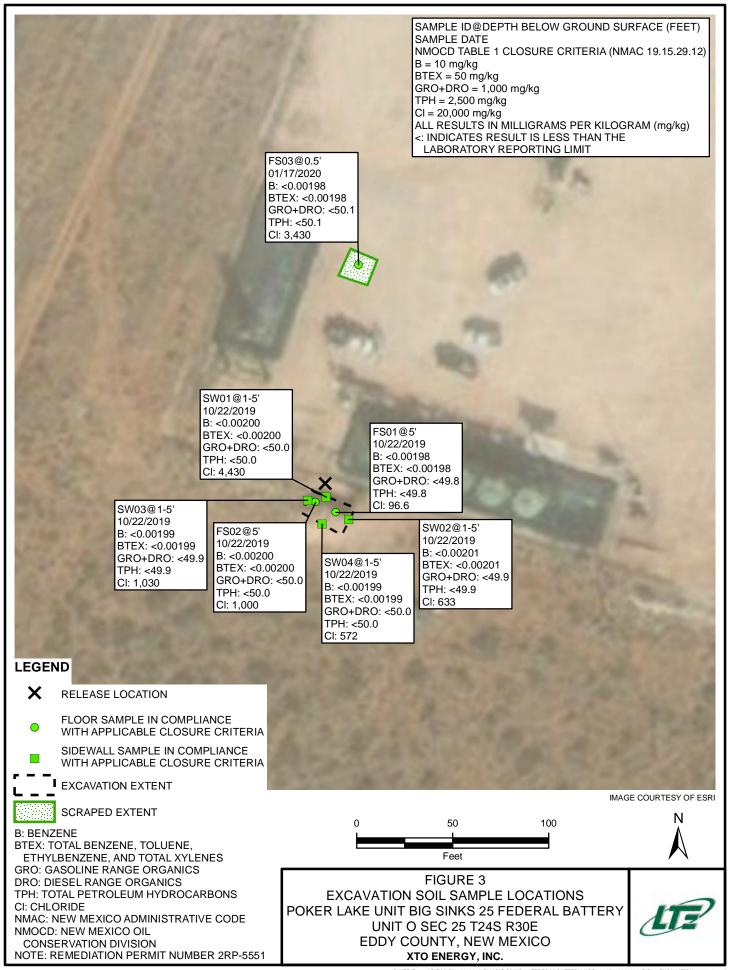
Attachment 1 Photographic Log

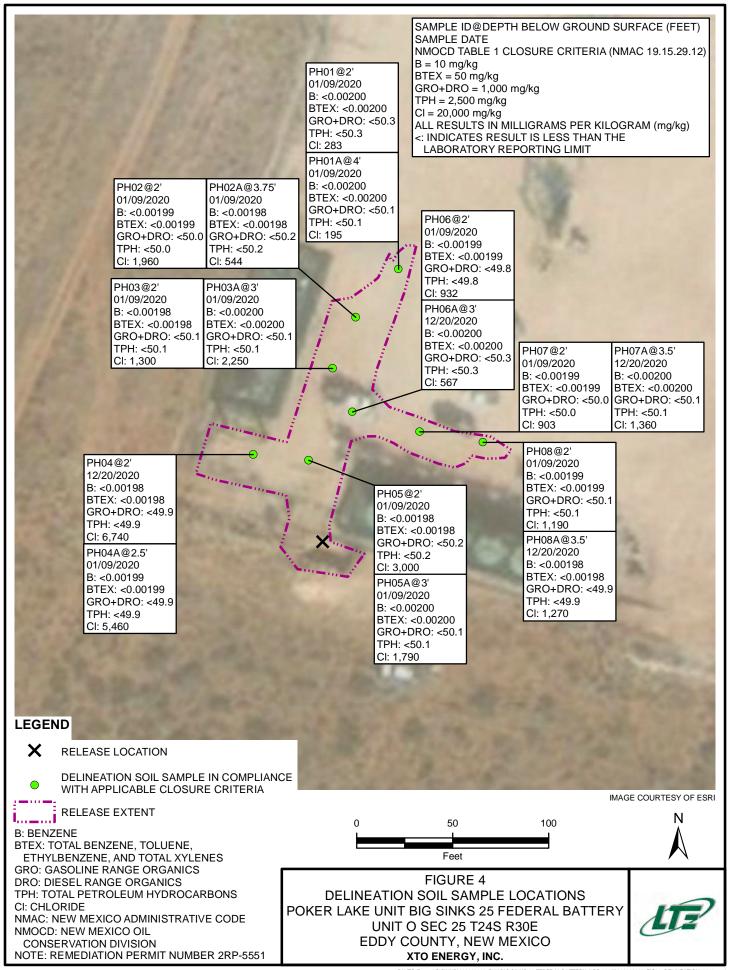
Attachment 2 Lithologic/Soil Sampling Logs Attachment 3 Laboratory Analytical Reports











## TABLE 1 SOIL ANALYTICAL RESULTS

# POKER LAKE UNIT BIG SINKS 25 FEDERAL BATTERY REMEDIATION PERMIT NUMBER 2RP-5551 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria		10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000	
SS01	0.5	07/09/2019	<0.00197	< 0.00197	<0.00197	<0.00197	<0.00197	<15.0	26.9	<15.0	26.9	26.9	12,700
SS02	0.5	07/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	17.3	1,210	90.1	1,230	1,320	7,800
SS03	0.5	07/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	9,500
SS04	0.5	07/09/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	11,100
SS05	0.5	07/09/2019	<0.00196	<0.00196	<0.00196	<0.00196	<0.00196	<15.0	<15.0	<15.0	<15.0	<15.0	9,840
SS06	0.5	07/09/2019	<0.00200	0.0160	0.00480	0.0184	0.0392	<15.0	43.3	<15.0	43.3	43.3	14,600
SS07	0.5	07/09/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	11,100
SS08	0.5	07/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	9,840
FS01	5	10/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	96.6
FS02	5	10/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,000
FS03	0.5	01/17/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	3,430
SW01	1 - 5	10/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	4,430
SW02	1 - 5	10/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	633
SW03	1 - 5	10/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	1,030
SW04	1 - 5	10/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	572
PH01	2	01/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	283
PH01A	4	01/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	195
PH02	2	01/09/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	1,960
PH02A	3.75	01/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	544
PH03	2	01/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	1,300
PH03A	3	01/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	2,250
PH04	2	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	6,740
PH04A	2.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	5,460
PH05	2	01/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	3,000
PH05A	3	01/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	1,790



## TABLE 1 SOIL ANALYTICAL RESULTS

# POKER LAKE UNIT BIG SINKS 25 FEDERAL BATTERY REMEDIATION PERMIT NUMBER 2RP-5551 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria		10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000	
PH06	2	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	932
PH06A	3	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	567
PH07	2	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	903
PH07A	3.5	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	1,360
PH08	2	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	1,190
PH08A	3.5	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	1,270

#### Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

**Bold** - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018







View of surficial soil staining in the southern area of the release extent, south of the point of release, during site assessment activities.

Project: 012919149	XTO Energy, Inc. Poker Lake Unit Big Sinks 25 Federal Battery	LIZ
July 9, 2019	Photographic Log	Advancing Opportunity



Southern view of scraped area on caliche well pad during confirmation soil sampling activities.

Project: 012919149	XTO Energy, Inc. Poker Lake Unit Big Sinks 25 Federal Battery	LTZ
January 17, 2020	Photographic Log	Advancing Opportunity



LT Eavenment	-		Ca	508 Wes rlsbad, N	ronmenta t Stevens lew Mexic Engineering	Street to 88220			ect Name: V Big Sink Fed Batter	1/9/20 RP Number: 2LP - 5551		
1 //		LITHO	LOGIC	C / SOI	L SAMPI			Logg	ged By: Ellie	-	Method: Brok here	
Lat/Long:					Field Scree	+Chla	ride	Hole	e Diameter		Total Depth: 41	
Commen	ts:											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)		Soil/Rock Type		Lithol	ogy/Rem	arks	
0	135	0.5	N	PH01	2	254	S	sand-tra	a s:lt, brow	n,ni	oder	
D	7160	0.2	N	PH01A	34	491	5	gand, n	a oder, be	ran 1		
					6							
					8							
					10							
					12							
					14			h				
					16							
					18							
					20							
					12							

LT Environm	and the last of th		Ca	508 Wes rlsbad, N	ronmenta st Stevens New Mexic Engineering	Street to 88220			PHUZ Project Name: PLV Big 25 Fed		Date: 1 /9 /20  RP Number: 200 - 5551
		LITHO	LOGIC	C / SOI	L SAMPI	LING LO	OG		Logged By:		Method: Back he
_at/Long					Field Scree	ning:	ride		Hole Diameter:	, ,,,	Total Depth:
Commen	ts:										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type			Lithology/Re	marks
D	1,629	0.0	N	PH02	2 - 3	25+	5	san d light	Hrace Cal	lich , w	oder, bown t
0	392	0.0	N	PH02A	4	5.7%	- 5	alto	he, he co	lor	
					6						
					8						
					10						
					12						
					14						
					16						
					18						
					20						
					12						

LITHOLOGIC / SOIL SAMPLING LOG Logged By: Eliz N Method: Buckl	Barry	mental loc			508 We arlsbad,	rironment st Stevens New Mexi Engineering	s Street ico 8822			Project Name: PLU Big Sinks	Date: 1/9/20 RP Number: 2RP - 555
Total Depth:  To			LITHO		1,000					25 Fed Battery	
Depth   Dept	Lat/Long	Ç	Limo	LOUI	C 7501						
D 1,719 0.0 N PHOS 2 28t 5 sand course-Sine, no odor, ten  D 851 0.0 N PHOSA 3 35t 5 caliche, no odor  10 12 11 11 11 11 11 11 11 11 11 11 11 11	Commen	its:				T W CC	30410	rice			
D 951 0.0 N PHO3 2 28t 5 Sand course - Sine, no odor, tun  D 951 0.0 N PHO3A 3 3 35t 5 Calible, no odor  10 12 14 16 18 18	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #			Soil/Rock Type		Lithology	/Remarks
10	P	1,719	0.0	N	PH03		28+	5	sand,	course - Sine, no	odor, tan
6	Ø	851	0.0	N	PH03A	3	384	5	calich	e ne oder	
10 1 10 1 12 1 14 1 16 1 18 1 18 1 18 1 18 1 18 1 18						4					
10						6					
12						8					
14						10					
						12					
						14					
						16					
20 🗍					1	18					
					3	20					

Advancing		LIT		LT Environ 508 West St Carlsbad, New ompliance · Engir GIC / SOIL SA	neering · R	emediation G LOG	n		Identifier: PH04 Project Name: PLU Big Sinks 25 Federal Battery Logged By: WM Hole Diameter: 4"	Date: 12/20/2019  RP Number: 2RP-5551  Method: backhoe  Total Depth: 2.5	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholo	gy/Remarks	
dry	820 696	0.2	no	PH04A	0	2' 2.5'		CALICH	E, with silt, tan, cement 2.5 foot bgs	w plasticity, non-cemented ted	

LT:	and a		Car	508 Wes rlsbad, N	ronmenta at Stevens New Mexic Engineering	Street co 88220			Identifier:  PHO 5  Project Name:  PLU Big Sig 25 Fed	n Es Sallery	Date: 1/9/20  RP Number: 2RP - 5551
	1	LITHOI	LOGIC	2 / SOII	L SAMPI	LING LO	OG		Logged By: Ell		Method: Backhe
at/Long:					Field Scree	ning: + Chlor	ride	1	Hole Diameter:		Total Depth:
Comment	5:										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type			Lithology/Re	marks
1)	1,00%	0.2	N	PH05	-	281	S	Calic	he, no	odu-	
0	(,008	0.0	N	PH05A	3	38.1	s	,			
					4						
					6						
					8 _						
					10						
					12						
					14						
					16						
					18						
					20						
					12						

Lat/Long Comment		LIT		LT Environ 508 West St Carlsbad, New ompliance · Engir GIC / SOIL SA	neering · R	Permediation G LOG ening:	n		Identifier: PH06 Project Name: PLU Big Sinks 25 Federal Battery Logged By: WM Hole Diameter: 4"	Date: 12/20/2019 RP Number: 2RP-5551 Method: Total Depth: 3'	backhoe
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholo	gy/Remarks	
dry	528 148	0.7	no	PH06A	0	2'		CALICH	vith clay, red-brown, lo		emented

Lat/Long:		LIT	LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220  Compliance · Engineering · Remediation  LITHOLOGIC / SOIL SAMPLING LOG  Field Screening: PID/HACH  Identifier: PH07  12/20/2019  Project Name: PLU Big Sinks 25 Federal Battery  Logged By: WM  Method: Field Screening: PID/HACH  Method: Total Depth: 3.5'								3
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholo	gy/Remarks	
dry	630	0.1	no	PH07A	0	3.5'	cche cche	CALICH	E, with silt, tan, cemen oth 3.5 foot bgs	w plasticity, non-cemented	

Lat/Long Comment		LIT		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220  Compliance · Engineering · Remediation  Compliance · Engineering · Remediation  PLU Big Sinks 25 Federal Battery  Compliance · Engineering · Remediation  DLOGIC / SOIL SAMPLING LOG  Field Screening: PID/HACH  Hole Diameter: Total Depth: 3.5'							
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type		Litholo	gy/Remarks	
dry	820 696	0.2	no	PH08A	0	3.5'	cche	CALICH	E, with silt, tan, cemen oth 3.5 foot bgs	w plasticity, non-cemented	



# **Analytical Report 630600**

for

LT Environmental, Inc.

Project Manager: Dan Moir
PLU BIG SINKS FED BATTERY

16-JUL-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)

> 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)



16-JUL-19

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

Reference: XENCO Report No(s): 630600

PLU BIG SINKS FED BATTERY Project Address: Delaware Basin

#### 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) 630600. 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. 630600 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

Jessica Vermer

**Project Assistant** 

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

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



# **Sample Cross Reference 630600**

# LT Environmental, Inc., Arvada, CO

### PLU BIG SINKS FED BATTERY

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
SS01	S	07-09-19 13:10	0.5 ft	630600-001
SS02	S	07-09-19 13:15	0.5 ft	630600-002
SS03	S	07-09-19 13:20	0.5 ft	630600-003
SS04	S	07-09-19 13:25	0.5 ft	630600-004
SS05	S	07-09-19 13:30	0.5 ft	630600-005
SS06	S	07-09-19 13:35	0.5 ft	630600-006
SS07	S	07-09-19 13:40	0.5 ft	630600-007
SS08	S	07-09-19 13:45	0.5 ft	630600-008

#### CASE NARRATIVE

Page 52 of 495

Client Name: LT Environmental, Inc.

Project Name: PLU BIG SINKS FED BATTERY

Project ID: Report Date: 16-JUL-19
Work Order Number(s): 630600 Date Received: 07/11/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3095520 BTEX by EPA 8021B

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



**Project Id:** 

Certificate of Analysis Summary 630600

LT Environmental, Inc., Arvada, CO

**Project Name: PLU BIG SINKS FED BATTERY** 

**Date Received in Lab:** Thu Jul-11-19 12:48 pm

**Report Date:** 16-JUL-19 **Project Manager:** Jessica Kramer

Contact: Dan Moir

Project Location: Delaware Basin

	Lab Id:	630600-0	001	630600-0	002	630600-0	003	630600-	004	630600-	005	630600-	006
Analysis Paguestad	Field Id:	SS01		SS02		SS03		SS04		SS05		SS06	,
Analysis Requested	Depth:	0.5- ft	i l	0.5- ft		0.5- ft	i l	0.5- f	t	0.5- f	t	0.5- f	ť
	Matrix:	SOIL		SOIL		SOIL	,	SOIL	,	SOIL		SOIL	_
	Sampled:	Jul-09-19	13:10	Jul-09-19	3:15	Jul-09-19	13:20	Jul-09-19	13:25	Jul-09-19	13:30	Jul-09-19	13:35
BTEX by EPA 8021B	Extracted:	Jul-13-19	15:20	Jul-13-19 15:20		Jul-13-19 15:20		Jul-13-19 15:20		Jul-13-19 15:20		Jul-13-19	15:20
SUB: T104704400-18-16	Analyzed:	Jul-15-19 (	05:52	Jul-15-19 (	06:14	Jul-16-19	11:21	Jul-15-19	06:58	Jul-15-19	07:20	Jul-15-19	07:42
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00197	0.00197	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00196	0.00196	< 0.00200	0.00200
Toluene		< 0.00197	0.00197	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00196	0.00196	0.0160	0.00200
Ethylbenzene		< 0.00197			0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00196	0.00196	0.00480	0.00200
m,p-Xylenes		< 0.00394	<0.00394 0.00394		0.00401	< 0.00400	0.00400	< 0.00402	0.00402	< 0.00393	0.00393	0.0129	0.00399
o-Xylene		< 0.00197	0.00197	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00196	0.00196	0.00548	0.00200
Total Xylenes		< 0.00197	0.00197	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00196	0.00196	0.0184	0.00200
Total BTEX		< 0.00197	0.00197	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00196	0.00196	0.0392	0.00200
Chloride by EPA 300	Extracted:	Jul-15-19	11:00	Jul-15-19 11:00		Jul-15-19 11:00		Jul-15-19	11:00	Jul-15-19 11:00		Jul-15-19 11:15	
SUB: T104704400-18-16	Analyzed:	Jul-15-19	16:59	Jul-15-19	7:06	Jul-15-19	17:13	Jul-15-19 17:21		Jul-15-19 17:28		Jul-15-19 18:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride	·	12700	99.2	7800	49.6	9500	49.9	11100	50.0	9840	50.0	14600	99.4
TPH by SW8015 Mod	Extracted:	Jul-14-19 (	08:00	Jul-14-19 (	08:00	Jul-14-19 (	08:00	Jul-14-19	08:00	Jul-14-19	08:00	Jul-14-19	08:00
SUB: T104704400-18-16	Analyzed:	Jul-14-19	11:04	Jul-14-19	2:16	Jul-14-19	12:41	Jul-14-19	13:05	Jul-14-19	13:30	Jul-14-19	13:54
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)	·	<15.0	15.0	17.3	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		26.9	15.0	1210	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	43.3	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	<15.0 15.0		15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		26.9	26.9 15.0		15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	43.3	15.0
Total GRO-DRO		26.9	15.0	1230	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	43.3	15.0

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

Jessica Kramer Project Assistant



Delaware Basin

**Project Id:** 

**Project Location:** 

**Contact:** Dan Moir Certificate of Analysis Summary 630600

LT Environmental, Inc., Arvada, CO **Project Name: PLU BIG SINKS FED BATTERY** 

**Date Received in Lab:** Thu Jul-11-19 12:48 pm

**Report Date:** 16-JUL-19 Project Manager: Jessica Kramer

	Lab Id:	630600-007	630600-008		
Analysis Requested	Field Id:	SS07	SS08		
Analysis Requesieu	Depth:	0.5- ft	0.5- ft		
	Matrix:	SOIL	SOIL		
	Sampled:	Jul-09-19 13:40	Jul-09-19 13:45		
BTEX by EPA 8021B	Extracted:	Jul-13-19 15:20	Jul-13-19 15:20		
SUB: T104704400-18-16	Analyzed:	Jul-15-19 08:04	Jul-15-19 08:26		
	Units/RL:	mg/kg RL	mg/kg RL		
Benzene		< 0.00199 0.00199	<0.00200 0.00200		
Toluene		< 0.00199 0.00199	<0.00200 0.00200		
Ethylbenzene		< 0.00199 0.00199	<0.00200 0.00200		
m,p-Xylenes		< 0.00398 0.00398	<0.00400 0.00400		
o-Xylene		<0.00199 0.00199	<0.00200 0.00200		
Total Xylenes		< 0.00199 0.00199	<0.00200 0.00200		
Total BTEX		<0.00199 0.00199	<0.00200 0.00200		
Chloride by EPA 300	Extracted:	Jul-15-19 11:15	Jul-15-19 11:15		
SUB: T104704400-18-16	Analyzed:	Jul-16-19 16:44	Jul-15-19 18:48		
	Units/RL:	mg/kg RL	mg/kg RL		
Chloride		11100 D 100	9840 50.1		
TPH by SW8015 Mod	Extracted:	Jul-14-19 08:00	Jul-14-19 08:00		
SUB: T104704400-18-16	Analyzed:	Jul-14-19 14:19	Jul-14-19 14:43		
	Units/RL:	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)	·	<14.9 14.9	<15.0 15.0		
Diesel Range Organics (DRO)		<14.9 14.9	<15.0 15.0		
Motor Oil Range Hydrocarbons (MRO)		<14.9 14.9	<15.0 15.0		
Total TPH		<14.9 14.9	<15.0 15.0		
Total GRO-DRO		<14.9 14.9	<15.0 15.0		

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.

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fession Weamer

Jessica Kramer Project Assistant



### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Soil

Sample Id: **SS01** 

Date Collected: 07.09.19 13.10

Date Received:07.11.19 12.48

Lab Sample Id: 630600-001

Sample Depth: 0.5 ft

Prep Method: E300P

Analytical Method: Chloride by EPA 300

CHE

% Moisture:

Basis:

Tech: CHE

Analyst:

07.15.19 11.00 Date Prep:

Wet Weight

Seq Number: 3095416

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12700	99.2	mg/kg	07.15.19 16.59		20

Matrix:

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

% Moisture:

Tech: Analyst: DVM ARM

07.14.19 08.00 Date Prep:

Basis: Wet Weight

Seq Number: 3095300

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	07.14.19 11.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	26.9	15.0		mg/kg	07.14.19 11.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	07.14.19 11.04	U	1
Total TPH	PHC635	26.9	15.0		mg/kg	07.14.19 11.04		1
Total GRO-DRO	PHC628	26.9	15.0		mg/kg	07.14.19 11.04		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	105	%	70-135	07.14.19 11.04		
o-Terphenyl		84-15-1	120	%	70-135	07.14.19 11.04		



Tech:

# Certificate of Analytical Results 630600

### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: SS01 Matrix: Soil Date Received:07.11.19 12.48

Lab Sample Id: 630600-001 Date Collected: 07.09.19 13.10 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: AMB Date Prep: 07.13.19 15.20 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00197	0.00197		mg/kg	07.15.19 05.52	U	1
Toluene	108-88-3	< 0.00197	0.00197		mg/kg	07.15.19 05.52	U	1
Ethylbenzene	100-41-4	< 0.00197	0.00197		mg/kg	07.15.19 05.52	U	1
m,p-Xylenes	179601-23-1	< 0.00394	0.00394		mg/kg	07.15.19 05.52	U	1
o-Xylene	95-47-6	< 0.00197	0.00197		mg/kg	07.15.19 05.52	U	1
Total Xylenes	1330-20-7	< 0.00197	0.00197		mg/kg	07.15.19 05.52	U	1
Total BTEX		< 0.00197	0.00197		mg/kg	07.15.19 05.52	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	106	%	70-130	07.15.19 05.52		
1,4-Difluorobenzene		540-36-3	95	%	70-130	07.15.19 05.52		



### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

07.15.19 11.00

Sample Id: SS02

Matrix: Soil

Date Received:07.11.19 12.48

Lab Sample Id: 630600-002

CHE

Date Collected: 07.09.19 13.15

Sample Depth: 0.5 ft

Prep Method: E300P

Analytical Method: Chloride by EPA 300

% Moisture:

Tech: CHE

Analyst:

Date Prep:

Basis: Wet Weight

Seq Number: 3095416

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7800	49.6	mg/kg	07.15.19 17.06		10

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

% Moisture:

Tech:
Analyst:

DVM ARM

Date Prep: 07.14.19 08.00

Basis: Wet Weight SUB: T104704400-18-16

Seq Number: 3095300

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	17.3	15.0		mg/kg	07.14.19 12.16		1
Diesel Range Organics (DRO)	C10C28DRO	1210	15.0		mg/kg	07.14.19 12.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	90.1	15.0		mg/kg	07.14.19 12.16		1
Total TPH	PHC635	1320	15.0		mg/kg	07.14.19 12.16		1
Total GRO-DRO	PHC628	1230	15.0		mg/kg	07.14.19 12.16		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	93	%	70-135	07.14.19 12.16		
o-Terphenyl		84-15-1	126	%	70-135	07.14.19 12.16		



Tech:

# Certificate of Analytical Results 630600

### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: SS02 Matrix: Soil Date Received:07.11.19 12.48

Lab Sample Id: 630600-002 Date Collected: 07.09.19 13.15 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: AMB Date Prep: 07.13.19 15.20 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	07.15.19 06.14	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	07.15.19 06.14	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	07.15.19 06.14	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	07.15.19 06.14	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	07.15.19 06.14	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	07.15.19 06.14	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	07.15.19 06.14	U	1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	90	%	70-130	07.15.19 06.14		
4-Bromofluorobenzene		460-00-4	105	%	70-130	07.15.19 06.14		



### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: **SS03**  Matrix: Soil Date Received:07.11.19 12.48

Date Collected: 07.09.19 13.20 Lab Sample Id: 630600-003

Sample Depth: 0.5 ft

Prep Method: E300P

Analytical Method: Chloride by EPA 300

% Moisture:

Tech: CHE

Date Prep:

Basis:

CHE Analyst: Seq Number: 3095416

SUB: T104704400-18-16

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9500	49.9	mg/kg	07.15.19 17.13		10

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

% Moisture:

DVM Tech: ARM

Seq Number: 3095300

Analyst:

Date Prep:

Basis: Wet Weight

07.14.19 08.00

07.15.19 11.00

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	07.14.19 12.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	07.14.19 12.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	07.14.19 12.41	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	07.14.19 12.41	U	1
Total GRO-DRO	PHC628	<15.0	15.0		mg/kg	07.14.19 12.41	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	91	%	70-135	07.14.19 12.41		
o-Terphenyl		84-15-1	94	%	70-135	07.14.19 12.41		



Tech:

# Certificate of Analytical Results 630600

### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: SS03 Matrix: Soil Date Received:07.11.19 12.48

Lab Sample Id: 630600-003 Date Collected: 07.09.19 13.20 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: AMB Date Prep: 07.13.19 15.20 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	07.16.19 11.21	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	07.16.19 11.21	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	07.16.19 11.21	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	07.16.19 11.21	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	07.16.19 11.21	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	07.16.19 11.21	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	07.16.19 11.21	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	94	%	70-130	07.16.19 11.21		
4-Bromofluorobenzene		460-00-4	109	%	70-130	07.16.19 11.21		



# LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: **SS04**  Matrix: Soil Date Received:07.11.19 12.48

Lab Sample Id: 630600-004

Date Collected: 07.09.19 13.25

Sample Depth: 0.5 ft Prep Method: E300P

Analytical Method: Chloride by EPA 300

% Moisture:

CHE Tech:

Date Prep:

PHCG2835

Basis:

Wet Weight

CHE Analyst: Seq Number: 3095416

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11100	50.0	mg/kg	07.15.19 17.21		10

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

07.14.19 13.05

mg/kg

U

1

% Moisture:

DVM Tech: ARM

Analyst:

Date Prep:

07.14.19 08.00

07.15.19 11.00

Basis: Wet Weight SUB: T104704400-18-16

Seq Number: 3095300

Cas Number Result RL**Parameter** Units **Analysis Date** Flag Dil PHC610 <15.0 07.14.19 13.05 U Gasoline Range Hydrocarbons (GRO) 15.0 mg/kg 1 Diesel Range Organics (DRO) C10C28DRO <15.0 15.0 mg/kg 07.14.19 13.05 U 1 Motor Oil Range Hydrocarbons (MRO)

15.0

Total TPH PHC635 <15.0 15.0 mg/kg 07.14.19 13.05 U Total GRO-DRO PHC628 U <15.0 15.0 07.14.19 13.05 mg/kg % Cas Number Units Surrogate Limits **Analysis Date** Flag Recovery 1-Chlorooctane 111-85-3 70-135 07.14.19 13.05 99 % 103 o-Terphenyl 84-15-1 % 70-135 07.14.19 13.05

<15.0



Tech:

# Certificate of Analytical Results 630600

### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: SS04 Matrix: Soil Date Received:07.11.19 12.48

Lab Sample Id: 630600-004 Date Collected: 07.09.19 13.25 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: AMB Date Prep: 07.13.19 15.20 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	07.15.19 06.58	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	07.15.19 06.58	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	07.15.19 06.58	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	07.15.19 06.58	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	07.15.19 06.58	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	07.15.19 06.58	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	07.15.19 06.58	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	98	%	70-130	07.15.19 06.58		
1,4-Difluorobenzene		540-36-3	92	%	70-130	07.15.19 06.58		



### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: SS05

Matrix: Soil

Date Received:07.11.19 12.48

Lab Sample Id: 630600-005

Date Collected: 07.09.19 13.30

Sample Depth: 0.5 ft

Prep Method: E300P

Analytical Method: Chloride by EPA 300

% Moisture:

Tech: CHE

Date Prep:

Basis:

Analyst: CHE Seq Number: 3095416

07.15.19 11.00

SUB: T104704400-18-16

Wet Weight

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 9840
 50.0
 mg/kg
 07.15.19 17.28
 10

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM Seq Number: 3095300

Date Prep: 07.14.19 08.00

Basis: Wet Weight SUB: T104704400-18-16

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	07.14.19 13.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	07.14.19 13.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0		mg/kg	07.14.19 13.30	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	07.14.19 13.30	U	1
Total GRO-DRO	PHC628	<15.0	15.0		mg/kg	07.14.19 13.30	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	103	%	70-135	07.14.19 13.30		
o-Terphenyl		84-15-1	108	%	70-135	07.14.19 13.30		



Tech:

# Certificate of Analytical Results 630600

### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: SS05 Matrix: Soil Date Received:07.11.19 12.48

Lab Sample Id: 630600-005 Date Collected: 07.09.19 13.30 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: AMB Date Prep: 07.13.19 15.20 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00196	0.00196		mg/kg	07.15.19 07.20	U	1
Toluene	108-88-3	< 0.00196	0.00196		mg/kg	07.15.19 07.20	U	1
Ethylbenzene	100-41-4	< 0.00196	0.00196		mg/kg	07.15.19 07.20	U	1
m,p-Xylenes	179601-23-1	< 0.00393	0.00393		mg/kg	07.15.19 07.20	U	1
o-Xylene	95-47-6	< 0.00196	0.00196		mg/kg	07.15.19 07.20	U	1
Total Xylenes	1330-20-7	< 0.00196	0.00196		mg/kg	07.15.19 07.20	U	1
Total BTEX		< 0.00196	0.00196		mg/kg	07.15.19 07.20	U	1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	112	%	70-130	07.15.19 07.20		
1,4-Difluorobenzene		540-36-3	98	%	70-130	07.15.19 07.20		



# LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: **SS06** 

Seq Number: 3095517

Tech:

Matrix:

Soil

Date Received:07.11.19 12.48

Lab Sample Id: 630600-006

Date Collected: 07.09.19 13.35

Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

CHE

Date Prep:

% Moisture: Basis:

Prep Method: E300P

CHE Analyst:

07.15.19 11.15

SUB: T104704400-18-16

Wet Weight

**Parameter** Result Cas Number RLUnits **Analysis Date** Dil Flag Chloride 16887-00-6 14600 99.4 mg/kg 07.15.19 18.33 20

Analytical Method: TPH by SW8015 Mod

DVM

Tech: Analyst: ARM

o-Terphenyl

Date Prep: 07.14.19 08.00

103

%

70-135

Prep Method: TX1005P

07.14.19 13.54

% Moisture:

Basis: Wet Weight SUB: T104704400-18-16

Seq Number: 3095300

Cas Number Result RL**Parameter** Units **Analysis Date** Flag Dil PHC610 07.14.19 13.54 Gasoline Range Hydrocarbons (GRO) <15.0 15.0 mg/kg U 1 C10C28DRO 43.3 15.0 mg/kg 07.14.19 13.54 Diesel Range Organics (DRO) 1 Motor Oil Range Hydrocarbons (MRO) PHCG2835 <15.0 15.0 07.14.19 13.54 U mg/kg 1 **Total TPH** PHC635 43.3 15.0 mg/kg 07.14.19 13.54 1 Total GRO-DRO PHC628 43.3 15.0 07.14.19 13.54 mg/kg 1 % Cas Number Units Surrogate Limits **Analysis Date** Flag Recovery 1-Chlorooctane 111-85-3 70-135 07.14.19 13.54 92 %

84-15-1



Tech:

# Certificate of Analytical Results 630600

### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: SS06 Matrix: Soil Date Received:07.11.19 12.48

Lab Sample Id: 630600-006 Date Collected: 07.09.19 13.35 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

 Analyst:
 AMB
 Date Prep:
 07.13.19 15.20
 Basis:
 Wet Weight

 Seq Number:
 3095520
 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	07.15.19 07.42	U	1
Toluene	108-88-3	0.0160	0.00200		mg/kg	07.15.19 07.42		1
Ethylbenzene	100-41-4	0.00480	0.00200		mg/kg	07.15.19 07.42		1
m,p-Xylenes	179601-23-1	0.0129	0.00399		mg/kg	07.15.19 07.42		1
o-Xylene	95-47-6	0.00548	0.00200		mg/kg	07.15.19 07.42		1
<b>Total Xylenes</b>	1330-20-7	0.0184	0.00200		mg/kg	07.15.19 07.42		1
Total BTEX		0.0392	0.00200		mg/kg	07.15.19 07.42		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	99	%	70-130	07.15.19 07.42		
1.4-Difluorobenzene		540-36-3	92	%	70-130	07.15.19 07.42		



### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

07.15.19 11.15

Sample Id: SS07

Matrix: Soil

Date Received:07.11.19 12.48

Lab Sample Id: 630600-007

Date Collected: 07.09.19 13.40

Sample Depth: 0.5 ft

Prep Method: E300P

Analytical Method: Chloride by EPA 300

% Moisture:

Tech: CHE

Date Prep:

70 IVIOISTUIC.

Analyst: CHE Seq Number: 3095517 Basis: Wet Weight

SUB: T104704400-18-16

Parameter Cas Number Result RLUnits **Analysis Date** Flag Dil 16887-00-6 Chloride 11100 100 07.15.19 18.41 D 20 mg/kg

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

% Moisture:

Tech: Analyst: DVM ARM

Date Prep: 07.14.19 08.00

Basis: Wet Weight

Seq Number: 3095300

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9		mg/kg	07.14.19 14.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9		mg/kg	07.14.19 14.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9		mg/kg	07.14.19 14.19	U	1
Total TPH	PHC635	<14.9	14.9		mg/kg	07.14.19 14.19	U	1
Total GRO-DRO	PHC628	<14.9	14.9		mg/kg	07.14.19 14.19	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	100	%	70-135	07.14.19 14.19		
o-Terphenyl		84-15-1	111	%	70-135	07.14.19 14.19		



Tech:

# Certificate of Analytical Results 630600

### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: SS07 Matrix: Soil Date Received:07.11.19 12.48

Lab Sample Id: 630600-007 Date Collected: 07.09.19 13.40 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: AMB Date Prep: 07.13.19 15.20 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	07.15.19 08.04	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	07.15.19 08.04	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	07.15.19 08.04	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	07.15.19 08.04	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	07.15.19 08.04	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	07.15.19 08.04	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	07.15.19 08.04	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	97	%	70-130	07.15.19 08.04		
4-Bromofluorobenzene		460-00-4	107	%	70-130	07.15.19 08.04		



# LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: **SS08**  Matrix: Soil Date Received:07.11.19 12.48

Lab Sample Id: 630600-008 Date Collected: 07.09.19 13.45 Sample Depth: 0.5 ft

Prep Method: E300P

Analytical Method: Chloride by EPA 300

CHE

% Moisture:

CHE Tech:

Seq Number: 3095517

Analyst:

Date Prep: 07.15.19 11.15

Basis: Wet Weight

SUB: T104704400-18-16

**Parameter** Cas Number Result RLUnits **Analysis Date** Flag Dil Chloride 16887-00-6 10 9840 50.1 mg/kg 07.15.19 18.48

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

% Moisture:

DVM Tech: ARM

Analyst:

**Parameter** 

Date Prep: 07.14.19 08.00

Basis: Wet Weight SUB: T104704400-18-16

Flag

Seq Number: 3095300

Cas Number Result RLUnits **Analysis Date** Flag Dil PHC610 07.14.19 14.43 U Gasoline Range Hydrocarbons (GRO) <15.0 15.0 mg/kg 1

Diesel Range Organics (DRO) C10C28DRO <15.0 15.0 mg/kg 07.14.19 14.43 U 1 Motor Oil Range Hydrocarbons (MRO) PHCG2835 <15.0 15.0 07.14.19 14.43 U mg/kg Total TPH PHC635 <15.0 15.0 mg/kg 07.14.19 14.43 U Total GRO-DRO PHC628 07.14.19 14.43 U <15.0 15.0 mg/kg 1

~	~	%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	
1-Chlorooctane	111-85-3	96	%	70-135	07.14.19 14.43	
o-Terphenyl	84-15-1	109	%	70-135	07.14.19 14.43	



Tech:

# Certificate of Analytical Results 630600

### LT Environmental, Inc., Arvada, CO

#### PLU BIG SINKS FED BATTERY

Sample Id: SS08 Matrix: Soil Date Received:07.11.19 12.48

Lab Sample Id: 630600-008 Date Collected: 07.09.19 13.45 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: AMB Date Prep: 07.13.19 15.20 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	07.15.19 08.26	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	07.15.19 08.26	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	07.15.19 08.26	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	07.15.19 08.26	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	07.15.19 08.26	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	07.15.19 08.26	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	07.15.19 08.26	U	1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	<b>Analysis Date</b>	Flag	
1,4-Difluorobenzene		540-36-3	94	%	70-130	07.15.19 08.26		
4-Bromofluorobenzene		460-00-4	104	%	70-130	07.15.19 08.26		



# 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.

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

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.



#### **QC Summary** 630600

#### LT Environmental, Inc. PLU BIG SINKS FED BATTERY

Analytical Method: Chloride by EPA 300

Seq Number: 3095416

MB Sample Id: 7682025-1-BLK

Matrix: Solid LCS Sample Id: 7682025-1-BKS

E300P Prep Method:

Date Prep: 07.15.19

LCSD Sample Id: 7682025-1-BSD

Spike LCS LCS Limits %RPD RPD Limit Units LCSD LCSD Analysis Flag **Parameter** Result Amount Result %Rec Date %Rec Result 07.15.19 13:52 Chloride < 0.858 250 240 96 240 96 90-110 0 20 mg/kg

Analytical Method: Chloride by EPA 300

Seq Number:

3095517

Matrix: Solid

Prep Method: Date Prep: 07.15.19

E300P

MB Sample Id:

7682026-1-BLK

LCS Sample Id: 7682026-1-BKS

LCSD Sample Id: 7682026-1-BSD

**Parameter** 

MB

LCS Result LCS LCSD

LCSD

%RPD RPD Limit Units

Analysis

07.15.19 17:57

Chloride

Result Amount < 5.00 250

Spike

MR

%Rec 241 96

Result 241 %Rec 96 90-110

Limits

0 20

Flag Date

Analytical Method: Chloride by EPA 300

3095416

Matrix: Soil

Prep Method: Date Prep: E300P

07.15.19

Seq Number: Parent Sample Id:

630592-001

MS Sample Id:

630592-001 S **MSD** 

**MSD** Limits MSD Sample Id: 630592-001 SD

mg/kg

mg/kg

mg/kg

Analysis

**Parameter** 

Chloride

Parent Spike Result Amount

249

452

135

0.993

MS MS Result %Rec 671 88

Result 672 %Rec 88

90-110 0 20

%RPD RPD Limit Units

Prep Method:

20

Date 07.15.19 14:19

Flag X

Analytical Method: Chloride by EPA 300

Seq Number:

3095416

Matrix: Soil

630592-002 S

Date Prep: MSD Sample Id: E300P

07.15.19

630592-002 SD

**Parameter** 

Chloride

Parent Sample Id:

630592-002

Parent Spike Result Amount

250

MS Sample Id: MS MS Result %Rec

367

**MSD** 

**MSD** Result %Rec

93

Limits

0

0

%RPD RPD Limit Units

Analysis

07.15.19 16:01

Flag Date

Analytical Method: Chloride by EPA 300

3095517

Matrix: Soil

MS Sample Id:

93

630733-004 S

367

90-110

Prep Method: Date Prep:

E300P

07.15.19

MSD Sample Id: 630733-004 SD

**Parameter** 

Chloride

Seq Number:

Parent Sample Id:

630733-004

Parent Spike Result

MS Result Amount 250 281

MS %Rec 112

**MSD** Result 281

Limits **MSD** %Rec 112 90-110

%RPD RPD Limit Units

20

Analysis

mg/kg

Flag Date 07.15.19 18:19 X

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

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result = MS/LCS Result

= MSD/LCSD Result

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



#### **QC Summary** 630600

#### LT Environmental, Inc. PLU BIG SINKS FED BATTERY

Analytical Method: Chloride by EPA 300

3095517 Matrix: Soil

E300P Prep Method:

> Date Prep: 07.15.19

MS Sample Id: 630733-009 S Parent Sample Id: 630733-009

MSD Sample Id: 630733-009 SD

Spike MS MS Limits %RPD RPD Limit Units Parent **MSD MSD** Analysis Flag **Parameter** Result Amount Result Date %Rec %Rec Result 07.15.19 20:00 Chloride 262 251 502 96 501 95 90-110 0 20 mg/kg

Analytical Method: TPH by SW8015 Mod

3095300

Matrix: Solid

TX1005P Prep Method:

07.14.19

Seq Number: MB Sample Id:

Seq Number:

7681990-1-BLK

LCS Sample Id: 7681990-1-BKS

Date Prep:

LCSD Sample Id: 7681990-1-BSD

Flag

Flag

MB Spike LCS LCS %RPD RPD Limit Units LCSD LCSD Limits Analysis **Parameter** Result %Rec Date Result Amount Result %Rec Gasoline Range Hydrocarbons (GRO) < 8.00 1000 1090 109 1020 102 70-135 7 20 07.14.19 10:15 mg/kg Diesel Range Organics (DRO) 1000 1150 1140 70-135 1 20 07.14.19 10:15 < 8.13 115 114 mg/kg

MB MB LCS LCS LCSD LCSD Limits Units Analysis Surrogate %Rec %Rec Flag Flag %Rec Flag Date 07.14.19 10:15 1-Chlorooctane 94 90 90 70-135 % 94 99 98 70-135 07.14.19 10:15 o-Terphenyl %

Analytical Method: TPH by SW8015 Mod

Seq Number:

3095300

Prep Method:

TX1005P

Matrix: Soil

Date Prep:

07.14.19

Parent Sample Id:

630600-001

MS Sample Id: 630600-001 S MSD Sample Id: 630600-001 SD

MS MS %RPD RPD Limit Units Spike Analysis Parent **MSD** MSD Limits **Parameter** Result Amount Result %Rec Date Result %Rec Gasoline Range Hydrocarbons (GRO) 997 07.14.19 11:28 10.7 1030 102 1060 105 70-135 3 20 mg/kg 997 1190 70-135 3 20 07.14.19 11:28 Diesel Range Organics (DRO) 26.9 1160 114 117 mg/kg

MS MS **MSD** Limits Units Analysis **MSD Surrogate** %Rec Flag %Rec Flag Date 07.14.19 11:28 91 94 1-Chlorooctane 70-135 % 07.14.19 11:28 o-Terphenyl 115 117 70-135 %

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

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result

= MS/LCS Result

= MSD/LCSD Result

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

Flag



#### **QC Summary** 630600

#### LT Environmental, Inc. PLU BIG SINKS FED BATTERY

Analytical Method: BTEX by EPA 8021B SW5030B Prep Method: Seq Number: 3095520 Matrix: Solid Date Prep: 07.13.19

LCS Sample Id: 7681948-1-BKS LCSD Sample Id: 7681948-1-BSD MB Sample Id: 7681948-1-BLK

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date
Benzene	< 0.00200	0.100	0.0743	74	0.0815	82	70-130	9	35	mg/kg	07.15.19 09:54
Toluene	< 0.00200	0.100	0.0861	86	0.0948	95	70-130	10	35	mg/kg	07.15.19 09:54
Ethylbenzene	< 0.00200	0.100	0.0853	85	0.0959	96	70-130	12	35	mg/kg	07.15.19 09:54
m,p-Xylenes	< 0.00400	0.200	0.174	87	0.195	98	70-130	11	35	mg/kg	07.15.19 09:54
o-Xylene	< 0.00200	0.100	0.0827	83	0.0923	92	70-130	11	35	mg/kg	07.15.19 09:54
Surrogate	MB	MB Flag	L(		LCS Flag	LCSE		_	imits	Units	Analysis Date

%Rec Flag %Rec Flag Flag Date %Rec 92 90 94 07.15.19 09:54 1,4-Difluorobenzene 70-130 % 97 103 07.15.19 09:54 4-Bromofluorobenzene 101 70-130 %

Analytical Method: BTEX by EPA 8021B

SW5030B Prep Method: Seq Number: 3095520 Matrix: Soil Date Prep: 07.13.19 MS Sample Id: 630566-039 S MSD Sample Id: 630566-039 SD Parent Sample Id: 630566-039

Spike MS %RPD RPD Limit Units MS **MSD** Limits Analysis **Parent MSD Parameter** Flag Result Amount Result %Rec Date Result %Rec 07.16.19 11:43 70-130 17 Benzene < 0.00199 0.0996 0.0901 90 0.0759 76 35 mg/kg Toluene < 0.00199 0.0996 0.0861 86 0.0881 88 70-130 2 35 07.16.19 11:43 mg/kg 07.16.19 11:43 Ethylbenzene < 0.00199 0.0996 0.0933 94 0.0821 82 70-130 13 35 mg/kg 07.16.19 11:43 m,p-Xylenes < 0.00398 0.199 0.189 95 70-130 35 mg/kg 0.165 83 14 0.0797 70-130 07.16.19 11:43 o-Xylene 0.07160.0996 0.0887 17 8 11 35 mg/kg X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		70-130	%	07.16.19 11:43
4-Bromofluorobenzene	114		125		70-130	%	07.16.19 11:43

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

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result

= MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

	Pooled may	Relinquished by: (Signature)					7: Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed		35	5508	5507	3506	5505	5504	3303	5002	1055	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name: Rober	P.O. Number: New Spill	Project Number:	Project Name: PL	Phone: 432.7	City, State ZIP: Midlar	Address: 3300 l		Project Manager: Dan Moir	Pag
(	6	nature)		\$75.00 will be applied t	nly for the cost of sam	nt and relinguishment	200.8 / 6020: ! Metal(s) to be a	-		4							8	ion Matrix	Yes No NIA	96	(S)	28	Temp Blank:	Robert McAfee	06-21-	(	PLU Big Sinks	432.704.5178	Midland, TX 79705	3300 North A Street	LT Environmental, Inc., Permian office	Moir	
	KKK	Received by:	Donoisod	o each project an	ples and shall no	of samples const	000			4							07/09/19	Sampled					c (Yes) No		19		Fed Bathry				, Permian of		Hobb
-	>	by: (Signature)	hu: (Cianatur	d a charge of \$5 i	t assume any res	itutes a valid pur	TCLP / SPLP 6010: 8RCRA			13115	1340	1335	1330	1325	1320	13/5	13/0	Sampled	Total Containers.	Correction Factor:	NYTO	Thermometer ID	Wet Ice:	Due Date:	Rush:	Routine		Email: c	0	Þ		m	s,NM (575-392-7
				for each sample s	ponsibility for an	chase order from	6010: 8RCF	11 1		•							0.5	Depth	0	2 6	4		Yes No	ate:	Rush: 3day	e	Turn Around	imoir@ltenv.	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	550) Phoenix,A
	1 11/11/1	Date/Time	ПафаПіг	submitted to Xenc	y losses or expen	client company to	RA Sb As Ba	2 05	A	×	×	×	×	*	×	×	×	TPH	EPA	8015	5)		s			*		Email: dmoir@ltenv.com rmcafee@ltenv.com	Carlsbad, NM		e: XTO-Energy	Kyle Littrel	Z (480-355-0900
-	248 2	-	200	o, but not analyzed.	ses incurred by	Xenco, its affil		Bo B	A.B.	/ ×	×	×	×	×	×	×	×	Chlo										@ltenv.com	MN		rgy	е	) Atlanta,GA (
		Kelliquistied by. (olgitatule)	Relinquished by: (Signat	zed. These terms will be enforced	the client if such losses are due to	lates and subcontractors. It assig	Be Cd Cr Co Cu Pb Mn Mo Ni	5 5 6																			ANALYSIS REQUEST						Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
			ure) Received by: (Signature)	ms will be enforced unless previously negotiated.	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 service. Xenco will be inforced unless previously negotiated.	tion: 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	Se Ag TI U	Ma Ma Ma Ni K Se Aa																			EST	Deliverables: EDD	-	_ =		Work C	-620-2000) www.xenco.com
		O'Si lataro)	Signature)				1631 / 245.	SiO2 Na Sr Tl Sn										Sa		TAT sta						•	W	ADari L			□PRP □Brownfields □	Work Order Comments	co.com Page
			Date/Time				470 /	Sn U V Zn		4							O.Serte	Sample Comments		TAT starts the day received by lab, if received by 4:30pm							Work Order Notes	Culci.	CANAL PAGE IA	DD Thurst IV	RC  uperfund	ts	of

# **Inter-Office Shipment**



Page 1 of 2

IOS Number 43274

Date/Time: 07/11/19 15:03 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.: 775692882670 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
630600-001	S	SS01	07/09/19 13:10	E300_CL	Chloride by EPA 300	07/15/19	01/05/20	JKR	CL	
630600-001	S	SS01	07/09/19 13:10	SW8021B	BTEX by EPA 8021B	07/15/19	07/23/19	JKR	BR4FBZ BZ BZME EBZ X	
630600-001	S	SS01	07/09/19 13:10	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/23/19	JKR	GRO-DRO PHCC10C28 PI	
630600-002	S	SS02	07/09/19 13:15	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/23/19	JKR	GRO-DRO PHCC10C28 PI	
630600-002	S	SS02	07/09/19 13:15	E300_CL	Chloride by EPA 300	07/15/19	01/05/20	JKR	CL	
630600-002	S	SS02	07/09/19 13:15	SW8021B	BTEX by EPA 8021B	07/15/19	07/23/19	JKR	BR4FBZ BZ BZME EBZ X	
630600-003	S	SS03	07/09/19 13:20	SW8021B	BTEX by EPA 8021B	07/15/19	07/23/19	JKR	BR4FBZ BZ BZME EBZ X	
630600-003	S	SS03	07/09/19 13:20	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/23/19	JKR	GRO-DRO PHCC10C28 PI	
630600-003	S	SS03	07/09/19 13:20	E300_CL	Chloride by EPA 300	07/15/19	01/05/20	JKR	CL	
630600-004	S	SS04	07/09/19 13:25	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/23/19	JKR	GRO-DRO PHCC10C28 PI	
630600-004	S	SS04	07/09/19 13:25	SW8021B	BTEX by EPA 8021B	07/15/19	07/23/19	JKR	BR4FBZ BZ BZME EBZ X	
630600-004	S	SS04	07/09/19 13:25	E300_CL	Chloride by EPA 300	07/15/19	01/05/20	JKR	CL	
630600-005	S	SS05	07/09/19 13:30	SW8021B	BTEX by EPA 8021B	07/15/19	07/23/19	JKR	BR4FBZ BZ BZME EBZ X	
630600-005	S	SS05	07/09/19 13:30	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/23/19	JKR	GRO-DRO PHCC10C28 PI	
630600-005	S	SS05	07/09/19 13:30	E300_CL	Chloride by EPA 300	07/15/19	01/05/20	JKR	CL	
630600-006	S	SS06	07/09/19 13:35	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/23/19	JKR	GRO-DRO PHCC10C28 PI	
630600-006	S	SS06	07/09/19 13:35	SW8021B	BTEX by EPA 8021B	07/15/19	07/23/19	JKR	BR4FBZ BZ BZME EBZ X	
630600-006	S	SS06	07/09/19 13:35	E300_CL	Chloride by EPA 300	07/15/19	01/05/20	JKR	CL	
630600-007	S	SS07	07/09/19 13:40	E300_CL	Chloride by EPA 300	07/15/19	01/05/20	JKR	CL	
630600-007	S	SS07	07/09/19 13:40	SW8021B	BTEX by EPA 8021B	07/15/19	07/23/19	JKR	BR4FBZ BZ BZME EBZ X	
630600-007	S	SS07	07/09/19 13:40	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/23/19	JKR	GRO-DRO PHCC10C28 PF	
630600-008	S	SS08	07/09/19 13:45	SW8021B	BTEX by EPA 8021B	07/15/19	07/23/19	JKR	BR4FBZ BZ BZME EBZ X	
630600-008	S	SS08	07/09/19 13:45	E300_CL	Chloride by EPA 300	07/15/19	01/05/20	JKR	CL	
630600-008	S	SS08	07/09/19 13:45	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/23/19	JKR	GRO-DRO PHCC10C28 PF	



Page 2 of 2

IOS Number 43274

Date/Time: 07/11/19 15:03

Created by: Elizabeth Mcclellan

Lab# From: Carlsbad

Delivery Priority:

Lab# To: Midland

Air Bill No.: 775692882670

**Inter Office Shipment or Sample Comments:** 

Relinquished By:

Elizabeth McClellan

Date Relinquished: <u>07/11/2019</u>

Please send report to: Jessica Kramer

Address: 1089 N Canal Street

E-Mail: jessica.kramer@xenco.com

Received By:

Date Received: <u>07/12/2019 11:42</u>

Cooler Temperature: 0.4

# Received by OCD: 3/26/2025 7:38:502AM1

#### **XENCO Laboratories**

# **Inter Office Report- Sample Receipt Checklist**

Sent To: Midland IOS #: 43274

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

Temperature Measuring device used: R8

**Date Sent:** 07/11/2019 03:03 PM Sent By: Elizabeth McClellan

Received By: Brianna Teel	Date Received: 07/12/2019 1	1:42 AM	
	Sample Receipt Checkl	ist	Comments
#1 *Temperature of cooler(s)?		.4	
#2 *Shipping container in good condition	on?	Yes	
#3 *Samples received with appropriate	temperature?	Yes	
#4 *Custody Seals intact on shipping c	ontainer/ cooler?	Yes	
#5 *Custody Seals Signed and dated for	or Containers/coolers	Yes	
#6 *IOS present?		Yes	
#7 Any missing/extra samples?		No	
#8 IOS agrees with sample label(s)/ma	trix?	Yes	
#9 Sample matrix/ properties agree wit	h IOS?	Yes	
#10 Samples in proper container/ bottle	e?	Yes	
#11 Samples properly preserved?		Yes	
#12 Sample container(s) intact?		Yes	
#13 Sufficient sample amount for indic	ated test(s)?	Yes	
#14 All samples received within hold til	me?	Yes	
* Must be completed for after-hours d NonConformance:	elivery of samples prior to plac	ing in the refrigerator	
Corrective Action Taken:			
	Nonconformance Docum	nentation	
Contact:	Contacted by :	Date:	
Checklist reviewed by:	Brianna Teel	Date: 07/12/2019	



# XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 07/11/2019 12:48:00 PM

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

Work Order #: 630600 Temperature Measuring device used : T-NM-007

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2	2.8	
#2 *Shipping container in good condition?	Y	es	
#3 *Samples received on ice?	Y	es	
#4 *Custody Seals intact on shipping conta	iner/ cooler?	No	
#5 Custody Seals intact on sample bottles?	)	No	
#6*Custody Seals Signed and dated?	N	I/A	
#7 *Chain of Custody present?	Y	es	
#8 Any missing/extra samples?	1	No	
#9 Chain of Custody signed when relinquis	hed/ received?	es	
#10 Chain of Custody agrees with sample I	abels/matrix? Y	es	
#11 Container label(s) legible and intact?	Y	es	
#12 Samples in proper container/ bottle?	Y	es	
#13 Samples properly preserved?	Y	es	
#14 Sample container(s) intact?	Y	es	
#15 Sufficient sample amount for indicated	test(s)?	es	
#16 All samples received within hold time?	Y	es	
#17 Subcontract of sample(s)?	Y	es	Subbed to Xenco Midland.
#18 Water VOC samples have zero headsp	pace?	I/A	

Analyst:		PH Device/Lot#:	
	Checklist completed by:	Elizabeth McClellan	Date: <u>07/11/2019</u>
	Checklist reviewed by:	Jessica Warmer  Jessica Kramer	Date: 07/12/2019

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

# **Analytical Report 640781**

for

LT Environmental, Inc.

Project Manager: Dan Moir
PLU Big Sinks 25 Federal Battery
2RP-4398
28-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)



28-OCT-19

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

Reference: XENCO Report No(s): 640781

**PLU Big Sinks 25 Federal Battery** 

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) 640781. 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. 640781 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

Jessica Vermer

**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 640781**

# LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
PH01	S	10-22-19 13:35	1 ft	640781-001
PH01A	S	10-22-19 13:40	2 ft	640781-002
PH01B	S	10-22-19 13:45	3 ft	640781-003
PH01C	S	10-22-19 13:50	4 ft	640781-004
PH01D	S	10-22-19 13:55	5 ft	640781-005
PH02	S	10-22-19 14:10	1 ft	640781-006
PH02A	S	10-22-19 14:15	2 ft	640781-007
PH02B	S	10-22-19 14:20	3 ft	640781-008
PH02C	S	10-22-19 14:25	4 ft	640781-009
PH02D	S	10-22-19 14:30	5 ft	640781-010
BH01	S	10-22-19 16:20	1 ft	640781-011
BH01A	S	10-22-19 16:25	2 ft	640781-012
BH01B	S	10-22-19 16:30	3 ft	640781-013
BH01C	S	10-22-19 16:35	4 ft	640781-014
BH01D	S	10-22-19 16:40	5 ft	640781-015
FS01	S	10-22-19 12:40	5 ft	640781-016
FS02	S	10-22-19 12:45	5 ft	640781-017
SW03	S	10-22-19 12:50	1 - 5 ft	640781-018
SW01	S	10-22-19 12:55	1 - 5 ft	640781-019
SW02	S	10-22-19 13:00	1 - 5 ft	640781-020
SW04	S	10-22-19 13:05	1 - 5 ft	640781-021

#### **CASE NARRATIVE**

Client Name: LT Environmental, Inc.

Project Name: PLU Big Sinks 25 Federal Battery

 Project ID:
 2RP-4398
 Report Date:
 28-OCT-19

 Work Order Number(s):
 640781
 Date Received:
 10/23/2019

#### Sample receipt non conformances and comments:

None

#### Sample receipt non conformances and comments per sample:

None

#### Analytical non conformances and comments:

Batch: LBA-3105377 Chloride by EPA 300

Lab Sample ID 640781-020 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride 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: 640781-009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020, -021.

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

Batch: LBA-3105530 BTEX by EPA 8021B

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

Batch: LBA-3105532 BTEX by EPA 8021B

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



**Project Id:** 2RP-4398 **Contact:** Dan Moir

**Project Location:** 

# Certificate of Analysis Summary 640781

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

Date Received in Lab: Wed Oct-23-19 09:12 am

Report Date: 28-OCT-19 Project Manager: Jessica Kramer

	Lab Id:	640781-0	001	640781-	002	640781-0	003	640781-	004	640781-	005	640781-	006
	Field Id:	PH01		PH012	A	PH01I	3	PH01	C	PH011	D	PH02	2
Analysis Requested	Depth:	1- ft		2- ft		3- ft		4- ft		5- ft		1- ft	
	Matrix:	SOIL		SOIL	,	SOIL		SOIL		SOIL	.	SOIL	_
	Sampled:	Oct-22-19	13:35	Oct-22-19	13:40	Oct-22-19	13:45	Oct-22-19	13:50	Oct-22-19	13:55	Oct-22-19	14:10
BTEX by EPA 8021B	Extracted:	Oct-27-19	10:30	Oct-27-19	10:30	Oct-27-19	10:30	Oct-27-19	10:30	Oct-27-19	10:30	Oct-27-19	10:30
SUB: T104704400-19-19	Analyzed:	Oct-27-19	14:02	Oct-27-19	14:23	Oct-27-19	14:43	Oct-27-19	15:03	Oct-27-19	15:23	Oct-27-19	15:43
	Units/RL:	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	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
Toluene		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
Ethylbenzene		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
m,p-Xylenes		< 0.00402	0.00402	< 0.00398	0.00398	< 0.00401	0.00401	< 0.00403	0.00403	< 0.00399	0.00399	< 0.00400	0.00400
o-Xylene		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
Total Xylenes		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
Total BTEX		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
Chloride by EPA 300	Extracted:	Oct-24-19	14:00	Oct-24-19	14:00	Oct-24-19	14:00	Oct-24-19	14:00	Oct-24-19	14:00	Oct-24-19	14:00
SUB: T104704400-19-19	Analyzed:	Oct-24-19 2	20:01	Oct-24-19	20:16	Oct-24-19	20:21	Oct-24-19	20:26	Oct-24-19	20:31	Oct-24-19	20:36
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.97	4.97	<4.97	4.97	< 5.01	5.01	8.30	5.00	7.72	5.00	<4.99	4.99
TPH by SW8015 Mod	Extracted:	Oct-24-19	11:00	Oct-24-19	11:00	Oct-24-19	11:00	Oct-24-19	11:00	Oct-24-19	11:00	Oct-24-19	11:00
SUB: T104704400-19-19	Analyzed:	Oct-24-19	13:13	Oct-24-19	14:16	Oct-24-19	14:37	Oct-24-19	14:58	Oct-24-19	15:32	Oct-24-19	15:53
	Units/RL:	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	<49.9	49.9	< 50.0	50.0	<49.9	49.9	<49.9	49.9
Diesel Range Organics (DRO)		<49.9	49.9	< 50.0	50.0	<49.9	49.9	< 50.0	50.0	<49.9	49.9	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	< 50.0	50.0	<49.9	49.9	< 50.0	50.0	<49.9	49.9	<49.9	49.9
Total GRO-DRO		<49.9	49.9	< 50.0	50.0	<49.9	49.9	< 50.0	50.0	<49.9	49.9	<49.9	49.9
Total TPH		<49.9	49.9	< 50.0	50.0	<49.9	49.9	< 50.0	50.0	<49.9	49.9	<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.

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

Version: 1.%

fession Weamer Jessica Kramer

Project Assistant

LT Environmental, Inc., Arvada, CO

**Project Name: PLU Big Sinks 25 Federal Battery** 

Date Received in Lab: Wed Oct-23-19 09:12 am

**Report Date:** 28-OCT-19 **Project Manager:** Jessica Kramer

Project Id: 2RP-4398
Contact: Dan Moir

**Project Location:** 

	Lab Id:	640781-0	007	640781-0	800	640781-0	009	640781-	010	640781-	011	640781-0	012
Analysis Requested	Field Id:	PH02A	4	PH02E	3	PH020		PH021	D	BH01		BH012	A
Anaiysis Kequesiea	Depth:	2- ft		3- ft		4- ft		5- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL	,	SOIL	,	SOIL	,
	Sampled:	Oct-22-19	14:15	Oct-22-19	14:20	Oct-22-19	14:25	Oct-22-19	14:30	Oct-22-19	16:20	Oct-22-19	16:25
BTEX by EPA 8021B	Extracted:	Oct-27-19	10:30										
SUB: T104704400-19-19	Analyzed:	Oct-27-19	16:03	Oct-27-19	16:23	Oct-27-19	16:43	Oct-27-19	17:03	Oct-27-19	18:22	Oct-27-19	18:42
	Units/RL:	mg/kg	RL										
Benzene	·	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00199	0.00199
Toluene		< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00199	0.00199
Ethylbenzene		< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00199	0.00199
m,p-Xylenes		< 0.00397	0.00397	< 0.00398	0.00398	< 0.00404	0.00404	< 0.00399	0.00399	< 0.00398	0.00398	< 0.00398	0.00398
o-Xylene		< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00199	0.00199
Total Xylenes		< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00199	0.00199
Total BTEX		< 0.00198	0.00198	< 0.00199	0.00199	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00199	0.00199
Chloride by EPA 300	Extracted:	Oct-24-19	14:00	Oct-24-19	14:00	Oct-24-19	14:30	Oct-24-19	14:30	Oct-24-19	14:30	Oct-24-19	14:30
SUB: T104704400-19-19	Analyzed:	Oct-24-19	20:41	Oct-24-19	20:46	Oct-24-19	21:16	Oct-24-19	21:31	Oct-24-19	21:36	Oct-24-19	21:41
	Units/RL:	mg/kg	RL										
Chloride	·	5.08	4.96	< 5.04	5.04	23.4	5.00	29.4	5.03	< 5.05	5.05	< 5.00	5.00
TPH by SW8015 Mod	Extracted:	Oct-24-19	11:00										
SUB: T104704400-19-19	Analyzed:	Oct-24-19	16:14	Oct-24-19	16:35	Oct-24-19	16:56	Oct-24-19	17:16	Oct-24-19	17:58	Oct-24-19	18:19
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		< 50.0	50.0	< 50.0	50.0	<49.9	49.9	<49.8	49.8	< 50.0	50.0	< 50.0	50.0
Diesel Range Organics (DRO)		< 50.0	50.0	< 50.0	50.0	<49.9	49.9	<49.8	49.8	< 50.0	50.0	< 50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		< 50.0	50.0	< 50.0	50.0	<49.9	49.9	<49.8	49.8	< 50.0	50.0	< 50.0	50.0
Total GRO-DRO		<50.0	50.0	< 50.0	50.0	<49.9	49.9	<49.8	49.8	< 50.0	50.0	< 50.0	50.0
Total TPH		<50.0	50.0	< 50.0	50.0	<49.9	49.9	<49.8	49.8	< 50.0	50.0	< 50.0	50.0

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Version: 1.%

Jessica Kramer Project Assistant

fession Weamer



Project Id: 2RP-4398

Dan Moir

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 640781

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

Date Received in Lab: Wed Oct-23-19 09:12 am

**Report Date:** 28-OCT-19 **Project Manager:** Jessica Kramer

	Lab Id:	640781-0	013	640781-	014	640781-0	015	640781-	016	640781-	017	640781-	018
Analusia Daguastad	Field Id:	BH011	В	BH01	С	BH011	)	FS01		FS02		SW03	3
Analysis Requested	Depth:	3- ft		4- ft		5- ft		5- ft		5- ft		1-5 ft	t
	Matrix:	SOIL		SOIL	.	SOIL	,	SOIL	,	SOIL	.	SOIL	_
	Sampled:	Oct-22-19	16:30	Oct-22-19	16:35	Oct-22-19	16:40	Oct-22-19	12:40	Oct-22-19	12:45	Oct-22-19	12:50
BTEX by EPA 8021B	Extracted:	Oct-27-19	10:30										
SUB: T104704400-19-19	Analyzed:	Oct-27-19	19:02	Oct-27-19	19:22	Oct-27-19	19:42	Oct-27-19	20:02	Oct-27-19	20:23	Oct-27-19	20:43
	Units/RL:	mg/kg	RL										
Benzene		< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199
Toluene		< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199
Ethylbenzene		< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199
m,p-Xylenes		< 0.00403	0.00403	< 0.00398	0.00398	< 0.00402	0.00402	< 0.00396	0.00396	< 0.00400	0.00400	< 0.00398	0.00398
o-Xylene		< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199
Total Xylenes		< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199
Total BTEX		< 0.00202	0.00202	< 0.00199	0.00199	< 0.00201	0.00201	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00199	0.00199
Chloride by EPA 300	Extracted:	Oct-24-19	14:30										
SUB: T104704400-19-19	Analyzed:	Oct-24-19	21:46	Oct-24-19	22:01	Oct-24-19	22:06	Oct-24-19	22:11	Oct-24-19	22:16	Oct-24-19	22:21
	Units/RL:	mg/kg	RL										
Chloride	, i	62.3	4.99	40.3	5.02	18.1	4.97	96.6	4.95	1000	4.95	1030	4.95
TPH by SW8015 Mod	Extracted:	Oct-24-19	11:00										
SUB: T104704400-19-19	Analyzed:	Oct-24-19	18:41	Oct-24-19	19:02	Oct-24-19	19:22	Oct-24-19	19:43	Oct-24-19	20:04	Oct-24-19	20:25
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)	,	< 50.0	50.0	<49.9	49.9	< 50.0	50.0	<49.8	49.8	< 50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		< 50.0	50.0	<49.9	49.9	< 50.0	50.0	<49.8	49.8	< 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	<49.8	49.8	< 50.0	50.0	<49.9	49.9
Total GRO-DRO		< 50.0	50.0	<49.9	49.9	< 50.0	50.0	<49.8	49.8	< 50.0	50.0	<49.9	49.9
Total TPH		< 50.0	50.0	<49.9	49.9	< 50.0	50.0	<49.8	49.8	<50.0	50.0	<49.9	49.9

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Version: 1.%

Jessica Kramer Project Assistant

Jessica Vermer



**Project Id:** 2RP-4398 **Contact:** Dan Moir

**Project Location:** 

# Certificate of Analysis Summary 640781

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

Date Received in Lab: Wed Oct-23-19 09:12 am

Report Date: 28-OCT-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	640781-0	110	(40701 (	20				
Analysis Paguastad		2.0701 0	,1,9	640781-0	)20	640781-0	21		
	Field Id:	SW01		SW02		SW04			
Anuiysis Requesieu	Depth:	1-5 ft		1-5 ft		1-5 ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Oct-22-19 1	12:55	Oct-22-19	13:00	Oct-22-19 1	3:05		
BTEX by EPA 8021B	Extracted:	Oct-27-19 1	10:30	Oct-27-19	10:30	Oct-27-19 1	1:00		
SUB: T104704400-19-19	Analyzed:	Oct-27-19 2	21:03	Oct-27-19	21:23	Oct-28-19 0	0:41		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199		
Toluene		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199		
Ethylbenzene		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199		
m,p-Xylenes		< 0.00400	0.00400	< 0.00402	0.00402	< 0.00398	0.00398		
o-Xylene		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199		
Total Xylenes		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199		
Total BTEX		< 0.00200	0.00200	< 0.00201	0.00201	< 0.00199	0.00199		
Chloride by EPA 300	Extracted:	Oct-24-19 1	14:30	Oct-24-19	14:30	Oct-24-19 1	4:30		
SUB: T104704400-19-19	Analyzed:	Oct-24-19 2	22:41	Oct-24-19	22:26	Oct-24-19 2	2:46		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		4430	25.2	633	4.99	572	4.98		
TPH by SW8015 Mod	Extracted:	Oct-24-19 1	11:00	Oct-24-19	11:00	Oct-24-19 1	1:00		
SUB: T104704400-19-19	Analyzed:	Oct-24-19 2	20:46	Oct-24-19	21:07	Oct-24-19 2	0:46		
	Units/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		
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0		
Motor Oil Range Hydrocarbons (MRO)		< 50.0	50.0	<49.9	49.9	< 50.0	50.0		
Total GRO-DRO		<50.0	50.0	<49.9	49.9	<50.0	50.0		
Total TPH		< 50.0	50.0	<49.9	49.9	< 50.0	50.0		

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Version: 1.%

Jessica Kramer Project Assistant

Jessica Weamer

Date Received:10.23.19 09.12



**PH01** 

Sample Id:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Soil

Lab Sample Id: 640781-001 Date Collected: 10.22.19 13.35 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Matrix:

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 10.24.19 14.00 Basis: Wet Weight

Seq Number: 3105376 SUB: T104704400-19-19

Parameter Cas Number Result RLUnits **Analysis Date** Flag Dil Chloride 16887-00-6 10.24.19 20.01 U <4.97 4.97 mg/kg 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	10.24.19 13.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	10.24.19 13.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	10.24.19 13.13	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	10.24.19 13.13	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	10.24.19 13.13	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	98	%	70-135	10.24.19 13.13		
o-Terphenyl		84-15-1	103	%	70-135	10.24.19 13.13		



Tech:

# **Certificate of Analytical Results 640781**

# LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH01 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-001 Date Collected: 10.22.19 13.35 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.27.19 14.02	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.27.19 14.02	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.27.19 14.02	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.27.19 14.02	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.27.19 14.02	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.27.19 14.02	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.27.19 14.02	U	1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	95	%	70-130	10.27.19 14.02		
1,4-Difluorobenzene		540-36-3	98	%	70-130	10.27.19 14.02		



# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

10.24.19 14.00

Matrix: Soil Sample Id: PH01A

Date Received:10.23.19 09.12

Lab Sample Id: 640781-002 Date Collected: 10.22.19 13.40 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Tech: CHE CHE Analyst: Basis:

Wet Weight

Seq Number: 3105376

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	10.24.19 20.16	U	1

Date Prep:

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

10.24.19 14.16

% Moisture:

70-135

DVM Tech: ARM Analyst:

o-Terphenyl

10.24.19 11.00 Date Prep:

101

Basis: Wet Weight SUB: T104704400-19-19

Seq Number: 3105463

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	10.24.19 14.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 14.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 14.16	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 14.16	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 14.16	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	98	%	70-135	10.24.19 14.16		

84-15-1



Tech:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH01A Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-002 Date Collected: 10.22.19 13.40 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.27.19 14.23	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.27.19 14.23	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.27.19 14.23	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.27.19 14.23	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.27.19 14.23	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.27.19 14.23	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.27.19 14.23	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	101	%	70-130	10.27.19 14.23		
4-Bromofluorobenzene		460-00-4	98	%	70-130	10.27.19 14.23		



# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Matrix: Soil Sample Id: PH01B

Date Received:10.23.19 09.12

Lab Sample Id: 640781-003 Date Collected: 10.22.19 13.45 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

10.24.19 14.00

% Moisture:

CHE Analyst: Seq Number: 3105376

Basis: Wet Weight SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	< 5.01	5.01	mg/kg	10.24.19 20.21	U	1

Date Prep:

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

% Moisture:

DVM Tech: ARM

Analyst:

10.24.19 11.00 Date Prep:

Basis: Wet Weight

Seq Number: 3105463

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	10.24.19 14.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	10.24.19 14.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	10.24.19 14.37	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	10.24.19 14.37	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	10.24.19 14.37	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	96	%	70-135	10.24.19 14.37		
o-Terphenyl		84-15-1	100	%	70-135	10.24.19 14.37		



Tech:

# **Certificate of Analytical Results 640781**

# LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH01B Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-003 Date Collected: 10.22.19 13.45 Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.27.19 14.43	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.27.19 14.43	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.27.19 14.43	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	10.27.19 14.43	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.27.19 14.43	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.27.19 14.43	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.27.19 14.43	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	102	%	70-130	10.27.19 14.43		
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.27.19 14.43		



Lab Sample Id: 640781-004

Seq Number: 3105376

PH01C

CHE

Sample Id:

Tech:

Tech:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Matrix: Soil Date Received:10.23.19 09.12

Date Collected: 10.22.19 13.50 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Analyst: CHE Date Prep: 10.24.19 14.00 Basis: Wet Weight

SUB: T104704400-19-19

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 8.30
 5.00
 mg/kg
 10.24.19 20.26
 1

Analytical Method: TPH by SW8015 Mod

DVM

Analyst: ARM Seq Number: 3105463

Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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	10.24.19 14.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 14.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 14.58	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 14.58	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 14.58	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	99	%	70-135	10.24.19 14.58		
o-Terphenyl		84-15-1	104	%	70-135	10.24.19 14.58		



Tech:

# **Certificate of Analytical Results 640781**

# LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH01C Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-004 Date Collected: 10.22.19 13.50 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	10.27.19 15.03	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	10.27.19 15.03	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	10.27.19 15.03	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	10.27.19 15.03	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	10.27.19 15.03	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	10.27.19 15.03	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	10.27.19 15.03	U	1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	112	%	70-130	10.27.19 15.03		
1,4-Difluorobenzene		540-36-3	97	%	70-130	10.27.19 15.03		



PH01D

CHE

Sample Id:

Tech:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Soil

Lab Sample Id: 640781-005 Date Collected: 10.22.19 13.55 Sample Depth: 5 ft

Matrix:

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

% Moisture:

Date Received:10.23.19 09.12

Analyst: CHE Date Prep: 10.24.19 14.00 Basis: Wet Weight

Seq Number: 3105376 SUB: T104704400-19-19

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 7.72
 5.00
 mg/kg
 10.24.19 20.31
 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	10.24.19 15.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	10.24.19 15.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	10.24.19 15.32	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	10.24.19 15.32	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	10.24.19 15.32	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	98	%	70-135	10.24.19 15.32		
o-Terphenyl		84-15-1	103	%	70-135	10.24.19 15.32		



# **Certificate of Analytical Results 640781**

# LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH01D Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-005 Date Collected: 10.22.19 13.55 Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: KTL % Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.27.19 15.23	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.27.19 15.23	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.27.19 15.23	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	10.27.19 15.23	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.27.19 15.23	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.27.19 15.23	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.27.19 15.23	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.27.19 15.23		
4-Bromofluorobenzene		460-00-4	104	%	70-130	10.27.19 15.23		



Analytical Method: Chloride by EPA 300

CHE

Seq Number: 3105376

Analyst:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH02 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-006 Date Collected: 10.22.19 14.10 Sample Depth: 1 ft

Prep Method: E300P

% Moisture:

Tech: CHE % Moisture:

Date Prep: 10.24.19 14.00 Basis: Wet Weight

SUB: T104704400-19-19

Parameter Cas Number Result RLUnits **Analysis Date** Flag Dil Chloride 16887-00-6 U <4.99 4.99 mg/kg 10.24.19 20.36 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	10.24.19 15.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	10.24.19 15.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	10.24.19 15.53	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	10.24.19 15.53	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	10.24.19 15.53	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	94	%	70-135	10.24.19 15.53		
o-Terphenyl		84-15-1	99	%	70-135	10.24.19 15.53		



Tech:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH02 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-006 Date Collected: 10.22.19 14.10 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

KTL % Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.27.19 15.43	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.27.19 15.43	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.27.19 15.43	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	10.27.19 15.43	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.27.19 15.43	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.27.19 15.43	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.27.19 15.43	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	110	%	70-130	10.27.19 15.43		
1.4-Difluorobenzene		540-36-3	102	%	70-130	10.27.19 15.43		



CHE

Tech:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH02A Matrix: Soil

Lab Sample Id: 640781-007 Date Collected: 10.22.19 14.15 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Analyst: CHE Date Prep: 10.24.19 14.00 Basis: Wet Weight

SUB: T104704400-19-19

Date Received:10.23.19 09.12

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 5.08
 4.96
 mg/kg
 10.24.19 20.41
 1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Seq Number: 3105376

Analyst: ARM Seq Number: 3105463

M Date Prep: 10.24.19 11.0

10.24.19 11.00 Basi

Basis: Wet Weight

Prep Method: SW8015P

% Moisture:

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0		mg/kg	10.24.19 16.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 16.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 16.14	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 16.14	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 16.14	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	96	%	70-135	10.24.19 16.14		
o-Terphenyl		84-15-1	100	%	70-135	10.24.19 16.14		



Tech:

# **Certificate of Analytical Results 640781**

# LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH02A Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-007 Date Collected: 10.22.19 14.15 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

KTL % Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	10.27.19 16.03	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	10.27.19 16.03	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	10.27.19 16.03	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	10.27.19 16.03	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	10.27.19 16.03	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	10.27.19 16.03	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	10.27.19 16.03	U	1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	<b>Analysis Date</b>	Flag	
4-Bromofluorobenzene		460-00-4	104	%	70-130	10.27.19 16.03		
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.27.19 16.03		

Date Received:10.23.19 09.12



PH02B

Sample Id:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Soil

Lab Sample Id: 640781-008 Date Collected: 10.22.19 14.20 Sample Depth: 3 ft

Matrix:

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 10.24.19 14.00 Basis: Wet Weight

Seq Number: 3105376 SUB: T104704400-19-19

Parameter Cas Number Result RLUnits **Analysis Date** Flag Dil Chloride 16887-00-6 < 5.04 U 5.04 mg/kg 10.24.19 20.46 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0		mg/kg	10.24.19 16.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 16.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 16.35	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 16.35	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 16.35	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	95	%	70-135	10.24.19 16.35		
o-Terphenyl		84-15-1	102	%	70-135	10.24.19 16.35		



Tech:

# **Certificate of Analytical Results 640781**

# LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH02B Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-008 Date Collected: 10.22.19 14.20 Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.27.19 16.23	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.27.19 16.23	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.27.19 16.23	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.27.19 16.23	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.27.19 16.23	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.27.19 16.23	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.27.19 16.23	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	101	%	70-130	10.27.19 16.23		
1,4-Difluorobenzene		540-36-3	100	%	70-130	10.27.19 16.23		

Date Received:10.23.19 09.12



Tech:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH02C Matrix: Soil

Lab Sample Id: 640781-009 Date Collected: 10.22.19 14.25 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

CHE % Moisture:

Analyst: CHE Date Prep: 10.24.19 14.30 Basis: Wet Weight

Seq Number: 3105377 SUB: T104704400-19-19

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 23.4
 5.00
 mg/kg
 10.24.19 21.16
 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	10.24.19 16.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	10.24.19 16.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	10.24.19 16.56	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	10.24.19 16.56	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	10.24.19 16.56	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	98	%	70-135	10.24.19 16.56		
o-Terphenyl		84-15-1	102	%	70-135	10.24.19 16.56		



Tech:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH02C Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-009 Date Collected: 10.22.19 14.25 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	10.27.19 16.43	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	10.27.19 16.43	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	10.27.19 16.43	U	1
m,p-Xylenes	179601-23-1	< 0.00404	0.00404		mg/kg	10.27.19 16.43	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	10.27.19 16.43	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	10.27.19 16.43	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	10.27.19 16.43	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	98	%	70-130	10.27.19 16.43		
4-Bromofluorobenzene		460-00-4	106	%	70-130	10.27.19 16.43		

1



# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Soil

Sample Id: PH02D Matrix:

Date Received:10.23.19 09.12

Lab Sample Id: 640781-010 Date Collected: 10.22.19 14.30

16887-00-6

Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE Seq Number: 3105377

Chloride

Tech:

10.24.19 14.30

Basis: Wet Weight

SUB: T104704400-19-19

10.24.19 21.31

mg/kg

Parameter Cas Number Result RL Units Analysis Date Flag Dil

Date Prep:

29.4

Analytical Method: TPH by SW8015 Mod

DVM

Prep Method: SW8015P

Basis:

% Moisture:

Analyst: ARM Seq Number: 3105463

Date Prep: 10.24.19 11.00

5.03

SUB: T104704400-19-19

Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	10.24.19 17.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	10.24.19 17.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	10.24.19 17.16	U	1
Total GRO-DRO	PHC628	<49.8	49.8		mg/kg	10.24.19 17.16	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	10.24.19 17.16	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	96	%	70-135	10.24.19 17.16		
o-Terphenyl		84-15-1	101	%	70-135	10.24.19 17.16		



Tech:

# **Certificate of Analytical Results 640781**

# LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: PH02D Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-010 Date Collected: 10.22.19 14.30 Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.27.19 17.03	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.27.19 17.03	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.27.19 17.03	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	10.27.19 17.03	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.27.19 17.03	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.27.19 17.03	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.27.19 17.03	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	98	%	70-130	10.27.19 17.03		
1,4-Difluorobenzene		540-36-3	101	%	70-130	10.27.19 17.03		



CHE

Analyst:

# **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **BH01** Matrix: Soil

Lab Sample Id: 640781-011 Date Collected: 10.22.19 16.20 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

% Moisture:

Date Received:10.23.19 09.12

CHE % Moisture: Tech:

> Basis: Date Prep: 10.24.19 14.30 Wet Weight

Seq Number: 3105377 SUB: T104704400-19-19

Parameter Cas Number Result RLUnits **Analysis Date** Flag Dil Chloride 16887-00-6 < 5.05 10.24.19 21.36 U 5.05 mg/kg 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DVM Tech:

ARM Analyst: 10.24.19 11.00 Basis: Wet Weight Date Prep:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0		mg/kg	10.24.19 17.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 17.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 17.58	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 17.58	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 17.58	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	100	%	70-135	10.24.19 17.58		
o-Terphenyl		84-15-1	104	%	70-135	10.24.19 17.58		



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: BH01 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-011 Date Collected: 10.22.19 16.20 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.27.19 18.22	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.27.19 18.22	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.27.19 18.22	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.27.19 18.22	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.27.19 18.22	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.27.19 18.22	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.27.19 18.22	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	95	%	70-130	10.27.19 18.22		
1,4-Difluorobenzene		540-36-3	97	%	70-130	10.27.19 18.22		



#### **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: BH01A Matrix: Soil

Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-012 Date Collected: 10.22.19 16.25 Sample Depth: 2 ft

Prep Method: E300P

% Moisture:

% Moisture:
Date Prep: 10.24.19 14.30 Basis:

SUB: T104704400-19-19

Wet Weight

Parameter Cas Number Result RLUnits **Analysis Date** Flag Dil Chloride 16887-00-6 < 5.00 10.24.19 21.41 U 5.00 mg/kg 1

Analytical Method: TPH by SW8015 Mod

Analytical Method: Chloride by EPA 300

CHE

CHE

Seq Number: 3105377

Tech:

Tech:

Analyst:

DVM

Analyst: ARM Seq Number: 3105463 Date Prep: 10.24.19 11.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

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	10.24.19 18.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 18.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 18.19	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 18.19	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 18.19	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	98	%	70-135	10.24.19 18.19		
o-Terphenyl		84-15-1	101	%	70-135	10.24.19 18.19		



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: BH01A Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-012 Date Collected: 10.22.19 16.25 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.27.19 18.42	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.27.19 18.42	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.27.19 18.42	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.27.19 18.42	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.27.19 18.42	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.27.19 18.42	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.27.19 18.42	U	1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	101	%	70-130	10.27.19 18.42		
1,4-Difluorobenzene		540-36-3	96	%	70-130	10.27.19 18.42		



#### **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: BH01B

Soil Date Received:10.23.19 09.12 Matrix:

Lab Sample Id: 640781-013 Date Collected: 10.22.19 16.30 Sample Depth: 3 ft

Prep Method: E300P

CHE % Moisture:

CHE Analyst: Basis: Date Prep: 10.24.19 14.30

Wet Weight SUB: T104704400-19-19

Parameter Cas Number Result RLUnits **Analysis Date** Flag Dil 16887-00-6 Chloride 62.3 4.99 mg/kg 10.24.19 21.46 1

Analytical Method: TPH by SW8015 Mod

Analytical Method: Chloride by EPA 300

Prep Method: SW8015P

DVM

% Moisture:

ARM Analyst: Seq Number: 3105463

Seq Number: 3105377

Tech:

Tech:

10.24.19 11.00 Date Prep:

Basis: Wet Weight 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	10.24.19 18.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 18.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 18.41	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 18.41	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 18.41	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	99	%	70-135	10.24.19 18.41		
o-Terphenyl		84-15-1	105	%	70-135	10.24.19 18.41		



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: BH01B Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-013 Date Collected: 10.22.19 16.30 Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	10.27.19 19.02	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	10.27.19 19.02	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	10.27.19 19.02	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	10.27.19 19.02	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	10.27.19 19.02	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	10.27.19 19.02	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	10.27.19 19.02	U	1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.27.19 19.02		
4-Bromofluorobenzene		460-00-4	105	%	70-130	10.27.19 19.02		



CHE

Seq Number: 3105377

#### **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: BH01C Matrix: Soil

Date Received:10.23.19 09.12

Lab Sample Id: 640781-014 Date Collected: 10.22.19 16.35 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Tech: CHE Analyst: Date Prep: 10.24.19 14.30 Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	40.3	5.02	mg/kg	10.24.19 22.01		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

% Moisture:

DVM Tech: ARM Analyst:

Seq Number: 3105463

Date Prep: 10.24.19 11.00

Basis: Wet Weight SUB: T104704400-19-19

Cas Number Result RL**Parameter** Units **Analysis Date** Flag Dil PHC610 10.24.19 19.02 U Gasoline Range Hydrocarbons (GRO) <49.9 49.9 mg/kg 1 Diesel Range Organics (DRO) C10C28DRO <49.9 49.9 mg/kg 10.24.19 19.02 U 1 Motor Oil Range Hydrocarbons (MRO) PHCG2835 <49.9 49.9 10.24.19 19.02 U mg/kg Total GRO-DRO PHC628 <49.9 49.9 mg/kg 10.24.19 19.02 U Total TPH PHC635 49.9 10.24.19 19.02 U <49.9 mg/kg 1 % Flag

Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	99	%	70-135	10.24.19 19.02
o-Terphenyl	84-15-1	103	%	70-135	10.24.19 19.02



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: BH01C Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-014 Date Collected: 10.22.19 16.35 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

KTL % Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.27.19 19.22	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.27.19 19.22	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.27.19 19.22	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.27.19 19.22	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.27.19 19.22	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.27.19 19.22	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.27.19 19.22	U	1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.27.19 19.22		
4-Bromofluorobenzene		460-00-4	107	%	70-130	10.27.19 19.22		



#### **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Soil

Sample Id: Matrix: BH01D

Date Received:10.23.19 09.12

Lab Sample Id: 640781-015 Date Collected: 10.22.19 16.40 Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Seq Number: 3105377

% Moisture:

CHE Analyst:

Date Prep: 10.24.19 14.30 Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.1	4.97	mg/kg	10.24.19 22.06		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

% Moisture:

DVM Tech: ARM

Analyst:

10.24.19 11.00 Date Prep:

Basis: Wet Weight

Seq Number: 3105463

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	10.24.19 19.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 19.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 19.22	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 19.22	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 19.22	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	99	%	70-135	10.24.19 19.22		
o-Terphenyl		84-15-1	105	%	70-135	10.24.19 19.22		



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: BH01D Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-015 Date Collected: 10.22.19 16.40 Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.27.19 19.42	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.27.19 19.42	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.27.19 19.42	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.27.19 19.42	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.27.19 19.42	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.27.19 19.42	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.27.19 19.42	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	98	%	70-130	10.27.19 19.42		
4-Bromofluorobenzene		460-00-4	108	%	70-130	10.27.19 19.42		

Date Received:10.23.19 09.12



## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: FS01 Matrix: Soil

Lab Sample Id: 640781-016 Date Collected: 10.22.19 12.40 Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 10.24.19 14.30 Basis: Wet Weight

Seq Number: 3105377 SUB: T104704400-19-19

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 96.6
 4.95
 mg/kg
 10.24.19 22.11
 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	10.24.19 19.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	10.24.19 19.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	10.24.19 19.43	U	1
Total GRO-DRO	PHC628	<49.8	49.8		mg/kg	10.24.19 19.43	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	10.24.19 19.43	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	102	%	70-135	10.24.19 19.43		
o-Terphenyl		84-15-1	107	%	70-135	10.24.19 19.43		



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: FS01 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-016 Date Collected: 10.22.19 12.40 Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	10.27.19 20.02	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	10.27.19 20.02	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	10.27.19 20.02	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	10.27.19 20.02	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	10.27.19 20.02	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	10.27.19 20.02	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	10.27.19 20.02	U	1
			%					
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	108	%	70-130	10.27.19 20.02		
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.27.19 20.02		



#### **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: FS02 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-017 Date Collected: 10.22.19 12.45 Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 10.24.19 14.30 Basis: Wet Weight

Seq Number: 3105377 SUB: T104704400-19-19

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 1000
 4.95
 mg/kg
 10.24.19 22.16
 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight

Parameter	Cas Number	Result	$\mathbf{RL}$		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	10.24.19 20.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 20.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 20.04	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 20.04	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 20.04	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	99	%	70-135	10.24.19 20.04		
o-Terphenyl		84-15-1	104	%	70-135	10.24.19 20.04		



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: FS02 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-017 Date Collected: 10.22.19 12.45 Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Number Result RL		Units	Analysis Date	Flag	Dil	
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.27.19 20.23	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.27.19 20.23	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.27.19 20.23	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	10.27.19 20.23	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.27.19 20.23	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.27.19 20.23	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.27.19 20.23	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.27.19 20.23		
4-Bromofluorobenzene		460-00-4	105	%	70-130	10.27.19 20.23		



Tech:

#### **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SW03 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-018 Date Collected: 10.22.19 12.50 Sample Depth: 1 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

CHE % Moisture:

Analyst: CHE Date Prep: 10.24.19 14.30 Basis: Wet Weight

Seq Number: 3105377 SUB: T104704400-19-19

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 1030
 4.95
 mg/kg
 10.24.19 22.21
 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 10.24.19 11.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	10.24.19 20.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	10.24.19 20.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	10.24.19 20.25	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	10.24.19 20.25	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	10.24.19 20.25	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	99	%	70-135	10.24.19 20.25		
o-Terphenyl		84-15-1	104	%	70-135	10.24.19 20.25		



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SW03 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-018 Date Collected: 10.22.19 12.50 Sample Depth: 1 - 5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number Result RL			Units	Analysis Date	Flag	Dil	
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.27.19 20.43	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.27.19 20.43	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.27.19 20.43	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.27.19 20.43	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.27.19 20.43	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.27.19 20.43	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	10.27.19 20.43	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	106	%	70-130	10.27.19 20.43		
1,4-Difluorobenzene		540-36-3	98	%	70-130	10.27.19 20.43		



CHE

Tech:

#### **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SW01 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-019 Date Collected: 10.22.19 12.55 Sample Depth: 1 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Analyst: CHE Date Prep: 10.24.19 14.30 Basis: Wet Weight

SUB: T104704400-19-19

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 4430
 25.2
 mg/kg
 10.24.19 22.41
 5

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Seq Number: 3105377

Analyst: ARM Seq Number: 3105463

M Date Prep: 10.24.19 11.00

Basis: Wet Weight

% Moisture:

SUB: T104704400-19-19

Prep Method: SW8015P

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	10.24.19 20.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 20.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 20.46	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 20.46	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 20.46	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	101	%	70-135	10.24.19 20.46		
o-Terphenyl		84-15-1	105	%	70-135	10.24.19 20.46		



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SW01 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-019 Date Collected: 10.22.19 12.55 Sample Depth: 1 - 5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	10.27.19 21.03	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	10.27.19 21.03	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	10.27.19 21.03	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	10.27.19 21.03	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	10.27.19 21.03	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	10.27.19 21.03	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	10.27.19 21.03	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	103	%	70-130	10.27.19 21.03		
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.27.19 21.03		



CHE

#### **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

10.24.19 11.00

Sample Id: SW02 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-020 Date Collected: 10.22.19 13.00 Sample Depth: 1 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Analyst: CHE Date Prep: 10.24.19 14.30 Basis: Wet Weight

Date Prep:

SUB: T104704400-19-19

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 633
 4.99
 mg/kg
 10.24.19 22.26
 1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Seq Number: 3105377

Tech:

Analyst: ARM

Seq Number: 3105463

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Number Result RL		Units	Analysis Date	Flag	Dil	
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	10.24.19 21.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	10.24.19 21.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	10.24.19 21.07	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	10.24.19 21.07	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	10.24.19 21.07	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	100	%	70-135	10.24.19 21.07		
o-Terphenyl		84-15-1	102	%	70-135	10.24.19 21.07		



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SW02 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-020 Date Collected: 10.22.19 13.00 Sample Depth: 1 - 5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 10.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	10.27.19 21.23	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	10.27.19 21.23	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	10.27.19 21.23	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	10.27.19 21.23	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	10.27.19 21.23	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	10.27.19 21.23	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	10.27.19 21.23	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.27.19 21.23		
4-Bromofluorobenzene		460-00-4	105	%	70-130	10.27.19 21.23		



CHE

Tech:

#### **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SW04 Matrix: Soil

Lab Sample Id: 640781-021 Date Collected: 10.22.19 13.05 Sample Depth: 1 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Date Received:10.23.19 09.12

Analyst: CHE Date Prep: 10.24.19 14.30 Basis: Wet Weight

SUB: T104704400-19-19

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 572
 4.98
 mg/kg
 10.24.19 22.46
 1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Seq Number: 3105377

Analyst: ARM

Seq Number: 3105466

% Moisture:

Date Prep: 10.24.19 11.00 Basis: Wet Weight

SUB: T104704400-19-19

Prep Method: SW8015P

Parameter Cas Number Result RL		RL		Units	Analysis Date	Flag	Dil	
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	10.24.19 20.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	10.24.19 20.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	10.24.19 20.46	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	10.24.19 20.46	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	10.24.19 20.46	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	81	%	70-135	10.24.19 20.46		
o-Terphenyl		84-15-1	82	%	70-135	10.24.19 20.46		



Tech:

## **Certificate of Analytical Results 640781**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: SW04 Matrix: Soil Date Received:10.23.19 09.12

Lab Sample Id: 640781-021 Date Collected: 10.22.19 13.05 Sample Depth: 1 - 5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: KTL Date Prep: 10.27.19 11.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	10.28.19 00.41	U	1	
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	10.28.19 00.41	U	1	
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	10.28.19 00.41	U	1	
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	10.28.19 00.41	U	1	
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	10.28.19 00.41	U	1	
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	10.28.19 00.41	U	1	
Total BTEX		< 0.00199	0.00199		mg/kg	10.28.19 00.41	U	1	
			%						
Surrogate		Cas Number	Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene		540-36-3	99	%	70-130	10.28.19 00.41			
4-Bromofluorobenzene		460-00-4	102	%	70-130	10.28.19 00.41			



# 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.

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

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.

E300P

E300P

E300P

Prep Method:

10.24.19

Prep Method:

Date Prep:



#### **QC Summary** 640781

#### LT Environmental, Inc.

PLU Big Sinks 25 Federal Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3105376 Matrix: Solid

LCS Sample Id: 7688862-1-BKS LCSD Sample Id: 7688862-1-BSD MB Sample Id: 7688862-1-BLK

MR Spike LCS LCS Limits %RPD RPD Limit Units LCSD LCSD Analysis Flag **Parameter** Result Amount Result %Rec Date %Rec Result

10.24.19 18:22 Chloride < 5.00 250 263 105 258 103 90-110 2 20 mg/kg

Analytical Method: Chloride by EPA 300

Prep Method: Seq Number: 3105377 Matrix: Solid Date Prep: 10.24.19

7688863-1-BSD MB Sample Id: 7688863-1-BLK LCS Sample Id: 7688863-1-BKS LCSD Sample Id:

MB Spike LCS LCS %RPD RPD Limit Units LCSD LCSD Limits Analysis Flag **Parameter** Result %Rec Date Result Amount Result %Rec

Chloride < 5.00 250 265 106 264 106 90-110 0 20 mg/kg 10.24.19 21:06

Analytical Method: Chloride by EPA 300

Prep Method: E300P Seq Number: 3105376 Matrix: Soil Date Prep: 10.24.19

MS Sample Id: 640895-022 S MSD Sample Id: 640895-022 SD 640895-022 Parent Sample Id:

MS %RPD RPD Limit Units Parent Spike MS **MSD MSD** Limits Analysis Flag **Parameter** Result Date Result %Rec Amount Result %Rec

Chloride 32.6 249 299 107 296 90-110 20 10.24.19 18:37 106 mg/kg

Analytical Method: Chloride by EPA 300

3105376 Matrix: Seq Number: Date Prep: 10.24.19 640896-004 S MSD Sample Id: 640896-004 SD 640896-004 MS Sample Id: Parent Sample Id:

MS %RPD RPD Limit Units Parent Spike MS **MSD MSD** Limits Analysis Flag **Parameter** Result %Rec Date Result Amount Result %Rec

Chloride 27.9 253 303 109 290 90-110 4 20 10.24.19 19:47 104 mg/kg

Analytical Method: Chloride by EPA 300

E300P Prep Method: 3105377 Matrix: Soil Seq Number: Date Prep: 10.24.19

640781-009 S MS Sample Id: Parent Sample Id: 640781-009 MSD Sample Id: 640781-009 SD

Parent Spike MS MS Limits %RPD RPD Limit Units Analysis **MSD MSD** Flag **Parameter** Result Date Result Amount %Rec Result %Rec Chloride 23.4 250 303 112 305 113 90-110 20 mg/kg 10.24.19 21:21 X

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

Log Difference

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result

= MS/LCS Result = MSD/LCSD Result



#### **QC Summary** 640781

#### LT Environmental, Inc.

PLU Big Sinks 25 Federal Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3105377 Matrix: Soil

MS Sample Id: 640781-020 S Parent Sample Id: 640781-020

E300P Prep Method:

Date Prep: 10.24.19 MSD Sample Id: 640781-020 SD

Spike MS MS Limits %RPD RPD Limit Units Parent **MSD MSD** Analysis Flag **Parameter** Result Amount Result Date %Rec %Rec Result 10.24.19 22:31 Chloride 633 250 922 116 930 119 90-110 20 mg/kg X

Analytical Method: TPH by SW8015 Mod

Seq Number:

3105463

7688840-1-BLK

Matrix: Solid

Date Prep:

Prep Method:

Prep Method:

SW8015P

10.24.19

MB Sample Id: LCS Sample Id: 7688840-1-BKS

LCSD Sample Id: 7688840-1-BSD

Flag

Flag

Spike LCS LCS %RPD RPD Limit Units MB LCSD LCSD Limits Analysis **Parameter** Result Date Result Amount %Rec Result %Rec Gasoline Range Hydrocarbons (GRO) < 50.0 1000 1140 114 1140 114 70-135 0 20 mg/kg 10.24.19 12:32 Diesel Range Organics (DRO) 1120 70-135 20 10.24.19 12:32 1000 1110 111 112 mg/kg <15.0

MB MB LCS LCS LCSD LCSD Limits Units Analysis Surrogate %Rec Flag %Rec Flag %Rec Flag Date 10.24.19 12:32 1-Chlorooctane 104 116 117 70-135 % 70-135 10.24.19 12:32 o-Terphenyl 103 117 117 %

Analytical Method: TPH by SW8015 Mod

Seq Number: 3105466

Matrix: Solid

Date Prep:

SW8015P

10.24.19

LCS Sample Id: 7688841-1-BKS LCSD Sample Id: 7688841-1-BSD MB Sample Id: 7688841-1-BLK

LCS LCS %RPD RPD Limit Units MB Spike LCSD **LCSD** Limits Analysis **Parameter** Result %Rec Date Result Amount Result %Rec Gasoline Range Hydrocarbons (GRO) 983 10.24.19 12:32 <15.0 1000 98 981 98 70-135 0 20 mg/kg 1000 927 93 1040 70-135 10.24.19 12:32 Diesel Range Organics (DRO) < 50.0 104 11 20 mg/kg

MB MBLCS LCS LCSD Limits Units Analysis LCSD **Surrogate** %Rec Flag %Rec Flag %Rec Flag Date 10.24.19 12:32 94 101 102 70-135 1-Chlorooctane % 10.24.19 12:32 o-Terphenyl 99 101 100 70-135 %

Analytical Method: TPH by SW8015 Mod

Seq Number:

3105463

Matrix: Solid

SW8015P

10.24.19

MB Sample Id: 7688840-1-BLK

MB **Parameter** Result

Units mg/kg Analysis Flag Date

Motor Oil Range Hydrocarbons (MRO)

< 50.0

Prep Method:

Date Prep:

10.24.19 12:11

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

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result

= MS/LCS Result = MSD/LCSD Result

Flag

Flag

SW8015P

Prep Method:



# QC Summary 640781

#### LT Environmental, Inc.

PLU Big Sinks 25 Federal Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3105466 Matrix: Solid Date Prep: 10.24.19

MB Sample Id: 7688841-1-BLK

Parameter MB Units Analysis Flag
Result Date

Motor Oil Range Hydrocarbons (MRO) <50.0 mg/kg 10.24.19 12:11

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Seq Number: 3105463 Matrix: Soil Date Prep: 10.24.19

Parent Sample Id: 640781-001 MS Sample Id: 640781-001 S MSD Sample Id: 640781-001 SD

MS MS %RPD RPD Limit Units Parent Spike **MSD MSD** Limits Analysis **Parameter** Result Date Result Amount %Rec Result %Rec Gasoline Range Hydrocarbons (GRO) <15.0 999 1100 110 1150 70-135 4 20 10.24.19 13:34 115 mg/kg Diesel Range Organics (DRO) 999 112 1170 70-135 4 20 10.24.19 13:34 <15.0 1120 117 mg/kg

MS MS **MSD MSD** Limits Units Analysis **Surrogate** %Rec Flag %Rec Flag Date 10.24.19 13:34 1-Chlorooctane 105 109 70-135 % 102 105 70-135 10.24.19 13:34 o-Terphenyl %

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Seq Number: 3105466 Matrix: Soil Date Prep: 10.24.19

Parent Sample Id: 640827-001 MS Sample Id: 640827-001 S MSD Sample Id: 640827-001 SD

MS MS %RPD RPD Limit Units Analysis **Parent** Spike **MSD** MSD Limits **Parameter** Result Amount Result %Rec Date Result %Rec Gasoline Range Hydrocarbons (GRO) 997 975 10.24.19 13:34 <15.0 98 965 97 70-135 1 20 mg/kg 997 924 90 899 70-135 10.24.19 13:34 Diesel Range Organics (DRO) 22.3 88 3 20 mg/kg

MS MS **MSD** Limits Units Analysis **MSD Surrogate** %Rec Flag %Rec Flag Date 10.24.19 13:34 91 89 1-Chlorooctane 70-135 % 10.24.19 13:34 o-Terphenyl 86 84 70-135 %

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

A = Parent Result
C = MS/LCS Result

E = MS/LCS ResultE = MSD/LCSD Result

Flag

Flag

Flag

Analysis



#### QC Summary 640781

#### LT Environmental, Inc.

PLU Big Sinks 25 Federal Battery

Analytical Method:BTEX by EPA 8021BPrep Method:SW5030BSeq Number:3105530Matrix:SolidDate Prep:10.27.19MB Sample Id:7688948-1-BLKLCS Sample Id:7688948-1-BKSLCSD Sample Id:7688948-1-BSD

•												
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	]
Benzene	< 0.00200	0.100	0.112	112	0.120	120	70-130	7	35	mg/kg	10.27.19 12:03	
Toluene	< 0.00200	0.100	0.110	110	0.111	111	70-130	1	35	mg/kg	10.27.19 12:03	
Ethylbenzene	< 0.00200	0.100	0.115	115	0.112	112	70-130	3	35	mg/kg	10.27.19 12:03	
m,p-Xylenes	< 0.00400	0.200	0.234	117	0.226	113	70-130	3	35	mg/kg	10.27.19 12:03	
o-Xylene	< 0.00200	0.100	0.114	114	0.111	111	70-130	3	35	mg/kg	10.27.19 12:03	
Surrogate	MB	MB Flag			LCS	LCSI		_	Limits	Units	Analysis Date	

%Rec Flag %Rec Flag Flag Date %Rec 97 99 10.27.19 12:03 1,4-Difluorobenzene 96 70-130 % 109 10.27.19 12:03 4-Bromofluorobenzene 99 98 70-130 %

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

 Seq Number:
 3105532
 Matrix:
 Solid
 Date Prep:
 10.27.19

 MB Sample Id:
 7688950-1-BLK
 LCS Sample Id:
 7688950-1-BKS
 LCSD Sample Id:
 7688950-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.108	108	0.108	108	70-130	0	35	mg/kg	10.27.19 22:41
Toluene	< 0.00200	0.100	0.102	102	0.100	100	70-130	2	35	mg/kg	10.27.19 22:41
Ethylbenzene	< 0.00200	0.100	0.103	103	0.0998	100	70-130	3	35	mg/kg	10.27.19 22:41
m,p-Xylenes	< 0.00400	0.200	0.207	104	0.200	100	70-130	3	35	mg/kg	10.27.19 22:41
o-Xylene	< 0.00200	0.100	0.103	103	0.100	100	70-130	3	35	mg/kg	10.27.19 22:41

Surrogate	%Rec	Flag	%Rec	Flag	%Rec	Flag		Date
1,4-Difluorobenzene	94		97		98	70-130	%	10.27.19 22:41
4-Bromofluorobenzene	95		104		98	70-130	%	10.27.19 22:41

LCS

Analytical Method:BTEX by EPA 8021BPrep Method:SW5030BSeq Number:3105530Matrix: SoilDate Prep:10.27.19

LCS

Parent Sample Id: 640781-001 MS Sample Id: 640781-001 S MSD Sample Id: 640781-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date
Benzene	< 0.00201	0.101	0.108	107	0.124	124	70-130	14	35	mg/kg	10.27.19 12:43
Toluene	< 0.00201	0.101	0.0996	99	0.113	113	70-130	13	35	mg/kg	10.27.19 12:43
Ethylbenzene	< 0.00201	0.101	0.0994	98	0.112	112	70-130	12	35	mg/kg	10.27.19 12:43
m,p-Xylenes	< 0.00402	0.201	0.201	100	0.226	113	70-130	12	35	mg/kg	10.27.19 12:43
o-Xylene	< 0.00201	0.101	0.0994	98	0.111	111	70-130	11	35	mg/kg	10.27.19 12:43

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	10.27.19 12:43
4-Bromofluorobenzene	101		107		70-130	%	10.27.19 12:43

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference 
$$\begin{split} [D] &= 100*(C\text{-A}) \, / \, B \\ RPD &= 200* \mid (C\text{-E}) \, / \, (C\text{+E}) \mid \\ [D] &= 100*(C) \, / \, [B] \end{split}$$

MB

MB

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample

A = Parent Result C = MS/LCS Result

C = MS/LCS ResultE = MSD/LCSD Result

LCSD

Limits

Units

LCSD

Flag



Seq Number:

m,p-Xylenes

o-Xylene

#### **QC Summary** 640781

#### LT Environmental, Inc.

PLU Big Sinks 25 Federal Battery

0.154

0.0804

76

80

70-130

70-130

12

12

Analytical Method: BTEX by EPA 8021B

3105532 Matrix: Soil

0.200

0.100

0.174

0.0910

< 0.00401

< 0.00200

Date Prep: 10.27.19

Prep Method:

35

35

mg/kg

mg/kg

SW5030B

10.27.19 23:22

10.27.19 23:22

MS Sample Id: 640781-021 S MSD Sample Id: 640781-021 SD Parent Sample Id: 640781-021 %RPD RPD Limit Units Spike MS MSLimits Parent **MSD** MSD Analysis **Parameter** Amount Result Date Result %Rec %Rec Result 0.0940 0.0880 70-130 7 10.27.19 23:22 Benzene < 0.00200 0.100 94 87 35 mg/kg 0.0852 85 0.0782 70-130 35 10.27.19 23:22 Toluene < 0.00200 0.100 77 9 mg/kg Ethylbenzene 87 0.0778 77 70-130 35 10.27.19 23:22 < 0.00200 0.100 0.0871 11 mg/kg

MS MS MSD **MSD** Limits Units Analysis **Surrogate** Flag %Rec Flag Date %Rec 100 101 10.27.19 23:22 1,4-Difluorobenzene 70-130 % 10.27.19 23:22 4-Bromofluorobenzene 110 98 70-130 %

87

91



Company Name:

37

ENVIONEM Noith

> Company Name: Bill to: (if different)

3/04

City, State ZIP: Co. Is bad Address:

NN

88120 Street

Reporting:Level II Level III PST/UST TRRP Level IV

Program: UST/PST PRP Brownfields RRC Superfund

**Work Order Comments** 

Page

으

State of Project:

City, State ZIP: Address:

3

TOWNS

Ja7 26 Strait

431. 236. 3849

# Chain of Custody

Work Order No: 1940 78/

Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701 Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Crasibad, NM (432) 704-5440 Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334

L.H.e []

Signature of this document and relinquishment of samples constitutes a valid purchase	inquished by: (Signature) Received by: (Signature)		Costa C	Special Costant	Service Costano
Due Date:   Ouote #:	Due Date:   Due Date:   PO #:     Quote #:     Quote #:       Quote #:       Quote #:       Quote #:       Quote #:       Quote #:       Quote #:       Quote #:       Quote #:       Quote #:   Quote #:   Quote #	Due Date:   Due Date:   PO#:	Due Date:   PO#:   Quote #:   Quote #:   PO#:   P	Due Date:   PO#:   Quote #:   Quote #:   PO#:   P	Due Date:   PO#:     Quote #:
Due Date:   Quote #:	Due Date:   Due Date:   PO#:	Sampler's Name:   Due Date:   PO #:     Ouote #:     PO #:     Ouote #:     PO #:     Ouote #:     PO #:     Ouote #:     Ouote #:     PO #:     Ouote #:     Ouote #:     Ouote #:     Ouote #:     Ouote #:     Ouote #:   Ouote	Due Date:   Due Date:   Po #:     Po #:   Po #:   Po #:   Po #:   Po P P P P P P P P P P P P P P P P P	Due Date:   Due Date:   PO#:	Due Date:   Due Date:   PO#:
Due Date:	MPLE RECEIPT  Temp Blank: Yes No  Temperature (°C):  Received Intact: Yes No  Cooler Custody Seals: Yes No  NIA  Total Containers:  PHOID  PHOID  FACIL  FACIL  Total 200.7   6010  200.8   6020:  Total 200.7   6010  Circle Method(s) and Metal(s) to be analyzed  Total contribute of this document and relinquishment of samples and shall not assume any responsibility for any losses or o not of the cost of samples and shall not assume any responsibility for any losses or o not of the cost of samples and shall not assume any responsibility for any losses or o not of the cost of samples and shall not assume any responsibility for any losses or o.	Due Date:   Due	Due Date:   Due Date:   PO#:     PO#:     PO#:     PO#:       PO#:       PO#:	MPLE RECEIPT Temp Blank: Yes No Wet Ice: (Yes) No Thermometer ID Received Intact: Yes No No Correction Factor: O. Z Sample Custody Seals: Yes (No) N/A Total Containers: Depth Sample Custody Seals: Yes (No) N/A Total Containers: Depth PHO I	MPLE RECEIPT Temp Blank: Yes No Wet Ice: Yes No Thermometer ID Received Intact: Yes (Ap) N/A Correction Factor: O_Z Sample Custody Seals: Yes (No) N/A Total Containers: Z  Sample Custody Seals: Yes (No) N/A Total Containers: Z  PHO I
Temp Blank:   Yes   No   Wet Ice:   Yes   Yes   Yes   No   Thermometer ID	MPLE RECEIPT Temp Blank: Yes No Temperature (°C): Received Intact: Yes No Cooler Custody Seals: Yes No N/A  Sample Custody Seals: Yes No N/A  Date Sample Custody Seals: Yes No N/A  Total Containers:  A C  PHO I	MPLE RECEIPT Temp Blank: Yes No Wet Ice: Yes No Received Intact: Yes No No Correction Factor: -0 2 Cooler Custody Seals: Yes No NA Total Containers: 2 Cooler Custody Seals: Yes No NA Total Custody Seals: Yes NA Tot	MPLE RECEIPT   Temp Blank:   Yes   No   Wet Ice:   Yes   No   Temperature (°C):   A	MPLE RECEIPT   Temp Blank:   Yes   No   Wet Ice:   Yes   No   Temperature (°C):   A	MPLE RECEIPT   Temp Blank:   Yes   No   Wet Ice:   Yes   No   Thermometer ID
Temp Blank:   Yes   No   Wet Ice:   Yes   No   Wet Ice:   Yes   No   Thermometer ID	MPLE RECEIPT Temp Blank: Yes No Wet Ice: Yes No Thermometer ID Received Intact: Yes No No Correction Factor: Ocicle Method(s) and Metal(s) to be analyzed Tibs of \$5 for each sample submitted to each project and a charge of \$5 for each sample submitted to each project and a cha	SAMPLE RECEIPT  Temp Blank: Yes No Wet Ice: Yes No Thermometer ID Temperature (°C): Yes No Cooler Custody Seals: Yes No N/A Total Containers: Sample Custody Seals: Yes No N/A Total Containers: Sample Custody Seals: Yes No N/A Total Containers: Sampled Samples sorter from Circle Method(S) and Metal(S) to be analyzed TCLP / SPLP 6010: 8RCRA Sampled Samples sorter from Circle Samples or each sample submitted to Samples and shall not assume any responsibility for any losses or each sample submitted to Samples or each sample submitted to Received by: (Signature)	MPLE RECEIPT  Temp Blank: Yes No Wet Ice: Yes No Thermometer ID  Received Intact: Yes No N/A Total Containers: 2 Sample Custody Seals: Yes No N/A Total Containers: 2 Sample Identification  Sample Identification  Matrix  Sampled Sampled Sampled  PHOLD  PH	MPLE RECEIPT  Temp Blank: Yes No  Thermometer ID  Received Intact: Yes No  Cooler Custody Seals: Yes No  Sample Custody Seals: Yes No  Sample Custody Seals: Yes No  Matrix  Date  Sampled Sampled  Sampled Sampled  PHOLD	MPLE RECEIPT  Temp Blank: Yes No Wet Ice: Yes No Thermometer ID  Received Intact: Yes No Correction Factor: -0, 7  Sample Custody Seals: Yes No N/A Total Containers: 21  Sample Identification  Matrix  Sampled Sampled Sampled Sampled Sampled PHo! Sampled
Temp Blank:   Yes   No   Wet Ice:   Yes   No   A   Thermometer ID	MPLE RECEIPT Temp Blank: Yes No Wet Ice: Yes No Thermometer ID Received Intact: Yes No Cooler Custody Seals: Yes No NA Total Containers: Sample Custody Seals: Yes No NA Total Containers: Sample Custody Seals: Yes No NA Total Containers: Sampled Samples constitutes a valid purchase order from client connoc. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to not only cosses or the sample submitted to any losses or not.	MPLE RECEIPT Temperature (°C):  Temperature (°C):  Received Intact: Yes No Cooler Custody Seals: Yes No N/A Correction Factor: Sample Custody Seals: Yes No N/A  Total Containers: Sampled Sam	MPLE RECEIPT Temp Blank: Yes No Wet Ice: Yes No Temporature (°C):  Received Intact: Yes No Thermometer ID Received Intact: Yes No Thermometer ID Received Intact: Yes No N/A Correction Factor: -0. Z  Sample Custody Seals: Yes (No N/A Total Containers: 2.1  Sample Custody Seals: Yes (No N/A Total Containers: 2.1  Date Sampled Sampled Sampled Sampled Photo: 3/4 13/5 2/2  Albord Sample Identification Matrix Sampled Sampled Sampled Photo: 3/4 13/5 3/2  Albord Sample Identification Matrix Sampled Sampled Photo: 3/4 13/5 3/2  Albord Sample Identification Matrix Sampled Sampled Photo: 3/4 13/5 3/2  Albord Sample Identification Sample Sampl	MPLE RECEIPT Temp Blank: Yes No Wet Ice: (Yes) No Temperature (°C): A O Thermometer ID Received Intact: (Yes) No Correction Factor: -0 Z Sample Custody Seals: Yes (No) N/A Total Containers: 2 Time Sample Identification Matrix Sampled Samples Sampled Sampled Sampled Samples Samples Sampled Samples Sampled Samples Sampled Samples Samp	MPLE RECEIPT Temp Blank: Yes No Wet Ice: (Yes) No Temporature (°C): A O Thermometer ID Received Intact: (Yes) No Cooler Custody Seals: Yes (No) N/A Total Containers: Sample Custody Seals: Yes (No) N/A Total Containers: Sample Custody Seals: Yes (No) N/A Total Containers: Sampled Sample Custody Seals: Yes (No) N/A Total Containers: Sampled Sampled Sampled Sampled Sampled Depth PHO! Sampled Sample
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Yes (No)         N/A         Correction Factor:         O           Yes (No)         N/A         Total Containers:         20.1           Date Sampled         Time Sampled         Dept 1375         1.34c           134c         2.7         1.34c         2.7           135c         4.7         1.375         3.7           1415         2.7         1.415         2.7           1415         2.7         1.415         2.7           200.8 / 6020:         8RCRA 13PPM         1.43pc         5.7           Metal(s) to be analyzed         TCLP / SPLP 6010:         1.43pc         5.7	Sample Custody Seals: Yes (No) N/A Total Containers: 21  Sample Custody Seals: Yes (No) N/A Total Containers: 21  Sample Identification Matrix Sampled Sample Sampl	Sample Custody Seals: Yes (No) N/A Total Containers: 21  Sample Custody Seals: Yes (No) N/A Total Containers: 21  Sample Custody Seals: Yes (No) N/A Total Containers: 21  PHO1  PHO	Sample Custody Seals: Yes (No) N/A Correction Factor: -0_Z Sample Custody Seals: Yes (No) N/A Total Containers: 2  Sample Custody Seals: Yes (No) N/A Total Containers: 2  Date Time Sampled Sampled Sampled Sampled Sampled Sampled Sampled Sampled Sampled PHo1 Sampled Samp	Sample Custody Seals: Yes (No) N/A Correction Factor: -0_Z Sample Custody Seals: Yes (No) N/A Total Containers: 2 Imperiod Sample Custody Seals: Yes (No) N/A Total Containers: 2 Imperiod Sampled Sampled Sampled Sampled Sampled Sampled Sampled Sampled Sampled PHo1 Sampled Sampled Sampled Sampled Sampled 1346 2: 1346 2	Sample Custody Seals: Yes (No) N/A Total Containers: 2   Sampled Custody Seals: Yes (No) N/A Total Containers: 2   Time Sampled Samples and shall not assume any responsibility for any losses of some sample samples and shall not assume any responsibility for any losses of some sample sampled to each project and a charge of \$5 for each sample submitted flinquished by: (Signature)  Received by: (Signature)
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on Matrix Sampled Sampled Dept   1346   27   1345   47   1355   57   1415   141	Sample Custody Seals: Yes (No) N/A Total Containers: She be analyzed containers: She be sample Sampled Custody Seals: Yes (No) N/A Time Date Sampled Sampled Depth Sampled Sam	Sample Custody Seals: Yes (No ) N/A Total Containers: Show the sample dentification Matrix Sampled Sampled Sampled Sampled PHo1 Sampled Sample	Sample Custody Seals: Yes (No) N/A Total Containers: 2 be be applied Sampled Sampled Sampled Sampled Sampled Sampled Sampled Depth D	Sample Custody Seals: Yes (No) N/A Total Containers: 2   5   5   5   5   5   5   5   5   5	Sample Custody Seals: Yes (No) N/A Total Containers: 21  Sample Identification Matrix Sampled Samples constitutes a valid purchase order from client conservice. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses of samples. Xenco will be applied to each project and a charge of \$5 for each sample submitted sample submitted Sample Sampled Sample S
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Revised Date 022619 Rev. 2019.1

Page 130 of 495



Company Name:

LT Environmental

City, State ZIP:

Phone:

432. 236. 3879

Email:

City, State ZIP:

Address:

Sta@ Itanvean

omor Blenvicon

Deliverables: EDD

State of Project:

ADaPT

Other:

NA 200

38226

Address:

3300 Midland.

North X

50L. 64 Street

# Chain of Custody

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334

Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701   www.xenco.com   Page   Work Order Comments
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	South	Relinquished by: (Signature	Notice: Signature of this document and of service. Xenco will be liable only for of Xenco. A minimum charge of \$75.00 v	Total 200.7 / 6010 200.8 / 6020:  Circle Method(s) and Metal(s) to be analyzed	Lows	(tamis	Str. 033	FSOL	E501	BHOLD	Stoll	EHOLE	RHOTA	10418	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	PO#	Sampler's Name:	Project Location	Project Number: 2 R P-	Project Name:
			relinquishment of sam the cost of samples an will be applied to each	200.8 / 6020: Metal(s) to be anal	~									'n	Matrix	Yes No N/A	Yes No WA	Yes No Q		Temp Blank:				-4368	5 3480 00
	000	Received by	ples constitutes a id shall not assum project and a cha	yzed T	<									10.22.19	Date Sampled	Total	Correc	7	TO O	Yes No	Quote #:				120000
6	100	Received by: (Signature)	valid purchase or e any responsibili rge of \$5 for each	8RCRA 13		1155	1250	1245	1240	249	1635	1630	1615	1620	Time Sampled	Total Containers:	Correction Factor:		Theimometer ID	Wet Ice:		Due Date:	Rush:	Routine	uni halles
		9	rder from client of ity for any losses sample submitte	SPPM Texa 6010: 8RCF	145	1-5	1.5.1	5'	vi,	4	6.	13	7.	1.1	Depth				0	Yes No		te:		<u></u>	Turn Around
	0/23/19	Q D	company to s or expens ad to Xenco	s 11 Al VA Sb	+								-	X	Numbe		***	-		1				Code	Drag
	21860	Date/Time	Xenco, its affiliates a es incurred by the cli es incurred by the cli , but not analyzed. The	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd TCLP/SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co	A 7 A								,	×	TP) Chi							7)			
0	4 2	Relinquished by: (Signature)	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.	B Cd Ca Cr Co Cu Fe Pb Mg Mn N Cr Co Cu Pb Mn Mo Ni Se Ag Tl U																					ANALYSIS REQUEST
		Received by: (Signature)	conditions I the control Liated.	K Se Ag SiO2 Na												A Sia	101	Zn Ace	NaOH: Na	HCL: HL	H2S04; H2	HNO3: HN	None: NO	MeOH: Me	
		Date/Time		1631/245.1/7470/7471:Hg											Sample Comments	received by 4:00pm		Zn Acetate+ NaOH: Zn	Na	÷	‡: H2	T.	NO	:: Me	Preservative Codes

Work Order No:

Relinquished by: (Signature)  Received by: (Signature)	Survey  Survey	Temp Blank: Yes No Date Time  Watrix Sampled Sample	PAR 236. 3649 Email: Turn Around	Month A Street  Month A Street  Month A Street  Company Name: 170  Address: 2100 Carles In N. M. BB210  City, State ZIP: Carles In N. M. BB210  City State ZIP: Carles In N. M. BB210
Received by: (Signature)  Date/Time  Revised Date 022619 Rev. 2019		None: NO HNO3: HN H2S04: H2 HCL: HL NaOH: Na Zn Acetate+ NaOH: Zn TAT starts the day recevied by the lab, if received by 4:00pm  Sample Comments	Preservative Codes	PRP Brownfields

#### **Inter-Office Shipment**



Page 1 of 3

IOS Number **50698** 

Date/Time: 10/23/19 14:02 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.: 776797683616 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
640781-001	S	PH01	10/22/19 13:35	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-001	S	PH01	10/22/19 13:35	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-001	S	PH01	10/22/19 13:35	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-002	S	PH01A	10/22/19 13:40	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-002	S	PH01A	10/22/19 13:40	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-002	S	PH01A	10/22/19 13:40	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-003	S	PH01B	10/22/19 13:45	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-003	S	PH01B	10/22/19 13:45	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-003	S	PH01B	10/22/19 13:45	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-004	S	PH01C	10/22/19 13:50	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-004	S	PH01C	10/22/19 13:50	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-004	S	PH01C	10/22/19 13:50	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-005	S	PH01D	10/22/19 13:55	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-005	S	PH01D	10/22/19 13:55	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-005	S	PH01D	10/22/19 13:55	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-006	S	PH02	10/22/19 14:10	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-006	S	PH02	10/22/19 14:10	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-006	S	PH02	10/22/19 14:10	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-007	S	PH02A	10/22/19 14:15	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-007	S	PH02A	10/22/19 14:15	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-007	S	PH02A	10/22/19 14:15	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-008	S	PH02B	10/22/19 14:20	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-008	S	PH02B	10/22/19 14:20	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-008	S	PH02B	10/22/19 14:20	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-009	S	PH02C	10/22/19 14:25	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PF	

#### **Inter-Office Shipment**



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IOS Number 50698

Date/Time: 10/23/19 14:02 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.: 776797683616 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
640781-009	S	PH02C	10/22/19 14:25	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-009	S	PH02C	10/22/19 14:25	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-010	S	PH02D	10/22/19 14:30	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-010	S	PH02D	10/22/19 14:30	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-010	S	PH02D	10/22/19 14:30	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-011	S	BH01	10/22/19 16:20	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-011	S	BH01	10/22/19 16:20	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-011	S	BH01	10/22/19 16:20	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-012	S	BH01A	10/22/19 16:25	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-012	S	BH01A	10/22/19 16:25	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-012	S	BH01A	10/22/19 16:25	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-013	S	вно1в	10/22/19 16:30	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-013	S	вно1в	10/22/19 16:30	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-013	S	BH01B	10/22/19 16:30	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-014	S	вно1С	10/22/19 16:35	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-014	S	вно1С	10/22/19 16:35	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-014	S	вно1С	10/22/19 16:35	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-015	S	BH01D	10/22/19 16:40	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-015	S	BH01D	10/22/19 16:40	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-015	S	BH01D	10/22/19 16:40	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-016	S	FS01	10/22/19 12:40	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-016	S	FS01	10/22/19 12:40	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-016	S	FS01	10/22/19 12:40	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-017	S	FS02	10/22/19 12:45	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-017	S	FS02	10/22/19 12:45	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

#### **Inter-Office Shipment**



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IOS Number 50698

Created by: Elizabeth Mcclellan Date/Time: 10/23/19 14:02 Please send report to: Jessica Kramer

Address: 1089 N Canal Street Lab# From: Carlsbad Delivery Priority:

Lab# To: Midland Air Bill No.: 776797683616 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
640781-017	S	FS02	10/22/19 12:45	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-018	S	SW03	10/22/19 12:50	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-018	S	SW03	10/22/19 12:50	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-018	S	SW03	10/22/19 12:50	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-019	S	SW01	10/22/19 12:55	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-019	S	SW01	10/22/19 12:55	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-019	S	SW01	10/22/19 12:55	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-020	S	SW02	10/22/19 13:00	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	
640781-020	S	SW02	10/22/19 13:00	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-020	S	SW02	10/22/19 13:00	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-021	S	SW04	10/22/19 13:05	SW8021B	BTEX by EPA 8021B	10/29/19	11/05/19	JKR	BR4FBZ BZ BZME EBZ X	
640781-021	S	SW04	10/22/19 13:05	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	GRO-DRO PHCC10C28 PI	
640781-021	S	SW04	10/22/19 13:05	E300_CL	Chloride by EPA 300	10/29/19	04/19/20	JKR	CL	

	Inter	Office	<b>Shipment</b>	or	Sample	Comments:
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Relinquished By:	10,	1	1
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Elizabeth McClellan

Date Relinquished: 10/23/2019

Cooler Temperature:

Received By:

Brianna Teel

Date Received:

0.6

# Received by OCD: 3/26/2025 7:38:502AM1

#### **XENCO Laboratories**

#### **Inter Office Report- Sample Receipt Checklist**

Sent To: Midland IOS #: 50698

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

Temperature Measuring device used: R8

**Date Sent:** 10/23/2019 02:02 PM Sent By: Elizabeth McClellan

Received By: Brianna Teel	Date Received: 10/24/2019 1	I1:18 AM			
	Sample Receipt Check	list	Comments		
#1 *Temperature of cooler(s)?		.6			
#2 *Shipping container in good condition	on?	Yes			
#3 *Samples received with appropriate	temperature?	Yes			
#4 *Custody Seals intact on shipping c	ontainer/ cooler?	Yes			
#5 *Custody Seals Signed and dated for	or Containers/coolers	Yes			
#6 *IOS present?		Yes			
#7 Any missing/extra samples?		No			
#8 IOS agrees with sample label(s)/ma	trix?	Yes			
#9 Sample matrix/ properties agree wit	h 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 d NonConformance:	elivery of samples prior to pla	icing in the refrigerator			
Corrective Action Taken:					
Nonconformance Documentation					
Contact:	Contacted by :	Date:			
Checklist reviewed by:	Buwa Tal Brianna Teel	Date: 10/24/2019			



# XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Work Order #: 640781

Date/ Time Received: 10/23/2019 09:12:00 AM

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)?		4	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping conta	iner/ 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 relinquis	ned/ received?	Yes	
#10 Chain of Custody agrees with sample I	abels/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 headsp	pace?	N/A	

* Must be	completed for after-hours de	elivery of samples prior to placi	ng in the refrigerator	
Analyst:		PH Device/Lot#:		
	Checklist completed by:	Elizabeth McClellan	Date: 10/23/2019	_
	Checklist reviewed by:	Jessica Warner  Jessica Kramer	Date: 10/24/2019	



# **Analytical Report 647383**

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU Big Sink 25 Federal Batterry 012919149 12.24.2019

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)



12.24.2019

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

Reference: XENCO Report No(s): 647383

**PLU Big Sink 25 Federal Batterry** Project Address: Eddy County

#### 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) 647383. 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. 647383 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** 

A Small Business and Minority Company

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



# Sample Cross Reference 647383

#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
PH04	S	12.20.2019 12:35	2 ft	647383-001
PH04A	S	12.20.2019 12:43	2.5 ft	647383-002
PH06	S	12.20.2019 11:48	2 ft	647383-003
PH06A	S	12.20.2019 11:52	3 ft	647383-004
PH07	S	12.20.2019 11:34	2 ft	647383-005
PH07A	S	12.20.2019 11:36	3.5 ft	647383-006
PH08	S	12.20.2019 11:17	2 ft	647383-007
PH08A	S	12.20.2019 11:23	3.5 ft	647383-008

#### **CASE NARRATIVE**



Client Name: LT Environmental, Inc.

Project Name: PLU Big Sink 25 Federal Batterry

 Project ID:
 012919149
 Report Date:
 12.24.2019

 Work Order Number(s):
 647383
 Date Received:
 12.23.2019

#### Sample receipt non conformances and comments:

None

#### Sample receipt non conformances and comments per sample:

None

#### **Analytical non conformances and comments:**

Batch: LBA-3111553 BTEX by EPA 8021B

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

Batch: LBA-3111556 Chloride by EPA 300

Lab Sample ID 647387-003 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: 647383-001, -002, -003, -004, -005, -006, -007, -008.

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

Final 1.000



# Certificate of Analysis Summary 647383

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sink 25 Federal Batterry

**Project Id:** 012919149 Dan Moir

**Eddy County** 

**Contact:** 

**Project Location:** 

**Date Received in Lab:** Mon 12.23.2019 11:00

**Report Date:** 12.24.2019 11:57

Project Manager: Jessica Kramer

	Lab Id:	647383-0	001	647383-0	02	647383-0	003	647383-0	004	647383-0	005	647383-0	006
Analysis Requested	Field Id:	PH04		PH04A	\	PH06		PH06A		PH07		PH07A	
Anaiysis Requesieu	Depth:	2- ft		2.5- ft		2- ft		3- ft		2- ft		3.5- ft	
	Matrix:	SOIL											
	Sampled:	12.20.2019	12:35	12.20.2019	12:43	12.20.2019	11:48	12.20.2019	11:52	12.20.2019	11:34	12.20.2019	11:36
BTEX by EPA 8021B	Extracted:	12.23.2019	12:00	12.23.2019	12:00	12.23.2019	12:00	12.23.2019	12:00	12.23.2019	12:00	12.23.2019	12:00
	Analyzed:	12.23.2019	17:47	12.23.2019	18:06	12.23.2019	18:25	12.23.2019	18:44	12.23.2019	19:03	12.23.2019	19:22
	Units/RL:	mg/kg	RL										
Benzene	·	< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Toluene		< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Ethylbenzene		< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
m,p-Xylenes		< 0.00396	0.00396	< 0.00398	0.00398	< 0.00398	0.00398	< 0.00399	0.00399	< 0.00398	0.00398	< 0.00400	0.00400
o-Xylene		< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Total Xylenes		< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Total BTEX		< 0.00198	0.00198	< 0.00199	0.00199	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200
Chloride by EPA 300	Extracted:	12.23.2019	13:11	12.23.2019	13:11	12.23.2019	13:11	12.23.2019	13:11	12.23.2019	13:11	12.23.2019	13:11
	Analyzed:	12.23.2019	16:54	12.23.2019	17:11	12.23.2019	17:17	12.23.2019	17:22	12.23.2019	17:28	12.23.2019	17:46
	Units/RL:	mg/kg	RL										
Chloride		6740	100	5460	99.9	932	49.5	567	9.98	903	49.4	1360	49.3
TPH by SW8015 Mod	Extracted:	12.23.2019	15:00	12.23.2019	15:00	12.23.2019	15:00	12.23.2019	15:00	12.23.2019	15:00	12.23.2019	15:00
	Analyzed:	12.23.2019	18:25	12.23.2019	19:05	12.23.2019	19:05	12.23.2019	19:24	12.23.2019	19:24	12.23.2019	19:44
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.9	49.9	<49.8	49.8	< 50.3	50.3	< 50.0	50.0	< 50.1	50.1
Diesel Range Organics (DRO)		<49.9	49.9	<49.9	49.9	<49.8	49.8	< 50.3	50.3	< 50.0	50.0	< 50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.9	49.9	<49.8	49.8	< 50.3	50.3	< 50.0	50.0	< 50.1	50.1
Total GRO-DRO		<49.9	49.9	<49.9	49.9	<49.8	49.8	< 50.3	50.3	< 50.0	50.0	< 50.1	50.1
Total TPH		<49.9	49.9	<49.9	49.9	<49.8	49.8	< 50.3	50.3	< 50.0	50.0	< 50.1	50.1

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

Jessica Kramer Project Assistant



**Eddy County** 

#### LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sink 25 Federal Batterry

**Project Id:** 012919149

**Contact:** 

**Project Location:** 

**Date Received in Lab:** Mon 12.23.2019 11:00

Dan Moir **Report Date:** 12.24.2019 11:57

Project Manager: Jessica Kramer

Page 149 of 495

	Lab Id:	647383-0	07	647383-0	08		
Analysis Requested	Field Id:	PH08		PH08A	١		
Analysis Requesieu	Depth:	2- ft		3.5- ft			
	Matrix:	SOIL		SOIL			
	Sampled:	12.20.2019	11:17	12.20.2019	11:23		
BTEX by EPA 8021B	Extracted:	12.23.2019	12:00	12.23.2019	12:00		
	Analyzed:	12.23.2019	19:41	12.23.2019	20:00		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00199	0.00199	< 0.00198	0.00198		
Toluene		< 0.00199	0.00199	< 0.00198	0.00198		
Ethylbenzene			0.00199		0.00198		
m,p-Xylenes		< 0.00398	0.00398	< 0.00396	0.00396		
o-Xylene			0.00199		0.00198		
Total Xylenes		< 0.00199	0.00199	< 0.00198	0.00198		
Total BTEX		< 0.00199	0.00199	< 0.00198	0.00198		
Chloride by EPA 300	Extracted:	12.23.2019	13:11	12.23.2019	13:11		
	Analyzed:	12.23.2019	17:51	12.23.2019	17:57		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		1190	49.6	1270	49.9		
TPH by SW8015 Mod	Extracted:	12.23.2019	15:00	12.23.2019	15:00		
	Analyzed:	12.23.2019	19:44	12.23.2019	20:04		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		< 50.1	50.1	<49.9	49.9		
Diesel Range Organics (DRO)		< 50.1	50.1	<49.9	49.9		
Motor Oil Range Hydrocarbons (MRO)		< 50.1	50.1	<49.9	49.9	 	
Total GRO-DRO		< 50.1	50.1	<49.9	49.9		
Total TPH		< 50.1	50.1	<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.

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

Jessica Kramer Project Assistant



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: **PH04** Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-001 Date Collected: 12.20.2019 12:35 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Tech: MAB Analyst: Date Prep: 12.23.2019 13:11 Basis: Wet Weight

Seq Number: 3111556

MAB

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6740	100	mg/kg	12.23.2019 16:54		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DTH % Moisture: Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 12.23.2019 15:00

Parameter	Cas Numbe	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	12.23.2019 18:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	12.23.2019 18:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	12.23.2019 18:25	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	12.23.2019 18:25	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	12.23.2019 18:25	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-135	12.23.2019 18:25		
o-Terphenyl		84-15-1	99	%	70-135	12.23.2019 18:25		



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: PH04 Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-001 Date Collected: 12.20.2019 12:35 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

460-00-4

Analyst: MAB Date Prep: 12.23.2019 12:00 Basis: Wet Weight

Seq Number: 3111553

4-Bromofluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	12.23.2019 17:47	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	12.23.2019 17:47	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	12.23.2019 17:47	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	12.23.2019 17:47	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	12.23.2019 17:47	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	12.23.2019 17:47	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	12.23.2019 17:47	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	4	540-36-3	101	%	70-130	12.23.2019 17:47		

112

70-130

12.23.2019 17:47



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: PH04A Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-002 Date Collected: 12.20.2019 12:43 Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Wet Weight

Tech: MAB

Date Prep: 12.23.2019 13:11 Basis:

Seq Number: 3111556

Analyst:

MAB

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5460	99.9	mg/kg	12.23.2019 17:11		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DTH % Moisture: Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 12.23.2019 15:00

Parameter	Cas Numbe	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	12.23.2019 19:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	12.23.2019 19:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	12.23.2019 19:05	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	12.23.2019 19:05	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	12.23.2019 19:05	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	104	%	70-135	12.23.2019 19:05		
o-Terphenyl		84-15-1	103	%	70-135	12.23.2019 19:05		



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: PH04A Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-002 Date Collected: 12.20.2019 12:43 Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.23.2019 12:00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	12.23.2019 18:06	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	12.23.2019 18:06	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	12.23.2019 18:06	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	12.23.2019 18:06	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	12.23.2019 18:06	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	12.23.2019 18:06	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	12.23.2019 18:06	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	124	%	70-130	12.23.2019 18:06		
1,4-Difluorobenzene		540-36-3	106	%	70-130	12.23.2019 18:06		



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

12.23.2019 13:11

Sample Id: **PH06** Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-003 Date Collected: 12.20.2019 11:48 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

Wet Weight

Basis:

Tech: MAB MAB

Date Prep:

Seq Number: 3111556

Analyst:

Result **Parameter** Cas Number RLUnits **Analysis Date** Dil Flag Chloride 932 12.23.2019 17:17 16887-00-6 49.5 mg/kg 5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DTH % Moisture: Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 12.23.2019 15:00

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	12.23.2019 19:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	12.23.2019 19:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	12.23.2019 19:05	U	1
Total GRO-DRO	PHC628	<49.8	49.8		mg/kg	12.23.2019 19:05	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	12.23.2019 19:05	U	1
Surrogate	Ca	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>	
1-Chlorooctane	111-85-3	94	%	70-135	12.23.2019 19:05	
o-Terphenyl	84-15-1	96	%	70-135	12.23.2019 19:05	



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: **PH06** Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-003 Date Collected: 12.20.2019 11:48 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

MAB Analyst: Date Prep: 12.23.2019 12:00 Basis: Wet Weight

Seq Number: 3111553

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	12.23.2019 18:25	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	12.23.2019 18:25	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	12.23.2019 18:25	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	12.23.2019 18:25	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	12.23.2019 18:25	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	12.23.2019 18:25	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	12.23.2019 18:25	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	116	%	70-130	12.23.2019 18:25		
1,4-Difluorobenzene		540-36-3	104	%	70-130	12.23.2019 18:25		



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: PH06A Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-004 Date Collected: 12.20.2019 11:52 Sample Depth: 3 ft

Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.23.2019 13:11 Basis: Wet Weight

Seq Number: 3111556

Analytical Method: Chloride by EPA 300

Parameter	Cas Number	Result	RL	Units	<b>Analysis Date</b>	Flag	Dil
Chloride	16887-00-6	567	9.98	mg/kg	12.23.2019 17:22		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.23.2019 15:00 Basis: Wet Weight

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3		mg/kg	12.23.2019 19:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.3	50.3		mg/kg	12.23.2019 19:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.3	50.3		mg/kg	12.23.2019 19:24	U	1
Total GRO-DRO	PHC628	< 50.3	50.3		mg/kg	12.23.2019 19:24	U	1
Total TPH	PHC635	<50.3	50.3		mg/kg	12.23.2019 19:24	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	105	%	70-135	12.23.2019 19:24		
o-Terphenyl		84-15-1	103	%	70-135	12.23.2019 19:24		



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: PH06A Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-004 Date Collected: 12.20.2019 11:52 Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

540-36-3

Analyst: MAB Date Prep: 12.23.2019 12:00 Basis: Wet Weight

Seq Number: 3111553

1,4-Difluorobenzene

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	12.23.2019 18:44	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	12.23.2019 18:44	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	12.23.2019 18:44	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	12.23.2019 18:44	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	12.23.2019 18:44	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	12.23.2019 18:44	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	12.23.2019 18:44	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	4	460-00-4	121	%	70-130	12.23.2019 18:44		

105

70-130

12.23.2019 18:44



**PH07** 

MAB

#### **Certificate of Analytical Results 647383**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

12.23.2019 13:11

Sample Id: Matrix: Soil

Lab Sample Id: 647383-005 Date Collected: 12.20.2019 11:34 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Date Prep:

% Moisture:

12.23.2019 19:24

70-135

Basis:

Date Received:12.23.2019 11:00

Wet Weight

Tech: MAB % Moisture:

Seq Number: 3111556

Analyst:

Result **Parameter** Cas Number RLUnits **Analysis Date** Dil Flag Chloride 903 12.23.2019 17:28 16887-00-6 49.4 mg/kg 5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DTH Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 12.23.2019 15:00

84-15-1

Seq Number: 3111593

o-Terphenyl

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	12.23.2019 19:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	12.23.2019 19:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	12.23.2019 19:24	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	12.23.2019 19:24	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	12.23.2019 19:24	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	94	%	70-135	12.23.2019 19:24		

96



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: PH07 Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-005 Date Collected: 12.20.2019 11:34 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.23.2019 12:00 Basis: Wet Weight

Parameter	Cas Numbe	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	12.23.2019 19:03	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	12.23.2019 19:03	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	12.23.2019 19:03	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	12.23.2019 19:03	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	12.23.2019 19:03	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	12.23.2019 19:03	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	12.23.2019 19:03	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	104	%	70-130	12.23.2019 19:03		
4-Bromofluorobenzene		460-00-4	123	%	70-130	12.23.2019 19:03		



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: PH07A

Matrix: Soil Date Received:12.23.2019 11:00

70-135

12.23.2019 19:44

Lab Sample Id: 647383-006 Date Collected: 12.20.2019 11:36 Sample Depth: 3.5 ft

Prep Method: E300P

Tech: MAB % Moisture:

MAB Analyst: Date Prep: 12.23.2019 13:11 Basis: Wet Weight

Seq Number: 3111556

Analytical Method: Chloride by EPA 300

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1360	49.3	mg/kg	12.23.2019 17:46		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DTH % Moisture: Tech:

84-15-1

Analyst: DTH 12.23.2019 15:00 Basis: Wet Weight Date Prep:

Seq Number: 3111593

o-Terphenyl

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1		mg/kg	12.23.2019 19:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	12.23.2019 19:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	12.23.2019 19:44	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	12.23.2019 19:44	U	1
Total TPH	PHC635	<50.1	50.1		mg/kg	12.23.2019 19:44	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	103	%	70-135	12.23.2019 19:44		

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#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: PH07A Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-006 Date Collected: 12.20.2019 11:36 Sample Depth: 3.5 ft

460-00-4

Prep Method: SW5030B

70-130

12.23.2019 19:22

% Moisture:

Analyst: MAB Date Prep: 12.23.2019 12:00 Basis: Wet Weight

Seq Number: 3111553

4-Bromofluorobenzene

Tech:

Analytical Method: BTEX by EPA 8021B

MAB

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	12.23.2019 19:22	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	12.23.2019 19:22	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	12.23.2019 19:22	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	12.23.2019 19:22	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	12.23.2019 19:22	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	12.23.2019 19:22	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	12.23.2019 19:22	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	103	%	70-130	12.23.2019 19:22		

122



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

12.23.2019 13:11

Sample Id: **PH08** 

Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-007 Date Collected: 12.20.2019 11:17 Sample Depth: 2 ft

Prep Method: E300P

Wet Weight

Tech: MAB % Moisture:

Basis:

MAB Seq Number: 3111556

Analyst:

Analytical Method: Chloride by EPA 300

Result **Parameter** Cas Number RLUnits **Analysis Date** Dil Flag Chloride 12.23.2019 17:51 16887-00-6 1190 49.6 mg/kg 5

Date Prep:

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DTH % Moisture: Tech:

Analyst: DTH Basis: Wet Weight Date Prep: 12.23.2019 15:00

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	12.23.2019 19:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	12.23.2019 19:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	12.23.2019 19:44	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	12.23.2019 19:44	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	12.23.2019 19:44	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>	F
1-Chlorooctane	111-85-3	94	%	70-135	12.23.2019 19:44	
o-Terphenyl	84-15-1	95	%	70-135	12.23.2019 19:44	



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: **PH08** Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-007 Date Collected: 12.20.2019 11:17 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

MAB Analyst: Date Prep: 12.23.2019 12:00 Basis: Wet Weight

Seq Number: 3111553

Parameter	Cas Numbe	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	12.23.2019 19:41	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	12.23.2019 19:41	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	12.23.2019 19:41	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	12.23.2019 19:41	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	12.23.2019 19:41	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	12.23.2019 19:41	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	12.23.2019 19:41	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	105	%	70-130	12.23.2019 19:41		
4-Bromofluorobenzene		460-00-4	123	%	70-130	12.23.2019 19:41		



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id:

PH08A Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-008 Date Collected: 12.20.2019 11:23 Sample Depth: 3.5 ft

Prep Method: E300P

Tech: MAB % Moisture:

MAB Analyst: Date Prep: 12.23.2019 13:11 Basis: Wet Weight

Seq Number: 3111556

Analytical Method: Chloride by EPA 300

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1270	49.9	mg/kg	12.23.2019 17:57		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DTH % Moisture: Tech:

Analyst: DTH 12.23.2019 15:00 Basis: Wet Weight Date Prep:

Parameter	Cas Numbe	r Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	12.23.2019 20:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	12.23.2019 20:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	12.23.2019 20:04	U	1
Total GRO-DRO	PHC628	<49.9	49.9		mg/kg	12.23.2019 20:04	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	12.23.2019 20:04	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	103	%	70-135	12.23.2019 20:04		
o-Terphenyl		84-15-1	102	%	70-135	12.23.2019 20:04		



#### LT Environmental, Inc., Arvada, CO

PLU Big Sink 25 Federal Batterry

Sample Id: PH08A Matrix: Soil Date Received:12.23.2019 11:00

Lab Sample Id: 647383-008 Date Collected: 12.20.2019 11:23 Sample Depth: 3.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

MAB Analyst: Date Prep: 12.23.2019 12:00 Basis: Wet Weight

Seq Number: 3111553

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	12.23.2019 20:00	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	12.23.2019 20:00	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	12.23.2019 20:00	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	12.23.2019 20:00	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	12.23.2019 20:00	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	12.23.2019 20:00	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	12.23.2019 20:00	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	102	%	70-130	12.23.2019 20:00		
4-Bromofluorobenzene		460-00-4	123	%	70-130	12.23.2019 20:00		



# 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

Flag

Flag





#### LT Environmental, Inc.

PLU Big Sink 25 Federal Batterry

E300P Analytical Method: Chloride by EPA 300 Prep Method: 12.23.2019 Seq Number: 3111556 Matrix: Solid Date Prep:

7693186-1-BLK LCS Sample Id: 7693186-1-BKS LCSD Sample Id: 7693186-1-BSD MB Sample Id:

LCS RPD MB Spike LCS Limits %RPD Units Analysis LCSD LCSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date Chloride <10.0 250 274 110 275 90-110 0 20 12.23.2019 19:53 110 mg/kg

Analytical Method: Chloride by EPA 300 Prep Method: E300P Seq Number: 3111556 Matrix: Soil Date Prep: 12.23.2019

647383-001 MS Sample Id: 647383-001 S MSD Sample Id: 647383-001 SD Parent Sample Id:

Parent Spike MS MS MSD MSD Limits %RPD RPD Units Analysis **Parameter** Flag Result Amount Result %Rec %Rec Limit Date Result 12.23.2019 16:59 Chloride 6740 201 6860 60 6850 55 90-110 0 20 mg/kg X

Analytical Method: Chloride by EPA 300 Prep Method: E300P

3111556 Seq Number: Matrix: Soil Date Prep: 12.23.2019 MS Sample Id: 647387-003 S MSD Sample Id: 647387-003 SD Parent Sample Id: 647387-003

Spike **RPD Parent** MS MS %RPD Units MSD **MSD** Limits Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 102 20 12.23.2019 18:20 198 311 106 309 105 90-110 mg/kg

SW8015P Analytical Method: TPH by SW8015 Mod Prep Method:

3111593 Matrix: Solid Seq Number: Date Prep: 12.23.2019 MB Sample Id: 7693201-1-BLK LCS Sample Id: 7693201-1-BKS LCSD Sample Id: 7693201-1-BSD

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis **Parameter** Result Limit Result Amount %Rec %Rec Date Result Gasoline Range Hydrocarbons (GRO) 12.23.2019 18:05 35 <139 1000 1190 119 1250 125 70-135 5 mg/kg 12.23.2019 18:05 Diesel Range Organics (DRO) 70-135 35 <11.5 1000 1200 120 1250 125 4 mg/kg

LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 12.23.2019 18:05 1-Chlorooctane 99 116 129 70-135 % 100 12.23.2019 18:05 o-Terphenyl 110 126 70-135 %

SW8015P Analytical Method: TPH by SW8015 Mod Prep Method:

Seq Number: 3111593 Matrix: Solid Date Prep: 12.23.2019

MB Sample Id: 7693201-1-BLK

MBUnits Analysis Flag **Parameter** Result Date Motor Oil Range Hydrocarbons (MRO) 12.23.2019 18:05 < 50.0 mg/kg

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

[D] = 100\*(C-A) / B $RPD = 200* \mid (C-E) \mid (C+E) \mid$ [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec



Seq Number:

#### **QC Summary** 647383

#### LT Environmental, Inc.

PLU Big Sink 25 Federal Batterry

Analytical Method: TPH by SW8015 Mod

3111593

Matrix: Soil

SW8015P Prep Method:

Date Prep: 12.23.2019

MS Sample Id: 647383-001 S Parent Sample Id: 647383-001 **Parent** MS MS Limits MSD

MSD Sample Id: 647383-001 SD RPD %RPD Units Analysis Flag

Spike **MSD Parameter** Result Amount Result %Rec Result %Rec Limit Date Gasoline Range Hydrocarbons (GRO) 1000 1000 99 35 12.23.2019 18:45 14.6 891 88 70-135 12 mg/kg 9 12.23.2019 18:45 Diesel Range Organics (DRO) <11.5 1000 1030 103 945 70-135 35 mg/kg 95

MS MS MSD MSD Limits Units Analysis **Surrogate** Flag Flag Date %Rec %Rec 12.23.2019 18:45 1-Chlorooctane 123 123 70-135 % 12.23.2019 18:45 o-Terphenyl 111 106 70-135 %

Analytical Method: BTEX by EPA 8021B

3111553 Seq Number:

7693184-1-BLK

Matrix: Solid

7693184-1-BKS

SW5030B Prep Method:

Date Prep: 12.23.2019

LCS Sample Id: LCSD Sample Id: 7693184-1-BSD MB Sample Id: MB Spike LCS LCS LCSD Limits %RPD **RPD** Units Analysis LCSD Flag **Parameter** Result Amount Result %Rec Result %Rec Limit Date

12.23.2019 16:05 < 0.00200 0.100 0.0909 91 0.0951 5 35 Benzene 95 70-130 mg/kg 12.23.2019 16:05 Toluene < 0.00200 0.100 0.0929 93 0.0972 97 70-130 5 35 mg/kg 12.23.2019 16:05 Ethylbenzene 0.100 0.0920 92 0.0963 96 71-129 5 35 < 0.00200 mg/kg 12.23.2019 16:05 m,p-Xylenes < 0.00400 0.200 0.194 97 0.203 102 70-135 5 35 mg/kg 12.23.2019 16:05 < 0.00200 0.100 0.0979 98 0.103 103 71-133 5 35 o-Xylene mg/kg

Limits MB LCS LCS LCSD MB LCSD Units Analysis Surrogate %Rec Flag %Rec Flag Flag Date %Rec 12.23.2019 16:05 1,4-Difluorobenzene 104 102 103 70-130 % 70-130 % 12.23.2019 16:05 4-Bromofluorobenzene 116 116 116

Matrix: Soil

Analytical Method: BTEX by EPA 8021B

Seq Number: 3111553 Parent Sample Id: 647383-001

MS Sample Id: 647383-001 S

SW5030B Prep Method:

Date Prep: 12.23.2019 MSD Sample Id: 647383-001 SD

Flag

RPD Parent Spike MS MS MSD **MSD** Limits %RPD Units Analysis **Parameter** Limit Date Result Amount Result %Rec %Rec Result 12.23.2019 16:43 < 0.00201 0.101 0.0922 91 0.0726 73 70-130 24 35 Benzene mg/kg 12.23.2019 16:43 92 74 70-130 23 35 Toluene < 0.00201 0.101 0.0929 0.0734 mg/kg Ethylbenzene 0.000495 0.101 0.0900 89 0.0708 71 71-129 24 35 12.23.2019 16:43 mg/kg 35 12.23.2019 16:43 m,p-Xylenes < 0.00402 0.201 0.189 94 0.148 74 70-135 24 mg/kg < 0.00201 0.101 0.0957 95 0.0753 71-133 24 35 mg/kg 12.23.2019 16:43 o-Xylene 76

MS MS MSD **MSD** Limits Units Analysis Surrogate Flag Flag %Rec %Rec Date 12.23.2019 16:43 1,4-Difluorobenzene 103 101 70-130 % 12.23.2019 16:43 4-Bromofluorobenzene 121 120 70-130 %

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

[D] = 100\*(C-A) / B $RPD = 200* \mid (C-E) \mid (C+E) \mid$ [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result

= MS/LCS Result = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

Midland, Tx 79705 3300 North A Street

City, State ZIP:

State of Project:

□RP □rownfields □RC Work Order Comments

**€** perfund

Address: City, State ZIP:

Company Name:

Dan Moir

Project Manager:

# Chain of Custody

Work Order No: 647383

www.xenco.com

Page

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Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334

LT Environmental, Inc., Permian office Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296 Bill to: (if different) Company Name: XTO Energy Kyle Littrell Program: UST/PST

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Released to Imaging: 5/13/2025 9:12:25 AM



# XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 12/23/2019 11:00:00 AM

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

Work Order #: 647383

Temperature Measuring device used: T NM 007

Comments

#1 *Temperature of cooler(s)?		.6
#2 *Shipping container in good condition	?	Yes
#3 *Samples received on ice?		Yes
#4 *Custody Seals intact on shipping co	ntainer/ cooler?	Yes
#5 Custody Seals intact on sample bottle	es?	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 relinque	uished/ received?	Yes
#10 Chain of Custody agrees with samp	e 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 indicat	ed test(s)?	Yes
#16 All samples received within hold tim	e?	Yes
#17 Subcontract of sample(s)?		Yes
#18 Water VOC samples have zero hear	dspace?	N/A
* Must be completed for after-hours de	livery of samples prior to placing in PH Device/Lot#:	the refrigerator
Analyst:  Checklist completed by:		Date: 12/23/2019
Checklist reviewed by:	Jessica Kramer	Date: 12/24/2019

**Sample Receipt Checklist** 

# **Analytical Report 648591**

for

LT Environmental, Inc.

Project Manager: Dan Moir PLU Big Sinks 25 Fed Battery

10-JAN-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)



10-JAN-20

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

Reference: XENCO Report No(s): 648591

PLU Big Sinks 25 Fed Battery Project Address: Eddy County

#### 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) 648591. 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. 648591 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

Jessica Vermer

**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 648591**

# LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
PH01	S	01-09-20 10:00	2 ft	648591-001
PH01A	S	01-09-20 10:05	4 ft	648591-002
PH02	S	01-09-20 10:25	2 ft	648591-003
PH02A	S	01-09-20 10:30	3.75 ft	648591-004
PH03	S	01-09-20 10:50	2 ft	648591-005
PH03A	S	01-09-20 10:55	3 ft	648591-006
PH05A	S	01-09-20 11:35	3 ft	648591-007
PH05	S	01-09-20 11:20	2 ft	648591-008

#### CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: PLU Big Sinks 25 Fed Battery

Project ID: Report Date: 10-JAN-20 Work Order Number(s): 648591 Date Received: 01/09/2020

#### Sample receipt non conformances and comments:

#### Sample receipt non conformances and comments per sample:

None

#### **Analytical non conformances and comments:**

Batch: LBA-3112831 BTEX by EPA 8021B

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

Batch: LBA-3112858 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits Data confirmed by re-analysis. Samples affected are:

7694053-1-BLK,648591-008,648591-006.



**Project Id:** 

**Contact:** Dan Moir **Project Location: Eddy County** 

# Certificate of Analysis Summary 648591

LT Environmental, Inc., Arvada, CO Project Name: PLU Big Sinks 25 Fed Battery

Date Received in Lab: Thu Jan-09-20 04:15 pm

**Report Date:** 10-JAN-20

Project Manager: Jessica Kramer

	Lab Id:	648591-0	001	648591-0	002	648591-0	003	648591-0	004	648591-0	005	648591-	006
Analusia Daguastad	Field Id:	PH01		PH01A	A	PH02		PH02A	A	PH03		PH03	A
Analysis Requested	Depth:	2- ft		4- ft		2- ft		3.75- f	ì	2- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	,	SOIL	.
	Sampled:	Jan-09-20 1	10:00	Jan-09-20	10:05	Jan-09-20	10:25	Jan-09-20	10:30	Jan-09-20	10:50	Jan-09-20	10:55
BTEX by EPA 8021B	Extracted:	Jan-09-20	17:00	Jan-09-20	17:00	Jan-09-20	17:00	Jan-09-20	17:00	Jan-09-20	17:00	Jan-09-20	17:00
	Analyzed:	Jan-09-20 2	23:38	Jan-09-20	23:55	Jan-10-20	00:12	Jan-10-20 (	00:30	Jan-10-20 (	00:47	Jan-10-20	01:05
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200
Toluene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200
Ethylbenzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200
m,p-Xylenes		< 0.00399	0.00399	< 0.00399	0.00399	< 0.00398	0.00398	< 0.00396	0.00396	< 0.00396	0.00396	< 0.00399	0.00399
o-Xylene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200
Total Xylenes		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200
Total BTEX		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00198	0.00198	< 0.00198	0.00198	< 0.00200	0.00200
Chloride by EPA 300	Extracted:	Jan-09-20 1	17:40	Jan-09-20	17:40	Jan-09-20	17:40	Jan-09-20	17:40	Jan-09-20	17:40	Jan-09-20	17:40
	Analyzed:	Jan-09-20 2	23:09	Jan-09-20	23:16	Jan-09-20	23:22	Jan-09-20 2	23:28	Jan-09-20	23:35	Jan-09-20	23:41
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		283	9.96	195	9.98	1960	50.4	544	10.1	1300	50.4	2250	50.3
TPH by SW8015 Mod	Extracted:	Jan-09-20 1	18:30	Jan-09-20	18:30	Jan-09-20	18:30	Jan-09-20	18:30	Jan-09-20	18:30	Jan-09-20	18:30
	Analyzed:	Jan-10-20 (	)3:54	Jan-10-20	14:25	Jan-10-20	04:33	Jan-10-20	14:45	Jan-10-20 (	04:53	Jan-10-20	05:13
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	< 50.1	50.1	< 50.0	50.0	< 50.2	50.2	<50.1	50.1	< 50.1	50.1
Diesel Range Organics (DRO)		<50.3	50.3	< 50.1	50.1	< 50.0	50.0	< 50.2	50.2	< 50.1	50.1	< 50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	< 50.1	50.1	< 50.0	50.0	< 50.2	50.2	< 50.1	50.1	< 50.1	50.1
Total GRO-DRO		<50.3	50.3	< 50.1	50.1	< 50.0	50.0	<50.2	50.2	< 50.1	50.1	< 50.1	50.1
Total TPH		<50.3	50.3	< 50.1	50.1	< 50.0	50.0	< 50.2	50.2	< 50.1	50.1	< 50.1	50.1

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Version: 1.%

Jessica Vramer

Jessica Kramer Project Assistant **Project Id:** 

**Project Location:** 

**Contact:** 



Dan Moir

**Eddy County** 

Certificate of Analysis Summary 648591

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Fed Battery

Date Received in Lab: Thu Jan-09-20 04:15 pm

**Report Date:** 10-JAN-20 Project Manager: Jessica Kramer

	Lab Id:	648591-0	007	648591-0	800		
Analysis Requested	Field Id:	PH05A	<b>\</b>	PH05			
Analysis Requesieu	Depth:	3- ft		2- ft			
	Matrix:	SOIL		SOIL			
	Sampled:	Jan-09-20 1	11:35	Jan-09-20 1	11:20		
BTEX by EPA 8021B	Extracted:	Jan-09-20 1	17:00	Jan-09-20 1	7:00		
	Analyzed:	Jan-10-20 (	01:22	Jan-10-20 (	1:39		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00200	0.00200	< 0.00198	0.00198		
Toluene		< 0.00200	0.00200	< 0.00198	0.00198		
Ethylbenzene		< 0.00200	0.00200	< 0.00198	0.00198		
m,p-Xylenes		< 0.00399	0.00399	< 0.00396	0.00396		
o-Xylene		< 0.00200	0.00200	< 0.00198	0.00198		
Total Xylenes		<0.00200 0.00200 <0.00200 0.00200		< 0.00198	0.00198		
Total BTEX		li i		< 0.00198	0.00198		
Chloride by EPA 300	Extracted:	Jan-09-20	17:40	Jan-09-20 1	7:40		
	Analyzed:	Jan-09-20 2	23:47	Jan-09-20 2	23:54		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		1790	50.4	3000	50.1		
TPH by SW8015 Mod	Extracted:	Jan-09-20 1	18:30	Jan-09-20 1	8:30		
	Analyzed:	Jan-10-20 (	05:13	Jan-10-20 (	5:33		
	Units/RL:	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)	·	< 50.1	50.1	< 50.2	50.2		
Diesel Range Organics (DRO)		< 50.1	50.1	< 50.2	50.2		
Motor Oil Range Hydrocarbons (MRO)		< 50.1	50.1	< 50.2	50.2		
Total GRO-DRO		<50.1	50.1	< 50.2	50.2		
Total TPH		< 50.1	50.1	< 50.2	50.2		

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.%

Jessica Kramer Project Assistant

Jessica Vermer

Date Received:01.09.20 16.15



**PH01** 

#### **Certificate of Analytical Results 648591**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Soil

Lab Sample Id: 648591-001 Date Collected: 01.09.20 10.00 Sample Depth: 2 ft

Matrix:

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.09.20 17.40 Basis: Wet Weight

Seq Number: 3112846

Sample Id:

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 283
 9.96
 mg/kg
 01.09.20 23.09
 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.09.20 18.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3		mg/kg	01.10.20 03.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.3	50.3		mg/kg	01.10.20 03.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.3	50.3		mg/kg	01.10.20 03.54	U	1
Total GRO-DRO	PHC628	< 50.3	50.3		mg/kg	01.10.20 03.54	U	1
Total TPH	PHC635	< 50.3	50.3		mg/kg	01.10.20 03.54	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	113	%	70-135	01.10.20 03.54		
o-Terphenyl		84-15-1	107	%	70-135	01.10.20 03.54		



#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Basis:

Wet Weight

Sample Id: PH01 Matrix: Soil Date Received:01.09.20 16.15

Lab Sample Id: 648591-001 Date Collected: 01.09.20 10.00 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.09.20 17.00
Seq Number: 3112831

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	01.09.20 23.38	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	01.09.20 23.38	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	01.09.20 23.38	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	01.09.20 23.38	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	01.09.20 23.38	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	01.09.20 23.38	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	01.09.20 23.38	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	100	%	70-130	01.09.20 23.38		
1,4-Difluorobenzene		540-36-3	98	%	70-130	01.09.20 23.38		



#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id: PH01A Matrix: Soil

Date Received:01.09.20 16.15

Date Collected: 01.09.20 10.05

Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

. . . .

% Moisture:

Basis:

Tech: MAB

Analyst: MAB

Date Prep: 01.09.20 17.40

Wet Weight

Seq Number: 3112846

Lab Sample Id: 648591-002

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	195	9.98	mg/kg	01.09.20 23.16		1

Date Prep:

Analytical Method: TPH by SW8015 Mod

DTH

Prep Method: SW8015P

% Moisture:

Tech: DTH

Analyst:

01.09.20 18.30 Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	01.10.20 14.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	01.10.20 14.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	01.10.20 14.25	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	01.10.20 14.25	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	01.10.20 14.25	U	1
Symmografia		Cas Number	%	Units	Limits	Analysis Date	Floo	
Surrogate		Cas Nulliber	Recovery	Units	Limits	Alialysis Date	Flag	
1-Chlorooctane		111-85-3	122	%	70-135	01.10.20 14.25		
o-Terphenyl		84-15-1	121	%	70-135	01.10.20 14.25		



4-Bromofluorobenzene

# **Certificate of Analytical Results 648591**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Basis:

70-130

01.09.20 23.55

Wet Weight

Sample Id: PH01A Matrix: Soil Date Received:01.09.20 16.15

Lab Sample Id: 648591-002 Date Collected: 01.09.20 10.05 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

460-00-4

Analyst: MAB Date Prep: 01.09.20 17.00 Seq Number: 3112831

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	01.09.20 23.55	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	01.09.20 23.55	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	01.09.20 23.55	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	01.09.20 23.55	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	01.09.20 23.55	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	01.09.20 23.55	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	01.09.20 23.55	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	101	%	70-130	01.09.20 23.55		

104



### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id: PH02 Matrix: Soil

Date Collected: 01.09.20 10.25 Sample Depth: 2 ft

Prep Method: E300P

Date Received:01.09.20 16.15

% Moisture:

% Moisture:

Analyst: MAB Date Prep: 01.09.20 17.40 Basis: Wet Weight

Seq Number: 3112846

Tech:

Lab Sample Id: 648591-003

Analytical Method: Chloride by EPA 300

MAB

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 1960
 50.4
 mg/kg
 01.09.20 23.22
 5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH

Analyst: DTH Date Prep: 01.09.20 18.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	01.10.20 04.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	01.10.20 04.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	01.10.20 04.33	U	1
Total GRO-DRO	PHC628	< 50.0	50.0		mg/kg	01.10.20 04.33	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	01.10.20 04.33	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	99	%	70-135	01.10.20 04.33		
o-Terphenyl		84-15-1	96	%	70-135	01.10.20 04.33		



### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id: PH02 Matrix: Soil Date Received:01.09.20 16.15

Lab Sample Id: 648591-003 Date Collected: 01.09.20 10.25 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.09.20 17.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	01.10.20 00.12	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	01.10.20 00.12	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	01.10.20 00.12	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	01.10.20 00.12	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	01.10.20 00.12	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	01.10.20 00.12	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	01.10.20 00.12	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	102	%	70-130	01.10.20 00.12		
4-Bromofluorobenzene		460-00-4	104	%	70-130	01.10.20 00.12		



PH02A

MAB

### **Certificate of Analytical Results 648591**

### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Soil

Lab Sample Id: 648591-004 Date Collected: 01.09.20 10.30 Sample Depth: 3.75 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

% Moisture:

% Moisture:

Date Received:01.09.20 16.15

Analyst: MAB Date Prep: 01.09.20 17.40 Basis: Wet Weight

Matrix:

Seq Number: 3112846

Sample Id:

Tech:

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 544
 10.1
 mg/kg
 01.09.20 23.28
 1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH

Analyst: DTH Date Prep: 01.09.20 18.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2		mg/kg	01.10.20 14.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.2	50.2		mg/kg	01.10.20 14.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.2	50.2		mg/kg	01.10.20 14.45	U	1
Total GRO-DRO	PHC628	< 50.2	50.2		mg/kg	01.10.20 14.45	U	1
Total TPH	PHC635	< 50.2	50.2		mg/kg	01.10.20 14.45	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	99	%	70-135	01.10.20 14.45		
o-Terphenyl		84-15-1	92	%	70-135	01.10.20 14.45		



### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

01.09.20 17.00

Basis:

Wet Weight

Sample Id: PH02A Matrix: Soil Date Received:01.09.20 16.15

Lab Sample Id: 648591-004 Date Collected: 01.09.20 10.30 Sample Depth: 3.75 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

MAB % Moisture:

Date Prep:

Seq Number: 3112831

MAB

Tech:

Analyst:

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	01.10.20 00.30	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	01.10.20 00.30	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	01.10.20 00.30	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	01.10.20 00.30	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	01.10.20 00.30	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	01.10.20 00.30	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	01.10.20 00.30	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	104	%	70-130	01.10.20 00.30		
1,4-Difluorobenzene		540-36-3	100	%	70-130	01.10.20 00.30		



**PH03** 

MAB

### **Certificate of Analytical Results 648591**

### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Soil

Date Received:01.09.20 16.15

Lab Sample Id: 648591-005 Date Collected: 01.09.20 10.50

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Matrix:

% Moisture:

Analyst: MAB Date Prep: 01.09.20 17.40 Basis: Wet Weight

Seq Number: 3112846

Sample Id:

Tech:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1300	50.4	mg/kg	01.09.20 23.35		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.09.20 18.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	01.10.20 04.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	01.10.20 04.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	01.10.20 04.53	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	01.10.20 04.53	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	01.10.20 04.53	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	101	%	70-135	01.10.20 04.53		
o-Terphenyl		84-15-1	95	%	70-135	01.10.20 04.53		



### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id: PH03 Matrix: Soil Date Received:01.09.20 16.15

Lab Sample Id: 648591-005 Date Collected: 01.09.20 10.50 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.09.20 17.00 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	01.10.20 00.47	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	01.10.20 00.47	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	01.10.20 00.47	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	01.10.20 00.47	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	01.10.20 00.47	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	01.10.20 00.47	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	01.10.20 00.47	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	104	%	70-130	01.10.20 00.47		
1,4-Difluorobenzene		540-36-3	99	%	70-130	01.10.20 00.47		



PH03A

Analytical Method: Chloride by EPA 300

MAB

### **Certificate of Analytical Results 648591**

### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

01.09.20 17.40

Matrix: Soil Date Received:01.09.20 16.15

Lab Sample Id: 648591-006 Date Collected: 01.09.20 10.55 Sample Depth: 3 ft

Date Prep:

Prep Method: E300P

Tech: MAB % Moisture:

Basis: Wet Weight

Seq Number: 3112846

Sample Id:

Analyst:

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 2250
 50.3
 mg/kg
 01.09.20 23.41
 5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.09.20 18.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	01.10.20 05.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	01.10.20 05.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	01.10.20 05.13	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	01.10.20 05.13	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	01.10.20 05.13	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	138	%	70-135	01.10.20 05.13	**	
o-Terphenyl		84-15-1	130	%	70-135	01.10.20 05.13		

Wet Weight



### **Certificate of Analytical Results 648591**

### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id: PH03A Matrix: Soil Date Received:01.09.20 16.15

Lab Sample Id: 648591-006 Date Collected: 01.09.20 10.55 Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.09.20 17.00 Basis:

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	01.10.20 01.05	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	01.10.20 01.05	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	01.10.20 01.05	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	01.10.20 01.05	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	01.10.20 01.05	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	01.10.20 01.05	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	01.10.20 01.05	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	102	%	70-130	01.10.20 01.05		
4-Bromofluorobenzene		460-00-4	110	%	70-130	01.10.20 01.05		



### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id: PH05A Matrix: S

Intrix: Soil Date Received:01.09.20 16.15

Lab Sample Id: 648591-007 Date Collected: 01.09.20 11.35 Sample Depth: 3 ft

Prep Method: E300P

Wet Weight

Analytical Method: Chloride by EPA 300 Prep Method:
Tech: MAB % Moisture:

% Moisture
Date Prep: 01.09.20 17.40 Basis:

Seq Number: 3112846

MAB

Analyst:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1790	50.4	mg/kg	01.09.20 23.47		

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.09.20 18.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	01.10.20 05.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	01.10.20 05.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	01.10.20 05.13	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	01.10.20 05.13	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	01.10.20 05.13	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	98	%	70-135	01.10.20 05.13		
o-Terphenyl		84-15-1	93	%	70-135	01.10.20 05.13		



### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id: PH05A Matrix: Soil Date Received:01.09.20 16.15

Lab Sample Id: 648591-007 Date Collected: 01.09.20 11.35 Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.09.20 17.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	01.10.20 01.22	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	01.10.20 01.22	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	01.10.20 01.22	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	01.10.20 01.22	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	01.10.20 01.22	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	01.10.20 01.22	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	01.10.20 01.22	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	104	%	70-130	01.10.20 01.22		
1,4-Difluorobenzene		540-36-3	99	%	70-130	01.10.20 01.22		



### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id: PH05 Matrix: Soil

Date Collected: 01.09.20 11.20 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Date Received:01.09.20 16.15

% Moisture:

Analyst: MAB Date Prep: 01.09.20 17.40 Basis: Wet Weight

Seq Number: 3112846

Tech:

Lab Sample Id: 648591-008

MAB

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 3000
 50.1
 mg/kg
 01.09.20 23.54
 5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 01.09.20 18.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2		mg/kg	01.10.20 05.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.2	50.2		mg/kg	01.10.20 05.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.2	50.2		mg/kg	01.10.20 05.33	U	1
Total GRO-DRO	PHC628	< 50.2	50.2		mg/kg	01.10.20 05.33	U	1
Total TPH	PHC635	< 50.2	50.2		mg/kg	01.10.20 05.33	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	139	%	70-135	01.10.20 05.33	**	
o-Terphenyl		84-15-1	130	%	70-135	01.10.20 05.33		



### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

01.09.20 17.00

Basis:

Wet Weight

Sample Id: PH05 Matrix: Soil Date Received:01.09.20 16.15

Lab Sample Id: 648591-008 Date Collected: 01.09.20 11.20 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Date Prep:

Tech: MAB % Moisture:

Seq Number: 3112831

MAB

Analyst:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	01.10.20 01.39	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	01.10.20 01.39	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	01.10.20 01.39	U	1
m,p-Xylenes	179601-23-1	< 0.00396	0.00396		mg/kg	01.10.20 01.39	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	01.10.20 01.39	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	01.10.20 01.39	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	01.10.20 01.39	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	106	%	70-130	01.10.20 01.39		
1,4-Difluorobenzene		540-36-3	102	%	70-130	01.10.20 01.39		



### 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.

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

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.

E300P

E300P

SW8015P

SW8015P

MS = Matrix Spike

01.09.20

Prep Method:

Prep Method:

Date Prep:



Seq Number:

### **QC Summary** 648591

### LT Environmental, Inc.

PLU Big Sinks 25 Fed Battery

Analytical Method: Chloride by EPA 300

3112846 Matrix: Solid

LCS Sample Id: 7694038-1-BKS LCSD Sample Id: 7694038-1-BSD MB Sample Id: 7694038-1-BLK

MR Spike LCS LCS Limits %RPD RPD Limit Units LCSD LCSD Analysis Flag **Parameter** Result Amount Result %Rec Date %Rec Result 01.09.20 20:51 Chloride <10.0 250 255 102 261 104 90-110 2 20 mg/kg

Analytical Method: Chloride by EPA 300

E300P Prep Method: Seq Number: 3112846 Matrix: Soil 01.09.20 Date Prep:

Parent Sample Id: 648427-047 MS Sample Id: 648427-047 S MSD Sample Id: 648427-047 SD

Spike MS MS %RPD RPD Limit Units Parent **MSD MSD** Limits Analysis Flag **Parameter** Result Date Result Amount %Rec Result %Rec

Chloride 200 199 415 108 417 109 90-110 0 20 mg/kg 01.09.20 21:10

Analytical Method: Chloride by EPA 300

3112846 Matrix: Soil 01.09.20 Seq Number: Date Prep:

MS Sample Id: MSD Sample Id: 648427-057 SD 648427-057 S Parent Sample Id: 648427-057

MS %RPD RPD Limit Units Parent Spike MS **MSD MSD** Limits Analysis Flag **Parameter** Result Date Result %Rec Amount Result %Rec Chloride 6890 202 7070 89 7040 75 90-110 0 20 01.09.20 22:38 X mg/kg

Analytical Method: TPH by SW8015 Mod

Prep Method: Seq Number: 3112858 Matrix: Solid Date Prep: 01.09.20

7694053-1-BKS LCSD Sample Id: LCS Sample Id: 7694053-1-BSD MB Sample Id: 7694053-1-BLK

LCS %RPD RPD Limit Units MB Spike LCS Limits Analysis LCSD LCSD Flag **Parameter** Result %Rec Date Result Amount %Rec Result Gasoline Range Hydrocarbons (GRO) 121 70-135 0 01.10.20 03:34 < 50.0 1000 1210 1210 121 35 mg/kg 01.10.20 03:34 70-135 35 Diesel Range Organics (DRO) 1000 1120 112 1110 1 < 50.0 111 mg/kg

LCS LCS MB MB LCSD LCSD Limits Units Analysis **Surrogate** %Rec Flag %Rec Flag Flag Date %Rec \*\* 1-Chlorooctane 137 130 114 70-135 % 01.10.20 03:34 01.10.20 03:34 o-Terphenyl 134 102 100 70-135 %

Analytical Method: TPH by SW8015 Mod

Prep Method: Seg Number: 3112858 Matrix: Solid Date Prep: 01.09.20

MB Sample Id: 7694053-1-BLK

MB Units Analysis Flag **Parameter** Result Date 01.10.20 03:34 Motor Oil Range Hydrocarbons (MRO) < 50.0 mg/kg

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

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample

= MS/LCS Result

A = Parent Result B = Spike Added D = MSD/LCSD % Rec = MSD/LCSD Result



Seq Number:

### **QC Summary** 648591

### LT Environmental, Inc.

PLU Big Sinks 25 Fed Battery

Analytical Method: TPH by SW8015 Mod

3112858 Matrix: Soil

MS Sample Id: 648591-001 S Parent Sample Id: 648591-001

SW8015P Prep Method:

Date Prep: 01.09.20

MSD Sample Id: 648591-001 SD

SW5030B

SW5030B

Flag

Flag

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI	RPD Limi	it Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	< 50.2	1000	1280	128	1260	126	70-135	2	35	mg/kg	01.10.20 13:44	
Diesel Range Organics (DRO)	< 50.2	1000	1200	120	1190	119	70-135	1	35	mg/kg	01.10.20 13:44	
				AS 1	MS	мсг	MSI	D ·	I imite	Units	Analysis	

MSD Units **Surrogate** Date %Rec Flag %Rec Flag 1-Chlorooctane 120 123 70-135 % 01.10.20 13:44 o-Terphenyl 107 109 70-135 01.10.20 13:44

Analytical Method: BTEX by EPA 8021B

Prep Method: Seq Number: 3112831 Matrix: Solid Date Prep: 01.09.20

LCS Sample Id: 7694076-1-BKS LCSD Sample Id: 7694076-1-BSD MB Sample Id: 7694076-1-BLK

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date
Benzene	< 0.00200	0.100	0.0941	94	0.101	101	70-130	7	35	mg/kg	01.09.20 17:50
Toluene	< 0.00200	0.100	0.0961	96	0.103	103	70-130	7	35	mg/kg	01.09.20 17:50
Ethylbenzene	< 0.00200	0.100	0.0948	95	0.101	101	71-129	6	35	mg/kg	01.09.20 17:50
m,p-Xylenes	< 0.00400	0.200	0.197	99	0.211	106	70-135	7	35	mg/kg	01.09.20 17:50
o-Xylene	< 0.00200	0.100	0.0961	96	0.103	103	71-133	7	35	mg/kg	01.09.20 17:50

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		99		101		70-130	%	01.09.20 17:50
4-Bromofluorobenzene	102		101		104		70-130	%	01.09.20 17:50

Analytical Method: BTEX by EPA 8021B

Prep Method: Seq Number: 3112831 Matrix: Soil Date Prep: 01.09.20MS Sample Id: 648427-057 S MSD Sample Id: 648427-057 SD Parent Sample Id: 648427-057

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date
Benzene	< 0.00200	0.100	0.113	113	0.103	103	70-130	9	35	mg/kg	01.09.20 18:25
Toluene	< 0.00200	0.100	0.110	110	0.0941	94	70-130	16	35	mg/kg	01.09.20 18:25
Ethylbenzene	< 0.00200	0.100	0.0990	99	0.0744	75	71-129	28	35	mg/kg	01.09.20 18:25
m,p-Xylenes	< 0.00401	0.200	0.203	102	0.150	75	70-135	30	35	mg/kg	01.09.20 18:25
o-Xylene	< 0.00200	0.100	0.101	101	0.0756	76	71-133	29	35	mg/kg	01.09.20 18:25

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	01.09.20 18:25
4-Bromofluorobenzene	108		106		70-130	%	01.09.20 18:25

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

[D] = 100\*(C-A) / BRPD = 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

Project Manager

Company Name: Address:

Phone:

City, State ZIP:

# **Chain of Custody**

(432) 236-3849	Midland, Tx 79705	3300 North A Street	LT Environmental, Inc., Permian office	Dan Moir	XENCO ABORATORIES	
Email: enaka@ltenv.com, dmoir@ltenv.com	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	Houston, TX (281) 240-4200 D Midland, TX (432-704-5440) I Hobbs, NM (575-392-7550) Phoenix, AZ (4)	C
dmoir@ltenv.com			XTO Energy	Kyle Littrell	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)	Chain of Custody
Deliverables: EDD ADaPT	Reporting:Level II Level III ST/UST RP I vel IV	State of Project:	Program: UST/PST ☐RP ☐rownfields ☐RC ☐perfund	Work Order Comments	13-620-2000) www.xenco.com Page	Work Order No:
Other:	JRP UbvelIV [		RC Derfund	ts	e of I	M. Cahin

Project Name:	PW Big Sinks 25 ted Bathery	25 Fed	betry	Turn Around		-		ANALYSIS REQUEST		Work Order Notes
Project Number:	TRP-	KP-8551		Routine [						
P.O. Number:	Edo	Eddy County		Rush: 2 day						
Sampler's Name:	Eliza	Elizabeth Naka		Due Date:						
SAMPLE RECEIPT	PT Temp Blank:	Blank: Yes	No	Wet Ice: (Yes) No						
ſemperature (°C):	5	(	Thermo	Thermometer ID	ners		)			
Received Intact:	(Ýes) N	No	艺	M007	ntai	)21)				
Cooler Custody Seals:	Ye	N/A	Correction Factor:	actor: _09	Cor				TAT st	TAT starts the day recevied by the
Sample Custody Seals:		N/A	Total Containers:	iners:	er of	31			a	lab, if received by 4:30pm
Sample Identification		Matrix Sampled	te Time pled Sampled	ne Depth	Numbe	TPH (EI	Chlorid		S	Sample Comments
pHGI		1911 5	0001 00/18	2'	,	X	X		dist	discrete
MOH			1005	4,			-			
20HJ			1025	5 2'						
Y20Ha			0£(J)	3.75						
PHO3			1056	6 2'						
PHOSA			1055	5 3'						
PHOSA			1135	5 3'						M
50110		4	1120	0 2	6	4	4		4	
						+		Elepheter Maky		
Total 200.7 / 6010 Circle Method(s) a	otal 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	:0: be analyzed	8	8RCRA 13PPM Texas 11 Al Sb As Ba Be TCLP / SPLP 6010: 8RCRA Sb As Ba Be	3S 11 AI S 3RCRA S	Sb As E	3a Be E a Be C	RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Mo Ni K Se Ag SiO2 TI U	Na Sr TI Sn U V Zn 1631 / 245.1 / 7470 / 7471 : Hg
olice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontrac f 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 loss f 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	ocument and relinquish able only for the cost o ge of \$75.00 will be ap	ment of samples of samples and s plied to each pro	s constitutes a value in the constitutes and a constitute in the constitutes a value in the constitutes and a constitute in the constitutes and a constitute in the c	/alid purchase order eany responsibility f ge of \$5 for each san	from client co or any losses nple submitted	or expense or to Xenco,	Kenco, its a is incurred but not an	olice: 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 a 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.	terms and conditions nces beyond the control lously negotiated.	
Relinquished by: (Signature)	(Signature)	Rece	Received by: (Signature)	gnature)		Date/Time	Ф	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
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							0			

Revised Date 051418 Rev. 2018.1

### **XENCO Laboratories**

### Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 01.09.2020 04.15.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 648591

Analyst:

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 contai	ner/ 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 relinquish	ned/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/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 headsp	ace?	N/A	

Must be completed fo	r after-hours deliver	y of samples	prior to placin	g in the refrigerator

N. 11.	

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 01.09.2020

Checklist reviewed by:

Jessica Warner

Date: 01.10.2020

# **Analytical Report 649505**

for

LT Environmental, Inc.

Project Manager: Dan Moir PLU Big Sinks 25 Fed Battery

21-JAN-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)



21-JAN-20

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

Reference: XENCO Report No(s): 649505

PLU Big Sinks 25 Fed Battery Project Address: Eddy County

### 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) 649505. 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. 649505 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

Jessica Vermer

**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 649505**

### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
FS03	S	01-17-20 12:50	0.5 ft	649505-001

Version: 1.%

### **CASE NARRATIVE**

Client Name: LT Environmental, Inc. Project Name: PLU Big Sinks 25 Fed Battery

Project ID: Report Date: 21-JAN-20 Work Order Number(s): 649505 Date Received: 01/17/2020

### Sample receipt non conformances and comments:

Per cleints email, corrected sample name from FS01 to FS03. New version generated, JK 01/21/20

### Sample receipt non conformances and comments per sample:

None

### **Analytical non conformances and comments:**

Batch: LBA-3113725 BTEX by EPA 8021B

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

Certificate of Analysis Summary 649505

LT Environmental, Inc., Arvada, CO Project Name: PLU Big Sinks 25 Fed Battery

Date Received in Lab: Fri Jan-17-20 02:30 pm

**Report Date:** 21-JAN-20 Project Manager: Jessica Kramer

**Contact:** Dan Moir **Project Location: Eddy County** 

**Project Id:** 

			1	1		T	I
	Lab Id:	649505-001					
Analysis Requested	Field Id:	FS03					
Analysis Requesieu	Depth:	0.5- ft					
	Matrix:	SOIL					
	Sampled:	Jan-17-20 12:50					
BTEX by EPA 8021B	Extracted:	Jan-17-20 16:00					
	Analyzed:	Jan-17-20 22:10					
	Units/RL:	mg/kg RL					
Benzene	·	< 0.00198 0.00198					
Toluene		< 0.00198 0.00198					
Ethylbenzene		<0.00198 0.00198					
m,p-Xylenes		< 0.00395 0.00395					
o-Xylene		<0.00198 0.00198					
Total Xylenes		<0.00198 0.00198					
Total BTEX		<0.00198 0.00198					
Chloride by EPA 300	Extracted:	Jan-17-20 16:00					
	Analyzed:	Jan-18-20 12:51					
	Units/RL:	mg/kg RL					
Chloride		3430 10.1					
TPH by SW8015 Mod	Extracted:	Jan-17-20 18:15					
	Analyzed:	Jan-19-20 03:47					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1					
Diesel Range Organics (DRO)		<50.1 50.1					
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1					
Total GRO-DRO		<50.1 50.1					
Total TPH		<50.1 50.1					
					•	•	

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.%

Jessica Kramer Project Assistant

Jessica Vermer



**FS03** 

Analytical Method: Chloride by EPA 300

### **Certificate of Analytical Results 649505**

### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Soil Date Received:01.17.20 14.30

Lab Sample Id: 649505-001 Date Collected: 01.17.20 12.50 Sample Depth: 0.5 ft

Prep Method: E300P

Tech: MAB

% Moisture:

**ECA** Analyst: 01.17.20 16.00 Basis: Wet Weight Date Prep:

Matrix:

Seq Number: 3113713

Sample Id:

Parameter	Cas Number	Result	RL	Units	<b>Analysis Date</b>	Flag	Dil
Chloride	16887-00-6	3430	10.1	mg/kg	01.18.20 12.51		1

Prep Method: SW8015P Analytical Method: TPH by SW8015 Mod

DTH % Moisture: Tech:

DTH Analyst: 01.17.20 18.15 Basis: Wet Weight Date Prep:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	01.19.20 03.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	01.19.20 03.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	01.19.20 03.47	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	01.19.20 03.47	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	01.19.20 03.47	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	100	%	70-135	01.19.20 03.47		
o-Terphenyl		84-15-1	101	%	70-135	01.19.20 03.47		



### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Fed Battery

Sample Id: FS03 Matrix: Soil Date Received:01.17.20 14.30

Lab Sample Id: 649505-001 Date Collected: 01.17.20 12.50 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 01.17.20 16.00 Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	01.17.20 22.10	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	01.17.20 22.10	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	01.17.20 22.10	U	1
m,p-Xylenes	179601-23-1	< 0.00395	0.00395		mg/kg	01.17.20 22.10	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	01.17.20 22.10	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	01.17.20 22.10	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	01.17.20 22.10	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	103	%	70-130	01.17.20 22.10		
4-Bromofluorobenzene		460-00-4	99	%	70-130	01.17.20 22.10		



### **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.

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

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.

E300P

E300P

Flag

01.17.20

Prep Method:

Prep Method:

Date Prep:



Seq Number:

### **QC Summary** 649505

### LT Environmental, Inc.

PLU Big Sinks 25 Fed Battery

Analytical Method: Chloride by EPA 300

3113713 Matrix: Solid

LCS Sample Id: 7694644-1-BKS LCSD Sample Id: 7694644-1-BSD MB Sample Id: 7694644-1-BLK

MR Spike LCS LCS Limits %RPD RPD Limit Units LCSD LCSD Analysis Flag **Parameter** Result Amount Result %Rec Date %Rec Result 01.17.20 21:01 Chloride <10.0 250 257 103 260 104 90-110 20 mg/kg

Analytical Method: Chloride by EPA 300

E300P Prep Method: Seq Number: 3113713 Matrix: Soil 01.17.20 Date Prep:

Parent Sample Id: 649439-029 MS Sample Id: 649439-029 S MSD Sample Id: 649439-029 SD

Spike MS MS %RPD RPD Limit Units Parent **MSD MSD** Limits Analysis Flag **Parameter** Result Date Result Amount %Rec Result %Rec

Chloride 162 200 381 110 380 109 90-110 0 20 mg/kg 01.17.20 21:19

Analytical Method: Chloride by EPA 300

3113713 Matrix: Soil Seq Number: Date Prep: 01.17.20

MS Sample Id: MSD Sample Id: 649501-004 SD 649501-004 S 649501-004 Parent Sample Id:

MS %RPD RPD Limit Units Parent Spike MS **MSD MSD** Limits Analysis Flag **Parameter** Result Date Result %Rec Amount Result %Rec Chloride 61.5 200 277 108 276 107 90-110 0 20 01.17.20 22:41 mg/kg

Analytical Method: TPH by SW8015 Mod

SW8015P Prep Method: 3113733 Matrix: Solid Seq Number: Date Prep: 01.17.20

7694707-1-BKS LCSD Sample Id: 7694707-1-BSD LCS Sample Id: MB Sample Id: 7694707-1-BLK

%RPD RPD Limit Units MB Spike LCS LCS Limits Analysis LCSD LCSD **Parameter** Result %Rec Date Result Amount %Rec Result Gasoline Range Hydrocarbons (GRO) 1020 102 70-135 01.19.20 01:11 < 50.0 1000 1030 103 35 1 mg/kg 01.19.20 01:11 70-135 Diesel Range Organics (DRO) 1000 1200 120 1080 108 11 35 < 50.0 mg/kg

LCS MB MB LCS LCSD LCSD Limits Units Analysis **Surrogate** %Rec Flag %Rec Flag Flag Date %Rec 1-Chlorooctane 113 122 129 70-135 % 01.19.20 01:11 01.19.20 01:11 o-Terphenyl 115 123 129 70-135 %

Analytical Method: TPH by SW8015 Mod

Seg Number: 3113733 Matrix: Solid Date Prep: 01.17.20

MB Sample Id: 7694707-1-BLK

MB Units Analysis Flag **Parameter** Result Date 01.19.20 00:51 Motor Oil Range Hydrocarbons (MRO) < 50.0 mg/kg

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

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample

A = Parent Result = MS/LCS Result = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

SW8015P

Prep Method:

Flag

Flag



Seq Number:

MB Sample Id:

### **QC Summary** 649505

### LT Environmental, Inc.

PLU Big Sinks 25 Fed Battery

Analytical Method: TPH by SW8015 Mod

3113733 Matrix: Soil

MS Sample Id: 649501-004 S Parent Sample Id: 649501-004

Prep Method: SW8015P

Date Prep: 01.17.20 MSD Sample Id: 649501-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	< 50.2	1000	1080	108	1050	104	70-135	3	35	mg/kg	01.19.20 02:09	
Diesel Range Organics (DRO)	< 50.2	1000	1160	116	1230	122	70-135	6	35	mg/kg	01.19.20 02:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		115		70-135	%	01.19.20 02:09
o-Terphenyl	120		114		70-135	%	01.19.20 02:09

Analytical Method: BTEX by EPA 8021B

Seq Number: 3113725

7694647-1-BLK

SW5030B Prep Method: Date Prep: 01.17.20

LCSD Sample Id: 7694647-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.100	100	0.106	106	70-130	6	35	mg/kg	01.17.20 12:11
Toluene	< 0.00200	0.100	0.0990	99	0.103	103	70-130	4	35	mg/kg	01.17.20 12:11
Ethylbenzene	< 0.00200	0.100	0.0975	98	0.0999	100	71-129	2	35	mg/kg	01.17.20 12:11
m,p-Xylenes	< 0.00400	0.200	0.201	101	0.205	103	70-135	2	35	mg/kg	01.17.20 12:11
o-Xylene	< 0.00200	0.100	0.0984	98	0.102	102	71-133	4	35	mg/kg	01.17.20 12:11

Matrix: Solid

LCS Sample Id: 7694647-1-BKS

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		101		104		70-130	%	01.17.20 12:11
4-Bromofluorobenzene	100		98		99		70-130	%	01.17.20 12:11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3113725 Parent Sample Id: 649437-001

Matrix: Soil MS Sample Id: 649437-001 S Prep Method: SW5030B Date Prep: 01.17.20

MSD Sample Id: 649437-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date
Benzene	< 0.00200	0.100	0.0925	93	0.0893	90	70-130	4	35	mg/kg	01.17.20 13:12
Toluene	< 0.00200	0.100	0.0910	91	0.0856	86	70-130	6	35	mg/kg	01.17.20 13:12
Ethylbenzene	0.000954	0.100	0.0895	89	0.0821	81	71-129	9	35	mg/kg	01.17.20 13:12
m,p-Xylenes	0.000763	0.200	0.184	92	0.168	84	70-135	9	35	mg/kg	01.17.20 13:12
o-Xylene	0.000582	0.100	0.0905	90	0.0831	83	71-133	9	35	mg/kg	01.17.20 13:12

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		104		70-130	%	01.17.20 13:12
4-Bromofluorobenzene	100		98		70-130	%	01.17.20 13:12

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

[D] = 100\*(C-A) / BRPD = 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

Project Manager:	S
Dan Moir	ENCO

# Chain of Custody

Work Order No:

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334

Phone: Address: City, State Company Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296

(	Hobbs, NM (57)	5-392-7550) Phoenix,AZ (	Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (81	pa,FL (813-620-2000) www.xenco.com Page of
anager:	anager: Dan Moir	Bill to: (if different)	Kyle Littrell	Work Order Comments
Name:	LT Environmental, Inc., Permian office	Company Name: XTO Energy	XTO Energy	Program: UST/PST □RP □rownfields □RC ⑤perfund □
	3300 North A Street	Address:		State of Project:
e ZIP:	Midland, Tx 79705	City, State ZIP:		Reporting:Level III\$T/UST!RP U_svel IV
	(432) 236-3849 Er	Email: enaka@ltenv.com, dmoir@ltenv.com	_dmoir@ltenv.com	Deliverables: EDD ADaPT Other:

3	" Elmator Mon	Relinquished by: (Signature)	Notice: Signature of this of service. Xenco will be of Xenco. A minimum ch	Total 200.7 / 6010 Circle Method(s) a						1	1087	1561	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Floject Name.
(	Moch 6	/: (Signature)	document and relinquishment il liable only for the cost of sampled to the state of \$75.00 will be applied to	Total 200.7 / 6010 200.8 / 6020:  Circle Method(s) and Metal(s) to be analyzed							S	4	ntification Matrix	als: Yes No N/A	ils: Yes (No) N/A	(Yes No	0.4	EIPT Temp Blank:	Elizabeth Naka	Eddy County	012878 54	CA 175 374 C
(	ンソアンド	Received by: (Signature)	of samples constitutes a valid purch ples and shall not assume any respo o each project and a charge of \$5 to	00							0521 22/4/11	F 0.25		Total Containers:	Correction Factor:	1-NN-	Thermometer ID	k: (Yes) No Wetice:	Naka Due Date:	ounty Rush:	Routine	Ci Country
- 17	1/11/20 14:30 <sup>2</sup>	Date/Time	ase order from client company to Xenco nsibility for any losses or expenses incu each sample submitted to Xenco, but n	RCRA 13PPM Texas 11 AI Sb As Ba B TCLP/SPLP 6010: 8RCRA Sb As Ba B				Elephone	•		0.5 1 X X 1		Number TPH (EI	PA 80	015)	)21)		No No	e.	24 hour		Turn Around
4	<b>3</b> 02	Relinquished by: (Signature)	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.	I Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo I Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U				1 war			X		Chlorid	e (EF	PA 3	00.0						ANALI SIS NEWOLS
		Received by: (Signature)	dard terms and conditions stances beyond the control previously negotiated.	Ni K Se Ag SiO2							0				TAT							
		Date/Time ►	aging:	71 : Hg	225 9:	12:2	5 AM				composite		Sample Comments	lab, if received by 4:30pm	TAT starts the day receyied by the							STORY OLDER INDICES



**APPENDIX B** 

June 26, 2020 Closure Request Addendum District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	NAB1921742793
District RP	2RP-5551
Facility ID	
Application ID	pAB1921742256

# **Release Notification**

### **Responsible Party**

Responsible	Party XTC	) Energy		OGRID	OGRID 5380				
Contact Nam	ne Kyle Lit	trell		Contact Te	elephone 432-221-7331				
Contact email Kyle_Littrell@xtoenergy.com				Incident #	Incident # (assigned by OCD) NAB1921742793				
Contact mail	ing address	522 W. Mermod	, Carlsbad, NM 88	220					
Latitude 32	.181450°			of Release So  Longitude _ imal degrees to 5 decim	-103.833297°				
Site Name	PLU Big Sin	ks 25 Federal Batt	ery	Site Type	Bulk Storage and Separation Facility				
Date Release	Discovered	7/7/2019		API# (if app	plicable) 30-015-39018 (PLU CVX JV BS 5	5H)			
Unit Letter	Section	Township	Range	Coun	ntv	7			
O	25	248	30E	Edd					
** Lega	al descript  Materia	Federal Trion lists as a Fe	ederal Surface ( Nature and	Owner Volume of I	Release  c justification for the volumes provided below)				
Crude Oi		Volume Release	d (bbls)		Volume Recovered (bbls)				
➤ Produced	Water	Volume Release	d (bbls) 67.65		Volume Recovered (bbls) 55				
			ion of total dissolv water >10,000 mg/		☐ Yes ☐ No				
Condensa	ite	Volume Release			Volume Recovered (bbls)				
☐ Natural Gas Volume Released (Mcf)			d (Mcf)		Volume Recovered (Mcf)				
Other (de	scribe)	Volume/Weight	Released (provide	units)	Volume/Weight Recovered (provide unit	s)			
Cause of Rel	A hole pad and line wa	l to a small area of	ROW near the soumaged section of r	urce. A vacuum tr iser was removed a	side of the tank battery. Fluids were released ruck recovered free fluids from the ground s and scheduled for repair. Additional third p	urface. The			

Form C-141 Page 2

# State of New Mexico Oil Conservation Division

Incident ID	NAB1921742793	
District RP	2RP-5551	
Facility ID		
Application ID	pAB1921742256	

Was this a major	If YES, for what reason(s) does the respon	nsible party consider this a major release?		
release as defined by 19.15.29.7(A) NMAC?	An unauthorized release of a volume of 25	barrels or more		
X Yes ☐ No				
Notice provided by Amy		nom? When and by what means (phone, email, etc)? ia Venegas, and Jim Griswold (NMOCD), Jim Amos and Deborah		
	Initial R	esponse		
The responsible	party must undertake the following actions immediate	y unless they could create a safety hazard that would result in injury		
The source of the rele	ease has been stopped.			
The impacted area ha	as been secured to protect human health and	the environment.		
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.				
All free liquids and re	ecoverable materials have been removed an	d managed appropriately.		
	d above have <u>not</u> been undertaken, explain	why:		
N/A				
has begun, please attach	a narrative of actions to date. If remedial	emediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred please attach all information needed for closure evaluation.		
		best of my knowledge and understand that pursuant to OCD rules and		
		fications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have		
failed to adequately investig	gate and remediate contamination that pose a three	at to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws		
and/or regulations.	n a c-141 report does not refleve the operator of	responsibility for compliance with any outer federal, state, or local laws		
Printed Name: Kyle Littr	rell	Title: SH&E Supervisor		
Signature:	Result	Date: 7/17/2019		
Kyle Littrell@xte	oenergy.com	432-221-7331		
email:		Telephone: 432-221-7331		
OCD Only				
	alia Bustamante	Date: 8/5/2019		
Received by: Ama	and Dastamanto	Date: 8/5/2019		

Page 212 of 495

Incident ID	NAB1921742793
District RP	2RP-5551
Facility ID	
Application ID	pAB1921742256

# Site Assessment/Characterization

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?	<u>&gt;100</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ⊠ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ⊠ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ⊠ No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes 🛛 No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil
Characterization Report Checklist: Each of the following items must be included in the report.	
<ul> <li>         \infty Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well in Field data     </li> </ul>	ls.
☐ Data table of soil contaminant concentration data ☐ Depth to water determination	
Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release	
<ul> <li>☑ Boring or excavation logs</li> <li>☑ Photographs including date and GIS information</li> </ul>	
☐ Topographic/Aerial maps ☐ Laboratory data including chain of custody	

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Received by OCD: 3/26/2025 7:38:50 AM State of New Mexico
Page 4 Oil Conservation Division

Page	213	of 495

Incident ID	NAB1921742793
District RP	2RP-5551
Facility ID	
Application ID	pAB1921742256

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.					
Printed Name: Kyle Littrell	Title: SH&E Supervisor				
Printed Name: Kyle Littrell  Signature:	Date: <u>06/26/2020</u>				
email: Kyle Littrell@xtoenergy.com	Telephone: (432)-221-7331				
OCD Only					
Received by:	Date:				

Page 214 of 495

	1 480 211 01 1.
Incident ID	NAB1921742793
District RP	2RP-5551
Facility ID	
Application ID	pAB1921742256

# Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.					
<ul> <li>☑ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)</li> <li>☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)</li> <li>☑ Description of remediation activities</li> </ul>					
			I hereby certify that the information given above is true an and regulations all operators are required to report and/or a may endanger public health or the environment. The accesshould their operations have failed to adequately investiga human health or the environment. In addition, OCD acceptompliance with any other federal, state, or local laws and restore, reclaim, and re-vegetate the impacted surface area accordance with 19.15.29.13 NMAC including notification	file certain release notificati ptance of a C-141 report by te and remediate contamina stance of a C-141 report doe for regulations. The respon to the conditions that existe	ons and perform corrective actions for releases which the OCD does not relieve the operator of liability tion that pose a threat to groundwater, surface water, as not relieve the operator of responsibility for sible party acknowledges they must substantially ed prior to the release or their final land use in
Printed Name:Kyle Littrell	Title:	SH&E Supervisor			
Printed Name: Kyle Littrell Signature: Signature:	Date: <u>06/2</u>	26/2020			
email: Kyle Littrell@xtoenergy.com	Telephone:	432-221-7331			
OCD Only					
Received by:	Date:				
Closure approval by the OCD does not relieve the responsi remediate contamination that poses a threat to groundwater party of compliance with any other federal, state, or local l	, surface water, human healt				
Closure Approved by:	Date: _				
Printed Name:	Title: _				



LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

June 26, 2020

Mr. Mike Bratcher New Mexico Oil Conservation Division 811 South First Street Artesia, New Mexico 88210

RE: Closure Request Addendum

Poker Lake Unit Big Sinks 25 Federal Battery Remediation Permit Number 2RP-5551 Incident Number NAB1921742793 Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following addendum to an original Closure Request submitted January 22, 2020. This Addendum provides an update of sampling activities at the Poker Lake Unit (PLU) Big Sinks 25 Federal Battery (Site), located in Unit O, Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1), in response to the denial of the Closure Request by the New Mexico Oil Conservation Division (NMOCD). In the denial, NMOCD required XTO collect an additional confirmation sample from within the northern excavation extent to confirm soil meets the NMOCD Table 1 Closure Criteria (Closure Criteria). Based on additional work conducted, XTO is requesting no further action (NFA) for Remediation Permit (RP) Number 2RP-5551 and Incident Number NAB1921742793.

### **BACKGROUND**

On January 22, 2020, LTE submitted a Closure Request to NMOCD for a release that occurred from a hole that developed in a line riser due to corrosion at the south side of the tank battery, resulting in the release of approximately 67.65 barrels (bbls) of produced water onto the caliche well pad and onto the adjacent developed right-of-way (ROW). XTO recovered free standing fluids with a hydrovacuum and excavated approximately 340 square feet of affected soil. A total of approximately 60 cubic yards of impacted soil were removed within the release extent. LTE personnel collected a total of thirty-one preliminary, delineation, and excavation soil samples within the release extent from July 2019 to January 2020. Closure was requested due to laboratory analytical results for preliminary, delineation, and excavation soil samples indicating residual soil was compliant with the Closure Criteria.

On March 16, 2020, NMOCD denied closure, via email, for the following reasons:

The OCD has denied the submitted Closure Report C-141 for incident #nAB1921742793 for the following reasons:



Bratcher, M. Page 2

- Depth to groundwater is not adequately identified. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less.
- For the on-pad area, samples are representative of more than 200 square feet. Please collect more confirmation samples, representing no more than 200 square feet, unless XTO chooses to provide a sampling plan for approval prior to conduction additional sampling.

After further review of the closest well with depth to groundwater, XTO requests that NMOCD reconsider the first reason for denial following submittal of additional information below:

- Figure 1 shows nearby XTO release locations for which NMOCD has approved the depth to groundwater determinations based on the depth to groundwater associated with the nearest New Mexico Office of the State Engineer (NMOSE) (dark blue) or United States Geological Survey (USGS) (light blue) wells identified. For all of these locations, depth to groundwater was estimated to be greater than 100 feet bgs. All determinations referenced the same groundwater wells and available data as provided in Figure 1. Existing referenced well records are included in Appendix 1.
- The regional trend does not support shallow groundwater less than 50 feet bgs at this Site. Depth to groundwater data identified on the map illustrates the documented trend of increasing depth to groundwater with increased distance from the Pecos River. The Pecos River is located approximately 7.85 miles west of the Site and is not shown on Figure 1. When viewed regionally using potentiometric contours, the Site falls in an area with depth to groundwater greater than 400 feet with five corresponding data points within 2 miles of the Site.
- There are no regional or Site-specific hydrological conditions, such as shallow surface water, karst features, wetlands, or vegetation, to suggest the Site is conducive to shallow groundwater.

Based on the additional data provided, XTO requests NMOCD approve the estimated depth to groundwater as greater than 100 feet and Closure Criteria, as identified in the original Closure Request, apply.

### **ADDITIONAL SITE ACTIVITIES**

To address the second reason for denial, LTE conducted additional confirmation sampling on May 12, 2020, to confirm impacted soil had been removed from the release extent. The excavation extents and confirmation soil sample locations are depicted on Figure 2. An additional



Bratcher, M. Page 3

confirmation composite floor sample, FS04, was collected at a depth of approximately 0.5 feet bgs.

The confirmation soil sample was placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) following United States Environmental Protection Agency (EPA) Method 8021B; total petroleum hydrocarbons (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.

#### **SOIL ANALYTICAL RESULTS**

Laboratory analytical results indicated confirmation soil sample FS04, collected at a depth of approximately 0.5 feet bgs, was compliant with the Closure Criteria for benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical report is included as Attachment 2.

#### **CLOSURE REQUEST**

LTE has provided additional information for NMOCD to reconsider denial of the depth to water determination in the original Closure Request. Regional trends and previous NMOCD approval of similar estimates made at release locations in the immediate vicinity support depth to water being greater than 100 feet bgs at the Site. In compliance with the NMOCD's suggestion to collect an additional conformation soil sample from within the excavation extent, LTE collected one additional sample (FS04) to confirm the absence of impacted soil and adequately represent 200 square feet of excavation area. Laboratory analytical results for confirmation soil sample FS04 indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the additional information provided, XTO requests NFA for Remediation Permit (RP) Number 2RP-5551 and Incident Number NAB1921742793.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096 or aager@ltenv.com.



Bratcher, M. Page 4

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley Staff Geoscientist Ashley L. Ager, M.S., P.G. Senior Geologist

cc: Kyle Littrell, XTO

United States Bureau of Land Management – New Mexico

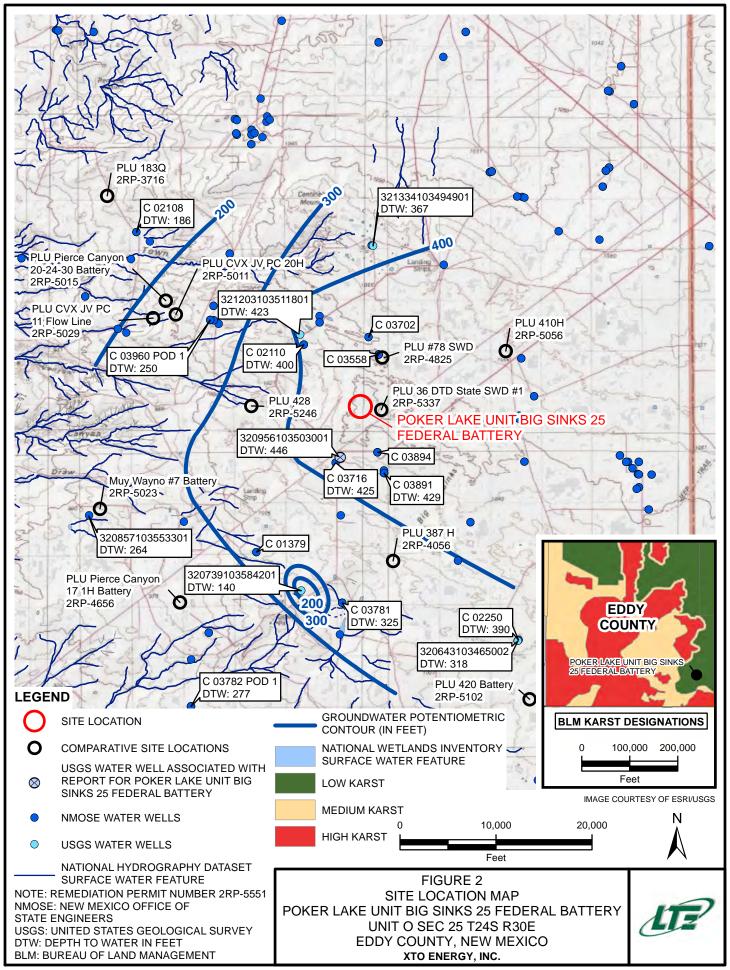
Ryan Mann, State Land Office

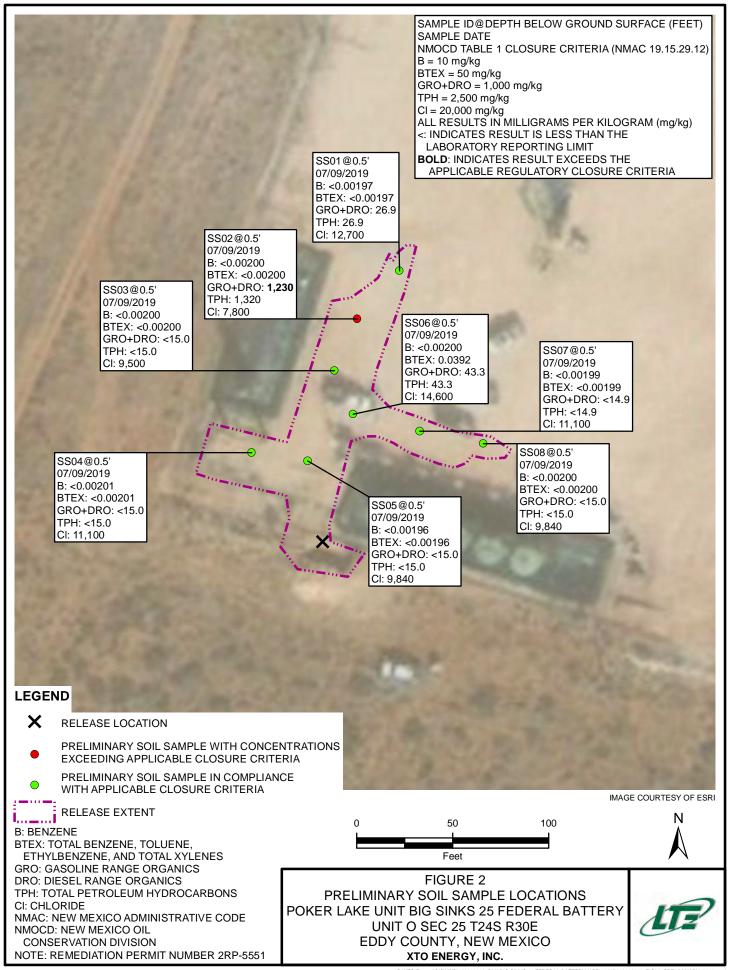
Robert Hamlet, NMOCD Victoria Venegas, NMOCD Cristina Eads, NMOCD

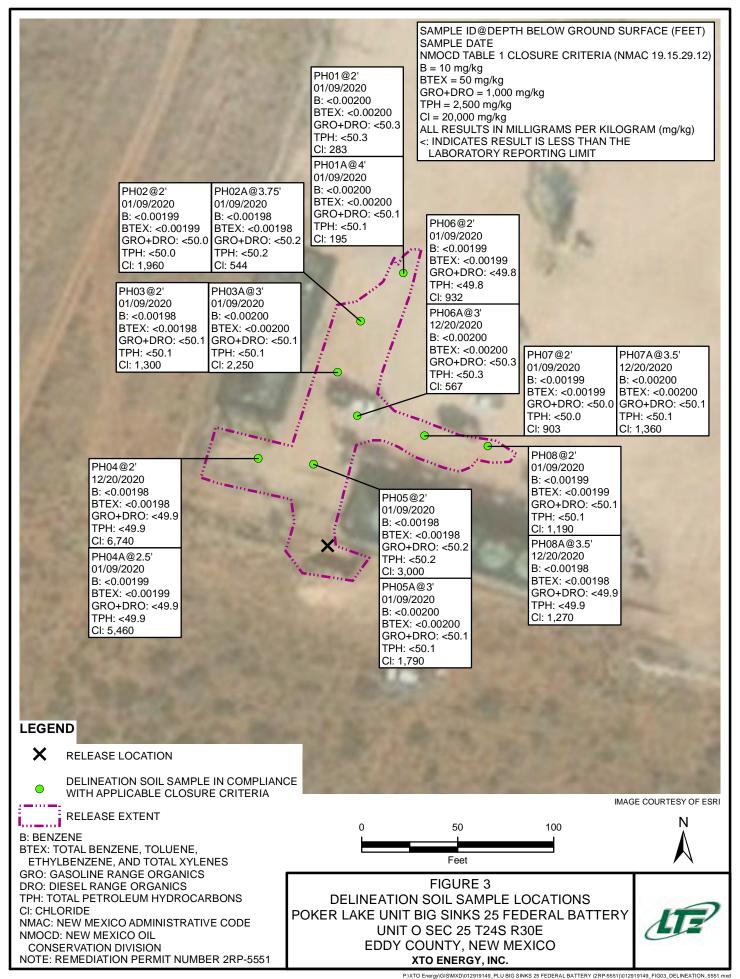
#### Appendices:

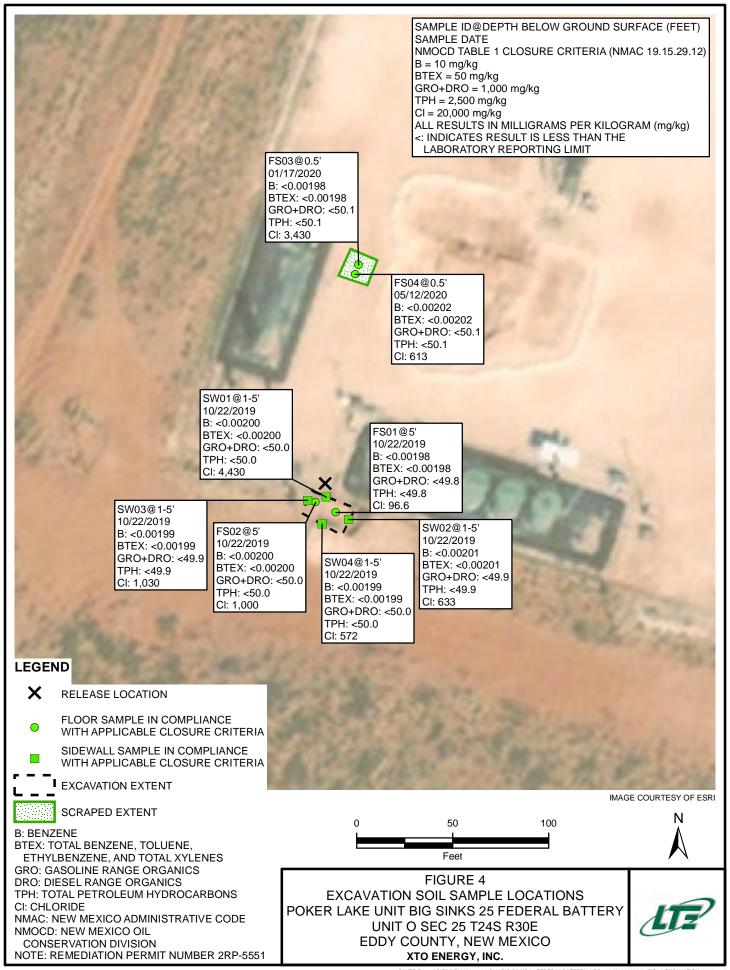
Figure 1 Site Location Map

Figure 2 Excavation Soil Sample Locations
Table 1 Laboratory Analytical Results
Attachment 2 Laboratory Analytical Reports
Appendix 1 Referenced Well Records









# TABLE 1 SOIL ANALYTICAL RESULTS

# POKER LAKE UNIT BIG SINKS 25 FEDERAL BATTERY REMEDIATION PERMIT NUMBER 2RP-5551 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table	e 1 Closure Crit	eria	10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
SS01	0.5	07/09/2019	<0.00197	< 0.00197	< 0.00197	<0.00197	<0.00197	<15.0	26.9	<15.0	26.9	26.9	12,700
SS02	0.5	07/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	17.3	1,210	90.1	1,230	1,320	7,800
SS03	0.5	07/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	9,500
SS04	0.5	07/09/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	11,100
SS05	0.5	07/09/2019	<0.00196	<0.00196	<0.00196	<0.00196	<0.00196	<15.0	<15.0	<15.0	<15.0	<15.0	9,840
SS06	0.5	07/09/2019	<0.00200	0.0160	0.00480	0.0184	0.0392	<15.0	43.3	<15.0	43.3	43.3	14,600
SS07	0.5	07/09/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	11,100
SS08	0.5	07/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	9,840
PH01	2	01/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	283
PH01A	4	01/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	195
PH02	2	01/09/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	1,960
PH02A	3.75	01/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	544
PH03	2	01/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	1,300
PH03A	3	01/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	2,250
PH04	2	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	6,740
PH04A	2.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	5,460
PH05	2	01/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	3,000
PH05A	3	01/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	1,790
PH06	2	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	932
PH06A	3	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	567
PH07	2	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	903
PH07A	3.5	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	1,360



# TABLE 1 SOIL ANALYTICAL RESULTS

# POKER LAKE UNIT BIG SINKS 25 FEDERAL BATTERY REMEDIATION PERMIT NUMBER 2RP-5551 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria		eria	10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
PH08	2	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	1,190
PH08A	3.5	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	1,270
FS01	5	10/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	96.6
FS02	5	10/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,000
FS03	0.5	01/17/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	3,430
FS04	0.5	05/12/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	613
SW01	1 - 5	10/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	4,430
SW02	1 - 5	10/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	633
SW03	1 - 5	10/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	1,030
SW04	1 - 5	10/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	572

#### Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

**Bold** - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

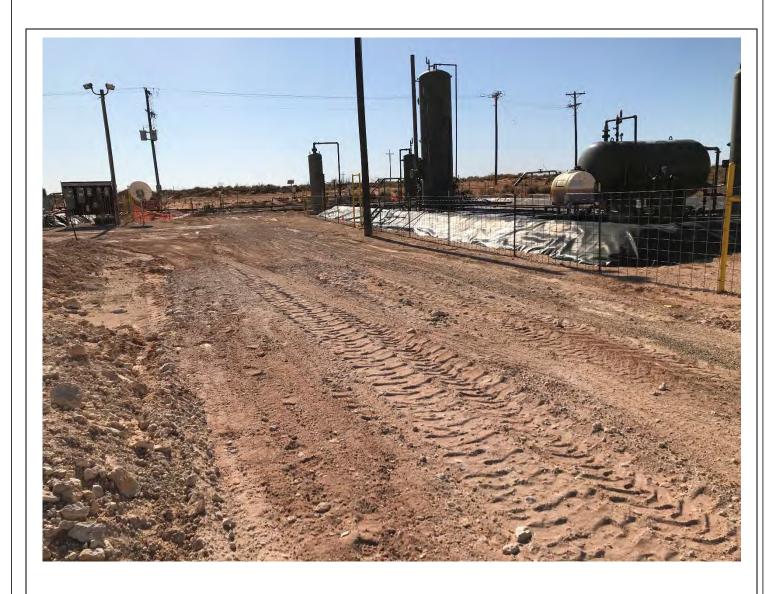






View of surficial soil staining in the southern area of the release extent, south of the point of release, during site assessment activities.

Project: 012919149	XTO Energy, Inc. Poker Lake Unit Big Sinks 25 Federal Battery	LIE
July 9, 2019	Photographic Log	Advancing Opportunity



Southern view of scraped area on caliche well pad during confirmation soil sampling activities.

Project: 012919149	XTO Energy, Inc. Poker Lake Unit Big Sinks 25 Federal Battery	LE
January 17, 2020	Photographic Log	Advancing Opportunity



## **Certificate of Analysis Summary 661297**

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 25 Federal Battery

**Project Id:** 

**Contact:** 

012919149

Dan Moir

**Date Received in Lab:** Tue 05.12.2020 14:00

**Report Date:** 06.10.2020 13:57

Project Manager: Jessica Kramer **Project Location:** 

	Lab Id:	661297-001			
4.7.50	Field Id:	FS04			
Analysis Requested	Depth:	0.5- ft			
	Matrix:	SOIL			
	Sampled:	05.12.2020 11:45			
BTEX by EPA 8021B	Extracted:	05.12.2020 14:21			
	Analyzed:	05.13.2020 10:11			
	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:	05.12.2020 17:52			
	Analyzed:	05.13.2020 03:38			
	Units/RL:	mg/kg RL			
Chloride		613 10.0			
TPH by SW8015 Mod	Extracted:	05.13.2020 11:40			
	Analyzed:	05.14.2020 04:38			
	Units/RL:	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1			
Diesel Range Organics (DRO)		<50.1 50.1			
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1			
Total GRO-DRO	Total GRO-DRO				
Total TPH		<50.1 50.1			

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

Jessica Kramer Project Manager



## **Analytical Report 661297**

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU Big Sinks 25 Federal Battery 012919149 06.10.2020

Collected By: Client

1089 N Canal Street Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054) Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



06.10.2020

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

Reference: XENCO Report No(s): 661297

**PLU Big Sinks 25 Federal Battery** 

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) 661297. 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. 661297 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 Manager

A Small Business and Minority Company

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



### **Sample Cross Reference 661297**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample IdMatrixDate CollectedSample DepthLab Sample IdFS04S05.12.2020 11:450.5 ft661297-001

#### Page 235 of 495

#### **CASE NARRATIVE**

Client Name: LT Environmental, Inc.

Project Name: PLU Big Sinks 25 Federal Battery

Report Date: 06.10.2020 Project ID: 012919149 Work Order Number(s): 661297 Date Received: 05.12.2020

Sample receipt non conformances and comments:

V1.001 Revision (client email) Corrected sample name from SS04 --> FS04 JK 06/10/20

Sample receipt non conformances and comments per sample:

None

1



#### **Certificate of Analytical Results 661297**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: **FS04** Matrix: Soil Date Received:05.12.2020 14:00

16887-00-6

Lab Sample Id: 661297-001 Date Collected: 05.12.2020 11:45 Sample Depth: 0.5 ft

Prep Method: E300P

05.13.2020 03:38

Wet Weight

Basis:

MAB % Moisture: Tech:

mg/kg

05.12.2020 17:52

Seq Number: 3125750

Analytical Method: Chloride by EPA 300

MAB

Analyst:

Result **Parameter** Cas Number RLUnits **Analysis Date** Dil Flag Chloride

10.0

Date Prep:

613

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

DTH % Moisture: Tech:

Analyst: DTH 05.13.2020 11:40 Basis: Wet Weight Date Prep:

Seq Number: 3125908

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.1	50.1		mg/kg	05.14.2020 04:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.1	50.1		mg/kg	05.14.2020 04:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	05.14.2020 04:38	U	1
Total GRO-DRO	PHC628	< 50.1	50.1		mg/kg	05.14.2020 04:38	U	1
Total TPH	PHC635	<50.1	50.1		mg/kg	05.14.2020 04:38	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	117	%	70-135	05.14.2020 04:38
o-Terphenyl	84-15-1	118	%	70-135	05.14.2020 04:38



#### **Certificate of Analytical Results 661297**

#### LT Environmental, Inc., Arvada, CO

PLU Big Sinks 25 Federal Battery

Sample Id: FS04 Matrix: Soil Date Received:05.12.2020 14:00

Lab Sample Id: 661297-001 Date Collected: 05.12.2020 11:45 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 05.12.2020 14:21 Basis: Wet Weight

Seq Number: 3125867

Parameter	Cas Number	Result	$\mathbf{RL}$		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	05.13.2020 10:11	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	05.13.2020 10:11	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	05.13.2020 10:11	U	1
m,p-Xylenes	179601-23-1	< 0.00404	0.00404		mg/kg	05.13.2020 10:11	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	05.13.2020 10:11	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	05.13.2020 10:11	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	05.13.2020 10:11	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4 Promofluorobanzana	,	160 00 4	07	0/-	70 120	05 12 2020 10:11		

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	05.13.2020 10:11	
1,4-Difluorobenzene	540-36-3	108	%	70-130	05.13.2020 10:11	



### 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. **ND** Not Detected.

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

Flag

Flag

RPD

#### **QC Summary** 661297



#### LT Environmental, Inc.

PLU Big Sinks 25 Federal Battery

LCSD

E300P Analytical Method: Chloride by EPA 300 Prep Method: 05.12.2020 Seq Number: 3125750 Matrix: Solid Date Prep:

LCS Sample Id: 7703212-1-BKS LCSD Sample Id: 7703212-1-BSD MB Sample Id: 7703212-1-BLK

LCS MB Spike LCS Limits %RPD Units Analysis LCSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date Chloride <10.0 250 251 100 250 90-110 0 20 05.13.2020 01:47 100 mg/kg

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Seq Number: 3125750 Matrix: Soil Date Prep: 05.12.2020 661339-001 S 661339-001 MS Sample Id: MSD Sample Id: 661339-001 SD Parent Sample Id:

Parent Spike MS MS MSD MSD Limits %RPD RPD Units Analysis **Parameter** Flag Result Amount Result %Rec %Rec Limit Date Result 05.13.2020 02:04 Chloride 677 199 868 96 872 98 90-110 0 20 mg/kg

E300P Analytical Method: Chloride by EPA 300 Prep Method: 3125750

Seq Number: Matrix: Soil Date Prep: 05.12.2020 MS Sample Id: 661339-011 S MSD Sample Id: 661339-011 SD Parent Sample Id: 661339-011

Spike **RPD Parent** MS MS %RPD Units MSD **MSD** Limits Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 897 20 05.13.2020 03:26 717 200 90 898 91 90-110 0 mg/kg

SW8015P Analytical Method: TPH by SW8015 Mod Prep Method:

3125908 Matrix: Solid Seq Number: Date Prep: 05.13.2020 MB Sample Id: 7703305-1-BLK LCS Sample Id: 7703305-1-BKS LCSD Sample Id: 7703305-1-BSD

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis **Parameter** Result Limit Result Amount %Rec %Rec Date Result Gasoline Range Hydrocarbons (GRO) 05.14.2020 09:59 991 99 35 < 50.0 1000 996 100 70-135 mg/kg 1 05.14.2020 09:59 Diesel Range Organics (DRO) 111 1090 70-135 35 < 50.0 1000 1110 109 2 mg/kg

LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 05.14.2020 09:59 1-Chlorooctane 135 123 122 70-135 % 05.14.2020 09:59 o-Terphenyl 135 124 121 70-135 %

SW8015P Analytical Method: TPH by SW8015 Mod Prep Method:

Seq Number: 3125908 Matrix: Solid Date Prep: 05.13.2020

MB Sample Id: 7703305-1-BLK

MBUnits Analysis Flag **Parameter** Result Date Motor Oil Range Hydrocarbons (MRO) 05.13.2020 12:23 < 50.0

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

[D] = 100\*(C-A) / B $RPD = 200* \mid (C-E) \mid (C+E) \mid$ [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

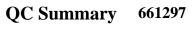
LCS = Laboratory Control Sample = Parent Result = MS/LCS Result

= MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

mg/kg

Flag





#### LT Environmental, Inc.

PLU Big Sinks 25 Federal Battery

SW8015P Analytical Method: TPH by SW8015 Mod Prep Method: Seq Number: 3125908 Matrix: Soil Date Prep: 05.13.2020 Parent Sample Id: 661180-001 MS Sample Id: 661180-001 S MSD Sample Id: 661180-001 SD

RPD **Parent** Spike MS MS Limits %RPD Units Analysis MSD MSD Flag **Parameter** Result Amount Result %Rec Result %Rec Limit Date Gasoline Range Hydrocarbons (GRO) < 50.1 1000 1010 101 1040 3 35 05.13.2020 23:07 104 70-135 mg/kg 05.13.2020 23:07 8 mg/kg Diesel Range Organics (DRO) 1090 1000 2130 104 2300 70-135 35 121

**MSD** Limits Units MS MS Analysis MSD **Surrogate** %Rec Flag Flag Date %Rec 05.13.2020 23:07 1-Chlorooctane 123 122 70-135 % 05.13.2020 23:07 o-Terphenyl 107 110 70-135 %

SW5035A Analytical Method: BTEX by EPA 8021B Prep Method: 3125867 Seq Number: Matrix: Solid Date Prep: 05.12.2020

7703235-1-BLK LCS Sample Id: 7703235-1-BKS LCSD Sample Id: 7703235-1-BSD MB Sample Id:

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.111	111	0.103	103	70-130	7	35	mg/kg	05.12.2020 23:25
Toluene	< 0.00200	0.100	0.106	106	0.0977	98	70-130	8	35	mg/kg	05.12.2020 23:25
Ethylbenzene	< 0.00200	0.100	0.0993	99	0.0915	92	71-129	8	35	mg/kg	05.12.2020 23:25
m,p-Xylenes	< 0.00400	0.200	0.201	101	0.185	93	70-135	8	35	mg/kg	05.12.2020 23:25
o-Xylene	< 0.00200	0.100	0.103	103	0.0947	95	71-133	8	35	mg/kg	05.12.2020 23:25

MBMB LCS LCS LCSD Limits Units Analysis LCSD **Surrogate** %Rec Flag %Rec Flag %Rec Flag Date 05.12.2020 23:25 1,4-Difluorobenzene 107 104 104 70-130 % 05.12.2020 23:25 4-Bromofluorobenzene 92 94 70-130 % 96

SW5035A Analytical Method: BTEX by EPA 8021B Prep Method: Seq Number: 3125867 Matrix: Soil Date Prep: 05.12.2020

Parent Sample Id: 661298-001 MS Sample Id: 661298-001 S MSD Sample Id: 661298-001 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	0.104	104	0.0971	97	70-130	7	35	mg/kg	05.13.2020 00:06	
Toluene	< 0.00200	0.0998	0.0970	97	0.0929	93	70-130	4	35	mg/kg	05.13.2020 00:06	
Ethylbenzene	< 0.00200	0.0998	0.0887	89	0.0850	85	71-129	4	35	mg/kg	05.13.2020 00:06	
m,p-Xylenes	< 0.00399	0.200	0.178	89	0.173	86	70-135	3	35	mg/kg	05.13.2020 00:06	
o-Xylene	< 0.00200	0.0998	0.0911	91	0.0879	88	71-133	4	35	mg/kg	05.13.2020 00:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	05.13.2020 00:06
4-Bromofluorobenzene	94		100		70-130	%	05.13.2020 00:06

E = MSD/LCSD Result

<

Zn

Date/Time

Revised Date 051418 Rev. 2018.1

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#### **XENCO Laboratories**

#### Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 05.12.2020 02.00.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 661297

Analyst:

Temperature Measuring device used: T-NM-007

Sample Receipt	Checklist	Comments
#1 *Temperature of cooler(s)?	4	
#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	Sample received in bulk container.
#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 deliver	v of samples prior to	placing in the refrigerato
Must be combleted to	aitei-ilouis aelivei	v di sallibles bildi to	Diacilla ili tile rell'iderato

Checklist completed by:	Culle	Date: 05.12.2020	
	Elizabeth McClellan		

PH Device/Lot#:

Checklist reviewed by:

Jessica Warner

Date: 05.14.2020





## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

C 01379

3 10 25S 30E  $\mathbf{X}$ 

606571 3556355\*

**Driller License:** 30 **Driller Company:** BARRON, EMMETT

**Driller Name:** 

BARRON, EMMETT

**Drill Finish Date:** 

03/20/1968

Plug Date:

**Drill Start Date:** Log File Date:

01/22/1968

**PCW Rcv Date:** 

04/26/1968

Source:

**Estimated Yield:** 

**Pump Type:** 

Pipe Discharge Size:

**Casing Size:** 

Depth Well:

400 feet

Depth Water:

\*UTM location was derived from PLSS - see Help

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

6/26/20 3:26 PM



## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03558 POD1

2 25 24S 30E

610412 3562651

**Driller License:** 1478 **Driller Company:** STRAUB CORPORATION

**Driller Name:** EDWARD BRYAN

**Drill Start Date:** 08/01/2012

0.00

**Drill Finish Date:** 

08/01/2012

20 feet

**Plug Date:** 

Depth Water:

08/01/2012

Log File Date:

08/13/2012

**PCW Rcv Date:** 

Depth Well:

Source:

0 feet

**Pump Type: Casing Size:** 

Pipe Discharge Size:

**Estimated Yield:** 

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.

6/26/20 3:51 PM



## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number** 

Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03558 POD2

2 25 24S 30E 610412

3562651

**Driller Company: Driller License:** 1478 STRAUB CORPORATION

**Driller Name:** BRYAN, EDWARD O.

**Drill Start Date:** 08/01/2012

**Drill Finish Date:** 

08/01/2012

**Plug Date:** 

08/01/2012

Log File Date:

08/13/2012

**PCW Rcv Date:** 

Source:

Pipe Discharge Size:

**Estimated Yield:** 

**Pump Type: Casing Size:** 

0.00Depth Well:

20 feet

Depth Water:

0 feet

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6/26/20 3:51 PM



## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number** 

Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03558 POD3

2 25 24S 30E

610412 3562651



**Driller Company: Driller License:** 1478 STRAUB CORPORATION

**Driller Name:** BRYAN, EDWARD O.

08/01/2012

**Drill Finish Date:** 

08/01/2012

**Plug Date:** 

08/01/2012

**Drill Start Date:** Log File Date:

Source:

08/13/2012

**PCW Rcv Date:** 

**Pump Type:** 

Pipe Discharge Size:

**Estimated Yield:** 

**Casing Size:** 

0.00

Depth Well:

25 feet

Depth Water:

0 feet

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.

6/26/20 3:51 PM



## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03558 POD4

2 25 3562651

24S 30E

610412

**Driller License:** 1478

**Driller Company:** 

STRAUB CORPORATION

**Driller Name: Drill Start Date:**  BRYAN, EDWARD O.

**Drill Finish Date:** 

08/01/2012

Plug Date:

Log File Date:

08/13/2012

**PCW Rcv Date:** 

Source:

**Pump Type: Casing Size:**  Pipe Discharge Size:

Depth Well:

**Estimated Yield:** 

0.00

08/01/2012

25 feet

Depth Water:

0 feet

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.

6/26/20 3:51 PM



## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number** 

Q64 Q16 Q4 Sec Tws Rng

2 25 24S 30E

 $\mathbf{X}$ 610412

C 03558 POD5

3562651



**Driller Company: Driller License:** 1478

STRAUB CORPORATION

**Driller Name:** BRYAN, EDWARD O.

**Drill Start Date:** 08/01/2012 **Drill Finish Date:** 

08/01/2012 **Plug Date:** 

08/01/2012

Log File Date:

08/13/2012

**PCW Rcv Date:** 

Source:

Pipe Discharge Size:

**Estimated Yield:** 

**Pump Type: Casing Size:** 

0.00

Depth Well:

30 feet

Depth Water:

0 feet

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6/26/20 3:51 PM



## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03702 POD1

24S 30E 24

610092 3563204

1711

STRAUB CORPORATION

**Driller Name:** BRYAN, EDWARD (LD)

**Driller Company:** 

**Driller License: Drill Start Date:** 

**Drill Finish Date:** 

12/11/2013 Plug Date:

Log File Date: 12/23/2013

**PCW Rcv Date:** 

Source:

**Pump Type:** 

Pipe Discharge Size:

**Estimated Yield:** 

**Casing Size:** Depth Well:

12/11/2013

20 feet

Depth Water:

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.

6/26/20 3:52 PM



## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 02108

UNKNOWN

7.00

3 08 24S 30E

602702 3566487\*

**Driller License:** 

**Driller Company:** 

**Driller Name:** 

**Drill Finish Date:** 12/31/1963

Plug Date:

**Drill Start Date:** 

**PCW Rcv Date:** 

Source:

Log File Date:

Estimated Yield: 16 GPM

**Pump Type: Casing Size:**  Pipe Discharge Size: Depth Well:

200 feet

Depth Water:

186 feet

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.

6/26/20 12:15 PM

<sup>\*</sup>UTM location was derived from PLSS - see Help



## New Mexico Office of the State Engineer

# **Point of Diversion Summary**

12/31/1967

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 02110

3 23 24S 30E

608036 3562950\*

**Driller License:** 

**Driller Company:** 

**Driller Name:** 

**Drill Start Date:** 

**Drill Finish Date:** 

Plug Date:

Log File Date:

**PCW Rcv Date:** 

Source:

**Pump Type:** 

Pipe Discharge Size:

Estimated Yield: 15 GPM

**Casing Size:** 

7.00

UNKNOWN

Depth Well: 600 feet Depth Water:

400 feet

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.

6/26/20 12:16 PM

<sup>\*</sup>UTM location was derived from PLSS - see Help



# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

4 21 25S 31E

614912 3553620\*

C 02250

**Driller License:** 

**Driller Company:** 

**Driller Name:** 

**Drill Start Date:** 

**Drill Finish Date:** 12/31/1941 Plug Date:

Log File Date:

8.63

UNKNOWN

**PCW Rcv Date:** Source: Pipe Discharge Size: **Estimated Yield:** 6 GPM

**Pump Type: Casing Size:** 

Depth Well:

400 feet

Depth Water:

390 feet

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6/26/20 12:17 PM

<sup>\*</sup>UTM location was derived from PLSS - see Help



# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03716 POD1

25S 30E 02

2

3559211 609069

**Driller License:** 1229 **Driller Company:** 

CARTER'S WELL DRILLING

**Driller Name:** RICHARD CARTER

**Drill Start Date:** 02/05/2014 **Drill Finish Date:** 

03/03/2014

**Plug Date:** 

Shallow

Log File Date:

03/12/2014

**PCW Rcv Date:** 

Source:

**Pump Type:** 

Pipe Discharge Size:

**Estimated Yield:** 

50 GPM

**Casing Size:** 

Depth Well:

600 feet

Depth Water:

425 feet

Water Bearing Stratifications:

**Bottom Description** Top

442

600 Sandstone/Gravel/Conglomerate

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# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03781 POD1

25S 30E 3 13

609306 3554761

**Driller License:** 331 SBQ2, LLC DBA STEWART BROTHERS DRILLING

**Driller Name:** 

**Drill Start Date:** 

01/08/2015

**Drill Finish Date:** 

**Driller Company:** 

01/10/2015 Plug Date:

Source:

Log File Date: **Pump Type:** 

02/19/2015

**PCW Rcv Date:** Pipe Discharge Size:

**Estimated Yield:** 

Artesian

**Casing Size:** 

8.63

Depth Well:

720 feet Depth Water: 325 feet

X	Water Bearing Stratifications:	Top	Bottom	Description
		200	370	Sandstone/Gravel/Conglomerate
		370	390	Sandstone/Gravel/Conglomerate
		390	410	Sandstone/Gravel/Conglomerate
		410	440	Sandstone/Gravel/Conglomerate
		440	460	Shale/Mudstone/Siltstone
		460	470	Shale/Mudstone/Siltstone
		470	490	Shale/Mudstone/Siltstone
		490	500	Shale/Mudstone/Siltstone
		500	510	Sandstone/Gravel/Conglomerate
		510	530	Shale/Mudstone/Siltstone
		530	660	Shale/Mudstone/Siltstone
		660	690	Shale/Mudstone/Siltstone
		690	700	Shale/Mudstone/Siltstone
		700	720	Shale/Mudstone/Siltstone
х	Casing Perforations:	Тор	Bottom	
		340	720	
x				

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.

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# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag POD Number C

Q64 Q16 Q4 Sec Tws Rng

X Y

C 03782 POD1

4 3 3 28 25S 30E

604526 3551444

Driller License: 331 Driller Company: SBQ2, LLC DBA STEWART BROTHERS DRILLING

**Driller Name:** 

01/16/2015 **Drill Finish Date:** 01/17/2015

01/17/2015 **Plug Date:** 

Drill Start Date: Log File Date:

02/19/2015 **PCW Rcv Date:** 

Source:

Artesian

**Pump Type:** 

2/19/2013 PCW R

Pipe Discharge Size:

**Estimated Yield:** 

Casing Size: 8.63 Depth Well: 805 feet Depth Water: 277 feet

Water Bearing Stratifications:	Top	Bottom	Description
	260	320	Sandstone/Gravel/Conglomerate
	320	380	Sandstone/Gravel/Conglomerate
	380	410	Sandstone/Gravel/Conglomerate
	410	530	Shale/Mudstone/Siltstone
	530	590	Shale/Mudstone/Siltstone
	590	600	Shale/Mudstone/Siltstone
	600	630	Shale/Mudstone/Siltstone
	630	650	Shale/Mudstone/Siltstone
	650	700	Shale/Mudstone/Siltstone
	700	710	Shale/Mudstone/Siltstone
	710	760	Shale/Mudstone/Siltstone
	760	770	Shale/Mudstone/Siltstone
	770	780	Shale/Mudstone/Siltstone
	780	790	Shale/Mudstone/Siltstone
	790	805	Shale/Mudstone/Siltstone
Casing Perforations:	Тор	Bottom	
	270	805	
x			

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.

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# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

			(quarters	are 1=N	W 2=1	NE 3=SW	V 4=SE)				
			(quarter	rs are sm	allest t	o largest	)	(NAD83 UT	AD83 UTM in meters)		
Well Tag	POD	Number	Q64 Q	16 Q4	Sec	Tws	Rng	X	Y		
	C 0.	3891 POD1	4	4 2	01	25S	30E	610608	3558890		
<sup>x</sup> Driller Lice Driller Nan		1723	Driller (	Compa	ny:	SB0 CO		C DBA STEV	VART BROTH	ERS DRILLING	
Drill Start l	Date:	11/10/2015	Drill Fin	ish Da	te:	1	1/14/201	15 Plu	g Date:		
<b>Log File Date:</b> 12/04/2015		PCW Ro	PCW Rcv Date:				Sou	irce:	Shallow		
Pump Type:		Pipe Dise	Pipe Discharge Size:				Est	imated Yield:	33 GPM		
Casing Size	<b>:</b>	6.13	Depth W	Depth Well:			635 feet		oth Water:	429 feet	
х	Wate	r Bearing Stratif	ications:	Te	op :	Botton	n Desci	ription			
				4:	20	450	Sands	stone/Gravel/	Conglomerate		
				4:	50	460	Sands	stone/Gravel/	Conglomerate		
				4	60	490	Sands	stone/Gravel/	Conglomerate		
				4	90	500	Sands	stone/Gravel/	Conglomerate		
				5	00	530	Sands	stone/Gravel/	Conglomerate		
		530			635	Sands	Sandstone/Gravel/Conglomerate				
x		Casing Perf	forations:	To	р	Bottom	1				
				4	60	635	5				

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.

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# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03891 POD2

2 01 25S 30E

610607

3558967

**Driller License: Driller Company:** 

**Driller Name:** 

**Drill Start Date: Drill Finish Date: Plug Date:** Log File Date: **PCW Rcv Date:** Source:

Pipe Discharge Size: **Estimated Yield: Pump Type: Casing Size:** Depth Well: Depth Water:

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.

6/26/20 4:07 PM



# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03960 POD1

2 24S 30E 21

605062 3563712

**Driller License:** 1753 **Driller Company:** VANGUARD WATER WELLS

**Driller Name:** JACOBO FRIESSEN

**Drill Start Date:** 11/12/2016 11/12/2016 **Drill Finish Date: Plug Date:** 

Log File Date: **PCW Rcv Date:** Shallow 11/17/2016 Source:

**Pump Type:** Pipe Discharge Size: **Estimated Yield:** 

**Casing Size:** 6.00 Depth Well: 475 feet Depth Water: 250 feet

Water Bearing Stratifications: **Bottom Description** Top 182 Sandstone/Gravel/Conglomerate 402 Sandstone/Gravel/Conglomerate **Casing Perforations:** Top **Bottom** 290 250 395 435

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.

6/26/20 12:16 PM



# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng 2 2 01 25S 30E

 $\mathbf{X}$ 

C 03894 POD1

610396 3559547

**Driller License: Driller Company:** 

**Driller Name:** 

**Drill Start Date: Drill Finish Date: Plug Date:** Log File Date: **PCW Rcv Date:** Source:

Pipe Discharge Size: **Estimated Yield: Pump Type: Casing Size:** Depth Well: Depth Water:

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.

6/26/20 4:08 PM



# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number** 

Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03894 POD2

2 2 01 25S 30E

610396 3559547



**Driller License: Driller Company:** 

**Driller Name:** 

**Drill Start Date: Drill Finish Date: Plug Date:** Log File Date: **PCW Rcv Date:** Source:

Pipe Discharge Size: **Estimated Yield: Pump Type: Casing Size:** Depth Well: Depth Water:

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.

6/26/20 4:08 PM



# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03894 POD3

2 2 01 25S 30E

610396 3559547

**Driller License: Driller Company:** 

**Driller Name:** 

**Drill Start Date: Drill Finish Date: Plug Date:** Log File Date: **PCW Rcv Date:** Source:

Pipe Discharge Size: **Estimated Yield: Pump Type: Casing Size:** Depth Well: Depth Water:

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.

6/26/20 4:08 PM



# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

 $\mathbf{X}$ 

C 03894 POD4

1 1 01 25S 30E

609789 3614977

**Driller License: Driller Company:** 

**Driller Name:** 

**Drill Start Date: Drill Finish Date: Plug Date:** Log File Date: **PCW Rcv Date:** Source:

Pipe Discharge Size: **Estimated Yield: Pump Type: Casing Size:** Depth Well: Depth Water:

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.

6/26/20 4:08 PM

# USGS 320643103465002 25S.31E.21.413314A

#### Available data for this site

### **Well Site**

#### **DESCRIPTION:**

Latitude 32°06'46.0", Longitude 103°46'56.3" NAD83 Eddy County, New Mexico , Hydrologic Unit 13070001

Well depth: 400 feet

Land surface altitude: 3,374.00 feet above NGVD29.

Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits"

(110AVMB) local aquifer

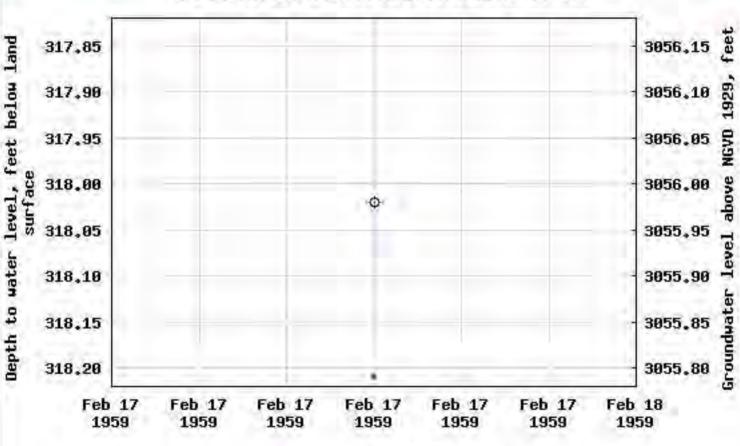
### **AVAILABLE DATA:**

Data Type	<b>Begin Date</b>	End Date	Count
Field groundwater-level measurements	1959-02-17	2013-01-17	2
Revisions	Unavailable (	site:0) (timese	eries:0)

### **OPERATION:**

Record for this site is maintained by the USGS New Mexico Water Science Center Email questions about this site to <a href="New Mexico Water Science Center Water-Data">New Mexico Water Science Center Water-Data</a> <a href="Inquiries">Inquiries</a>

# USGS 320643103465002 25S.31E.21.413314A



# USGS 320739103584201 25S.29E.15.31134

### Available data for this site

# **Well Site**

### **DESCRIPTION:**

Latitude 32°07'39", Longitude 103°58'42" NAD27 Eddy County, New Mexico , Hydrologic Unit 13060011

Well depth: 192 feet

Land surface altitude: 3,017 feet above NAVD88.

Well completed in "Rustler Formation" (312RSLR) local aquifer

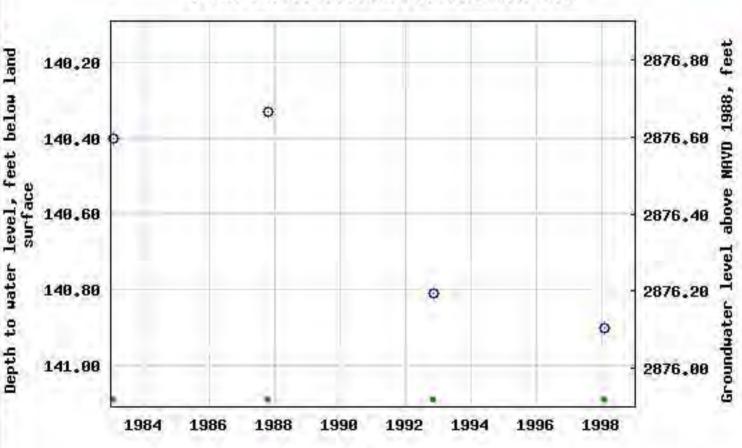
### **AVAILABLE DATA:**

Data Type	<b>Begin Date</b>	End Date	Count
Field groundwater-level measurements	1983-02-01	1998-01-29	4
Revisions	Unavailable (	site:0) (timese	eries:0)

#### **OPERATION:**

Record for this site is maintained by the USGS New Mexico Water Science Center Email questions about this site to <a href="New Mexico Water Science Center Water-Data">New Mexico Water Science Center Water-Data</a> <a href="Inquiries">Inquiries</a>

# USGS 320739103584201 25S.29E.15.31134



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# USGS 320857103553301 25S.30E.07.112331

#### Available data for this site

# **Well Site**

### **DESCRIPTION:**

Latitude 32°08'57", Longitude 103°55'33" NAD27 Eddy County, New Mexico , Hydrologic Unit 13060011

Well depth: 385 feet

Land surface altitude: 3,169 feet above NAVD88.

Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits"

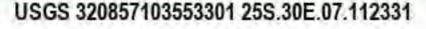
(110AVMB) local aquifer

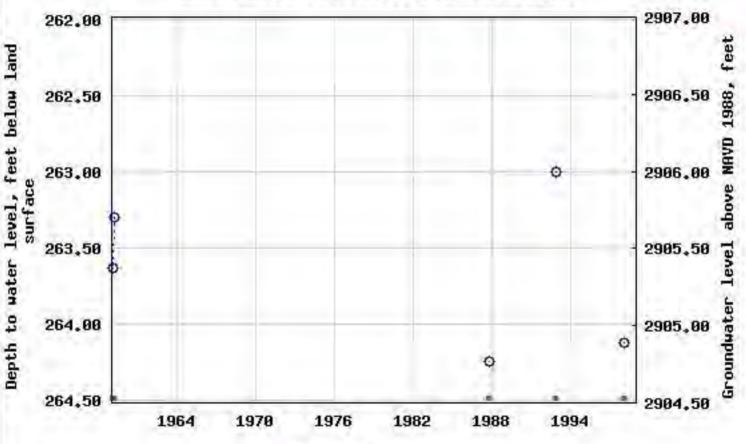
### **AVAILABLE DATA:**

Data Type	<b>Begin Date</b>	End Date	Count
Field groundwater-level measurements	1959-02-05	1998-01-28	5
Revisions	Unavailable (	site:0) (timese	eries:0)

### **OPERATION:**

Record for this site is maintained by the USGS New Mexico Water Science Center Email questions about this site to <a href="New Mexico Water Science Center Water-Data">New Mexico Water Science Center Water-Data</a> <a href="Inquiries">Inquiries</a>





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# USGS 320956103503001 24S.30E.36.33333

### Available data for this site

# **Well Site**

### **DESCRIPTION:**

Latitude 32°09'56", Longitude 103°50'30" NAD27 Eddy County, New Mexico , Hydrologic Unit 13060011

Well depth: 480 feet

Land surface altitude: 3,408 feet above NAVD88.

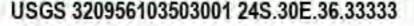
Well completed in "Rustler Formation" (312RSLR) local aquifer

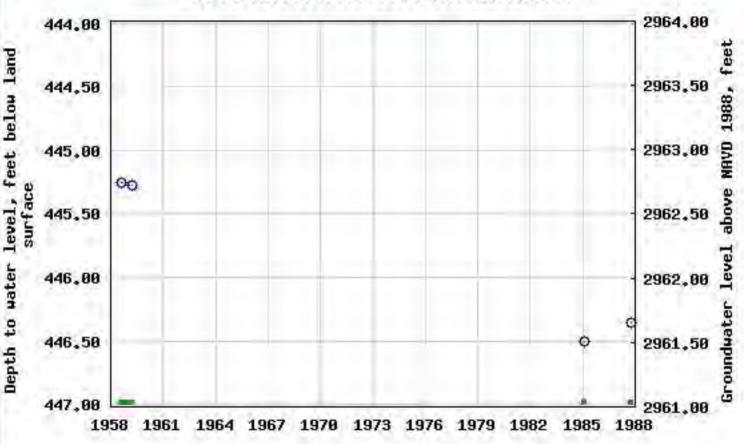
#### **AVAILABLE DATA:**

Data Type	<b>Begin Date</b>	End Date	Count	
Field groundwater-level measurements	1958-08-19	1987-10-15	4	
Revisions	Unavailable (	site:0) (timese	eries:0)	

#### **OPERATION:**

Record for this site is maintained by the USGS New Mexico Water Science Center Email questions about this site to <a href="New Mexico Water Science Center Water-Data">New Mexico Water Science Center Water-Data</a> <a href="Inquiries">Inquiries</a>





# USGS 321203103511801 24S.30E.23.3124143

#### Available data for this site

# **Well Site**

### **DESCRIPTION:**

Latitude 32°12'03", Longitude 103°51'18" NAD27 Eddy County, New Mexico , Hydrologic Unit 13060011

Well depth: 474 feet

Land surface altitude: 3,423 feet above NAVD88.

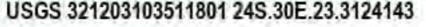
Well completed in "Rustler Formation" (312RSLR) local aquifer

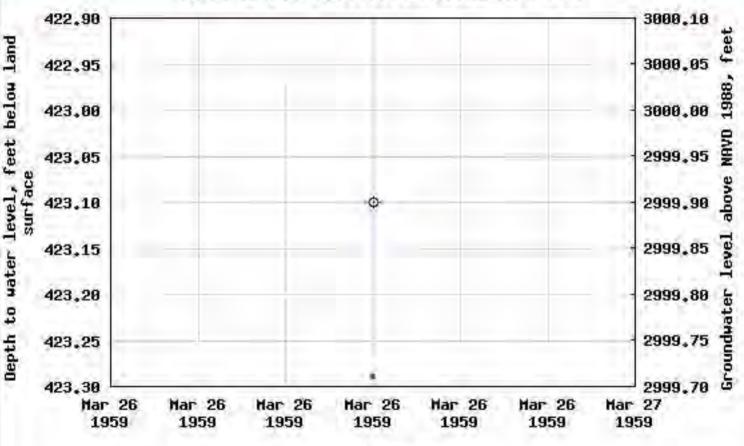
#### **AVAILABLE DATA:**

Data Type	<b>Begin Date</b>	End Date	Count	
Field groundwater-level measurements	1959-03-26	1959-03-26	1	
Revisions	Unavailable (	site:0) (timese	eries:0)	

#### **OPERATION:**

Record for this site is maintained by the USGS New Mexico Water Science Center Email questions about this site to <a href="New Mexico Water Science Center Water-Data">New Mexico Water Science Center Water-Data</a> Inquiries





# USGS 321334103494901 24S.30E.12.432344

#### Available data for this site

# **Well Site**

### **DESCRIPTION:**

Latitude 32°13'34", Longitude 103°49'49" NAD27 Eddy County, New Mexico , Hydrologic Unit 13060011

Well depth: 500 feet

Land surface altitude: 3,522 feet above NAVD88.

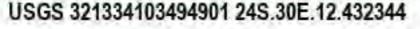
Well completed in "Rustler Formation" (312RSLR) local aquifer

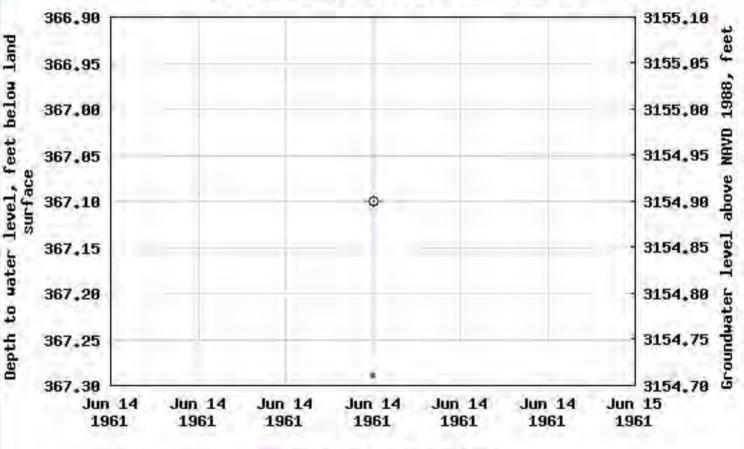
#### **AVAILABLE DATA:**

Data Type	<b>Begin Date</b>	End Date	Count
Field groundwater-level measurements	1961-06-14	1961-06-14	1
Revisions	Unavailable (	site:0) (timese	eries:0)

#### **OPERATION:**

Record for this site is maintained by the USGS New Mexico Water Science Center Email questions about this site to <a href="New Mexico Water Science Center Water-Data">New Mexico Water Science Center Water-Data</a> Inquiries





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# **APPENDIX C**

September 24, 2021 Closure Request Addendum



**WSP USA** 

3300 North "A" Street Building 1, Unit 222 Midland, Texas 79705 432.704.5178

September 24, 2021

District II New Mexico Oil Conservation Division 811 South First Street Artesia, New Mexico 88210

RE: Closure Request Addendum
PLU Big Sinks 25 Federal Battery
Remediation Permit Number 2RP-5551
Incident Number NAB1921742793
Eddy County, New Mexico

To Whom It May Concern:

WSP USA Inc. (WSP) on behalf of XTO Energy, Inc. (XTO), presents the following addendum to a previous Closure Request Addendum submitted June 26, 2020. This Addendum provides an update to the depth to groundwater determination and horizontal delineation activities completed at the Poker Lake Unit (PLU) Big Sinks 25 Federal Battery (Site), located in Unit O, Section 25, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1), in response to the denial of the Closure Request by the New Mexico Oil Conservation Division (NMOCD). In the denial, NMOCD expressed concern that the depth to groundwater assessment and horizontal delineation may not be sufficient. Based on the additional depth to groundwater determination and delineation activities described below, XTO is requesting no further action (NFA) for Incident Number NAB1921742793.

#### **BACKGROUND**

On July 7, 2019 a release occurred from a corrosion hole in a pipeline riser, resulting in the release of approximately 67.65 barrels (bbls) of produced water onto the caliche well pad and onto the adjacent developed right-of-way (ROW). Approximately 55 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 17, 2019. The release was assigned Remediation Permit (RP) Number 2RP-5551 and Incident Number NAB1921742793.

A Closure Request was submitted on January 22, 2020 detailing remediation activities, including excavation and delineation soil sampling. The Closure Request detailed site characterization according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Based on the site characterization, the following Closure Criteria were applied:

Benzene: 10 milligrams per kilogram (mg/kg)



District II Page 2

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg

• TPH: 2,500 mg/kg

Chloride: 20,000 mg/kg

On March 16, 2020, NMOCD denied the Closure Request via email requesting additional depth to groundwater determination and excavation confirmation sampling. A Closure Request Addendum was submitted on June 26, 2020, following the additional excavation sampling and providing additional depth to groundwater information.

On July 20, 2021, NMOCD denied the Closure Request Addendum for the following reasons:

- Horizontal delineation submitted was incomplete and did not meet the requirements of 19.15.29.11 NMAC. The values for determination of horizontal impact are derived by either approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less. This is especially important for "on-pad" releases to ensure the release did not extend to the "off-pad"/pasture area. A visual footprint on the surface is not sufficient to assess the horizontal extent of the release. Laboratory data must be provided as evidence of delineation efforts. Any sample exceeding approved "background" values or Table I Closure Criteria for releases where groundwater is at a depth of 50 feet or less requires additional samples for horizontal delineation.
- The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.

Following the second denial, additional depth to groundwater determination and horizontal delineation sampling activities were completed at the Site.

#### ADDITIONAL DEPTH TO GROUNDWATER ASSESSMENT ACTIVITIES

In an effort to confirm the depth to groundwater determination, WSP oversaw installation a soil boring within 0.5 miles of the Site utilizing a truck-mounted hollow-stem auger rig. Soil boring C-4484 was drilled to a depth of 110 feet bgs. A WSP geologist logged and described soils continuously. No moisture or groundwater was encountered during drilling activities. The Well Record and Log is included in Attachment 1. The location of the borehole is approximately 665 feet northeast of the site and is depicted on Figure 1. The borehole was left open for over 72



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hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 110 feet bgs. The borehole was properly abandoned with drill cuttings and hydrated bentonite chips. Based on the confirmed depth to water greater than 110 feet bgs, the Table 1 Closure Criteria identified in the original Closure Request are applicable and appropriate for protection of groundwater at this Site.

#### **ADDITIONAL DELINEATION ACTIVITIES**

On August 12, 2021, WSP personnel returned to the Site to collect additional horizontal delineation samples from the pasture areas adjacent to the release extent. Delineation samples SS01 through SS04 were collected in the pasture areas south and west of the pad from a depth of approximately 0.5 feet bgs. Soil from the delineation samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The delineation soil sample locations are depicted on Figure 2.

The delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

Laboratory analytical results for delineation samples SS01 through SS04, collected in the pasture from a depth of approximately 0.5 feet bgs, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. The soil sample analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Attachment 2.

#### **CLOSURE REQUEST**

Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the July 7, 2019 release of produced water at the Site. Based on the confirmed depth to water greater than 110 feet bgs, laboratory analytical results below the Site Closure Criteria in the delineation and excavation soil samples, and horizontal delineation in the adjacent pasture areas to below the most stringent Table 1 Closure Criteria, XTO respectfully requests no further action for Incident Number NAB1921742793.



District II Page 4

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096 or Ashley.Ager@wsp.com.

Sincerely,

WSP USA, INC.

Kaleb Henry
Kaleb Henry

Consultant, geologist

Ashley Y. Ager, P.G.

ashley L. ager

Managing Director, Geologist

cc: Shelby Pennington, XTO

Adrian Baker, XTO

New Mexico State Land Office Bureau of Land Management

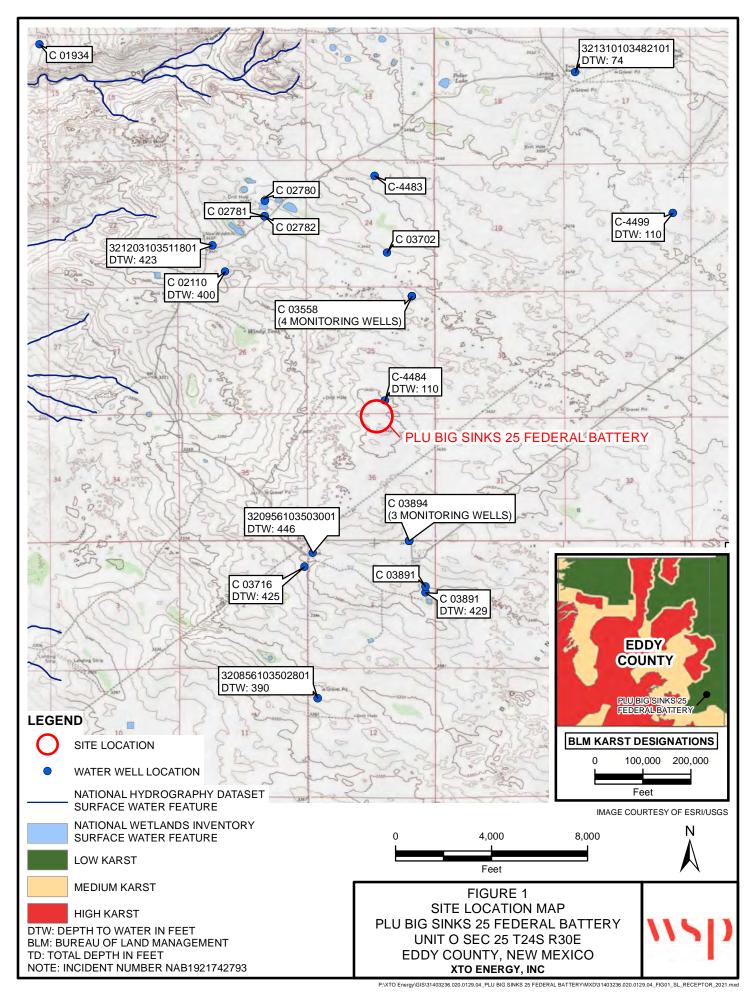
#### Attachments:

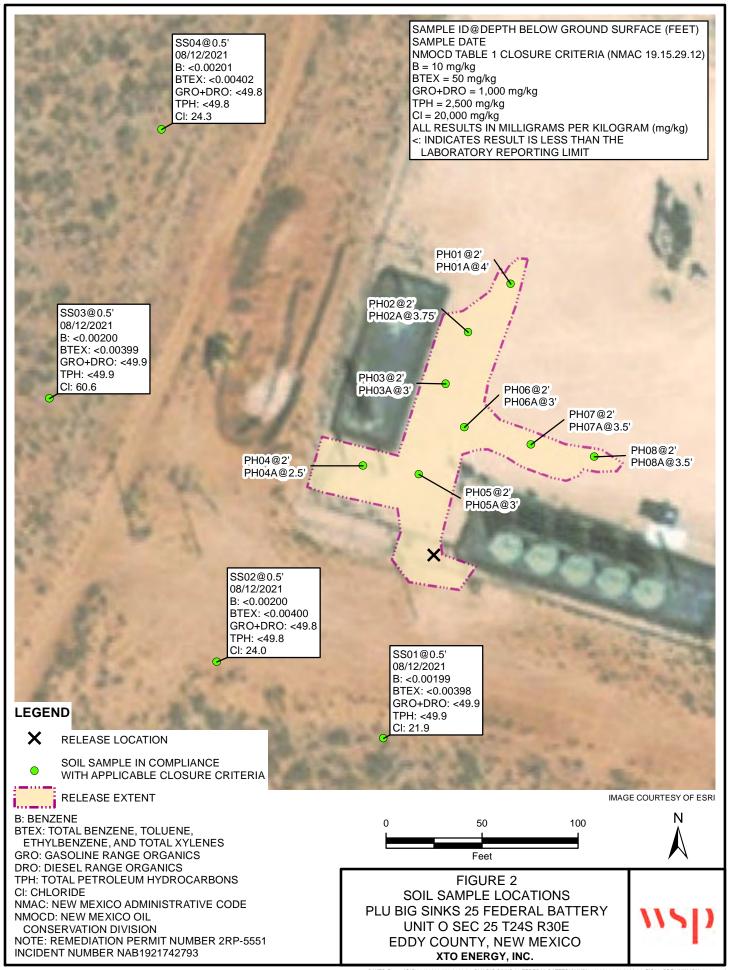
Figure 1 Site Location Map
Figure 2 Soil Sample Locations

Table 1 Soil Sample Analytical Results

Attachment 1 Well Record and Log

Attachment 2 Laboratory Analytical Reports





Received by OCD: 3/26/2025 7:38:50 AM

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Table 1

# Soil Analytical Results PLU Big Sinks 25 Federal Battery Incident Number NAB1921742793 Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Clo	osure Criteria (NM	10	50	NE	NE	NE	1,000	2,500	20,000	
Surface Samples										
SS01	08/12/2021	0.5	< 0.00199	< 0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	21.9
SS02	08/12/2021	0.5	< 0.00200	< 0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	24.0
SS03	08/12/2021	0.5	< 0.00200	< 0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	60.6
SS04	08/12/2021	0.5	< 0.00201	< 0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	24.3

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

< - indicates result is less than the stated laboratory method practical quantitation limit

NE - Not Established

**BOLD** - indicates results exceed the higher of the background sample result or applicable regulatory standard



ION	OSE POD NO POD1 (B	H-01)			WELL TAG ID NO n/a			OSE FILE NO( C-4484				
OCAT	WELL OWN XTO Energ	•	•					PHONE (OPTI	ONAL)			
WELL I	WELL OWN 6401 Holid		ig address Dr.					CITY Midland		STATE	79707	ZIP
GENERAL AND WELL LOCATION	WELL	ON L	D	egrees 32°				* ACCURACY	REQUIRED: ONE TENT	TH OF A	SECOND	
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FOR	DRILLING M		ROTARY	_   HAMMER			[7] OTHE	R – SPECIFY:	PECIFY: Hollow Stem Auger			
2. DRILLING & CASING INFORMATION	DEPTH (feet bgl) BORE HOLE FROM TO DIAM		CASING	MATERIAL ANI GRADE	O/OR		ASING NECTION	CASING INSIDE DIAM.		ING WALL ICKNESS	SLOT SIZE	
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LO	CATION	343	T24	5 R30E	Sec 5	WELL	TAG ID NO.		N	/	PAGE 2 OF 2

John R. D Antonio, Jr., P.E. State Engineer



koswell Office 1900 WEST SECOND STREET ROSWELL, NM 88201

#### STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

Trn Nbr:

679350

File Mbr:

C 04484

Well File Mbr: C 04484 POD1

Jan. 22, 2021

KALEI JENNINGS LT ENVIRONMENTAL INC 508 WEST STEVENS CARLSBAD, NM 88220

#### Greetings:

The above numbered permit was issued in your name on 09/29/2020.

The Well Record was received in this office on 12/17/2020, stating that it had been completed on 11/19/2020, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 09/29/2021.

If you have any questions, please feel free to contact us.

Sincerely,

Andrew Dennis (575) 622 - 6521

drywell



# **Environment Testing America**

# **ANALYTICAL REPORT**

Eurofins Xenco, Carlsbad 1089 N Canal St. Carlsbad, NM 88220 Tel: (575)988-3199

Laboratory Job ID: 890-1108-1

Laboratory Sample Delivery Group: 31403236.020.0129 Client Project/Site: PLU Big Sinks 25 Federal Battery

For:

WSP USA Inc. 2777 N. Stemmons Freeway Suite 1600 Dallas, Texas 75207

Attn: Tacoma Morrissey

MEAMER

Authorized for release by: 8/19/2021 3:03:20 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

.....LINKS .....

Review your project results through

Have a Question?



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 5/13/2025 9:12:25 AM

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: WSP USA Inc. Project/Site: PLU Big Sinks 25 Federal Battery Laboratory Job ID: 890-1108-1 SDG: 31403236.020.0129

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# **Definitions/Glossary**

Job ID: 890-1108-1 Client: WSP USA Inc. Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

#### **Qualifiers**

GC	VOA
Qual	ifier

*_	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.

**Qualifier Description** 

U Indicates the analyte was analyzed for but not detected.

#### **GC Semi VOA**

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

Qualifier	Qualifier Description	
		16 1 1 1 1

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 **Practical Quantitation Limit** PQL

**PRES** Presumptive **Quality Control** QC

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: WSP USA Inc.

Project/Site: PLU Big Sinks 25 Federal Battery

Job ID: 890-1108-1

SDG: 31403236.020.0129

Job ID: 890-1108-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-1108-1

#### Receipt

The samples were received on 8/13/2021 9:30 AM. 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 2.0°C

#### GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-6476 and analytical batch 880-6599 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: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-6476 and analytical batch 880-6599 recovered outside control limits for the following analytes: Benzene

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS04 (890-1108-4). Evidence of matrix interferences is not obvious.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### GC Semi VOA

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-6609 and analytical batch 880-6610 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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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IR

Matrix: Solid

Client: WSP USA Inc.

Job ID: 890-1108-1 Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

**Client Sample ID: SS01** Lab Sample ID: 890-1108-1

Date Collected: 08/12/21 11:38 Date Received: 08/13/21 09:30

Sample Depth: - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *- *1	0.00199	mg/Kg		08/16/21 16:39	08/17/21 05:01	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/16/21 16:39	08/17/21 05:01	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		08/16/21 16:39	08/17/21 05:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		08/16/21 16:39	08/17/21 05:01	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		08/16/21 16:39	08/17/21 05:01	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		08/16/21 16:39	08/17/21 05:01	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		08/16/21 16:39	08/17/21 05:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			08/16/21 16:39	08/17/21 05:01	1
1,4-Difluorobenzene (Surr)	100		70 - 130			08/16/21 16:39	08/17/21 05:01	1

Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		08/16/21 12:02	08/16/21 21:10	1
(GRO)-C6-C10 Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		08/16/21 12:02	08/16/21 21:10	1
C10-C28) Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/16/21 12:02	08/16/21 21:10	1
Total TPH	<49.9	U	49.9	mg/Kg		08/16/21 12:02	08/16/21 21:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	78		70 - 130			08/16/21 12:02	08/16/21 21:10	1
o-Terphenyl	86		70 - 130			08/16/21 12:02	08/16/21 21:10	1

	natography - S	oluble						
Analyte	Result (	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.9		4.95	mg/Kg			08/18/21 12:50	1

**Client Sample ID: SS02** Lab Sample ID: 890-1108-2 Date Collected: 08/12/21 11:40 **Matrix: Solid** 

Date Received: 08/13/21 09:30

Sample Depth: - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200	mg/Kg		08/16/21 16:39	08/17/21 05:21	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/16/21 16:39	08/17/21 05:21	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/16/21 16:39	08/17/21 05:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/16/21 16:39	08/17/21 05:21	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/16/21 16:39	08/17/21 05:21	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/16/21 16:39	08/17/21 05:21	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/16/21 16:39	08/17/21 05:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			08/16/21 16:39	08/17/21 05:21	1
1,4-Difluorobenzene (Surr)	88		70 - 130			08/16/21 16:39	08/17/21 05:21	1

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-1108-1 Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

**Client Sample ID: SS02** Lab Sample ID: 890-1108-2

Date Collected: 08/12/21 11:40 Matrix: Solid Date Received: 08/13/21 09:30

Sample Depth: - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.8	U	49.8	mg/Kg		08/16/21 12:02	08/16/21 21:32	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.8	U	49.8	mg/Kg		08/16/21 12:02	08/16/21 21:32	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/16/21 12:02	08/16/21 21:32	1
Total TPH	<49.8	U	49.8	mg/Kg		08/16/21 12:02	08/16/21 21:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	80		70 - 130			08/16/21 12:02	08/16/21 21:32	1
o-Terphenyl	90		70 - 130			08/16/21 12:02	08/16/21 21:32	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			4.99				08/18/21 19:18	

**Client Sample ID: SS03** Lab Sample ID: 890-1108-3

Date Collected: 08/12/21 11:49 Matrix: Solid

Date Received: 08/13/21 09:30

Sample Depth: - 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- *1	0.00200	mg/Kg		08/16/21 16:39	08/17/21 05:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/16/21 16:39	08/17/21 05:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/16/21 16:39	08/17/21 05:41	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		08/16/21 16:39	08/17/21 05:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/16/21 16:39	08/17/21 05:41	1
Xylenes, Total	< 0.00399	U	0.00399	mg/Kg		08/16/21 16:39	08/17/21 05:41	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		08/16/21 16:39	08/17/21 05:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130			08/16/21 16:39	08/17/21 05:41	1
1,4-Difluorobenzene (Surr)	93		70 - 130			08/16/21 16:39	08/17/21 05:41	1
Method: 8015B NM - Diesel Ranç Analyte	• • •	RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mothod: 9045P NM Discol Dans	no Organico (D	BOV (CC)						
Analyte	Result	Qualifier			<u>D</u>		Analyzed	Dil Fac
Analyte Gasoline Range Organics	• • •	Qualifier	RL 49.9	Unit mg/Kg	<u>D</u>	Prepared 08/16/21 12:02	Analyzed 08/16/21 21:54	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10	Result   <49.9	Qualifier U	49.9	mg/Kg	<u>D</u>	08/16/21 12:02	08/16/21 21:54	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U			<u>D</u>			1
Analyte Gasoline Range Organics (GRO)-C6-C10	Result   <49.9	Qualifier U	49.9	mg/Kg	<u>D</u>	08/16/21 12:02	08/16/21 21:54	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <49.9   <49.9	Qualifier U U	49.9	mg/Kg	<u>D</u>	08/16/21 12:02 08/16/21 12:02	08/16/21 21:54 08/16/21 21:54	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <49.9   <49.9   <49.9	Qualifier U U U U	49.9 49.9 49.9	mg/Kg mg/Kg mg/Kg	<u>D</u>	08/16/21 12:02 08/16/21 12:02 08/16/21 12:02	08/16/21 21:54 08/16/21 21:54 08/16/21 21:54	1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH	Result   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49.9   <49	Qualifier U U U U	49.9 49.9 49.9 49.9	mg/Kg mg/Kg mg/Kg	<u>D</u>	08/16/21 12:02 08/16/21 12:02 08/16/21 12:02 08/16/21 12:02	08/16/21 21:54 08/16/21 21:54 08/16/21 21:54 08/16/21 21:54	1 1 1 <i>Dil Fac</i>
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH  Surrogate	Result	Qualifier U U U U	49.9 49.9 49.9 49.9 <i>Limits</i>	mg/Kg mg/Kg mg/Kg	<u>D</u>	08/16/21 12:02 08/16/21 12:02 08/16/21 12:02 08/16/21 12:02 Prepared	08/16/21 21:54 08/16/21 21:54 08/16/21 21:54 08/16/21 21:54 Analyzed	1 1 1 Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH  Surrogate 1-Chlorooctane	Result	Qualifier  U  U  U  Qualifier	49.9 49.9 49.9 49.9  Limits 70 - 130	mg/Kg mg/Kg mg/Kg	<u>D</u>	08/16/21 12:02 08/16/21 12:02 08/16/21 12:02 08/16/21 12:02 Prepared 08/16/21 12:02	08/16/21 21:54  08/16/21 21:54  08/16/21 21:54  08/16/21 21:54  Analyzed  08/16/21 21:54	1 1 1 1 Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH  Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier  U  U  U  Qualifier	49.9 49.9 49.9 49.9  Limits 70 - 130	mg/Kg mg/Kg mg/Kg	<u>D</u>	08/16/21 12:02 08/16/21 12:02 08/16/21 12:02 08/16/21 12:02 Prepared 08/16/21 12:02	08/16/21 21:54  08/16/21 21:54  08/16/21 21:54  08/16/21 21:54  Analyzed  08/16/21 21:54	1

# **Client Sample Results**

Client: WSP USA Inc.

Job ID: 890-1108-1

Project/Site: PLU Big Sinks 25 Federal Battery

SDG: 31403236.020.0129

Client Sample ID: SS04

Date Collected: 08/12/21 11:53 Date Received: 08/13/21 09:30

Sample Depth: - 0.5

Surrogate

1-Chlorooctane

Lab Sample ID: 890-1108-	4
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Matrix: Solid

Method: 8021B - Volatile Orga	nic Compounds (	GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *- *1	0.00201	mg/Kg		08/16/21 16:39	08/17/21 06:02	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/16/21 16:39	08/17/21 06:02	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/16/21 16:39	08/17/21 06:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/16/21 16:39	08/17/21 06:02	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/16/21 16:39	08/17/21 06:02	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/16/21 16:39	08/17/21 06:02	1
Total BTEX	<0.00402	U	0.00402	mg/Kg		08/16/21 16:39	08/17/21 06:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130			08/16/21 16:39	08/17/21 06:02	1
1,4-Difluorobenzene (Surr)	90		70 - 130			08/16/21 16:39	08/17/21 06:02	1

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Method: 8015B NM - Diesel Range Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte					=		Allalyzeu	Dirrac
Gasoline Range Organics	<49.8	U	49.8	mg/Kg		08/16/21 12:02	08/16/21 22:15	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.8	U	49.8	mg/Kg		08/16/21 12:02	08/16/21 22:15	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/16/21 12:02	08/16/21 22:15	1
Total TPH	<49.8	U	49.8	ma/Ka		08/16/21 12:02	08/16/21 22:15	1

Analyzed	Dil Fac
08/16/21 22:15	1

Prepared

08/16/21 12:02

o-Terphenyl	94		70 - 130			08/16/21 12:02	08/16/21 22:15	1
Method: 300.0 - Anions, Ion Chroma	atography - S	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24.3		5.01	mg/Kg			08/18/21 19:41	1

Limits

70 - 130

%Recovery Qualifier

# **Surrogate Summary**

Client: WSP USA Inc. Job ID: 890-1108-1 Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limit
		BFB1	DFBZ1	
b Sample ID	Client Sample ID	(70-130)	(70-130)	
0-5041-A-1-E MS	Matrix Spike	112	106	
0-5041-A-1-F MSD	Matrix Spike Duplicate	117	101	
0-1108-1	SS01	120	100	
0-1108-2	SS02	114	88	
)-1108-3	SS03	123	93	
-1108-4	SS04	136 S1+	90	
880-6476/1-A	Lab Control Sample	107	106	
D 880-6476/2-A	Lab Control Sample Dup	111	107	
880-6476/5-A	Method Blank	122	98	
880-6596/5-A	Method Blank	101	96	

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

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-5111-A-1-E MS	Matrix Spike	74	74	
880-5111-A-1-F MSD	Matrix Spike Duplicate	74	74	
890-1108-1	SS01	78	86	
890-1108-2	SS02	80	90	
890-1108-3	SS03	75	76	
890-1108-4	SS04	83	94	
LCS 880-6609/2-A	Lab Control Sample	93	100	
LCSD 880-6609/3-A	Lab Control Sample Dup	88	95	
MB 880-6609/1-A	Method Blank	99	112	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc. Job ID: 890-1108-1 Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-6476/5-A

**Matrix: Solid** 

**Analysis Batch: 6599** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6476

	MB ME	В				
Analyte	Result Qu	ualifier RL	Unit D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	0.00200	mg/Kg	08/16/21 16:39	08/17/21 00:14	
Toluene	<0.00200 U	0.00200	mg/Kg	08/16/21 16:39	08/17/21 00:14	
Ethylbenzene	<0.00200 U	0.00200	mg/Kg	08/16/21 16:39	08/17/21 00:14	
m-Xylene & p-Xylene	<0.00400 U	0.00400	mg/Kg	08/16/21 16:39	08/17/21 00:14	
o-Xylene	<0.00200 U	0.00200	mg/Kg	08/16/21 16:39	08/17/21 00:14	
Xylenes, Total	<0.00400 U	0.00400	mg/Kg	08/16/21 16:39	08/17/21 00:14	
Total BTEX	<0.00400 U	0.00400	mg/Kg	08/16/21 16:39	08/17/21 00:14	

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122	70 - 130	08/16/21 16:39	08/17/21 00:14	1
1,4-Difluorobenzene (Surr)	98	70 - 130	08/16/21 16:39	08/17/21 00:14	1

Lab Sample ID: LCS 880-6476/1-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** 

**Analysis Batch: 6599** 

Prep Type: Total/NA Prep Batch: 6476

	<b>Spike</b>	LCS	LUS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.03564	*_	mg/Kg		36	70 - 130	
Toluene	0.100	0.08815		mg/Kg		88	70 - 130	
Ethylbenzene	0.100	0.08786		mg/Kg		88	70 - 130	
m-Xylene & p-Xylene	0.200	0.1764		mg/Kg		88	70 - 130	
o-Xylene	0.100	0.09019		mg/Kg		90	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	107	70 - 130
1 4-Difluorobenzene (Surr)	106	70 - 130

Lab Sample ID: LCSD 880-6476/2-A

**Matrix: Solid** 

**Analysis Batch: 6599** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 6476

	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09517	*1	mg/Kg		95	70 - 130	91	35	
Toluene	0.100	0.08807		mg/Kg		88	70 - 130	0	35	
Ethylbenzene	0.100	0.08866		mg/Kg		89	70 - 130	1	35	
m-Xylene & p-Xylene	0.200	0.1802		mg/Kg		90	70 - 130	2	35	
o-Xylene	0.100	0.09195		mg/Kg		92	70 - 130	2	35	

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	111	70 _ 130
1.4-Difluorobenzene (Surr)	107	70 - 130

Lab Sample ID: 880-5041-A-1-E MS

**Matrix: Solid** 

**Analysis Batch: 6599** 

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 6476

7 manyone Buttonn ecot										op Bato.	•
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00200	U *- *1	0.101	0.08062		mg/Kg		80	70 - 130		

Client: WSP USA Inc. Job ID: 890-1108-1 Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-5041-A-1-E MS

Lab Sample ID: 880-5041-A-1-F MSD

**Matrix: Solid** 

**Matrix: Solid** 

**Analysis Batch: 6599** 

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 6476

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Toluene	<0.00200	U	0.101	0.07730		mg/Kg		77	70 - 130	
Ethylbenzene	<0.00200	U	0.101	0.07614		mg/Kg		75	70 - 130	
m-Xylene & p-Xylene	<0.00399	U	0.202	0.1550		mg/Kg		77	70 - 130	
o-Xylene	<0.00200	U	0.101	0.07815		mg/Kg		77	70 - 130	

MS MS

Surrogate	%Recovery Qualific	er Limits
4-Bromofluorobenzene (Surr)	112	70 - 130
1,4-Difluorobenzene (Surr)	106	70 - 130

Client Sample ID: Matrix Spike Duplicate

70 - 130

Prep Type: Total/NA

Prep Batch: 6476

**Analysis Batch: 6599** MSD MSD %Rec. RPD Sample Sample Spike Limit Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Benzene <0.00200 U \*- \*1 0.0996 0.07899 79 2 35 mg/Kg 70 - 130 Toluene <0.00200 U 0.0996 0.07743 78 70 - 130 35 mg/Kg 0 Ethylbenzene <0.00200 U 0.0996 0.07670 70 - 130 mg/Kg 77 35 m-Xylene & p-Xylene <0.00399 U 0.199 0.1583 79 70 - 130 2 35 mg/Kg

0.08007

mg/Kg

0.0996

MSD MSD

<0.00200 U

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	117	70 - 130
1,4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: MB 880-6596/5-A

**Matrix: Solid** 

o-Xylene

**Analysis Batch: 6599** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6596

IVID	IVID

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/16/21 09:50	08/16/21 13:22	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/16/21 09:50	08/16/21 13:22	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/16/21 09:50	08/16/21 13:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/16/21 09:50	08/16/21 13:22	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/16/21 09:50	08/16/21 13:22	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/16/21 09:50	08/16/21 13:22	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		08/16/21 09:50	08/16/21 13:22	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	08/16/21 09:50	08/16/21 13:22	1
1,4-Difluorobenzene (Surr)	96		70 - 130	08/16/21 09:50	08/16/21 13:22	1

Client: WSP USA Inc. Job ID: 890-1108-1 Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-6609/1-A

**Matrix: Solid** 

Analysis Batch: 6610

Prep Type: Total/NA

Prep Batch: 6609

		MB	MB						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics	<50.0	U	50.0	mg/Kg		08/16/21 12:02	08/16/21 14:21	1
	(GRO)-C6-C10								
	Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		08/16/21 12:02	08/16/21 14:21	1
	C10-C28)								
	Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/16/21 12:02	08/16/21 14:21	1
	Total TPH	<50.0	U	50.0	mg/Kg		08/16/21 12:02	08/16/21 14:21	1
ı									

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	08/16/21 12:02	08/16/21 14:21	1
o-Terphenyl	112		70 - 130	08/16/21 12:02	08/16/21 14:21	1

Lab Sample ID: LCS 880-6609/2-A Client Sample ID: Lab Control Sample Prep Type: Total/NA

**Matrix: Solid** 

Matrix: Cond								ypo. Iotaiiit
Analysis Batch: 6610							Pre	Batch: 6609
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	959.3		mg/Kg		96	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1029		mg/Kg		103	70 - 130	

C10-C28)

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	100		70 - 130

Lab Sample ID: LCSD 880-6609/3-A Client Sample ID: Lab Control Sample Dup

1000

**Matrix: Solid** 

Ana

Analysis Batch: 6610							Pre	p Batch	: 6609
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	839.5		mg/Kg		84	70 - 130	13	20
(GRO)-C6-C10									

987.4

mg/Kg

Diesel Range Organics (Over C10-C28)

LCSD LCSD Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 88 70 - 130 o-Terphenyl 95

Lab Sample ID: 880-5111-A-1-E MS

**Matrix: Solid** 

**Analysis Batch: 6610** 

Client Sample ID:	Matrix Spike
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70 - 130

Prep Batch: 6609

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	995	676.7	F1	mg/Kg		68	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	995	793.1		mg/Kg		80	70 - 130	

Eurofins Xenco, Carlsbad

Prep Type: Total/NA

Prep Type: Total/NA

Job ID: 890-1108-1

Client: WSP USA Inc. Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

# Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-5111-A-1-E MS Client Sample ID: Matrix Spike

**Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 6610** Prep Batch: 6609

	MS MS	
Surrogate	%Recovery Qualifie	er Limits
1-Chlorooctane	74	70 - 130
o-Terphenyl	74	70 - 130

Lab Sample ID: 880-5111-A-1-F MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 6610** Prep Batch: 6609

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	998	733.7		mg/Kg		74	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	792.2		mg/Kg		79	70 - 130	0	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	74		70 - 130
o-Terphenyl	74		70 - 130

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-6602/1-A Client Sample ID: Method Blank **Matrix: Solid** 

**Prep Type: Soluble Analysis Batch: 6718** 

мв мв

Analyte Result Qualifier RL Unit D Dil Fac Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 08/18/21 10:30

Lab Sample ID: LCS 880-6602/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 6718** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit %Rec Limits Chloride 250 254.3 mg/Kg 102 90 - 110

Lab Sample ID: LCSD 880-6602/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** 

**Analysis Batch: 6718** 

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Spike LCSD LCSD %Rec. RPD Result Qualifier Added Analyte Unit D %Rec Limits RPD Limit Chloride 250 254.6 mg/Kg 102 90 - 110 20

Lab Sample ID: 890-1098-A-1-F MS Client Sample ID: Matrix Spike

**Matrix: Solid Prep Type: Soluble Analysis Batch: 6718** 

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 250 308.9 64.5 mg/Kg 90 - 110

Eurofins Xenco, Carlsbad

**Prep Type: Soluble** 

Client: WSP USA Inc. Job ID: 890-1108-1 Project/Site: PLU Big Sinks 25 Federal Battery

SDG: 31403236.020.0129

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-1098-A-1-H MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 6718** 

Sample Sample Spike MSD MSD %Rec. RPD Result Qualifier Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 64.5 250 309.4 mg/Kg 98 90 - 110 20

Lab Sample ID: MB 880-6603/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 6755** 

мв мв

Result Qualifier Unit Dil Fac Analyte RL D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 08/18/21 19:01

Lab Sample ID: LCS 880-6603/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 6755** 

LCS LCS %Rec. Spike Analyte Added Result Qualifier Unit %Rec Limits Chloride 250 252.5 mg/Kg 101 90 - 110

Lab Sample ID: LCSD 880-6603/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 6755** 

Spike LCSD LCSD RPD %Rec. Analyte Added Result Qualifier Unit %Rec RPD Limit D Limits Chloride 250 255.7 102 90 - 110 20 mg/Kg

Lab Sample ID: 890-1108-2 MS Client Sample ID: SS02 **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 6755** 

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 250 24.0 268.5 mg/Kg 98 90 - 110

Lab Sample ID: 890-1108-2 MSD

**Matrix: Solid** 

**Analysis Batch: 6755** 

Sample Sample Spike MSD MSD %Rec. **RPD** Added Result Qualifier RPD Limit Analyte Result Qualifier Unit D %Rec Limits Chloride 24.0 250 268.7 mg/Kg 98 90 - 110 20

Eurofins Xenco, Carlsbad

**Client Sample ID: SS02** 

**Prep Type: Soluble** 

# **QC Association Summary**

Client: WSP USA Inc. Job ID: 890-1108-1 Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

#### **GC VOA**

# Prep Batch: 6476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1108-1	SS01	Total/NA	Solid	5035	
890-1108-2	SS02	Total/NA	Solid	5035	
890-1108-3	SS03	Total/NA	Solid	5035	
890-1108-4	SS04	Total/NA	Solid	5035	
MB 880-6476/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-6476/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-6476/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5041-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-5041-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Prep Batch: 6596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-6596/5-A	Method Blank	Total/NA	Solid	5035	

#### **Analysis Batch: 6599**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1108-1	SS01	Total/NA	Solid	8021B	6476
890-1108-2	SS02	Total/NA	Solid	8021B	6476
890-1108-3	SS03	Total/NA	Solid	8021B	6476
890-1108-4	SS04	Total/NA	Solid	8021B	6476
MB 880-6476/5-A	Method Blank	Total/NA	Solid	8021B	6476
MB 880-6596/5-A	Method Blank	Total/NA	Solid	8021B	6596
LCS 880-6476/1-A	Lab Control Sample	Total/NA	Solid	8021B	6476
LCSD 880-6476/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	6476
880-5041-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	6476
880-5041-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	6476

#### **GC Semi VOA**

#### Prep Batch: 6609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1108-1	SS01	Total/NA	Solid	8015NM Prep	
890-1108-2	SS02	Total/NA	Solid	8015NM Prep	
890-1108-3	SS03	Total/NA	Solid	8015NM Prep	
890-1108-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-6609/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-6609/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-6609/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-5111-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-5111-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### **Analysis Batch: 6610**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1108-1	SS01	Total/NA	Solid	8015B NM	6609
890-1108-2	SS02	Total/NA	Solid	8015B NM	6609
890-1108-3	SS03	Total/NA	Solid	8015B NM	6609
890-1108-4	SS04	Total/NA	Solid	8015B NM	6609
MB 880-6609/1-A	Method Blank	Total/NA	Solid	8015B NM	6609
LCS 880-6609/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	6609
LCSD 880-6609/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	6609
880-5111-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	6609

Eurofins Xenco, Carlsbad

8/19/2021

# **QC Association Summary**

Client: WSP USA Inc. Job ID: 890-1108-1 Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

#### GC Semi VOA (Continued)

#### **Analysis Batch: 6610 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5111-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	6609

#### HPLC/IC

#### Leach Batch: 6602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1108-1	SS01	Soluble	Solid	DI Leach	
MB 880-6602/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-6602/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-6602/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1098-A-1-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-1098-A-1-H MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### Leach Batch: 6603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1108-2	SS02	Soluble	Solid	DI Leach	
890-1108-3	SS03	Soluble	Solid	DI Leach	
890-1108-4	SS04	Soluble	Solid	DI Leach	
MB 880-6603/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-6603/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-6603/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1108-2 MS	SS02	Soluble	Solid	DI Leach	
890-1108-2 MSD	SS02	Soluble	Solid	DI Leach	

#### **Analysis Batch: 6718**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1108-1	SS01	Soluble	Solid	300.0	6602
MB 880-6602/1-A	Method Blank	Soluble	Solid	300.0	6602
LCS 880-6602/2-A	Lab Control Sample	Soluble	Solid	300.0	6602
LCSD 880-6602/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	6602
890-1098-A-1-F MS	Matrix Spike	Soluble	Solid	300.0	6602
890-1098-A-1-H MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	6602

#### **Analysis Batch: 6755**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1108-2	SS02	Soluble	Solid	300.0	6603
890-1108-3	SS03	Soluble	Solid	300.0	6603
890-1108-4	SS04	Soluble	Solid	300.0	6603
MB 880-6603/1-A	Method Blank	Soluble	Solid	300.0	6603
LCS 880-6603/2-A	Lab Control Sample	Soluble	Solid	300.0	6603
LCSD 880-6603/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	6603
890-1108-2 MS	SS02	Soluble	Solid	300.0	6603
890-1108-2 MSD	SS02	Soluble	Solid	300.0	6603

Client: WSP USA Inc. Job ID: 890-1108-1 Project/Site: PLU Big Sinks 25 Federal Battery SDG: 31403236.020.0129

**Client Sample ID: SS01** Lab Sample ID: 890-1108-1

Date Collected: 08/12/21 11:38 Matrix: Solid Date Received: 08/13/21 09:30

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6476	08/16/21 16:39	KL	XEN MID
Total/NA	Analysis	8021B		1	6599	08/17/21 05:01	KL	XEN MID
Total/NA	Prep	8015NM Prep			6609	08/16/21 12:02	DM	XEN MID
Total/NA	Analysis	8015B NM		1	6610	08/16/21 21:10	AJ	XEN MID
Soluble	Leach	DI Leach			6602	08/16/21 11:10	CH	XEN MID
Soluble	Analysis	300.0		1	6718	08/18/21 12:50	CH	XEN MID

**Client Sample ID: SS02** Lab Sample ID: 890-1108-2 Matrix: Solid

Date Collected: 08/12/21 11:40 Date Received: 08/13/21 09:30

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6476	08/16/21 16:39	KL	XEN MID
Total/NA	Analysis	8021B		1	6599	08/17/21 05:21	KL	XEN MID
Total/NA	Prep	8015NM Prep			6609	08/16/21 12:02	DM	XEN MID
Total/NA	Analysis	8015B NM		1	6610	08/16/21 21:32	AJ	XEN MID
Soluble	Leach	DI Leach			6603	08/16/21 11:12	СН	XEN MID
Soluble	Analysis	300.0		1	6755	08/18/21 19:18	CH	XEN MID

**Client Sample ID: SS03** Lab Sample ID: 890-1108-3

Date Collected: 08/12/21 11:49 Date Received: 08/13/21 09:30

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6476	08/16/21 16:39	KL	XEN MID
Total/NA	Analysis	8021B		1	6599	08/17/21 05:41	KL	XEN MID
Total/NA	Prep	8015NM Prep			6609	08/16/21 12:02	DM	XEN MID
Total/NA	Analysis	8015B NM		1	6610	08/16/21 21:54	AJ	XEN MID
Soluble	Leach	DI Leach			6603	08/16/21 11:12	СН	XEN MID
Soluble	Analysis	300.0		1	6755	08/18/21 19:35	CH	XEN MID

**Client Sample ID: SS04** Lab Sample ID: 890-1108-4 Date Collected: 08/12/21 11:53 Matrix: Solid

Date Received: 08/13/21 09:30

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6476	08/16/21 16:39	KL	XEN MID
Total/NA	Analysis	8021B		1	6599	08/17/21 06:02	KL	XEN MID
Total/NA	Prep	8015NM Prep			6609	08/16/21 12:02	DM	XEN MID
Total/NA	Analysis	8015B NM		1	6610	08/16/21 22:15	AJ	XEN MID
Soluble	Leach	DI Leach			6603	08/16/21 11:12	СН	XEN MID
Soluble	Analysis	300.0		1	6755	08/18/21 19:41	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Xenco, Carlsbad

**Matrix: Solid** 

# **Accreditation/Certification Summary**

Client: WSP USA Inc.

Job ID: 890-1108-1

Project/Site: PLU Big Sinks 25 Federal Battery

SDG: 31403236.020.0129

#### **Laboratory: Eurofins Xenco, Midland**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	P	rogram	Identification Number	<b>Expiration Date</b>
Texas	N	ELAP	T104704400-20-21	06-30-22
The following analytes	are included in this report by	ut the laboratory is not certifi	ed by the governing authority. This list ma	y include analytes for y
the agency does not of	• •	at the laboratory to not out in	od by the governing addressity. This list the	ly include unalytes for t
,	• •	Matrix	Analyte	y molude analytes for v
the agency does not of	fer certification.	•	, , ,	y moduce unarytes for t

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# **Method Summary**

Client: WSP USA Inc.

Project/Site: PLU Big Sinks 25 Federal Battery

Job ID: 890-1108-1

SDG: 31403236.020.0129

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

# **Sample Summary**

Client: WSP USA Inc.

Project/Site: PLU Big Sinks 25 Federal Battery

Job ID: 890-1108-1

SDG: 31403236.020.0129

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1108-1	SS01	Solid	08/12/21 11:38	08/13/21 09:30	- 0.5
890-1108-2	SS02	Solid	08/12/21 11:40	08/13/21 09:30	- 0.5
890-1108-3	SS03	Solid	08/12/21 11:49	08/13/21 09:30	- 0.5
890-1108-4	SS04	Solid	08/12/21 11:53	08/13/21 09:30	- 0.5

# Chain of Custody

Revised Date 051418 Rev 2018 1										5
		4				-				3
			F-13-21 299302	1		6	18 (11		1	· hollele
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	D	re)	Received by: (Signature)	Received	)	y: (Signature)	Relinquished by: (Signature)
	nously negonated.	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 amorced unless previously negoniated.	Xenco, but not analy	bmitted to	or each sample su	a charge of \$5 t	each project and	ill be applied to	harge of \$75.00 w	of Xenco. A minimum c
	It assigns standard terms and conditions  re due to circumstances beyond the control	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 condutions 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	expenses incurred by	lient comp	chase order from c ponsibility for any I	utes a valid pur	samples constit	e cost of sample	s document and re e liable only for th	Notice: Signature of this of service. Xenco will b
			73 73 74 75	5	יייייייייייייייייייייייייייייייייייייי	- C	lalyzeu	al(s) to be at	Circle Method(s) and Metal(s) to be analyzed	Circle Metho
1631 / 245.1 / 7470 / 7471 : Hg	- K Se Ag SIOZ	Sh As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo N	As Ba Be B		PM Texas 11	BRCRA 13PPM		200.8 / 6020:	6010 200.	Total 200.7 / 6010
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			×	_	0.5	1149	8/12/2021	S	03	SS03
			×	_	0.5	1140	8/12/2021	S	02	SS02
			×		0.5	1138	8/12/2021	S	01	SS01
Sample Comments			BTEX (	Numb	Depth	Time Sampled	Date Sampled	Matrix	ntification	Sample Identification
lab, if received by 4:30pm			EPA			Total Containers:	Tota	N/A		Sample Custody Seals:
TAT starts the day recevied by the			0=8			Correction Factor:	Corre	No N/A	als: Yes	Cooler Custody Seals
			021)		202	J-WM	1	No SP	γ	Received Intact:
	Sustady	890-1108 Chain of Custody	)	ners	ō	hermometer	7	12:0	2,2	Temperature (°C):
2RP-5551				3	Ke No	Wet Ice:	Ye No	Temp Blank:	EIPT	SAMPLE RECEIPT
Incident #: NAB1921742793					Date:	Due Date:			Luis Del Val	Sampler's Name:
API: 30-015-39018						Rush:	39491001	Cost Center: 1139491001	Cost	P.O. Number:
AFE: EW.2019.03171.EXP.01	A					Routine	0.0129	31403236.020.0129	G	Project Number:
Work Order Notes		ANALYSIS REQUEST			Turn Around		PLU Big Sinks 25 Federal Battery	g Sinks 25 F	PLU Bi	Project Name:
Otner:	Deliverables: EDD		luis.delval@wsp.com; tacoma.morrissey@wsp.com	/sp.com	luis.delval@w	Email:		49	432.236.3849	Phone:
	evel		Carlsbad, NM 88220		City, State ZIP:			( 79705	Midland, TX 79705	City, State ZIP:
<u> </u>			3104 E Green Street	31	Address:			A Street	3300 North A Street	Address:
ts _RC _uperfund	Program: UST/PST ☐PRP ☐Brownfields	Prog	XTO Energy		Company Name:			Inc.	WSP USA Inc.	Company Name:
ments	Work Order Comments		Kyle Littrell	Ş	Bill to: (if different)			orrissey	Tacoma Morrissey	Project Manager:
Page of	www.xenco.com	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	5-0900) Atlanta,GA	Z (480-35	7550) Phoenix,A	,NM (575-392-	Hobbs			•
1		Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-5334 Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296	TX (214) 902-0300 ISO,TX (915)585-344	0 Dallas, 0) EL Pa	TX (281) 240-420 ,TX (432-704-544	Houston, Midland		m M	BCRATORIES	
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	Work Order No:	<b>の+つユ</b> く	Thain of Clistody	ر ا						

# **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-1108-1 SDG Number: 31403236.020.0129

List Ossumer Franchisco Venera Osalahad

List Source: Eurofins Xenco, Carlsbad
List Number: 1

Creator: Olivas, Nathaniel

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.	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	N/A	

Eurofins Xenco, Carlsbad

Released to Imaging: 5/13/2025 9:12:25 AM

<6mm (1/4").

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# **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-1108-1

SDG Number: 31403236.020.0129

List Source: Eurofins Xenco, Midland

List Creation: 08/16/21 10:34 AM

Login Number: 1108 List Number: 2

Creator: Copeland, Tatiana

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	Comment
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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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").	True	

Eurofins Xenco, Carlsbad

Released to Imaging: 5/13/2025 9:12:25 AM

Matrix: Solid

Lab Sample ID: 890-2683-1

# **Client Sample Results**

Client: Ensolum Job ID: 890-2683-1 Project/Site: PLU Big Sinks 25 SDG: Eddy County

**Client Sample ID: SS01** 

Date Collected: 07/28/22 09:00 Date Received: 07/28/22 13:50

Sample Depth: 0.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/02/22 14:31	08/05/22 19:14	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/02/22 14:31	08/05/22 19:14	1
Ethylbenzene	<0.00201	U *1	0.00201	mg/Kg		08/02/22 14:31	08/05/22 19:14	1
m-Xylene & p-Xylene	<0.00402	U *1	0.00402	mg/Kg		08/02/22 14:31	08/05/22 19:14	1
o-Xylene	<0.00201	U *1	0.00201	mg/Kg		08/02/22 14:31	08/05/22 19:14	1
Xylenes, Total	<0.00402	U *1	0.00402	mg/Kg		08/02/22 14:31	08/05/22 19:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130			08/02/22 14:31	08/05/22 19:14	1
1,4-Difluorobenzene (Surr)	91		70 - 130			08/02/22 14:31	08/05/22 19:14	1
- Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/08/22 14:27	-
Method: 8015 NM - Diesel Range Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/03/22 11:13	
							00/03/22 11.13	•
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)					00/03/22 11.13	1
	• •	RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Gasoline Range Organics	• •	Qualifier	RL 50.0	Unit mg/Kg	<u>D</u>	Prepared 08/02/22 08:40		Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U			<u>D</u>		Analyzed	Dil Fac
Analyte Gasoline Range Organics	Result < 50.0	Qualifier U	50.0	mg/Kg	<u>D</u>	08/02/22 08:40	<b>Analyzed</b> 08/02/22 14:51	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0 <50.0	Qualifier U U U	50.0	mg/Kg	<u>D</u>	08/02/22 08:40 08/02/22 08:40	Analyzed 08/02/22 14:51 08/02/22 14:51	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result <50.0 <50.0 <50.0	Qualifier U U U Qualifier	50.0 50.0 50.0	mg/Kg	<u>D</u>	08/02/22 08:40 08/02/22 08:40 08/02/22 08:40	Analyzed 08/02/22 14:51 08/02/22 14:51 08/02/22 14:51	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result	Qualifier U U U Qualifier	50.0 50.0 50.0 <i>Limits</i>	mg/Kg	<u>D</u>	08/02/22 08:40 08/02/22 08:40 08/02/22 08:40 <b>Prepared</b>	Analyzed  08/02/22 14:51  08/02/22 14:51  08/02/22 14:51  Analyzed	Dil Fac
C10-C28)	Result	Qualifier  U  U  Qualifier  S1-	50.0 50.0 50.0 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	08/02/22 08:40 08/02/22 08:40 08/02/22 08:40  Prepared 08/02/22 08:40	Analyzed 08/02/22 14:51 08/02/22 14:51 08/02/22 14:51  Analyzed 08/02/22 14:51	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier  U  U  Qualifier  S1-	50.0 50.0 50.0 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	08/02/22 08:40 08/02/22 08:40 08/02/22 08:40  Prepared 08/02/22 08:40	Analyzed 08/02/22 14:51 08/02/22 14:51 08/02/22 14:51  Analyzed 08/02/22 14:51	Dil Fac

# **Surrogate Summary**

Client: Ensolum Job ID: 890-2683-1
Project/Site: PLU Big Sinks 25 SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2645-A-1-G MS	Matrix Spike	107	99	
890-2645-A-1-H MSD	Matrix Spike Duplicate	102	86	
890-2683-1	SS01	117	91	
890-2689-A-2-G MS	Matrix Spike	124	98	
890-2689-A-2-H MSD	Matrix Spike Duplicate	112	93	
_CS 880-31335/1-A	Lab Control Sample	116	100	
LCS 880-31573/1-A	Lab Control Sample	106	90	
CSD 880-31335/2-A	Lab Control Sample Dup	106	98	
_CSD 880-31573/2-A	Lab Control Sample Dup	112	94	
MB 880-31335/5-A	Method Blank	99	89	
MB 880-31573/5-A	Method Blank	101	91	
Surrogate Legend				

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2683-1	SS01	68 S1-	74	
890-2686-A-1-C MS	Matrix Spike	97	97	
890-2686-A-1-D MSD	Matrix Spike Duplicate	84	82	
LCS 880-31286/2-A	Lab Control Sample	104	102	
LCSD 880-31286/3-A	Lab Control Sample Dup	104	108	
MB 880-31286/1-A	Method Blank	90	103	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Project/Site: PLU Big Sinks 25

Job ID: 890-2683-1

SDG: Eddy County

# Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31335/5-A

Lab Sample ID: LCS 880-31335/1-A

Matrix: Solid

Analysis Batch: 31540

**Matrix: Solid** 

Analysis Batch: 31540

Client	Sample	ID:	Method	Blank

Prep Type: Total/NA

Prep Batch: 31335

		MB	MB						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
	Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
	Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
	m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
	o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
	Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
ı									

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	 08/02/22 14:31	08/05/22 11:25	1
1,4-Difluorobenzene (Surr)	89		70 - 130	08/02/22 14:31	08/05/22 11:25	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31335

Prep Type: Total/NA

Prep Batch: 31335

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1114		mg/Kg		111	70 - 130	
Toluene	0.100	0.1046		mg/Kg		105	70 - 130	
Ethylbenzene	0.100	0.1239		mg/Kg		124	70 - 130	
m-Xylene & p-Xylene	0.200	0.2398		mg/Kg		120	70 - 130	
o-Xylene	0.100	0.1296		mg/Kg		130	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	116	70 - 130
1,4-Difluorobenzene (Surr)	100	70 - 130

**Client Sample ID: Lab Control Sample Dup** 

**Matrix: Solid** 

Lab Sample ID: LCSD 880-31335/2-A

Analysis Batch: 31540

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08982		mg/Kg		90	70 - 130	21	35
Toluene	0.100	0.08489		mg/Kg		85	70 - 130	21	35
Ethylbenzene	0.100	0.08074	*1	mg/Kg		81	70 - 130	42	35
m-Xylene & p-Xylene	0.200	0.1641	*1	mg/Kg		82	70 - 130	38	35
o-Xylene	0.100	0.09044	*1	mg/Kg		90	70 - 130	36	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1.4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 890-2645-A-1-G MS

**Matrix: Solid** 

Analysis Batch: 31540

Client Sample ID: Matrix Spike Prep Type: Total/NA

Prep Batch: 31335

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00202	U F1	0.101	0.1014		mg/Kg		101	70 - 130	
Toluene	<0.00202	U F1	0.101	0.09230		mg/Kg		91	70 - 130	

Client: Ensolum Job ID: 890-2683-1 Project/Site: PLU Big Sinks 25 SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-2645-A-1-G MS

Lab Sample ID: 890-2645-A-1-H MSD

**Matrix: Solid** 

Analysis Batch: 31540

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31335

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Ethylbenzene <0.00202 U \*1 F1 0.101 0.08894 88 70 - 130 mg/Kg m-Xylene & p-Xylene <0.00403 U \*1 F1 0.201 0.1784 mg/Kg 87 70 - 130 0.101 o-Xylene 0.00264 \*1 F1 0.09574 mg/Kg 93 70 - 130

MS MS

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31335

**Matrix: Solid** Analysis Batch: 31540

Sample Sample Spike MSD MSD RPD Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit %Rec 0.0998 Benzene <0.00202 UF1 <0.00200 UF1 mg/Kg 0 70 - 130 NC 35 Toluene 0.0998 70 - 130 <0.00202 UF1 <0.00200 UF1 mg/Kg 0 NC 35 NC Ethylbenzene <0.00202 U \*1 F1 0.0998 <0.00200 UF1 mg/Kg 0 70 - 130 35 <0.00403 U \*1 F1 0.200 <0.00399 UF1 0 70 - 130 NC 35 m-Xylene & p-Xylene mg/Kg 0.0998 NC 0.00264 \*1 F1 <0.00200 U F1 0 70 - 130 o-Xylene mg/Kg

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

Lab Sample ID: MB 880-31573/5-A

**Matrix: Solid** 

Analysis Batch: 31540

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31573

MD MD

ı		IVID	IVID						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Benzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:19	08/06/22 00:00	1
	Toluene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:19	08/06/22 00:00	1
	Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:19	08/06/22 00:00	1
İ	m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/05/22 11:19	08/06/22 00:00	1
	o-Xylene	<0.00200	U	0.00200	mg/Kg		08/05/22 11:19	08/06/22 00:00	1
	Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/05/22 11:19	08/06/22 00:00	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	08/05/22 11:19	08/06/22 00:00	1
1,4-Difluorobenzene (Surr)	91		70 - 130	08/05/22 11:19	08/06/22 00:00	1

Lab Sample ID: LCS 880-31573/1-A

**Matrix: Solid** 

Analysis Batch: 31540

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31573

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09897		mg/Kg		99	70 - 130	
Toluene	0.100	0.1022		mg/Kg		102	70 - 130	
Ethylbenzene	0.100	0.1050		mg/Kg		105	70 - 130	
m-Xylene & p-Xylene	0.200	0.2137		mg/Kg		107	70 - 130	

Client: Ensolum

Project/Site: PLU Big Sinks 25

Analysis Batch: 31540

Job ID: 890-2683-1

SDG: Eddy County

# Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-31573/1-A **Client Sample ID: Lab Control Sample Matrix: Solid** 

Prep Type: Total/NA Prep Batch: 31573

Spike LCS LCS Analyte Added Result Qualifier Unit %Rec Limits o-Xylene 0.100 0.1208 121 70 - 130 mg/Kg

LCS LCS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 106 70 - 130 70 - 130

90

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 880-31573/2-A **Matrix: Solid** 

Prep Type: Total/NA

**Analysis Batch: 31540** 

1,4-Difluorobenzene (Surr)

Prep Batch: 31573

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09262		mg/Kg		93	70 - 130	7	35
Toluene	0.100	0.09534		mg/Kg		95	70 - 130	7	35
Ethylbenzene	0.100	0.1047		mg/Kg		105	70 - 130	0	35
m-Xylene & p-Xylene	0.200	0.2146		mg/Kg		107	70 - 130	0	35
o-Xylene	0.100	0.1189		mg/Kg		119	70 - 130	2	35

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LCSD LCSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 112 70 - 130 1,4-Difluorobenzene (Surr) 94 70 - 130

Lab Sample ID: 890-2689-A-2-G MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 31540

Prep Type: Total/NA Prep Batch: 31573

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.101	0.09178		mg/Kg		91	70 - 130	
Toluene	<0.00200	U	0.101	0.1004		mg/Kg		100	70 - 130	
Ethylbenzene	<0.00200	U	0.101	0.1071		mg/Kg		107	70 - 130	
m-Xylene & p-Xylene	<0.00399	U	0.201	0.2218		mg/Kg		110	70 - 130	
o-Xylene	<0.00200	U	0.101	0.1258		mg/Kg		125	70 - 130	
	MC	MS								
	MS	IVIS								

Surrogate %Recovery Qualifier Limits 70 - 130 4-Bromofluorobenzene (Surr) 124 70 - 130 1,4-Difluorobenzene (Surr) 98

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analysis Batch: 31540									Prep	Batch:	31573
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0998	0.08524		mg/Kg		85	70 - 130	7	35
Toluene	<0.00200	U	0.0998	0.08780		mg/Kg		88	70 - 130	13	35
Ethylbenzene	<0.00200	U	0.0998	0.08996		mg/Kg		90	70 - 130	17	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1787		mg/Kg		90	70 - 130	22	35
o-Xylene	<0.00200	U	0.0998	0.1036		mg/Kg		104	70 - 130	19	35

**Eurofins Carlsbad** 

Lab Sample ID: 890-2689-A-2-H MSD

Client: Ensolum Project/Site: PLU Big Sinks 25

Job ID: 890-2683-1

SDG: Eddy County

#### Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-2689-A-2-H MSD

**Matrix: Solid** 

Analysis Batch: 31540

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

Prep Batch: 31573

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	112	70 - 130
1,4-Difluorobenzene (Surr)	93	70 - 130

# Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-31286/1-A

**Matrix: Solid** 

**Analysis Batch: 31239** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 31286

мв мв

	IND	1110						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 10:16	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 10:16	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 10:16	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	08/02/22 08:40	08/02/22 10:16	1
o-Terphenyl	103		70 - 130	08/02/22 08:40	08/02/22 10:16	1

Lab Sample ID: LCS 880-31286/2-A

**Matrix: Solid** 

**Analysis Batch: 31239** 

Client Sample ID: I	Lab Control Sample
	Prep Type: Total/NA

Prep Batch: 31286

-	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1060		mg/Kg		106	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1036		mg/Kg		104	70 - 130	
C10-C28)								

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	104	70 - 130
o-Terphenyl	102	70 - 130

Lab Sample ID: LCSD 880-31286/3-A

**Matrix: Solid** 

Analysis Batch: 31239

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Prep Batch: 31286

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1063		mg/Kg		106	70 - 130	0	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1092		mg/Kg		109	70 - 130	5	20
C10 C28)									

LCSD LCSD

Surrogate	%Recovery Qua	lifier Limits
1-Chlorooctane	104	70 - 130
o-Terphenyl	108	70 - 130

Job ID: 890-2683-1 Client: Ensolum Project/Site: PLU Big Sinks 25 SDG: Eddy County

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-2686-A-1-C MS

**Matrix: Solid** 

**Analysis Batch: 31239** 

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 31286

Sample Sample Spike MS MS Result Qualifier Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <49.9 U 999 941.9 mg/Kg 94 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 999 802.5 മറ 70 - 130<49.9 U mg/Kg

C10-C28)

MS MS

%Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 97 o-Terphenyl 97 70 - 130

Lab Sample ID: 890-2686-A-1-D MSD

**Matrix: Solid** 

**Analysis Batch: 31239** 

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 31286

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Spike MSD MSD %Rec RPD Sample Sample Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits **RPD** Limit 999 Gasoline Range Organics <49.9 829.1 mg/Kg 83 70 - 130 13 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 700.8 mg/Kg 70 70 - 130 14 20 C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 84 70 - 130 82 70 - 130 o-Terphenyl

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31219/1-A Client Sample ID: Method Blank

**Matrix: Solid** 

**Analysis Batch: 31436** 

MB MB

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 08/04/22 08:50

mg/Kg

Lab Sample ID: LCS 880-31219/2-A

**Matrix: Solid** 

Analysis Batch: 31436

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 266.3 107 90 - 110 mg/Kg

Lab Sample ID: LCSD 880-31219/3-A

Matrix: Solid

Analysis Batch: 31436

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	236.4		mg/Kg		95	90 - 110	12	20

Client: Ensolum Job ID: 890-2683-1 Project/Site: PLU Big Sinks 25 SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2682-A-6-E MS Client Sample ID: Matrix Spike

**Matrix: Solid Prep Type: Soluble** Analysis Batch: 31436

Sample Sample Spike MS MS %Rec Result Qualifier Result Qualifier Added Analyte Unit %Rec Limits

Chloride 765 F1 252 1167 F1 mg/Kg 160 90 - 110

Lab Sample ID: 890-2682-A-6-F MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 31436

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier RPD Added Result Qualifier Limits Limit Analyte Unit D %Rec Chloride 765 F1 252 980.9 F1 mg/Kg 86 90 - 110 17 20

# **QC Association Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25

Job ID: 890-2683-1 SDG: Eddy County

#### **GC VOA**

#### Prep Batch: 31335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2683-1	SS01	Total/NA	Solid	5035	
MB 880-31335/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31335/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31335/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2645-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2645-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Analysis Batch: 31540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2683-1	SS01	Total/NA	Solid	8021B	31335
MB 880-31335/5-A	Method Blank	Total/NA	Solid	8021B	31335
MB 880-31573/5-A	Method Blank	Total/NA	Solid	8021B	31573
LCS 880-31335/1-A	Lab Control Sample	Total/NA	Solid	8021B	31335
LCS 880-31573/1-A	Lab Control Sample	Total/NA	Solid	8021B	31573
LCSD 880-31335/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31335
LCSD 880-31573/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31573
890-2645-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	31335
890-2645-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31335
890-2689-A-2-G MS	Matrix Spike	Total/NA	Solid	8021B	31573
890-2689-A-2-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31573

#### Prep Batch: 31573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31573/5-A	Method Blank	Total/NA	Solid	5035	<u> </u>
LCS 880-31573/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31573/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2689-A-2-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2689-A-2-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

# Analysis Batch: 31775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2683-1	SS01	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

#### **Analysis Batch: 31239**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2683-1	SS01	Total/NA	Solid	8015B NM	31286
MB 880-31286/1-A	Method Blank	Total/NA	Solid	8015B NM	31286
LCS 880-31286/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31286
LCSD 880-31286/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31286
890-2686-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	31286
890-2686-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31286

#### Prep Batch: 31286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2683-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-31286/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31286/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31286/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2686-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

**Eurofins Carlsbad** 

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# **QC Association Summary**

Client: Ensolum Job ID: 890-2683-1 Project/Site: PLU Big Sinks 25 SDG: Eddy County

# GC Semi VOA (Continued)

# Prep Batch: 31286 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2686-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 31401

Lab S	ample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2	683-1	SS01	Total/NA	Solid	8015 NM	

# HPLC/IC

#### Leach Batch: 31219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2683-1	SS01	Soluble	Solid	DI Leach	
MB 880-31219/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31219/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31219/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2682-A-6-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2682-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### **Analysis Batch: 31436**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2683-1	SS01	Soluble	Solid	300.0	31219
MB 880-31219/1-A	Method Blank	Soluble	Solid	300.0	31219
LCS 880-31219/2-A	Lab Control Sample	Soluble	Solid	300.0	31219
LCSD 880-31219/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31219
890-2682-A-6-E MS	Matrix Spike	Soluble	Solid	300.0	31219
890-2682-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31219

#### **Lab Chronicle**

Client: Ensolum

Project/Site: PLU Big Sinks 25

SDG: Eddy County

**Client Sample ID: SS01** 

Lab Sample ID: 890-2683-1

Matrix: Solid

Date Collected: 07/28/22 09:00 Date Received: 07/28/22 13:50

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	31335	08/02/22 14:31	MR	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31540	08/05/22 19:14	MR	EETSC MIC
Total/NA	Analysis	Total BTEX		1			31775	08/08/22 14:27	SM	EETSC MIE
Total/NA	Analysis	8015 NM		1			31401	08/03/22 11:13	SM	EETSC MIE
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	31286	08/02/22 08:40	DM	EETSC MIE
Total/NA	Analysis	8015B NM		1			31239	08/02/22 14:51	SM	EETSC MIC
Soluble	Leach	DI Leach			5.01 g	50 mL	31219	08/01/22 16:08	SMC	EETSC MIE
Soluble	Analysis	300.0		1			31436	08/04/22 14:32	CH	EETSC MIC

#### Laboratory References:

EETSC MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

**Eurofins Carlsbad** 

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# **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-2683-1 Project/Site: PLU Big Sinks 25

SDG: Eddy County

#### **Laboratory: Eurofins Midland**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Pr	ogram	Identification Number	Expiration Date	
Texas		ELAP	T104704400-22-24	06-30-23	
The following analytes the agency does not of	•	ut the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo	
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		

# **Method Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25

Job ID: 890-2683-1

SDG: Eddy County

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Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EETSC MID
Total BTEX	Total BTEX Calculation	TAL SOP	EETSC MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EETSC MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	EETSC MID
800.0	Anions, Ion Chromatography	MCAWW	EETSC MID
5035	Closed System Purge and Trap	SW846	EETSC MID
8015NM Prep	Microextraction	SW846	EETSC MID
Ol Leach	Deionized Water Leaching Procedure	ASTM	EETSC MID

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. 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:

EETSC MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

# **Sample Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25

Job ID: 890-2683-1

SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2683-1	SS01	Solid	07/28/22 09:00	07/28/22 13:50	0.2

Work Order No:	Work Order Comments  UST/PST	Preservative Codes  None: NO DI W ater: H <sub>2</sub> O  Cool: Cool MeOH: Me  H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na  H <sub>3</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na  H <sub>3</sub> PO <sub>4</sub> : H <sub>2</sub> NaOH: Na  H <sub>3</sub> PO <sub>4</sub> : H <sub>2</sub> NaOH: Na  NaHSO <sub>4</sub> : NABIS  Na 2,5 2,0; NaSO <sub>3</sub> Zn Acetate+NaOH: Zn  NaOH+Ascorbic Acid: SAPC  Sample Comments  COSTON	Se Ag SiO <sub>2</sub> Na Sr Tl Sn U V Zn Hg: 1631/245.1/7470 /7471	Received by: (Signature)  Date/Time
Chain of Custody  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	Address Alm 4627   Reporting: Level III   An An An An An An An An An An An An An	ANALYSIS REQUEST  Social Control of Custody  By Social Chain of Custody  Analysis Request  Analysis Request  By Social Chain of Custody  By Social Chain of Custody		Bate/Time Relinquished by: (Signature) Receive そっぱっ   子子   4
Chai  Houston, TX (281)  Environment Testing Midland, TX (915) 70  EL Paso, TX (915) 58  Hobbs, NM (575) 38	Project Manager:   Alone Much   Skill to: (if different)   Alone   Company Name:   Address:   SIZZ Nat Tona   Cal Skill to: (if different)   Address:   City, State ZIP:   City, State ZIP:   City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to City, State ZIP:   Cal Skill to	Project Name: DLW 3-74 5-74 5-75 Turn Around Project Location: CAS COT Code Custody Seals: Yes No NAA Temperature: Asampled Completed Sample Identification Matrix Sampled Sampled Sampled Company Company Company Company Company Code Company Code Company Code Company Code Company Code Company Code Code Code Code Code Code Code Code	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 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 Tl U Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xerco, its affiliates and subcontractors. It assigns standard terms and conditions of sensice. Eurofins Xerco, all 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 Xerco, A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xerco, but not analyzed. These terms will be enforced unless previously negotiated.	Relinquished by: (Signature)  Oat  (1.04)

# **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2683-1 SDG Number: Eddy County

List Source: Eurofins Carlsbad

Login Number: 2683 List Number: 1 Creator: Clifton, Cloe

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.	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	N/A	

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<6mm (1/4").

## **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2683-1 SDG Number: Eddy County

List Source: Eurofins Midland

List Number: 2

List Creation: 08/01/22 08:22 AM

Creator: Rodriguez, Leticia

Login Number: 2683

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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Released to Imaging: 5/13/2025 9:12:25 AM



# **ANALYTICAL REPORT**

**Eurofins Carlsbad** 1089 N Canal St. Carlsbad, NM 88220 Tel: (575)988-3199

Laboratory Job ID: 890-2684-1

Laboratory Sample Delivery Group: Eddy County

Client Project/Site: PLU Big Sinks 25

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 8/5/2022 12:33:55 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: PLU Big Sinks 25
Laboratory Job ID: 890-2684-1
SDG: Eddy County

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### **Definitions/Glossary**

Client: Ensolum Job ID: 890-2684-1 Project/Site: PLU Big Sinks 25 SDG: Eddy County

#### **Qualifiers**

<b>GC VOA</b>	
Qualifier	

*_	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
H	Indicates the analyte was analyzed for but not detected

**Qualifier Description** 

#### **GC Semi VOA**

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

#### **HPLC/IC**

Qualifier	Qualifier Description							
F1	MS and/or MSD recovery exceeds control limits.							
U	Indicates the analyte was analyzed for but not detected.							

### Glossarv

Ciossary	
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)

ND

LOQ

MCL

MDA MDC

MDL

MPN

MQL

NC

Not Calculated

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number

Method Quantitation Limit

Not Detected at the reporting limit (or MDL or EDL if shown)

Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" Minimum Detectable Activity (Radiochemistry)

Minimum Detectable Concentration (Radiochemistry)

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/Site: PLU Big Sinks 25

Job ID: 890-2684-1

SDG: Eddy County

Job ID: 890-2684-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2684-1

#### Receipt

The sample was received on 7/28/2022 1:48 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 10.4°C

#### **GC VOA**

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-31414 and analytical batch 880-31453 was outside control limits. Sample matrix interference is suspected.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS04 (890-2684-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### GC Semi VOA

Method 8015MOD NM: Surrogate recovery for the following sample was outside control limits: SS04 (890-2684-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### HPLC/IC

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-31219 and analytical batch 880-31436 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Matrix: Solid

Lab Sample ID: 890-2684-1

# **Client Sample Results**

Client: Ensolum Job ID: 890-2684-1
Project/Site: PLU Big Sinks 25 SDG: Eddy County

Client Sample ID: SS04

Date Collected: 07/28/22 09:45 Date Received: 07/28/22 13:48

Sample Depth: 0.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *1	0.00199	mg/Kg		08/03/22 11:41	08/05/22 05:44	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/03/22 11:41	08/05/22 05:44	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		08/03/22 11:41	08/05/22 05:44	1
m-Xylene & p-Xylene	<0.00398	U *-	0.00398	mg/Kg		08/03/22 11:41	08/05/22 05:44	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		08/03/22 11:41	08/05/22 05:44	1
Xylenes, Total	<0.00398	U *-	0.00398	mg/Kg		08/03/22 11:41	08/05/22 05:44	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)		S1-	70 - 130			08/03/22 11:41	08/05/22 05:44	1
1,4-Difluorobenzene (Surr)	87		70 - 130			08/03/22 11:41	08/05/22 05:44	1
- Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/05/22 13:19	1
Method: 8015 NM - Diesel Range Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total TPH	<50.0		50.0	mg/Kg	— <u> </u>		08/03/22 11:13	1
Mothods 2015P NM Discol Pon-								
Wellion: ou lab MW - Diesel Rank	ne Organics (D)	RO) (GC)						
	• •	RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Gasoline Range Organics	• •	Qualifier	RL 50.0	Unit mg/Kg	<u>D</u>	Prepared 08/02/22 08:40	Analyzed 08/02/22 15:12	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U			<u>D</u>			1
Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <50.0	Qualifier U	50.0	mg/Kg	<u> </u>	08/02/22 08:40	08/02/22 15:12	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.0 <50.0	Qualifier U U U	50.0	mg/Kg	<u>D</u>	08/02/22 08:40 08/02/22 08:40	08/02/22 15:12 08/02/22 15:12	1
Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0 <50.0 <50.0	Qualifier U U U	50.0 50.0 50.0	mg/Kg	<u>D</u>	08/02/22 08:40 08/02/22 08:40 08/02/22 08:40	08/02/22 15:12 08/02/22 15:12 08/02/22 15:12	1 1 1 Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result   <50.0   <50.0   <50.0   <50.0   <60.0   %Recovery	Qualifier U U U Qualifier	50.0 50.0 50.0 <i>Limits</i>	mg/Kg	<u>D</u>	08/02/22 08:40 08/02/22 08:40 08/02/22 08:40 <b>Prepared</b>	08/02/22 15:12 08/02/22 15:12 08/02/22 15:12 <b>Analyzed</b>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result	Qualifier  U  U  Qualifier  S1-	50.0 50.0 50.0 <b>Limits</b> 70 - 130	mg/Kg	<u> </u>	08/02/22 08:40 08/02/22 08:40 08/02/22 08:40  Prepared 08/02/22 08:40	08/02/22 15:12 08/02/22 15:12 08/02/22 15:12 Analyzed 08/02/22 15:12	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier  U  U  Qualifier  S1-	50.0 50.0 50.0 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	08/02/22 08:40 08/02/22 08:40 08/02/22 08:40  Prepared 08/02/22 08:40	08/02/22 15:12 08/02/22 15:12 08/02/22 15:12 Analyzed 08/02/22 15:12	Dil Fac

# **Surrogate Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25

SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2655-A-1-D MS	Matrix Spike	98	102	
890-2655-A-1-E MSD	Matrix Spike Duplicate	111	102	
890-2684-1	SS04	28 S1-	87	
LCS 880-31414/1-A	Lab Control Sample	80	120	
LCSD 880-31414/2-A	Lab Control Sample Dup	81	107	
MB 880-31200/5-A	Method Blank	82	106	
MB 880-31414/5-A	Method Blank	83	105	

BFB = 4-Bromofluorobenzene (Surr) DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-2684-1	SS04	69 S1-	76	
890-2686-A-1-C MS	Matrix Spike	97	97	
890-2686-A-1-D MSD	Matrix Spike Duplicate	84	82	
LCS 880-31286/2-A	Lab Control Sample	104	102	
LCSD 880-31286/3-A	Lab Control Sample Dup	104	108	
MB 880-31286/1-A	Method Blank	90	103	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2684-1 Project/Site: PLU Big Sinks 25

SDG: Eddy County

### Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31200/5-A

Lab Sample ID: MB 880-31414/5-A

**Matrix: Solid** 

Analysis Batch: 31453

Client Sam	iple ID:	Method	Blank
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**Prep Type: Total/NA** 

Prep Batch: 31200

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/01/22 14:58	08/04/22 10:53	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/01/22 14:58	08/04/22 10:53	1

MB MB

Surrogate	ate %Recovery Qualifier Limits			Prepared	Analyzed	
4-Bromofluorobenzene (Surr)	82		70 - 130	-	08/01/22 14:58	08/04/22 10:53
1,4-Difluorobenzene (Surr)	106		70 - 130		08/01/22 14:58	08/04/22 10:53

Client Sample ID: Method Blank

Analyzed

Prep Type: Total/NA Prep Batch: 31414

Matrix: Solid Analysis Batch: 31453

	INID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/03/22 11:41	08/04/22 23:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/03/22 11:41	08/04/22 23:07	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/03/22 11:41	08/04/22 23:07	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepare	ed	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		70 - 130	08/03/22	11:41	08/04/22 23:07	1
1,4-Difluorobenzene (Surr)	105		70 - 130	08/03/22	11:41	08/04/22 23:07	1

Lab Sample ID: LCS 880-31414/1-A

**Matrix: Solid** 

**Analysis Batch: 31453** 

<b>Client Sample</b>	ID: Lab C	ontrol Sample
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**Prep Type: Total/NA** Prep Batch: 31414

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1214		mg/Kg		121	70 - 130	
Toluene	0.100	0.09865		mg/Kg		99	70 - 130	
Ethylbenzene	0.100	0.09199		mg/Kg		92	70 - 130	
m-Xylene & p-Xylene	0.200	0.07945	*_	mg/Kg		40	70 - 130	
o-Xvlene	0.100	0.08730		ma/Ka		87	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	80	70 _ 130
1.4-Difluorobenzene (Surr)	120	70 - 130

Lab Sample ID: LCSD 880-31414/2-A

Matrix: Solid

**Analysis Batch: 31453** 

Client Sample	ID: Lab	Control	Sample Dup	
		Prep Ty	vpe: Total/NA	

Prep Batch: 31414

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.07448	*1	mg/Kg		74	70 - 130	48	35

**Eurofins Carlsbad** 

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Dil Fac

Job ID: 890-2684-1

SDG: Eddy County

### Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-31414/2-A **Matrix: Solid** 

**Analysis Batch: 31453** 

Project/Site: PLU Big Sinks 25

Client Sample ID: Lab Control Sample Dup

**Prep Type: Total/NA** Prep Batch: 31414

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.07311		mg/Kg		73	70 - 130	30	35
Ethylbenzene	0.100	0.07141		mg/Kg		71	70 - 130	25	35
m-Xylene & p-Xylene	0.200	0.06955	*_	mg/Kg		35	70 - 130	13	35
o-Xylene	0.100	0.07107		mg/Kg		71	70 - 130	21	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	81		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: 890-2655-A-1-D MS

**Matrix: Solid** 

**Analysis Batch: 31453** 

Client Sample ID: Matrix Spike Prep Type: Total/NA

Prep Batch: 31414

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U *1 F1	0.101	0.05843	F1	mg/Kg		58	70 - 130	
		F2								
Toluene	<0.00200	U F1 F2	0.101	0.05184	F1	mg/Kg		52	70 - 130	
Ethylbenzene	<0.00200	U F1 F2	0.101	0.05405	F1	mg/Kg		54	70 - 130	
m-Xylene & p-Xylene	<0.00401	U *- F1 F2	0.201	0.1046	F1	mg/Kg		52	70 - 130	
o-Xylene	<0.00200	U F1	0.101	0.05325	F1	mg/Kg		53	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 890-2655-A-1-E MSD

**Matrix: Solid** 

**Analysis Batch: 31453** 

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

Prep Batch: 31414

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U *1 F1	0.0990	0.03449	F1 F2	mg/Kg		35	70 - 130	52	35
		F2									
Toluene	<0.00200	U F1 F2	0.0990	0.03593	F1 F2	mg/Kg		36	70 - 130	36	35
Ethylbenzene	<0.00200	U F1 F2	0.0990	0.03345	F1 F2	mg/Kg		34	70 - 130	47	35
m-Xylene & p-Xylene	<0.00401	U *- F1 F2	0.198	0.07182	F1 F2	mg/Kg		36	70 - 130	37	35
o-Xylene	<0.00200	U F1	0.0990	0.03786	F1	mg/Kg		38	70 - 130	34	35

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	111	70 - 130
1,4-Difluorobenzene (Surr)	102	70 - 130

Job ID: 890-2684-1

SDG: Eddy County

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

MD MD

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103

Lab Sample ID: MB 880-31286/1-A

**Matrix: Solid** 

Project/Site: PLU Big Sinks 25

Analysis Batch: 31239

Client Sample ID: Method Blank

08/02/22 10:16

08/02/22 10:16

Prep Type: Total/NA

Prep Batch: 31286

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 10:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 10:16	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 10:16	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

70 - 130

70 - 130

Lab Sample ID: LCS 880-31286/2-A

1-Chlorooctane

o-Terphenyl

Analysis Batch: 31239

**Matrix: Solid** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

08/02/22 08:40

08/02/22 08:40

Prep Batch: 31286

LCS LCS Spike Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 1060 106 70 - 130 mg/Kg (GRO)-C6-C10 1000 Diesel Range Organics (Over 1036 mg/Kg 104 70 - 130C10-C28)

LCS LCS Qualifier Limits Surrogate %Recovery 1-Chlorooctane 104 70 - 130 o-Terphenyl 102 70 - 130

Lab Sample ID: LCSD 880-31286/3-A

**Matrix: Solid** 

**Analysis Batch: 31239** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 31286

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1063		mg/Kg		106	70 - 130	0	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1092		mg/Kg		109	70 - 130	5	20
C10-C28)									

LCSD LCSD

%Recovery Qualifier Limits Surrogate 70 - 130 1-Chlorooctane 104 108 70 - 130 o-Terphenyl

Lab Sample ID: 890-2686-A-1-C MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

Released to Imaging: 5/13/2025 9:12:25 AM

Prep Type: Total/NA Prep Batch: 31286 **Analysis Batch: 31239** 

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	999	941.9		mg/Kg		94	70 - 130	 
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U	999	802.5		mg/Kg		80	70 - 130	
C10-C28)										

Prep Batch: 31286

Prep Type: Total/NA

Client: Ensolum Job ID: 890-2684-1 Project/Site: PLU Big Sinks 25 SDG: Eddy County

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-2686-A-1-C MS Client Sample ID: Matrix Spike Prep Type: Total/NA

**Matrix: Solid** 

Analysis Batch: 31239

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: 890-2686-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 31239									Prep Batch: 31286			
		Sample	Sample	Spike	MSD	MSD				%Rec		RPD
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
	Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	829.1		mg/Kg		83	70 - 130	13	20
	Diesel Range Organics (Over C10-C28)	<49.9	U	999	700.8		mg/Kg		70	70 - 130	14	20

MSD MSD Surrogate %Recovery Qualifier Limits 84 70 - 130 1-Chlorooctane 82 70 - 130 o-Terphenyl

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31219/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 31436

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	ma/Ka			08/04/22 08:50	1

Lab Sample ID: LCS 880-31219/2-A Client Sample ID: Lab Control Sample

**Matrix: Solid** 

**Analysis Batch: 31436** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 250	266.3		mg/Kg		107	90 - 110	

Lab Sample ID: LCSD 880-31219/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

**Analysis Batch: 31436** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	236.4		mg/Kg		95	90 - 110	12	20

Lab Sample ID: 890-2682-A-6-E MS Client Sample ID: Matrix Spike **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 31436** 

7 mm, 5000 = 0000 mm 0 1 100									
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Chloride	765	F1	252	1167	F1	mg/Kg		160	90 - 110

**Eurofins Carlsbad** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

# **QC Sample Results**

Client: Ensolum

Project/Site: PLU Big Sinks 25

SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2682-A-6-F MSD

Matrix: Solid

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Matrix: Solid Analysis Batch: 31436

RPD Sample Sample Spike MSD MSD %Rec Result Qualifier Added Result Qualifier RPD Limit Analyte Unit %Rec Limits Chloride 765 F1 252 980.9 F1 mg/Kg 86 90 - 110 17 20

3

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4.0

13

114

# **QC Association Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25

Job ID: 890-2684-1

SDG: Eddy County

### **GC VOA**

### Prep Batch: 31200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31200/5-A	Method Blank	Total/NA	Solid	5035	

### Prep Batch: 31414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2684-1	SS04	Total/NA	Solid	5035	
MB 880-31414/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31414/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31414/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2655-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
890-2655-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

### Analysis Batch: 31453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2684-1	SS04	Total/NA	Solid	8021B	31414
MB 880-31200/5-A	Method Blank	Total/NA	Solid	8021B	31200
MB 880-31414/5-A	Method Blank	Total/NA	Solid	8021B	31414
LCS 880-31414/1-A	Lab Control Sample	Total/NA	Solid	8021B	31414
LCSD 880-31414/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31414
890-2655-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	31414
890-2655-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31414

#### Analysis Batch: 31594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2684-1	SS04	Total/NA	Solid	Total BTEX	

### **GC Semi VOA**

### Analysis Batch: 31239

<b>Lab Sample ID</b> 890-2684-1	Client Sample ID SS04	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 31286
MB 880-31286/1-A	Method Blank	Total/NA	Solid	8015B NM	31286
LCS 880-31286/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31286
LCSD 880-31286/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31286
890-2686-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	31286
890-2686-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31286

### Prep Batch: 31286

<b>Lab Sample ID</b> 890-2684-1	Client Sample ID SS04	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-31286/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31286/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31286/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2686-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2686-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

### Analysis Batch: 31402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2684-1	SS04	Total/NA	Solid	8015 NM	

# **QC Association Summary**

Client: Ensolum
Project/Site: PLU Big Sinks 25
Job ID: 890-2684-1
SDG: Eddy County

HPLC/IC

Leach Batch: 31219

<b>Lab Sample ID</b> 890-2684-1	Client Sample ID SS04	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-31219/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31219/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31219/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2682-A-6-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2682-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2684-1	SS04	Soluble	Solid	300.0	31219
MB 880-31219/1-A	Method Blank	Soluble	Solid	300.0	31219
LCS 880-31219/2-A	Lab Control Sample	Soluble	Solid	300.0	31219
LCSD 880-31219/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31219
890-2682-A-6-E MS	Matrix Spike	Soluble	Solid	300.0	31219
890-2682-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	31219

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### **Lab Chronicle**

Client: Ensolum Job ID: 890-2684-1 Project/Site: PLU Big Sinks 25 SDG: Eddy County

**Client Sample ID: SS04** 

Lab Sample ID: 890-2684-1

Matrix: Solid

Date Collected: 07/28/22 09:45 Date Received: 07/28/22 13:48

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	31414	08/03/22 11:41	MR	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31453	08/05/22 05:44	MR	EETSC MIC
Total/NA	Analysis	Total BTEX		1			31594	08/05/22 13:19	AJ	EETSC MIE
Total/NA	Analysis	8015 NM		1			31402	08/03/22 11:13	SM	EETSC MIE
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31286	08/02/22 08:40	DM	EETSC MIC
Total/NA	Analysis	8015B NM		1			31239	08/02/22 15:12	SM	EETSC MIC
Soluble	Leach	DI Leach			5.01 g	50 mL	31219	08/01/22 16:08	SMC	EETSC MIE
Soluble	Analysis	300.0		1			31436	08/04/22 15:03	CH	EETSC MIL

#### **Laboratory References:**

EETSC MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

# **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-2684-1 Project/Site: PLU Big Sinks 25

SDG: Eddy County

### **Laboratory: Eurofins Midland**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Pr	ogram	Identification Number	<b>Expiration Date</b>
Texas	NE	ELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of	• '	it the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	
Total BTFX		Solid	Total BTFX	

# **Method Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25

Job ID: 890-2684-1

SDG: Eddy County

lethod	Method Description	Protocol	Laboratory
021B	Volatile Organic Compounds (GC)	SW846	EETSC MID
otal BTEX	Total BTEX Calculation	TAL SOP	EETSC MID
015 NM	Diesel Range Organics (DRO) (GC)	SW846	EETSC MID
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EETSC MID
00.0	Anions, Ion Chromatography	MCAWW	EETSC MID
035	Closed System Purge and Trap	SW846	EETSC MID
015NM Prep	Microextraction	SW846	EETSC MID
l Leach	Deionized Water Leaching Procedure	ASTM	EETSC MID

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. 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:

EETSC MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

# **Sample Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25

Job ID: 890-2684-1

SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2684-1	SS04	Solid	07/28/22 09:45	07/28/22 13:48	0.2

PRP☐ Brownfields☐ RRC☐ Superfund☐

evel III | PST/UST | TRRP | Level IV |

DI Water: H<sub>2</sub>O

Preservative Codes

HNO<sub>3</sub>: HN NaOH: Na MeOH: Me

NaOH+Ascorbic Acid: SAPC

Zn Acetate+NaOH: Zn Na25203: NaSO 3

Sample Comments

Revised Date: 08/25/2020 Rev. 2020.2

Date/Time

					S	Chain of Custody	tody		
eurotins eurotins			Testing	Hou	ston, TX (2 d, TX (432)	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	TX (214) 902-0300 io, TX (210) 509-3334	Work Order No:	der No:
	Xenco			EL Pa Hobb	so, TX (91:	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carisbad, NM (575) 988-3199	TX (806) 794-1296 , NM (575) 988-3199	X.WWW	www.xenco.com Page
Project Manager:	Tecoma M	2013507	67	Bill to: (if different)	ıtı	mercen	Green	Wor	Work Order Comments
Company Name:	/4m		,	Company Name:	241	XTO 62		Program: UST/PST   PRP	P☐ Brownfields ☐ RRC
Address:				Address:			11	State of Project:	
e ZIP:				City, State ZIP:				Reporting: Level II Level III	el III   PST/UST   TRRP
	331-251-803	100	Email:					Deliverables: EDD	ADaPT Other:
Project Name:	Mu Bru STAKS 25	525	Turn,	Turn Around			ANALYSIS REQUEST	JEST	Preservativ
Der:	1		Routine	Rush	Pres.				None: NO
Project Location:	chho Court		Due Date:						Cool: Cool
Sampler's Name:	त्याः		TAT starts the	TAT starts the day received by the lab, it eceived by 4:30pm					HCL: HC
FO #::	-	(	141.	(	219				H PO · HP
SAMPLE RECEIPT	lemp Blank:	Thermometer ID:	et ice:	The No	19WE				NaHSO 4: NABIS
Cooler Custody Seals:	Yes No NIA	Correction Factor:	actor.	6.60	ans 9				Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO
Sample Custody Seals:		Temperature Reading:	Reading:	(O. C		1×7		CO 2684 Chain of Custody	Zn Acetate+NaOl
Total Containers:		Corrected Temperature:	mperature:	10.4		12/1/2	0.000	The state of the s	NaOH+Ascorbic /
Sample Identification	Matrix	Date Sampled	Time	Depth Grab/	# of Cont	4			Sample Co
48	2	728	CAHS	2 1/2		/			
Total 200.7 / 6010 Circle Method(s) and	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed		BRCRA 13PP TCLP / SF	13PPM Texas 11 LP / SPLP 6010 : 8RC	Al Sb CRA Sb	AI Sb As Ba Be B Cd CRA Sb As Ba Be Cd C	A 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo P TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Sr Tl r Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631/245.1/74	<sub>2</sub> Na Sr Tl Sn U V Zn 1/245.1/7470/7471
Notice: Signature of this docume of service. Eurofins Xenco will be of Eurofins Xenco. A minimum ch	ent and relinquishment of sample e liable only for the cost of sample harge of \$85.00 will be applied to	es constitutes a va les and shall not a o each project an	alid purchase orderssume any respon	er from client compar nsibility for any losses or each sample subm	or expense	is Xenco, its affiliates and s incurred by the client if offins Xenco, but not anal	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, Hamiltourn charge of \$85.00 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 negotated.	ns and conditions yond the control	
Relinquished by: (Signature)	gnature)	Received by	Received by: (Signature)	(1)		Date/Time	Relinquished by: (Signature)	ure) Received by: (Signature)	(Signature) Da
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S							9		

# **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2684-1

SDG Number: Eddy County

List Source: Eurofins Carlsbad

Login Number: 2684 List Number: 1 Creator: Clifton, Cloe

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.	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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## **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2684-1 SDG Number: Eddy County

List Source: Eurofins Midland

Login Number: 2684 List Number: 2 List Creation: 08/01/22 08:22 AM

Creator: Rodriguez, Leticia

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	



**ANALYTICAL REPORT** 

**America** 

**Environment Testing** 

**Eurofins Carlsbad** 1089 N Canal St. Carlsbad, NM 88220 Tel: (575)988-3199

Laboratory Job ID: 890-2685-1

Laboratory Sample Delivery Group: Eddy County

Client Project/Site: PLU Big Sinks 25

For:

eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 8/8/2022 3:54:46 PM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

.....LINKS

Received by OCD: 3/26/2025 7:38:50 AM

**Review your project** results through EOL

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env Released to Imaging: 5/13/2025 9:12:25 AM This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: PLU Big Sinks 25
Laboratory Job ID: 890-2685-1
SDG: Eddy County

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### **Definitions/Glossary**

Job ID: 890-2685-1 Client: Ensolum Project/Site: PLU Big Sinks 25 SDG: Eddy County

#### **Qualifiers**

**GC VOA** 

Qualifier **Qualifier Description** LCS/LCSD RPD exceeds control limits. F1 MS and/or MSD recovery exceeds control limits.

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

Qualifier **Qualifier Description** 

MS and/or MSD recovery exceeds control limits. 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

DFR 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

Decision Level Concentration (Radiochemistry) DLC

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Method Detection Limit MDL 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

Toxicity Equivalent Factor (Dioxin) TEF Toxicity Equivalent Quotient (Dioxin) TEQ

**TNTC** Too Numerous To Count

### **Case Narrative**

Client: Ensolum

Project/Site: PLU Big Sinks 25

Job ID: 890-2685-1

SDG: Eddy County

Job ID: 890-2685-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-2685-1

#### Receipt

The sample was received on 7/28/2022 1:50 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 10.4°C

#### **GC VOA**

Method 8021B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-31335 and analytical batch 880-31540 recovered outside control limits for the following analytes: Ethylbenzene, m-Xylene & p-Xylene, o-Xylene and Xylenes, Total.

Method 8021B: Spike compounds were inadvertently omitted during the extraction process for the matrix spike duplicate (MSD); therefore, matrix spike duplicate recoveries are unavailable for preparation batch 880-31335 and analytical batch 880-31540. The associated laboratory control sample (LCS) met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### HPLC/IC

Method 300 ORGFM 28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-31219 and analytical batch 880-31436 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Matrix: Solid

Lab Sample ID: 890-2685-1

# **Client Sample Results**

Client: Ensolum Job ID: 890-2685-1 Project/Site: PLU Big Sinks 25 SDG: Eddy County

**Client Sample ID: SS02** 

Date Collected: 07/28/22 09:15 Date Received: 07/28/22 13:50

Sample Depth: 0.2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		08/02/22 14:31	08/05/22 19:55	1
Toluene	<0.00199	U	0.00199	mg/Kg		08/02/22 14:31	08/05/22 19:55	1
Ethylbenzene	< 0.00199	U *1	0.00199	mg/Kg		08/02/22 14:31	08/05/22 19:55	1
m-Xylene & p-Xylene	<0.00398	U *1	0.00398	mg/Kg		08/02/22 14:31	08/05/22 19:55	1
o-Xylene	<0.00199	U *1	0.00199	mg/Kg		08/02/22 14:31	08/05/22 19:55	•
Xylenes, Total	<0.00398	U *1	0.00398	mg/Kg		08/02/22 14:31	08/05/22 19:55	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	112		70 - 130			08/02/22 14:31	08/05/22 19:55	1
1,4-Difluorobenzene (Surr)	92		70 - 130			08/02/22 14:31	08/05/22 19:55	1
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/08/22 14:27	1
- Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/03/22 11:13	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 16:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 16:17	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 16:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	70		70 - 130			08/02/22 08:40	08/02/22 16:17	1
o-Terphenyl	74		70 - 130			08/02/22 08:40	08/02/22 16:17	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.5		4.96	mg/Kg	_		08/04/22 15:11	1

# **Surrogate Summary**

Client: Ensolum Job ID: 890-2685-1
Project/Site: PLU Big Sinks 25 SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2645-A-1-G MS	Matrix Spike	107	99	
890-2645-A-1-H MSD	Matrix Spike Duplicate	102	86	
890-2685-1	SS02	112	92	
890-2689-A-2-G MS	Matrix Spike	124	98	
890-2689-A-2-H MSD	Matrix Spike Duplicate	112	93	
LCS 880-31335/1-A	Lab Control Sample	116	100	
LCS 880-31573/1-A	Lab Control Sample	106	90	
LCSD 880-31335/2-A	Lab Control Sample Dup	106	98	
LCSD 880-31573/2-A	Lab Control Sample Dup	112	94	
MB 880-31335/5-A	Method Blank	99	89	
MB 880-31573/5-A	Method Blank	101	91	
Surrogate Legend				

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-2685-1	SS02	70	74	
890-2686-A-1-C MS	Matrix Spike	97	97	
890-2686-A-1-D MSD	Matrix Spike Duplicate	84	82	
LCS 880-31286/2-A	Lab Control Sample	104	102	
LCSD 880-31286/3-A	Lab Control Sample Dup	104	108	
MB 880-31286/1-A	Method Blank	90	103	
Surrogate Legend				

**Eurofins Carlsbad** 

OTPH = o-Terphenyl

Client: Ensolum Project/Site: PLU Big Sinks 25

Job ID: 890-2685-1

SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-31335/5-A

**Matrix: Solid** Analysis Batch: 31540 Prep Type: Total/NA

Prep Batch: 31335

Client Sample ID: Method Blank

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/02/22 14:31	08/05/22 11:25	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/02/22 14:31	08/05/22 11:25	1

MB MB

MD MD

Surrogate	%Recovery Qua	alifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99	70 - 130	08/02/22 14:31	08/05/22 11:25	1
1,4-Difluorobenzene (Surr)	89	70 - 130	08/02/22 14:31	08/05/22 11:25	1

**Client Sample ID: Lab Control Sample** 

Lab Sample ID: LCS 880-31335/1-A **Matrix: Solid** 

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 31335

Analysis Batch: 31540 Prep Batch: 31335 LCS LCS Spike Added Result Qualifier Unit %Rec Limits

Analyte Benzene 0.100 0.1114 mg/Kg 111 70 - 130 Toluene 0.100 0.1046 mg/Kg 105 70 - 130 0.100 0.1239 Ethylbenzene mg/Kg 124 70 - 130 0.200 0.2398 120 70 - 130 m-Xylene & p-Xylene mg/Kg 0.100 0.1296 130 70 - 130 o-Xylene mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	116		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

**Client Sample ID: Lab Control Sample Dup** 

Analysis Batch: 31540

**Matrix: Solid** 

Lab Sample ID: LCSD 880-31335/2-A

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08982		mg/Kg		90	70 - 130	21	35	
Toluene	0.100	0.08489		mg/Kg		85	70 - 130	21	35	
Ethylbenzene	0.100	0.08074	*1	mg/Kg		81	70 - 130	42	35	
m-Xylene & p-Xylene	0.200	0.1641	*1	mg/Kg		82	70 - 130	38	35	
o-Xvlene	0 100	0.09044	*1	ma/Ka		90	70 - 130	36	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1.4-Difluorobenzene (Surr)	98		70 - 130

Analysis Batch: 31540

ab Sample ID: 890-2645-A-1-G MS	Client Sample ID: Matrix Spike
Matrix: Solid	Prep Type: Total/NA

Prep Batch: 31335

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00202	U F1	0.101	0.1014		mg/Kg		101	70 - 130	
Toluene	<0.00202	U F1	0.101	0.09230		mg/Kg		91	70 - 130	

Project/Site: PLU Big Sinks 25

Job ID: 890-2685-1

SDG: Eddy County

# Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-2645-A-1-G MS

Lab Sample ID: 890-2645-A-1-H MSD

**Matrix: Solid** 

**Matrix: Solid** 

Ethylbenzene

Analysis Batch: 31540

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31335

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00202	U *1 F1	0.101	0.08894		mg/Kg		88	70 - 130	
m-Xylene & p-Xylene	<0.00403	U *1 F1	0.201	0.1784		mg/Kg		87	70 - 130	
o-Xylene	0.00264	*1 F1	0.101	0.09574		mg/Kg		93	70 - 130	

MS MS

Surrogate	%Recovery Qualif	ier Limits
4-Bromofluorobenzene (Surr)	107	70 - 130
1,4-Difluorobenzene (Surr)	99	70 - 130

Client Sample ID: Matrix Spike Duplicate

70 - 130

70 - 130

70 - 130

0

0

0

08/05/22 11:19

Prep Type: Total/NA

NC

NC

NC

Prep Batch: 31335

Analysis Batch: 31540 Sample Sample Spike MSD MSD RPD Result Qualifier %Rec RPD Limit Analyte babbA Result Qualifier Unit Limits 0.0998 Benzene <0.00202 UF1 <0.00200 UF1 mg/Kg 0 70 - 130 NC 35 Toluene <0.00202 UF1 0.0998 <0.00200 UF1 mg/Kg 0 70 - 130 NC 35

<0.00200 UF1

mg/Kg

mg/Kg

mg/Kg

mg/Kg

0.0998

m-Xylene & p-Xylene <0.00403 U \*1 F1 0.200 <0.00399 UF1 \*1 F1 0.00264 0.0998 <0.00200 U F1 o-Xylene MSD MSD

<0.00202 U\*1 F1

Surrogate %Recovery Qualifier Limits 70 - 130 4-Bromofluorobenzene (Surr) 102 1,4-Difluorobenzene (Surr) 70 - 130 86

Lab Sample ID: MB 880-31573/5-A

**Matrix: Solid** 

Xylenes, Total

Analysis Batch: 31540

Client Sample ID: Method Blank Prep Type: Total/NA

08/06/22 00:00

Prep Batch: 31573

Result Qualifier Unit Analyzed Dil Fac Analyte RL Prepared Benzene <0.00200 U 0.00200 mg/Kg 08/05/22 11:19 08/06/22 00:00 Toluene <0.00200 U 0.00200 08/05/22 11:19 08/06/22 00:00 mg/Kg Ethylbenzene <0.00200 U 0.00200 mg/Kg 08/05/22 11:19 08/06/22 00:00 m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 08/05/22 11:19 08/06/22 00:00 0.00200 08/05/22 11:19 08/06/22 00:00 o-Xylene <0.00200 U mg/Kg

0.00400

MB MB

<0.00400 U

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	08/05/22 11:19	08/06/22 00:00	1
1,4-Difluorobenzene (Surr)	91		70 - 130	08/05/22 11:19	08/06/22 00:00	1

Lab Sample ID: LCS 880-31573/1-A

**Matrix: Solid** 

**Analysis Batch: 31540** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31573

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09897		mg/Kg		99	70 - 130	
Toluene	0.100	0.1022		mg/Kg		102	70 - 130	
Ethylbenzene	0.100	0.1050		mg/Kg		105	70 - 130	
m-Xylene & p-Xylene	0.200	0.2137		mg/Kg		107	70 - 130	

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Surrogate

Project/Site: PLU Big Sinks 25

Job ID: 890-2685-1

SDG: Eddy County

# Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-31573/1-A

**Matrix: Solid** Analysis Batch: 31540 Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 31573

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits D 0.100 0.1208 121 o-Xylene mg/Kg

LCS LCS

%Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 106 70 - 130 70 - 130 90

70 - 130

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 880-31573/2-A **Matrix: Solid** 

Lab Sample ID: 890-2689-A-2-G MS

Lab Sample ID: 890-2689-A-2-H MSD

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 31540

**Analysis Batch: 31540** 

1,4-Difluorobenzene (Surr)

Prep Type: Total/NA

Prep Batch: 31573

Spike LCSD LCSD RPD Analyte Added Result Qualifier Unit %Rec Limits D Benzene 0.100 0.09262 mg/Kg 93 70 - 130 Toluene 0.100 0.09534 mg/Kg 95 70 - 130 Ethylbenzene 0.100 0.1047 mg/Kg 105 70 - 130 0 m-Xylene & p-Xylene 0.200 0.2146 mg/Kg 107 70 - 130 0 0.100 0.1189 70 - 130 35 o-Xylene mg/Kg 119 2

Limit 35 35 35 35

LCSD LCSD

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 112 70 - 130 1,4-Difluorobenzene (Surr) 94 70 - 130

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 31573

MS MS Sample Sample Spike %Rec Result Qualifier Added Result Qualifier Analyte %Rec Limits Unit Benzene <0.00200 U 0.101 0.09178 91 70 - 130 mg/Kg Toluene <0.00200 U 0.101 0.1004 100 70 - 130 mg/Kg Ethylbenzene <0.00200 U 0.101 0.1071 mg/Kg 107 70 - 130 m-Xylene & p-Xylene < 0.00399 U 0.201 0.2218 mg/Kg 110 70 - 130 o-Xylene <0.00200 U 0.101 0.1258 mg/Kg 125 70 - 130

MS MS

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 124 70 - 130 70 - 130 1,4-Difluorobenzene (Surr) 98

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analysis Batch: 31540									Prep	Batch:	31573
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0998	0.08524		mg/Kg		85	70 - 130	7	35
Toluene	<0.00200	U	0.0998	0.08780		mg/Kg		88	70 - 130	13	35
Ethylbenzene	<0.00200	U	0.0998	0.08996		mg/Kg		90	70 - 130	17	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1787		mg/Kg		90	70 - 130	22	35
o-Xylene	<0.00200	U	0.0998	0.1036		mg/Kg		104	70 - 130	19	35

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Job ID: 890-2685-1

SDG: Eddy County

### Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-2689-A-2-H MSD

**Matrix: Solid** 

Analysis Batch: 31540

Project/Site: PLU Big Sinks 25

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

Prep Batch: 31573

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

### Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-31286/1-A

**Matrix: Solid** 

**Analysis Batch: 31239** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 31286

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Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 10:16	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 10:16	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/02/22 08:40	08/02/22 10:16	1
	Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Analyte         Result           Gasoline Range Organics         <50.0           (GRO)-C6-C10            Diesel Range Organics (Over C10-C28)         <50.0           Oll Range Organics (Over C28-C36)         <50.0	Gasoline Range Organics <50.0 U (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U C10-C28)	Analyte         Result         Qualifier         RL           Gasoline Range Organics         <50.0         U         50.0           (GRO)-C6-C10         U         50.0           Diesel Range Organics (Over         <50.0         U         50.0           C10-C28)         Oll Range Organics (Over C28-C36)         <50.0         U         50.0	Analyte         Result         Qualifier         RL         Unit           Gasoline Range Organics         <50.0         U         50.0         mg/Kg           (GRO)-C6-C10         Diesel Range Organics (Over         <50.0         U         50.0         mg/Kg           C10-C28)         Oll Range Organics (Over C28-C36)         <50.0         U         50.0         mg/Kg	Analyte         Result         Qualifier         RL         Unit         D           Gasoline Range Organics         <50.0         U         50.0         mg/Kg           (GRO)-C6-C10         Diesel Range Organics (Over         <50.0         U         50.0         mg/Kg           C10-C28)         Oll Range Organics (Over C28-C36)         <50.0         U         50.0         mg/Kg	Analyte         Result         Qualifier         RL         Unit         D         Prepared           Gasoline Range Organics         <50.0         U         50.0         mg/Kg         08/02/22 08:40           (GRO)-C6-C10         Diesel Range Organics (Over         <50.0         U         50.0         mg/Kg         08/02/22 08:40           C10-C28)         OII Range Organics (Over C28-C36)         <50.0         U         50.0         mg/Kg         08/02/22 08:40	Analyte         Result         Qualifier         RL         Unit         D         Prepared         Analyzed           Gasoline Range Organics         <50.0         U         50.0         mg/Kg         08/02/22 08:40         08/02/22 10:16           (GRO)-C6-C10         Diesel Range Organics (Over         <50.0         U         50.0         mg/Kg         08/02/22 08:40         08/02/22 10:16           C10-C28)         OII Range Organics (Over C28-C36)         <50.0         U         50.0         mg/Kg         08/02/22 08:40         08/02/22 10:16

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	08/02/22 08:40	08/02/22 10:16	1
o-Terphenyl	103		70 - 130	08/02/22 08:40	08/02/22 10:16	1

Lab Sample ID: LCS 880-31286/2-A

**Matrix: Solid** 

**Analysis Batch: 31239** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Prep Batch: 31286

	<b>Бріке</b>	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics	1000	1060		mg/Kg		106	70 - 130
(GRO)-C6-C10							
Diesel Range Organics (Over	1000	1036		mg/Kg		104	70 - 130
C10-C28)							

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	104	70 - 130
o-Terphenyl	102	70 - 130

Lab Sample ID: LCSD 880-31286/3-A

**Matrix: Solid** 

Analysis Batch: 31239

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Prep Batch: 31286

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	1063		mg/Kg		106	70 - 130	0	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1092		mg/Kg		109	70 - 130	5	20
C10-C28)									

LCSD LCSD

Surrogate	%Recovery Qualit	fier Limits
1-Chlorooctane	104	70 - 130
o-Terphenyl	108	70 - 130

Job ID: 890-2685-1 Client: Ensolum Project/Site: PLU Big Sinks 25 SDG: Eddy County

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-2686-A-1-C MS

**Matrix: Solid Analysis Batch: 31239**  Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 31286

Sample Sample Spike MS MS Result Qualifier Analyte Added Result Qualifier Unit %Rec Limits D Gasoline Range Organics <49.9 U 999 941.9 mg/Kg 94 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 999 802 5 മറ 70 - 130<49.9 U mg/Kg

C10-C28)

MS MS %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 97 o-Terphenyl 97 70 - 130

Lab Sample ID: 890-2686-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** 

**Analysis Batch: 31239** 

Prep Type: Total/NA

Prep Batch: 31286

Spike MSD MSD %Rec RPD Sample Sample Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits **RPD** Limit 999 Gasoline Range Organics <49.9 829.1 mg/Kg 83 70 - 130 13 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 700.8 mg/Kg 70 70 - 130 14 20 C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 84 70 - 130 82 70 - 130 o-Terphenyl

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-31219/1-A

MB MB

**Matrix: Solid** 

**Analysis Batch: 31436** 

Client Sample ID: Method Blank **Prep Type: Soluble** 

Result Qualifier Analyte

RL Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 08/04/22 08:50 mg/Kg

Unit

LCS LCS

Lab Sample ID: LCS 880-31219/2-A

**Matrix: Solid** 

Client Sample ID: Lab Control Sample

%Rec

**Prep Type: Soluble** 

Analysis Batch: 31436

Spike Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 266.3 107 90 - 110 mg/Kg

Lab Sample ID: LCSD 880-31219/3-A

Client Sample ID: Lab Control Sample Dup

**Prep Type: Soluble** 

**Analysis Batch: 31436** 

Matrix: Solid

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier %Rec Limits RPD Limit Unit D Chloride 250 236.4 mg/Kg 95 90 \_ 110 12 20

# QC Sample Results

Client: Ensolum Job ID: 890-2685-1 Project/Site: PLU Big Sinks 25 SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2682-A-6-E MS Client Sample ID: Matrix Spike **Prep Type: Soluble** 

**Matrix: Solid** Analysis Batch: 31436

Sample Sample Spike MS MS %Rec Result Qualifier Result Qualifier Added Analyte Unit %Rec Limits Chloride 765 F1 252 1167 F1 mg/Kg 160 90 - 110

Lab Sample ID: 890-2682-A-6-F MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 31436

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier RPD Added Result Qualifier Limits Limit Analyte Unit D %Rec Chloride 765 F1 252 980.9 F1 mg/Kg 86 90 - 110 17 20

# **QC Association Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25

Job ID: 890-2685-1 SDG: Eddy County

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# **GC VOA**

Prep Batch: 31335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2685-1	SS02	Total/NA	Solid	5035	
MB 880-31335/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31335/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31335/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2645-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2645-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

# Analysis Batch: 31540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2685-1	SS02	Total/NA	Solid	8021B	31335
MB 880-31335/5-A	Method Blank	Total/NA	Solid	8021B	31335
MB 880-31573/5-A	Method Blank	Total/NA	Solid	8021B	31573
LCS 880-31335/1-A	Lab Control Sample	Total/NA	Solid	8021B	31335
LCS 880-31573/1-A	Lab Control Sample	Total/NA	Solid	8021B	31573
LCSD 880-31335/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31335
LCSD 880-31573/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31573
890-2645-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	31335
890-2645-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31335
890-2689-A-2-G MS	Matrix Spike	Total/NA	Solid	8021B	31573
890-2689-A-2-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31573

# Prep Batch: 31573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-31573/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31573/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31573/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2689-A-2-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2689-A-2-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

# Analysis Batch: 31777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2685-1	SS02	Total/NA	Solid	Total BTEX	

# **GC Semi VOA**

# Analysis Batch: 31239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2685-1	SS02	Total/NA	Solid	8015B NM	31286
MB 880-31286/1-A	Method Blank	Total/NA	Solid	8015B NM	31286
LCS 880-31286/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	31286
LCSD 880-31286/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	31286
890-2686-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	31286
890-2686-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	31286

# Prep Batch: 31286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2685-1	SS02	Total/NA	Solid	8015NM Prep	
MB 880-31286/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-31286/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-31286/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2686-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

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# **QC Association Summary**

Client: Ensolum Job ID: 890-2685-1
Project/Site: PLU Big Sinks 25 SDG: Eddy County

GC Semi VOA (Continued)

Prep Batch: 31286 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2686-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

**Analysis Batch: 31403** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2685-1	SS02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 31219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2685-1	SS02	Soluble	Solid	DI Leach	
MB 880-31219/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-31219/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-31219/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2682-A-6-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2682-A-6-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 31436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2685-1	SS02	Soluble	Solid	300.0	31219
MB 880-31219/1-A	Method Blank	Soluble	Solid	300.0	31219
LCS 880-31219/2-A	Lab Control Sample	Soluble	Solid	300.0	31219
LCSD 880-31219/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	31219
890-2682-A-6-E MS	Matrix Spike	Soluble	Solid	300.0	31219
800-2682-A-6-F MSD	Matrix Snike Dunlicate	Soluble	Solid	300.0	31210

# Lab Chronicle

Client: Ensolum

Project/Site: PLU Big Sinks 25

SDG: Eddy County

Client Sample ID: SS02

Lab Sample ID: 890-2685-1

Matrix: Solid

Date Collected: 07/28/22 09:15 Date Received: 07/28/22 13:50

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	31335	08/02/22 14:31	MR	EETSC MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31540	08/05/22 19:55	MR	EETSC MIC
Total/NA	Analysis	Total BTEX		1			31777	08/08/22 14:27	SM	EETSC MII
Total/NA	Analysis	8015 NM		1			31403	08/03/22 11:13	SM	EETSC MII
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	31286	08/02/22 08:40	DM	EETSC MIC
Total/NA	Analysis	8015B NM		1			31239	08/02/22 16:17	SM	EETSC MIC
Soluble	Leach	DI Leach			5.04 g	50 mL	31219	08/01/22 16:08	SMC	EETSC MIC
Soluble	Analysis	300.0		1			31436	08/04/22 15:11	CH	EETSC MID

#### Laboratory References:

EETSC MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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# **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-2685-1 Project/Site: PLU Big Sinks 25

SDG: Eddy County

#### **Laboratory: Eurofins Midland**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority Texas		ogram	Identification Number	<b>Expiration Date</b>
		AP T104704400-22-24		06-30-23
The following analytes the agency does not of	' '	ut the laboratory is not certif	led by the governing authority. This list ma	ay include analytes for
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM		Solid	Total TPH	

**Method Description** 

**Total BTEX Calculation** 

Microextraction

Volatile Organic Compounds (GC)

Diesel Range Organics (DRO) (GC)

Diesel Range Organics (DRO) (GC)

**Deionized Water Leaching Procedure** 

Anions, Ion Chromatography

Closed System Purge and Trap

# **Method Summary**

Client: Ensolum

Method

8021B

Total BTEX

8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

Project/Site: PLU Big Sinks 25

Job ID: 890-2685-1

SDG: Eddy County

Protocol	Laboratory
SW846	EETSC MID
TAL SOP	EETSC MID
SW846	EETSC MID
SW846	EETSC MID
MCAWW	EETSC MID
SW846	EETSC MID

EETSC MID **EETSC MID** 

SW846

**ASTM** 

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. 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:

EETSC MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

# **Sample Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25

Job ID: 890-2685-1

SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2685-1	SS02	Solid	07/28/22 09:15	07/28/22 13:50	0.2

Date/Time

Received by: (Signature)

Relinquished by: (Signature)

38.33 (345C

Date/Time

(Signature)

Relinquisped by: (Agnature)

# Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296

**Environment Testing** 

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Xenco

Work Order No:

Project Manager:	acome Morrisser	15587		Bill to: (if different)	erent)	Correct Corees		Work Order Comments
	noolum			Company Name:	ame:	XTO ENECGT	Program:	UST/PST
Address:				Address:		/	State of Project:	
City, State ZIP:				City, State ZIP:	<u>ن</u>		Reporting: Level II Level III	Reporting: Level III   Level III   PST/UST   TRRP   Level IV
Phone:	31-257-803	1205	Email:				Deliverables: EDD	ADaPT ☐ Other:
Project Name:	d 340 See	45 25	Mul.	Turn Around			ANALYSIS REQUEST	Preservative Codes
Project Number: 07	18 KK- BO	13	Routine	Rush	Pres. Code			None: NO DI Water: H <sub>2</sub> O
Project Location:	20,00	\	Due Date:					Cool: Cool MeOH: Me
Sampler's Name: PO #;	S		TAT starts the the lab, if rece	TAT starts the day received by the lab, if received by 4:30pm	y, u			HCL: HC HNO 3: HN H <sub>2</sub> SO 4: H <sub>2</sub> NaOH: Na
SAMPLE RECEIPT	Temp Blank:	Yes	Wet Ice:	(Yes) No	eters			H <sub>3</sub> PO <sub>4</sub> : HP
Samples Received Intact:	Ves No	Thermometer ID:		MW	K			NaHSO 4: NABIS
Cooler Custody Seals:	Yes No NATA	Correction Factor:	ctor:	10.	0		800.0685 Chain of Custody	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>
Sample Custody Seals:	Yes No N/A	Temperature Reading:	Reading:	9 . 4.1		H	0007-000	Zn Acetate+NaOH: Zn
Total Containers:		Corrected Temperature:	mperature:	7.0	1	71		NaOH+Ascorbic Acid: SAPC
Sample Identification	ion Matrix	Date Sampled	Time	Depth Gr	Grab/ # of Comp Cont	1		Sample Comments
5502	2	7-28	300	7 7.	7			
		_		_		_		

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO<sub>2</sub> Na Sr Tl Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471 Eurofins Xerco. A minimum charge of \$55.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xerco, A minimum charge of \$55.00 will be enforced unless previously negotiated. TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U otice 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 fearore. 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 Circle Method(s) and Metal(s) to be analyzed 200.8 / 6020: Total 200.7 / 6010

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# **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-2685-1

SDG Number: Eddy County

List Source: Eurofins Carlsbad

Login Number: 2685 List Number: 1 Creator: Clifton, Cloe

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.	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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# **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-2685-1 SDG Number: Eddy County

List Source: Eurofins Midland

Login Number: 2685 List Number: 2 Creator: Rodriguez, Leticia

List Creation: 08/01/22 08:22 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	

N/A

<6mm (1/4").

Containers requiring zero headspace have no headspace or bubble is

**Environment Testing** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Tacoma Morrissey Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 3/6/2023 2:09:59 PM

# **JOB DESCRIPTION**

PLU Big Sinks 25 Battery SDG NUMBER 03E1558046

# **JOB NUMBER**

890-4227-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Released to Imaging: 5/13/2025 9:12:25 AM

# **Eurofins Carlsbad**

# **Job Notes**

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 3/6/2023 2:09:59 PM

Authorized for release by Jessica Kramer, Project Manager <u>Jessica.Kramer@et.eurofinsus.com</u> (432)704-5440

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

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Client: Ensolum Laboratory Job ID: 890-4227-1 Project/Site: PLU Big Sinks 25 Battery SDG: 03E1558046

# **Table of Contents**

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# **Definitions/Glossary**

Job ID: 890-4227-1 Client: Ensolum Project/Site: PLU Big Sinks 25 Battery SDG: 03E1558046

**Qualifiers** 

**GC VOA** Qualifier **Qualifier Description** 

S1-Surrogate recovery exceeds control limits, low 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** 

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** 

Detection Limit (DoD/DOE) DL

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) Most Probable Number MPN Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NFG 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)

Relative Percent Difference, a measure of the relative difference between two points RPD

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

#### **Case Narrative**

Client: Ensolum Job ID: 890-4227-1 Project/Site: PLU Big Sinks 25 Battery

SDG: 03E1558046

Job ID: 890-4227-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-4227-1

#### Receipt

The sample was received on 3/2/2023 2:03 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C

#### **Receipt Exceptions**

The following sample was received and analyzed from an unpreserved bulk soil jar: SS05 (890-4227-1).

#### **GC VOA**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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.

Matrix: Solid

# **Client Sample Results**

Client: Ensolum
Project/Site: PLU Big Sinks 25 Battery

Job ID: 890-4227-1
SDG: 03E1558046

roject/Site: PLU Big Sinks 25 Battery

SDG: 03E1558046

Lab Sample ID: 890-4227-1

Client Sample ID: SS05

Date Collected: 03/02/23 10:50

Date Received: 03/02/23 14:03

Sample Depth: 0.5'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		03/03/23 09:48	03/03/23 16:38	1
Toluene	<0.00198	U	0.00198	mg/Kg		03/03/23 09:48	03/03/23 16:38	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		03/03/23 09:48	03/03/23 16:38	1
m-Xylene & p-Xylene	< 0.00396	U	0.00396	mg/Kg		03/03/23 09:48	03/03/23 16:38	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		03/03/23 09:48	03/03/23 16:38	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		03/03/23 09:48	03/03/23 16:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)		S1-	70 - 130			03/03/23 09:48	03/03/23 16:38	1
1,4-Difluorobenzene (Surr)	0	S1-	70 - 130			03/03/23 09:48	03/03/23 16:38	1
- Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			03/06/23 14:38	1
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH		- <u> </u>	50.0	mg/Kg	— <del>-</del>	Prepared	03/06/23 14:42	DII Fac
-							00/00/20 14.42	1
Method: SW846 8015B NM - Dies							00/00/20 14.42	1
monitor offord out of the Pilot	sel Range Orga	nics (DRO)	(GC)				00/00/20 14.42	1
	• •	nics (DRO) Qualifier	(GC)	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Gasoline Range Organics	• •	Qualifier	• •	Unit mg/Kg	<u>D</u>	Prepared 03/03/23 09:08		Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U	RL		<u>D</u>	<u>·</u>	Analyzed	
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result < 50.0 <50.0	Qualifier U	FL 50.0	mg/Kg	<u>D</u>	03/03/23 09:08	Analyzed 03/03/23 14:43 03/03/23 14:43	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <50.0	Qualifier U	RL 50.0	mg/Kg	<u> </u>	03/03/23 09:08	Analyzed 03/03/23 14:43	1
Analyte Gasoline Range Organics (GRO)-C6-C10	Result	Qualifier U U U	50.0 50.0 50.0 Limits	mg/Kg	<u> </u>	03/03/23 09:08 03/03/23 09:08 03/03/23 09:08 Prepared	Analyzed 03/03/23 14:43 03/03/23 14:43 03/03/23 14:43 Analyzed	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.0 <50.0 <50.0	Qualifier U U U	FL 50.0 50.0 50.0	mg/Kg	<u>D</u>	03/03/23 09:08 03/03/23 09:08 03/03/23 09:08	Analyzed 03/03/23 14:43 03/03/23 14:43	1
Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	Result	Qualifier U U U	50.0 50.0 50.0 Limits	mg/Kg	<u> </u>	03/03/23 09:08 03/03/23 09:08 03/03/23 09:08 Prepared	Analyzed 03/03/23 14:43 03/03/23 14:43 03/03/23 14:43 Analyzed	1 1 1 Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result	Qualifier U U Qualifier	RL 50.0 50.0 50.0 <b>Limits</b> 70 - 130 70 - 130	mg/Kg	<u>D</u>	03/03/23 09:08 03/03/23 09:08 03/03/23 09:08 Prepared 03/03/23 09:08	Analyzed 03/03/23 14:43 03/03/23 14:43 03/03/23 14:43  Analyzed 03/03/23 14:43	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result	Qualifier U U Qualifier	RL 50.0 50.0 50.0 <b>Limits</b> 70 - 130 70 - 130	mg/Kg	<u>D</u>	03/03/23 09:08 03/03/23 09:08 03/03/23 09:08 Prepared 03/03/23 09:08	Analyzed 03/03/23 14:43 03/03/23 14:43 03/03/23 14:43  Analyzed 03/03/23 14:43	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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# **Surrogate Summary**

Client: Ensolum Job ID: 890-4227-1
Project/Site: PLU Big Sinks 25 Battery SDG: 03E1558046

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Accept	ance Limits)
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
380-24991-A-11-F MS	Matrix Spike	115	104		
880-24991-A-11-G MSD	Matrix Spike Duplicate	113	111		
390-4227-1	SS05	0 S1-	0 S1-		
LCS 880-47713/1-A	Lab Control Sample	108	121		
CSD 880-47713/2-A	Lab Control Sample Dup	108	108		
MB 880-47713/5-A	Method Blank	103	106		
Surrogate Legend					
BFB = 4-Bromofluorober	nzene (Surr)				
DFBZ = 1,4-Difluorobenz	zene (Surr)				

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-25349-A-1-B MS	Matrix Spike	93	84	
880-25349-A-1-C MSD	Matrix Spike Duplicate	102	88	
890-4227-1	SS05	102	100	
LCS 880-47692/2-A	Lab Control Sample	94	100	
LCSD 880-47692/3-A	Lab Control Sample Dup	113	99	
MB 880-47692/1-A	Method Blank	110	112	
Surrogate Legend				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-4227-1 Project/Site: PLU Big Sinks 25 Battery SDG: 03E1558046

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-47713/5-A

**Matrix: Solid** Analysis Batch: 47723 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 47713

ı		IVID	IVID						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Benzene	<0.00200	U	0.00200	mg/Kg		03/03/23 09:48	03/03/23 14:40	1
	Toluene	<0.00200	U	0.00200	mg/Kg		03/03/23 09:48	03/03/23 14:40	1
	Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/03/23 09:48	03/03/23 14:40	1
	m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		03/03/23 09:48	03/03/23 14:40	1
	o-Xylene	<0.00200	U	0.00200	mg/Kg		03/03/23 09:48	03/03/23 14:40	1
	Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		03/03/23 09:48	03/03/23 14:40	1
ı									

мв мв

MD MD

Surrogate	%Recovery	Qualifier	Limits	Pr	epared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	03/03	3/23 09:48	03/03/23 14:40	1
1,4-Difluorobenzene (Surr)	106		70 - 130	03/03	3/23 09:48	03/03/23 14:40	1

Lab Sample ID: LCS 880-47713/1-A

Matrix: Solid

Analysis Batch: 47723

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 47713

	<b>Spike</b>	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09079	-	mg/Kg		91	70 - 130	
Toluene	0.100	0.09638		mg/Kg		96	70 - 130	
Ethylbenzene	0.100	0.1029		mg/Kg		103	70 - 130	
m-Xylene & p-Xylene	0.200	0.2158		mg/Kg		108	70 - 130	
o-Xylene	0.100	0.1022		mg/Kg		102	70 - 130	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	121		70 - 130

Lab Sample ID: LCSD 880-47713/2-A

**Matrix: Solid** 

Analysis Batch: 47723

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Prep Batch: 47713

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1026		mg/Kg		103	70 - 130	12	35	
Toluene	0.100	0.1042		mg/Kg		104	70 - 130	8	35	
Ethylbenzene	0.100	0.1088		mg/Kg		109	70 - 130	6	35	
m-Xylene & p-Xylene	0.200	0.2331		mg/Kg		117	70 - 130	8	35	
o-Xylene	0.100	0.1112		mg/Kg		111	70 - 130	8	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1.4-Difluorobenzene (Surr)	108		70 - 130

Lab Sample ID: 880-24991-A-11-F MS

**Matrix: Solid** 

Analysis Batch: 47723

Client Sample ID: Matrix Spike Prep Type: Total/NA

Prep Batch: 47713

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00201	U	0.100	0.1037		mg/Kg	_	104	70 - 130	
Toluene	<0.00201	U	0.100	0.1145		mg/Kg		114	70 - 130	

Client: Ensolum

Project/Site: PLU Big Sinks 25 Battery

Job ID: 890-4227-1 SDG: 03E1558046

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-24991-A-11-F MS

**Matrix: Solid** 

Analysis Batch: 47723

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 47713

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Ethylbenzene	<0.00201	U	0.100	0.1208		mg/Kg		121	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2579		mg/Kg		129	70 - 130
o-Xylene	<0.00201	U	0.100	0.1236		mg/Kg		123	70 - 130

MS MS

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

**Client Sample ID: Matrix Spike Duplicate** 

Prep Type: Total/NA

Prep Batch: 47713

Lab Sample ID: 880-24991-A-11-G MSD **Matrix: Solid** 

**Analysis Batch: 47723** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00201	U	0.0996	0.1202		mg/Kg		121	70 - 130	15	35
Toluene	<0.00201	U	0.0996	0.1171		mg/Kg		118	70 - 130	2	35
Ethylbenzene	<0.00201	U	0.0996	0.1216		mg/Kg		122	70 - 130	1	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.2596		mg/Kg		130	70 - 130	1	35
o-Xylene	<0.00201	U	0.0996	0.1245		mg/Kg		125	70 - 130	1	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-47692/1-A

**Matrix: Solid** 

Analysis Batch: 47685

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 47692

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/03/23 08:08	03/03/23 08:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/03/23 08:08	03/03/23 08:35	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/03/23 08:08	03/03/23 08:35	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	03/03/23 08:08	03/03/23 08:35	1
o-Terphenyl	112		70 - 130	03/03/23 08:08	03/03/23 08:35	1

Lab Sample ID: LCS 880-47692/2-A

**Matrix: Solid** 

**Analysis B** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Batch: 47685						Prep Batch: 47692	
	Spike	LCS LCS				%Rec	
	Added	Result Qualifier	Unit	D	%Rec	Limits	

Analyte 999 946.6 95 70 - 130 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 999 1029 mg/Kg 103 70 - 130

C10-C28)

Job ID: 890-4227-1 Client: Ensolum Project/Site: PLU Big Sinks 25 Battery SDG: 03E1558046

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-47692/2-A

**Matrix: Solid** 

Analysis Batch: 47685

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA Prep Batch: 47692

LCS LCS

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 94 70 - 130 o-Terphenyl 100 70 - 130

Lab Sample ID: LCSD 880-47692/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Analysis Batch: 47685

Prep Type: Total/NA

Prep Batch: 47692

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 999 977.0 98 70 - 1303 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 999 1017 102 mg/Kg 70 - 13020

LCSD LCSD

Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 113 70 - 130 o-Terphenyl 99

Lab Sample ID: 880-25349-A-1-B MS Client Sample ID: Matrix Spike

**Matrix: Solid** 

C10-C28)

**Analysis Batch: 47685** 

Prep Type: Total/NA Prep Batch: 47692

Sample Sample MS MS Spike Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <50.0 U 999 888.3 mg/Kg 89 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 999 857.5 mg/Kg 84 70 - 130 C10-C28)

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 93 o-Terphenyl 84 70 - 130

Lab Sample ID: 880-25349-A-1-C MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** 

Analysis Batch: 47685

Prep Type: Total/NA

Prep Batch: 47692

Sample Sample MSD MSD RPD Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit U 999 1022 Gasoline Range Organics <50.0 102 70 - 130 14 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 999 897.5 mg/Kg 88 70 - 130 5 20 C10-C28)

MSD MSD

Released to Imaging: 5/13/2025 9:12:25 AM

Qualifier Surrogate %Recovery Limits 1-Chlorooctane 102 70 - 130 88 70 - 130 o-Terphenyl

# QC Sample Results

Job ID: 890-4227-1 Client: Ensolum Project/Site: PLU Big Sinks 25 Battery

%Rec

Limits

90 - 110

Client Sample ID: Method Blank

SDG: 03E1558046

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

RPD

Limit

RPD

Limit

Client Sample ID: Lab Control Sample

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-47744/1-A

**Matrix: Solid** 

Analysis Batch: 47760

мв мв

Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 03/03/23 15:10

Lab Sample ID: LCS 880-47744/2-A

Lab Sample ID: LCSD 880-47744/3-A

**Matrix: Solid** 

**Matrix: Solid** 

**Matrix: Solid** 

Analyte

Chloride

Chloride

Analysis Batch: 47760

Analysis Batch: 47760

Analyte Chloride

Spike Added 250

Result 230.3

LCS LCS

LCSD LCSD

MSD MSD

Qualifier

Result

306.3

Result

230.0

Qualifier Unit

Qualifier

mg/Kg

Unit

mg/Kg

Client Sample ID: Lab Control Sample Dup

D

%Rec

%Rec

92

%Rec Limits RPD 90 - 110

Client Sample ID: Matrix Spike **Prep Type: Soluble** 

Analysis Batch: 47760

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Qualifier %Rec Result Unit Limits Chloride 65.6 249 305.7 90 - 110 mg/Kg

Spike

Added

249

Sample Sample

Qualifier

Result

65.6

Spike

Added

250

Lab Sample ID: 890-4225-A-7-C MSD

Lab Sample ID: 890-4225-A-7-B MS

**Matrix: Solid** 

Analysis Batch: 47760

Analyte

Unit

mg/Kg

%Rec

97

%Rec Limits 90 - 110

Client Sample ID: Matrix Spike Duplicate

0 20

**Prep Type: Soluble** 

RPD

# **QC Association Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25 Battery

Job ID: 890-4227-1 SDG: 03E1558046

#### **GC VOA**

#### Prep Batch: 47713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4227-1	SS05	Total/NA	Solid	5035	
MB 880-47713/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-47713/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-47713/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24991-A-11-F MS	Matrix Spike	Total/NA	Solid	5035	
880-24991-A-11-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

# Analysis Batch: 47723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4227-1	SS05	Total/NA	Solid	8021B	47713
MB 880-47713/5-A	Method Blank	Total/NA	Solid	8021B	47713
LCS 880-47713/1-A	Lab Control Sample	Total/NA	Solid	8021B	47713
LCSD 880-47713/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	47713
880-24991-A-11-F MS	Matrix Spike	Total/NA	Solid	8021B	47713
880-24991-A-11-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	47713

#### **Analysis Batch: 47947**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4227-1	SS05	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

# Analysis Batch: 47685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4227-1	SS05	Total/NA	Solid	8015B NM	47692
MB 880-47692/1-A	Method Blank	Total/NA	Solid	8015B NM	47692
LCS 880-47692/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	47692
LCSD 880-47692/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	47692
880-25349-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	47692
880-25349-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	47692

#### Prep Batch: 47692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4227-1	SS05	Total/NA	Solid	8015NM Prep	
MB 880-47692/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-47692/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-47692/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-25349-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-25349-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

#### Analysis Batch: 47948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4227-1	SS05	Total/NA	Solid	8015 NM	

# HPLC/IC

#### Leach Batch: 47744

<del>_</del>					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4227-1	SS05	Soluble	Solid	DI Leach	
MB 880-47744/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-47744/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-47744/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Project/Site: PLU Big Sinks 25 Battery

# **QC Association Summary**

Client: Ensolum

Job ID: 890-4227-1

SDG: 03E1558046

# **HPLC/IC** (Continued)

# Leach Batch: 47744 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4225-A-7-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4225-A-7-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### **Analysis Batch: 47760**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4227-1	SS05	Soluble	Solid	300.0	47744
MB 880-47744/1-A	Method Blank	Soluble	Solid	300.0	47744
LCS 880-47744/2-A	Lab Control Sample	Soluble	Solid	300.0	47744
LCSD 880-47744/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	47744
890-4225-A-7-B MS	Matrix Spike	Soluble	Solid	300.0	47744
890-4225-A-7-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	47744

# **Lab Chronicle**

Client: Ensolum Job ID: 890-4227-1 Project/Site: PLU Big Sinks 25 Battery SDG: 03E1558046

**Client Sample ID: SS05** Lab Sample ID: 890-4227-1 Date Collected: 03/02/23 10:50

Matrix: Solid

Date Received: 03/02/23 14:03

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	47713	03/03/23 09:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	47723	03/03/23 16:38	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47947	03/06/23 14:38	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47948	03/06/23 14:42	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	47692	03/03/23 09:08	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	47685	03/03/23 14:43	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	47744	03/03/23 12:54	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	47760	03/03/23 16:49	CH	EET MID

#### **Laboratory References:**

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

# **Accreditation/Certification Summary**

Client: Ensolum Job ID: 890-4227-1 Project/Site: PLU Big Sinks 25 Battery

SDG: 03E1558046

#### **Laboratory: Eurofins Midland**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority		ogram	Identification Number	<b>Expiration Date</b>	
Texas	NE	ELAP	T104704400-22-25	06-30-23	
The following analytes the agency does not of	• •	it the laboratory is not certif	ied by the governing authority. This list ma	ay include analytes fo	
Analysis Method	Prep Method	Matrix	Analyte		
8015 NM		Solid	Total TPH		

# **Method Summary**

Client: Ensolum

Project/Site: PLU Big Sinks 25 Battery

Job ID: 890-4227-1

SDG: 03E1558046

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: PLU Big Sinks 25 Battery

Job ID: 890-4227-1

SDG: 03E1558046

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4227-1	SS05	Solid	03/02/23 10:50	03/02/23 14:03	0.5'

# **Chain of Custody**

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334

Tacoma Morrissey	Page    Comments	Davis - J Date - De DE 2000 Dave - 2000 3			6 4								5 3
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Page  r Comments  r Coll Cool  Cool: Cool HCL: HC H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> H <sub>3</sub> PO <sub>4</sub> : HP NaHSO <sub>4</sub> : NABIS Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub> Zn Acetate+NaOh NaOH+Ascorbic A  Sample Co Incident ID: NAPP22131484 Cost Center: AFE:  AFE:  AFE:  Na Sr TI Sn U V Na Sr TI Sn U V	Page  r Comments  r Coll Cool: Cool H2S04: H2 H3P04: H	tions ontrol gotlated.	assigns standard terms and conditi due to circumstances beyond the co ill be enforced unless previously neg	co, its affiliates and subcontractors. It neurred by the client if such losses are enco, but not analyzed. These terms w	Eurofins Xen r expenses in to Eurofins X	company to ny losses o submitted	m client oblity for a ch sample	rchase order from the second of the second o	titutes a valid pu I shall not assun project and a cha	of samples consi it of samples and applied to each r	nd relinquishment of the cost of \$85.00 will be	s document a inco will be lia ilnimum charg	Notice: Signature of thi of service. Eurofins Xe of Eurofins Xenco_A n
Manager:   Tacoma Morrissey	EL Paso, TX (915) 595-3443, Lubbock, TX (906) 794-1296	Na Sr II Sn U V 31 / 245.1 / 7470 / 74	Se Ag TIU Hg:	Cd Ca Cr Co Cu Fe Pb Wd Cr Co Cu Pb Mn Mo Ni	Ba Be Co	Sb As B	1 Al RCRA	M Texas 1 LP 6010: 8	TCLP / SP	žed 8F	)0.8 / 6020: s) to be analyz	5010 20 and Metal(	Total 200.7 / Circle Method(s)
Manager:   Tacoma Morrissey	EL Paso, TX (915) 985-3443, Lubbook, TX (926) 794-1296												
Manager:   Tacoma Morrissey	EL Paso, TX (915) 585-3443, Lubbook, TX (806) 794-1296	lmorrissey@ensclum.com											
Manager:   Tacoma Morrissey   Bill to: (d diferent)   Garret Green   Face   F	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296												
Manager:   Tacoma Morrissey   Bill to: (if different)   Carriel Green   Company Name:   Carriel Green   Carr	EL Paso, TX (915) 585-3443, Lubbock, TX (808) 794-1296					12	1						
Manager:   Tacoma Morrissey	Bill to: (if different)   Garret Green   State of Project:   City, State ZIP:   Carlsbad, NM (875) 982-7550, Carlsbad, NM (875) 982-750, Ca	AFE:				2			$\int$				
Manager:	Bill to: (if different)   Garret Green   Page   Work Order Comments												
Manager:   Tacoma Morrissey   Bill to: (if different)   Garret Green   Morrissey   Bill to: (if different)   Garret Green   Morrissey   Bill to: (if different)   Garret Green   Morrissey   Bill to: (if different)   Garret Green   Morrissey   M	EL Paso, TX (915) 585-3443, Lubbock, TX (805) 794-1296	Cost Center:									/	/	Ý
Manager:   Tacoma Morrissey	EL Paso, TX (915) 585-3443, Lubbock, TX (805) 794-1296	NAPP2213148421			$\dashv$	$\dashv$							
Manager:   Tacoma Morrissey   Bill fo: (if different)   Garret Green   St.	EL Paso, TX (915) 595-3443, Lubbock, TX (806) 794-1296	Incident ID:			_	-				3/2/2023	s	05	SS
Manager:   Tacoma Morrissey	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296   Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Sample Comments				CHLOF				Date Sampled	Matrix	entification	Sample Ide
Manager:   Tacoma Morrissey	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199    Www.xen.co.com   Page	Na CH+Ascorbic Acid: SAFC						0.0	mperature:	Corrected Te			Total Containers:
Manager:   Tacoma Morrissey   Bill to: (if different)   Garret Green   Morrissey   Bill to: (if different)   Garret Green   Morrissey   Mork Order Comments	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	Zn Acetate+NaOH: Zn					1	1	Reading:	Temperature	S		Sample Custody Si
Manager:   Tacoma Morrissey   Bill to: (if different)   Garret Green   Page	EL Paso, TX (915) 585-3443, Lubbock. TX (806) 794-1296   Hobbs, NM (575) 392-7550, Carisbad, NM (575) 988-3199	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>		Chain of		PA	P	0	ctor:	Correction Fa	No MA		Cooler Custody Se
EL Paso, TX (915) 585-3443, Lubbock, TX (805) 794-1296	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	NaHSO4: NABIS				: 30	ara	LOG MI	D.	Thermometer		Intact:	Samples Received
Manager:   Tacoma Morrissey   Bill to: (if different)   Garret Green   Page	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	H <sub>3</sub> PO <sub>4</sub> : HP				0.0)	mete	1	Wet Ice:		Temp Blank:		SAMPLE RECE
Manager:   Tacoma Morrissey   Bill to: (if different)   Company Name:   Ensolum   State ZIP:   Carlsbad, NM 88220   City, State ZIP:   C	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296						ers	/ed by 4:30pm	the lab, if recei				PO#:
	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296   Hobbs, NM (575) 392-7550, Carisbad, NM (575) 988-3199		-				Ì	lay received by	TAT starts the		Kase Parke		Sampler's Name:
Manager:   Tacoma Morrissey   Bill to: (if different)   Company Name:   Company Name:   Company Name:   Company Name:   Corrisbad, NM 88220   Email:   Garret. Green   City, State ziP:   Carlsbad, NM 88220   Email:   Garret. Green   City, State ziP:   Carlsbad, NM 88220   City, State ziP:   Carlsbad, NM 88220   City, State ziP:   Carlsbad, NM 88220   Email:   Garret. Green   City, State ziP:   Carlsbad, NM 88220   Carlsbad, NM 88220   City, State ziP:   Carlsbad, NM 88220   City,	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296   Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	2						24hr	Due Date:		2.1819, -103.8	з З	Project Location:
Manager:   Tacoma Morrissey   Bill to: (if different)   Garret Green   Morrissey   Morri	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199  Www.xenco.com Page  Work Order Comments  Work Order Comments  Work Order Comments  Program: UST/PST   PRP   Brownfields   RRC   State of Project: City, State ZIP: Carlsbad, NM 88220  Garret.Green@ExxonMobil.com  ANALYSIS REQUEST  Deliverables: EDD   ADaPT   Other:						Code	<b>⊘</b> Rush	Routine	0,	03E1558046		Project Number:
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296         Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199       www.xenco.com       Page         Manager:       Tacoma Morrissey       Bill to: (if different)       Garret Green       Garret Green       Program: UST/PST	EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199  Bill to: (if different) Company Name:  XTO Energy Address:  3104 E. Green St. City, State ZIP: Carlsbad, NM 88220 City, State ZIP: Carlsbad, NM 88220 City State SIP: Carlsbad, NM 88220 Company Name: City State SIP: Carlsbad, NM 88220 Company Name: City State SIP: Carlsbad, NM 88220 Company Name: City State SIP: Carlsbad, NM 88220 Company Name: City State SIP: Carlsbad, NM 88220 Company Name: City State SIP: Carlsbad, NM 88220 Company Name: City State SIP: Carlsbad, NM 88220 Company Name: City State SIP: Carlsbad, NM 88220 Company Name: Company	Preservative Codes	EST	ANALYSIS REQU				round	Turn A	Battery	Big Sinks 25	PLU	Project Name:
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199  Tacoma Morrissey  Bill to: (if different) Ensolum Company Name: XTO Energy 3122 National Parks Hwy Address: 3104 E. Green St. Carlsbad, NM 88220  Carlsbad, NM 88220  El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296  Www.xenco.com Page  Work Order Comments Program: UST/PST   PRP   Brownfields   RRC   State of Project: Reporting: Level II   Level III   PST/UST   TRRP	xo, TX (915) 585-3443, Lubbock, TX (806) 794-1296  NM (575) 392-7550, Carlsbad, NM (575) 988-3199  www.xenco.com Page  www.xenco.com Page  Work Order Comments  XTO Energy  3104 E. Green St.  Carlsbad, NM 88220  Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐		Deliverables: EDD		om	nMobil.c	@Exxc	arret. Greer	Email:		-2946	303-887	Phone:
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199  Tacoma Morrissey  Bill to: (if different) Company Name:  XTO Energy  3104 E. Green St.  Address:  Address:  Address:  BEPaso, TX (915) 585-3443, Lubbock, TX (806) 794-1296  Www.xenco.com Page  Work Order Comments  Program: UST/PST   PRP   Brownfields   RRC	NM (575) 392-7550, Carlsbad, NM (575) 988-3199  Carret Green  XTO Energy  XTO Energy  3104 E. Green St.  State of Project:  State of Project:		Reporting: Level II Level III		. NM 88220	Carlsbad		ity, State ZIP	0		, NM 88220	Carlsbac	City, State ZIP:
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Xenco         EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296           Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199         www.xenco.com         Page           Tacoma Morrissey         Bill to: (if different)         Garret Green         Work Order Comments	so, TX (915) 585-3443, Lubbock, TX (806) 794-1296 , NM (575) 392-7550, Carlsbad, NM (575) 988-3199  www.xenco.com Page  Work Order Comments		Program: UST/PST ☐ PRP☐		rgy	XTO Ene	ie.	ompany Nan	0			Ensolum	Company Name:
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	Sampler		Lab PM	3			Carrier T	Carrier Tracking No(s).		COC No.			
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Company Eurofins Environment Testing South Centr				Accreditations Required (See NELAP - Texas	Required (See	note)				Job #: 890-4227-1	97_1		
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Note: Since laboratory accreditations are subject to change. Eurofins Environment Testing South Central LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attenting to said compliance to Eurofins Environment Testing South Central, LLC.	nt Testing South Central bove for analysis/tests/mantral LLC attention immunitial LLC attention	LLC places the owner atrix being analyzed the ediately If all requeste	rship of method, ar ne samples must b ed accreditations a	alyte & accredit	ation complian o the Eurofins e, return the si	ce upon our su Environment i	bcontract lab Festing South	oratories Th Central LLC sting to said c	is sample ship laboratory or compliance to	oment is forw other instruct	rarded under c	toe upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the Environment Testing South Central. LLC laboratory or other instructions will be provided. Any changes to igned Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central. LLC	
Possible Hazard Identification Unconfirmed				Sample I	Sample Disposal ( A f	66	may be assessed if samples are retained longer	assessed if samp	les are ret	tained long	than 1	month)	
Deliverable Requested I II III, IV, Other (specify)	Primary Deliverable Rank	e Rank 2		Special In	Special Instructions/	QC Requirements	ments					morning	
Empty Kit Relinquished by	Date	ite		Time		7	Me	Method of Shipment.	nent.				
Religioushed by	Date/Time:		Company	Received				Date	Date/Time <sup>.</sup>			Company	
Relinquished by	Date/Time <sup>.</sup>	The state of the s	Company	Received by	ed by			Date	Date/Time.			Company	
j	Date/Time		Company	Received by:	ed by:			Date	Date/Time:			Company	L
Custody Seals Intact: Custody Seal No				Cooler	Cooler Temperature(	(s) °C and Other Remarks	er Remarks.						

3/6/2023

# **Login Sample Receipt Checklist**

Client: Ensolum Job Number: 890-4227-1 SDG Number: 03E1558046

Login Number: 4227 List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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	

# **Login Sample Receipt Checklist**

Client: Ensolum

Job Number: 890-4227-1

SDG Number: 03E1558046

List Source: Eurofins Midland List Creation: 03/03/23 01:06 PM

List Number: 2 Creator: Teel, Brianna

Login Number: 4227

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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is	True	

Euronns Carisbau

Released to Imaging: 5/13/2025 9:12:25 AM

5

3

4

5

9

11

13

14

<6mm (1/4").



APPENDIX C NMOCD

**Notifications** 

#### **Dan Moir**

From: Green, Garrett J <garrett.green@exxonmobil.com>

**Sent:** Thursday, July 21, 2022 11:57 PM

**To:** Kalei Jennings; Tacoma Morrissey; Ben Belill; Stuart Hyde **Subject:** FW: XTO - Sampling Notification (Week of 7/25/22 - 7/29/22)

# [ \*\*EXTERNAL EMAIL\*\*]

From: Green, Garrett J

Sent: Thursday, July 21, 2022 3:57 PM

To: 'ocd.enviro@state.nm.us' <ocd.enviro@state.nm.us>; 'Bratcher, Mike, EMNRD' <mike.bratcher@state.nm.us>;

'Hamlet, Robert, EMNRD' <Robert.Hamlet@state.nm.us>
Cc: DelawareSpills /SM <DelawareSpills@exxonmobil.com>

Subject: XTO - Sampling Notification (Week of 7/25/22 - 7/29/22)

All,

XTO plans to complete final sampling activities at the following sites the week of July 25, 2022.

#### Monday

PLU Big Sinks 25 CTB/ NAPP2214544127

#### Tuesday

PLU Big Sinks 25 CTB/ NAPP2214544127

#### Wednesday

PLU C1 Frac Pond / NAPP2207743395

Thursday

#### Friday

PLU Big Sinks Fed 25 Battery / NAB1921742793

Thank you,

#### **Garrett Green**

Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

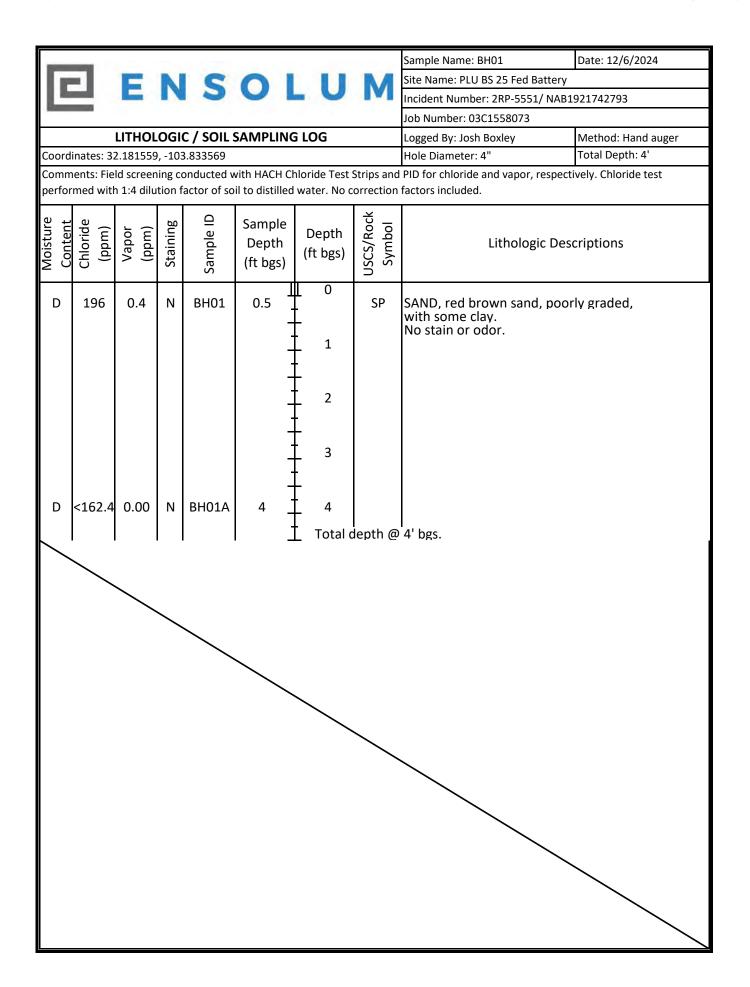
XTO Energy, Inc.

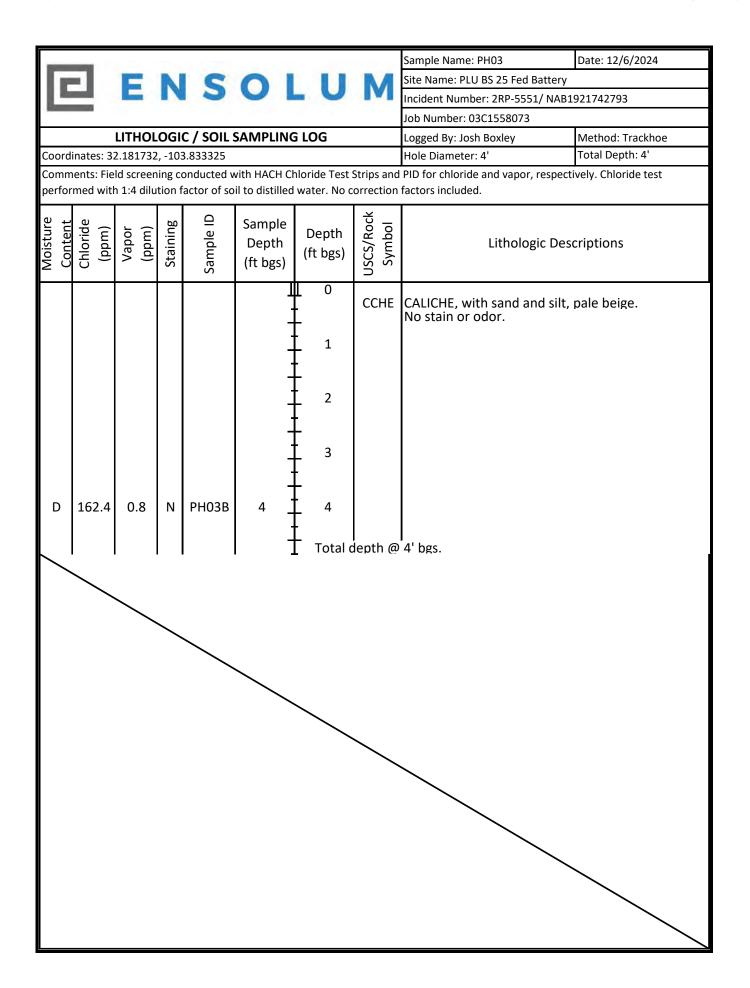
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

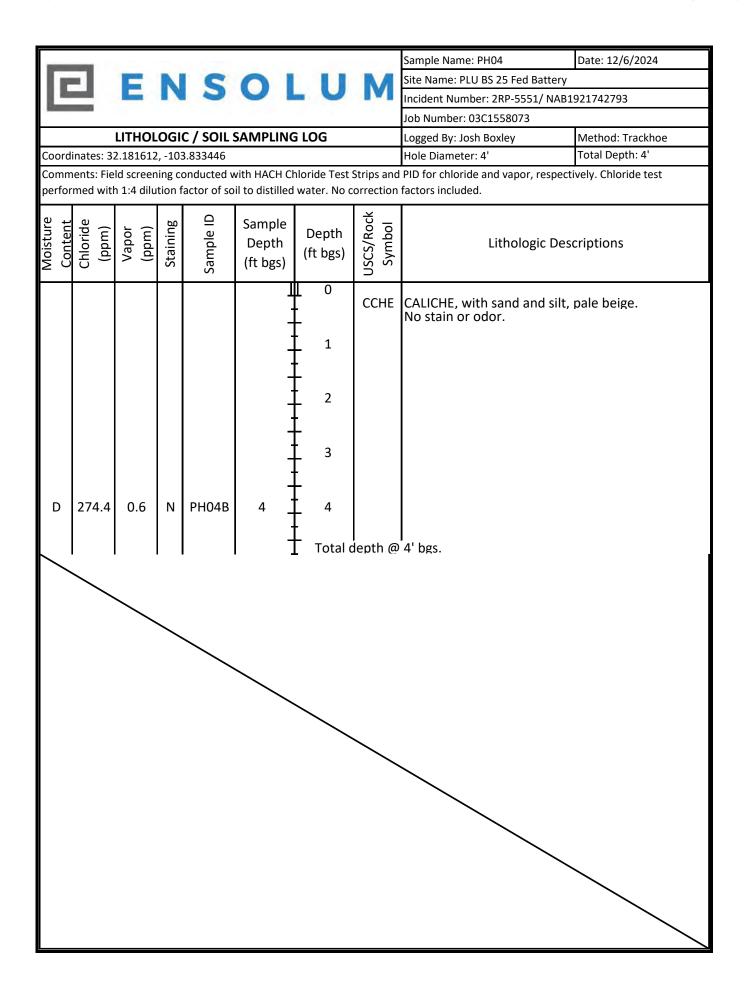


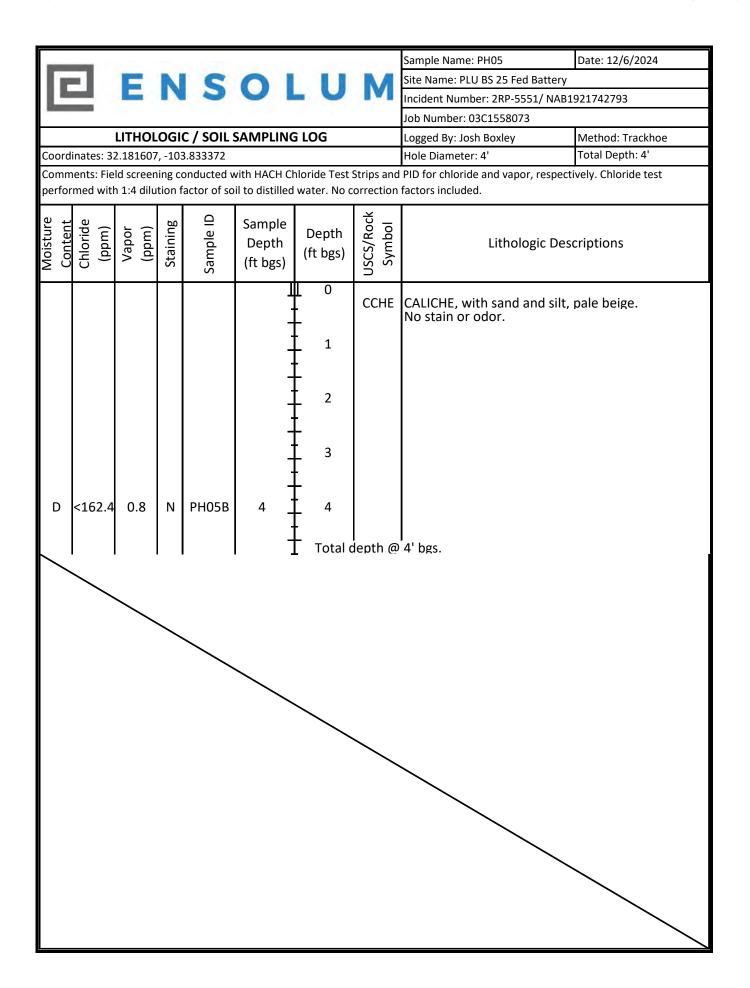
**APPENDIX E** 

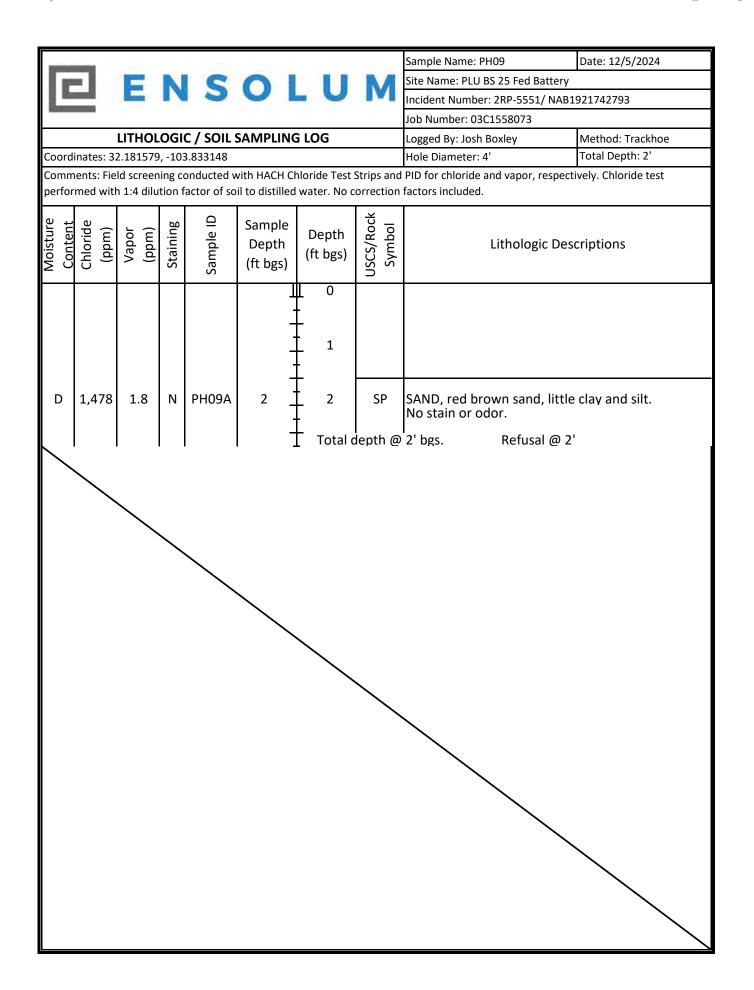
Boring Logs (2024)

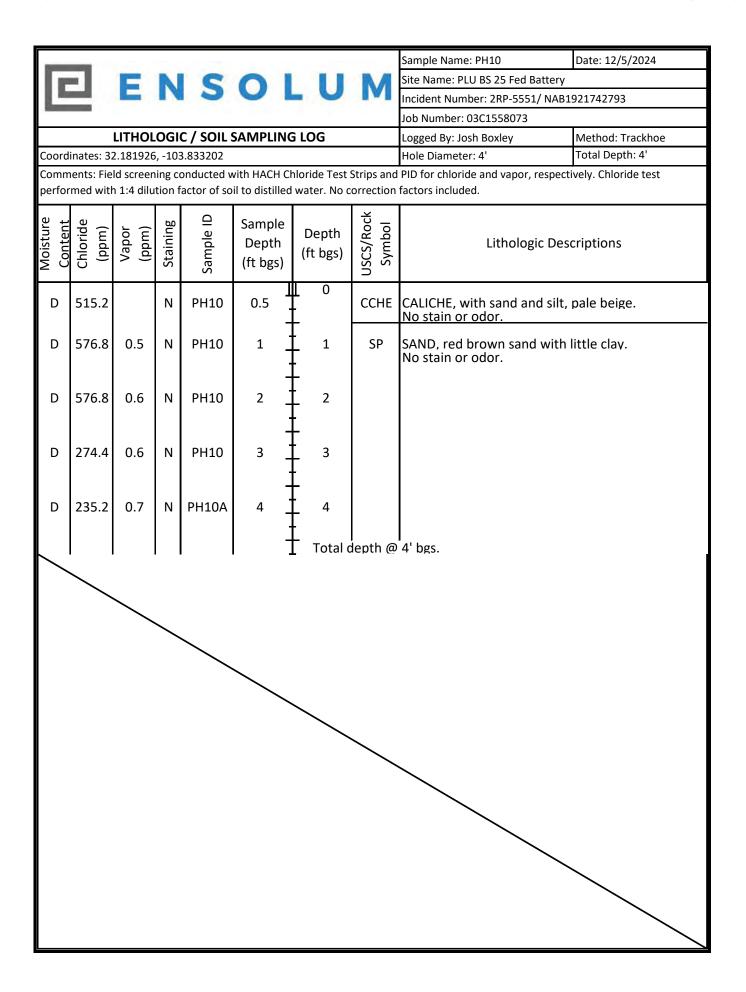




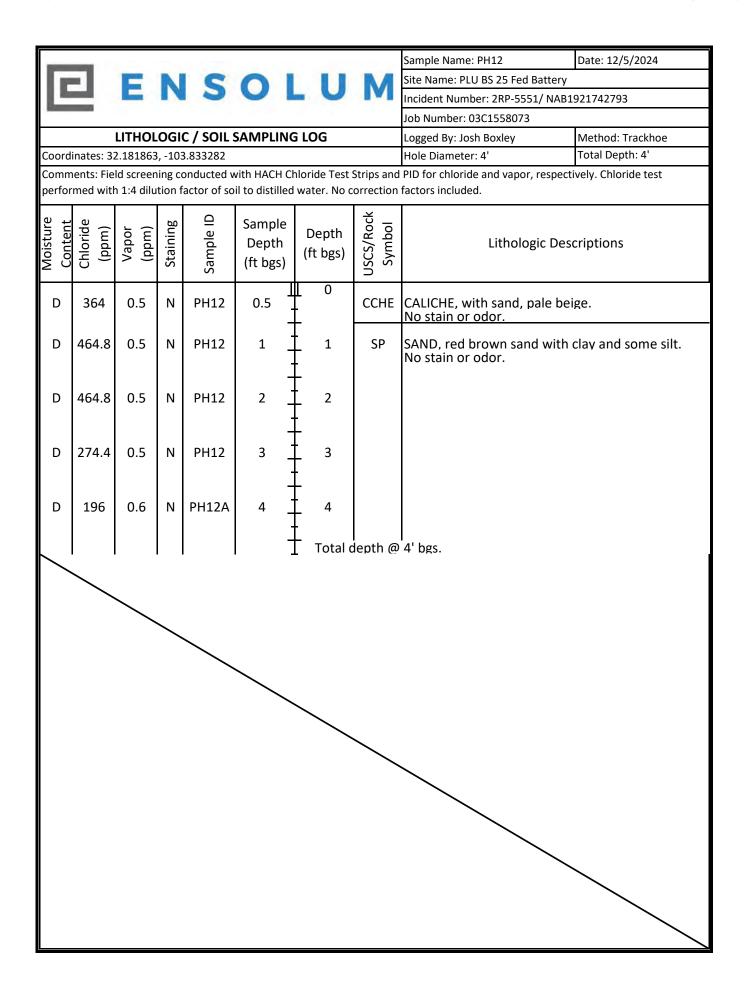




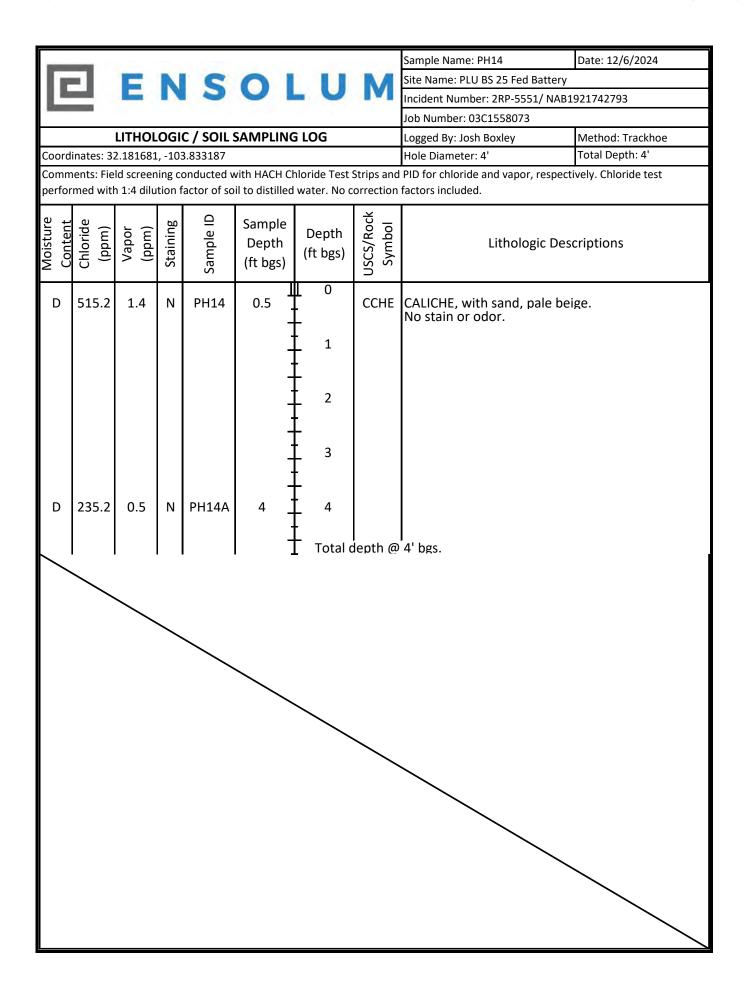




								Carrada Narra a BUIA	D-+ 42/5/2024
		_						Sample Name: PH11	Date: 12/5/2024
	a l		N	S	OI	U	M	Site Name: PLU BS 25 Fed Battery Incident Number: 2RP-5551/ NAE	
								Job Number: 03C1558073	31921/42/93
<u> </u>		ITUO	061	C / SOUL 4	SAMPLING	5106			Mothod: Trackle
Coordina					AWIPLING	LUG		Logged By: Josh Boxley Hole Diameter: 4'	Method: Trackhoe Total Depth: 6'
Common					ii+h UACU CI	alarida Tast (	String and	PID for chloride and vapor, respec	*
			_					factors included.	ctively. Cilionae test
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	scriptions
D 4	464.8	1.6	Ν	PH11	0.5 <u> </u>	0	ССНЕ	CALICHE, with some silt, pagraded. No stain or odor.	ile beige, poorly
D 4	464.8	1.4	N	PH11	1 _	1	SP	SAND, red brown sand with No stain or odor.	n little clay.
D 5	576.8	1.6	N	PH11	2	_ 2			
D 4	414.4	1.3	N	PH11	3 _	- - - 3			
D	364	2.00	N	PH11A	4 _	- - 4	ССНЕ	CALICHE, hard packed with No stain or odor.	silty sand.
D 5	515.2	1.2	N	PH11	5 <u> </u>	- - - 5			
D 3	319.2	0.6	N	PH11	6	6	Takal d	epth @ 6' bgs.	
	ı	I	ı	ı	_	L	rotal de	eptn @ 6 bgs.	



								C 1 N 20142	D : 42/5/2024
		_						Sample Name: PH13	Date: 12/5/2024
	-21		N	5	OI	. U	M	Site Name: PLU BS 25 Fed Battery	
	- 0							Incident Number: 2RP-5551/ NAE	01321/42/33
<b> </b>		LITUO	001	C / SOUL 6	SAMPLING	2106		Job Number: 03C1558073	Mothody Trackle
Coord				3.833208	AWIPLING	LOG		Logged By: Josh Boxley Hole Diameter: 4'	Method: Trackhoe Total Depth: 4'
					iith HACH Ch	alorido Tost	String and	PID for chloride and vapor, respec	·
			_					factors included.	ctively. Chioride test
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic De	scriptions
D	515.2	1.2	N	PH13	0.5 <u> </u>	<u> </u>	CCHE	CALICHE, with sand, pale bo No stain or odor.	eige.
D	515.2	1.4	N	PH13	1 _	1	SP	SAND, red brown sand with poorly graded. No stain or odor.	n some clay,
D	414.4	1.4	N	PH13	2 _	2			
D	274.4	1.8	N	PH13	3 _	3			
D	319.2	1.3	N	PH13A	4 _	- - 4 -	CCHE	CALICHE, pale beige with si No stain or odor.	lt.
						Total	lepth @	4' bgs.	
			\						





**APPENDIX F** 

Photographic Log (2024 & 2025)



Photographic Log XTO Energy, Inc PLU Big Sinks 25 Federal Battery NAB1921742793





12/04/2024 Photograph 2 Photograph 1 Date:

Date: 12/06/2024

Description: SW01 through SW03 Sample Locations

Description: BH01 Sample Location

View: West

View: Southwest





Photograph 3

Date:

01/23/2025 Photograph 4

02/05/2025 Date:

Description: Excavation activities

Description: Backfilled excavation View: South-southeast

View: Northwest

Page 1 of 1



## **APPENDIX G**

Laboratory Analytical Reports and Chain of Custody Documentation (2024 & 2025)



December 09, 2024

TRACY HILLARD
ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD, NM 88220

RE: PLU BIG SINKS 25 FED BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/06/24 16:51.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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)

Celey D. Keene

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/06/2024 Sampling Date: 12/06/2024

Reported: 12/09/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Alyssa Parras

Applyand By 14

Project Location: XTO 32.181450, -103.833297

### Sample ID: SW 01 0-4 (H247440-01)

DTEV 0021D

BTEX 8021B	mg,	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16	
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86	
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20	
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38	
Total BTEX	<0.300	0.300	12/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.2	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	12/09/2024	ND	432	108	400	3.64	
TPH 8015M	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					
Surrogate: 1-Chlorooctane	70.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	67.8	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/06/2024 Sampling Date: 12/06/2024

Reported: 12/09/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Alyssa Parras

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

### Sample ID: SW 02 0-4 (H247440-02)

RTFY 8021R

B1EX 8021B	mg/	кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16	
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86	
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20	
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38	
Total BTEX	<0.300	0.300	12/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.3	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/09/2024	ND	432	108	400	3.64	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					
Surrogate: 1-Chlorooctane	78.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	75.4	% 49.1-14	8						

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Celey D. Keene



### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/06/2024 Sampling Date: 12/06/2024

Reported: 12/09/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Alyssa Parras

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

### Sample ID: SW 03 0-4 (H247440-03)

RTFY 8021R

mg/	кg	Anaiyze	а ву: Јн						
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16		
<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86		
<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20		
<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38		
<0.300	0.300	12/09/2024	ND						
98.2	% 71.5-13	4							
mg/kg		Analyzed By: KV							
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
48.0	16.0	12/09/2024	ND	432	108	400	3.64		
mg/	'kg	Analyze	d By: MS						
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<10.0	10.0	12/09/2024	ND	217	109	200	1.35		
<10.0	10.0	12/09/2024	ND	210	105	200	2.04		
<10.0	10.0	12/09/2024	ND						
76.2	% 48.2-13	4							
72.4	% 49.1-14	8							
	Result <0.050 <0.050 <0.050 <0.150 <0.300  98.2  mg/  Result 48.0  mg/  Result <10.0 <10.0 <76.2	<ul> <li>&lt;0.050</li> <li>&lt;0.050</li> <li>&lt;0.050</li> <li>&lt;0.050</li> <li>&lt;0.050</li> <li>&lt;0.150</li> <li>&lt;0.300</li> <li>0.300</li> <li>98.2 %     71.5-13     mg/kg     </li> <li>Result Reporting Limit</li> <li>48.0 16.0</li> <li>mg/kg</li> <li>Result Reporting Limit</li> <li>&lt;10.0</li> <li>10.0</li> <li>&lt;10.0</li> <li>10.0</li> <li>&lt;10.0</li> <li>10.0</li> <li>&lt;10.0</li> <li>48.2-13</li> </ul>	Result         Reporting Limit         Analyzed           <0.050	Result         Reporting Limit         Analyzed         Method Blank           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           < 0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           <0.050	<td>Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           &lt;0.050</td> 0.050         12/09/2024         ND         2.23         112         2.00         3.16           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           <0.050

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Celey D. Keene



### Analytical Results For:

**ENSOLUM** TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/06/2024 Sampling Date: 12/06/2024

Reported: 12/09/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Project Number: Sample Received By: 03C1558073 Alyssa Parras

Project Location: XTO 32.181450, -103.833297

### Sample ID: BH 01 0.5 (H247440-04)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16	
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86	
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20	
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38	
Total BTEX	<0.300	0.300	12/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	12/09/2024	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					
Surrogate: 1-Chlorooctane	80.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	77.8	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/06/2024 Sampling Date: 12/06/2024

Reported: 12/09/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Alyssa Parras

Analyzed By: JH

Project Location: XTO 32.181450, -103.833297

mg/kg

### Sample ID: BH 01A 4' (H247440-05)

BTEX 8021B

	<u> </u>								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16	
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86	
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20	
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38	
Total BTEX	<0.300	0.300	12/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.7	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2024	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					
Surrogate: 1-Chlorooctane	77.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	75.0	% 49.1-14	8						

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Celey D. Keene



### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/06/2024 Sampling Date: 12/06/2024

Reported: 12/09/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Alyssa Parras

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

### Sample ID: PH 03B 4 (H247440-06)

RTFY 8021R

B1EX 8021B	mg	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16	
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86	
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20	
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38	
Total BTEX	<0.300	0.300	12/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.6	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	12/09/2024	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					
Surrogate: 1-Chlorooctane	77.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	74.7	% 49.1-14	8						

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Celey & Keene



### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/06/2024 Sampling Date: 12/06/2024

Reported: 12/09/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Alyssa Parras

Analyzed By: JH

Project Location: XTO 32.181450, -103.833297

mg/kg

### Sample ID: PH 04B 4 (H247440-07)

BTEX 8021B

	<u> </u>								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16	
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86	
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20	
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38	
Total BTEX	<0.300	0.300	12/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.3	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/09/2024	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					
Surrogate: 1-Chlorooctane	69.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	69.5	% 49.1-14	8						

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Celey D. Keene



### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/06/2024 Sampling Date: 12/06/2024

Reported: 12/09/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Alyssa Parras

Analyzed By: JH

Project Location: XTO 32.181450, -103.833297

mg/kg

### Sample ID: PH 05B 4 (H247440-08)

BTEX 8021B

	9,	9	7	7: :					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16	
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86	
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20	
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38	
Total BTEX	<0.300	0.300	12/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.0	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/09/2024	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					
Surrogate: 1-Chlorooctane	76.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	73.2	% 49.1-14	8						

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Celey D. Keene



### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/06/2024 Sampling Date: 12/06/2024

Reported: 12/09/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Alyssa Parras

Analyzed By: JH

Project Location: XTO 32.181450, -103.833297

mg/kg

### Sample ID: PH 14 0.5 (H247440-09)

BTEX 8021B

	9,	9	7	7: :					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16	
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86	
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20	
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38	
Total BTEX	<0.300	0.300	12/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.7	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	12/09/2024	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					
Surrogate: 1-Chlorooctane	74.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	73.3	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/06/2024 Sampling Date: 12/06/2024

Reported: 12/09/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Alyssa Parras

Analyzed By: JH

Project Location: XTO 32.181450, -103.833297

mg/kg

### Sample ID: PH 14A 4 (H247440-10)

BTEX 8021B

	9,	9	7	7: :					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16	
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86	
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20	
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38	
Total BTEX	<0.300	0.300	12/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.8	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/09/2024	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					
Surrogate: 1-Chlorooctane	69.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	68.0	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



### **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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Celeg D. Keene

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

> Observed Time:

000

Sample Condition

CHECKED BY: (Initials)

Turnaround Time:

Bacteria (only) Sample Condition
Cool Intact Observed Temp.

Yes Yes
No Corrected Temp.

Observed Temp. °C Corrected Temp. °C

Cost Center:

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

## 101 East Marland, Hobbs, NM 88240

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

	(575) 393-2326 FA	FAX (575) 393-2476	76					SISA IVIN	VSIS REQUEST	FST	
ompany Name: Ensolum, LLC	Ensolum, LLC			BILL TO	10	-	1	77.5	- 1		1
oject Manager:	Surveying	ACIO		P.O. #:		_	-				
dress: 3122 Na	tional Parks Hwy			Company: XTO Energy Inc	nergy Inc						
ty: Carlsbad		State: NM	Zip: 88220	Attn: Colton Brown	wn		_			_	_
hone #: 305	5 319 9604	Fax #:		Address: 3104 E Green St	Green St					_	
niect #: 03	01	Project Owner: XTO	XTO	City: Carlsbad			_				
roject Name:	ALI BIASINA	24	ted Bathery	State: NM Zip:	Zip: 88220		_				
	2 8	72.65	1 1	Phone #:					_		_
ojeca Lomo:	1			Fax #:			_		_		
ampier Name: Josiiua Boxiey	JOSHUA DOXIEY		MATRIX	PRESERV.	SAMPLING		_				
Lab I.D.	Sample I.D.	Depth (feet)	RAB OR (C)OMP. ONTAINERS OUNDWATER STEWATER			Chlorides	X3T8 H9T	, , , , , , , , , , , , , , , , , , ,			
OHITHO	SINT	200	7	À	-	X	X	\			
<b>V</b>	CIM2	20	C		15/14 1450	X	1	10			
No	5003	2,5	×	8	16.W 195	X	X				
	DHZ SAC	200	6 1	1 12	26.24 09.30						
1-2	71014	7	- 5		0950						
50	DIN0 3 B	-2	-		1460						
76	Shorid	2			1000						
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æ		2.0		-	Moo			>			
-	A11110	2	- -	W 12	2624 1415	X	X	0	-	-	-
LEASE NOTE: Liability at nailyses. All claims including	nd Damages. Cardinal's liability and ing those for negligence and any other	client's exclusive remedy for a cause whatsoever shall be requested damages, including	**LEASE NOTE: Lability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or fort, shall be limited to the amount paid by the client for the paper of th	ntract or fort, shall be limited to the ag and received by Cardinal within ions, loss of use, or loss of profits in	amount paid by the client fo 30 days after completion of t nourred by client, its subsidia	r the the applicable tries,					
ervice. In no event shall C ffliates or successors aris	shall Cardinal be liable for incidental or consecutions arising out of or related to the performance and Rv.	ce of services hereunder by  Date:	hereunder by Cardinal, regardless of whether such claim is based upon any of the above Received By:	claim is based upon any of the abo	Verbal Result:	3 7	☐ Yes	□ No Add'I	Add'I Phone #:		
Relinquished By:	Jan Sall	Time;	Received by.		All Result	ts are em	ensolum	All Results are emailed. Please provide Email address: コヴ - <b>@ensolum.com</b> , TMorrissey@ensolum.com,	nail address: y@ensolum.com バルリーロバルらし	emailed. Please provide Email address: - @ensolum.com, TMorrissey@ensolum.com, KThomason@ensolum.com - 人人の Recolum かっつんのないおのはたしした。のか	olum.com
Relinquished By:	y.	Date:	Received By:		REMARK Incident:	(S: AB)	17/20	12793			
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December 11, 2024

TRACY HILLARD
ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD, NM 88220

RE: PLU BIG SINKS 25 FED BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/10/24 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

 Received:
 12/10/2024
 Sampling Date:
 12/05/2024

 Reported:
 12/11/2024
 Sampling Type:
 Soil

Reported: 12/11/2024 Sampling Type: Soil
Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact

Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyand By 14

Project Location: XTO 32.181450, -103.833297

### Sample ID: PH 09 0.5 (H247473-01)

DTEV 0021D

BTEX 8021B	mg	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2024	ND	2.26	113	2.00	6.91	
Toluene*	<0.050	0.050	12/10/2024	ND	2.16	108	2.00	5.61	
Ethylbenzene*	<0.050	0.050	12/10/2024	ND	2.15	108	2.00	4.27	
Total Xylenes*	<0.150	0.150	12/10/2024	ND	6.44	107	6.00	4.38	
Total BTEX	<0.300	0.300	12/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.2	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/11/2024	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2024	ND	236	118	200	1.40	
DRO >C10-C28*	<10.0	10.0	12/10/2024	ND	233	117	200	0.669	
EXT DRO >C28-C36	<10.0	10.0	12/10/2024	ND					
Surrogate: 1-Chlorooctane	103	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.7	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: 12/11/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

### Sample ID: PH 09A 2' (H247473-02)

BTEX 8021B	mg	/kg	Analyze	ed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2024	ND	2.26	113	2.00	6.91	
Toluene*	<0.050	0.050	12/10/2024	ND	2.16	108	2.00	5.61	
Ethylbenzene*	<0.050	0.050	12/10/2024	ND	2.15	108	2.00	4.27	
Total Xylenes*	<0.150	0.150	12/10/2024	ND	6.44	107	6.00	4.38	
Total BTEX	<0.300	0.300	12/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	100	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	12/11/2024	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2024	ND	236	118	200	1.40	
DRO >C10-C28*	<10.0	10.0	12/10/2024	ND	233	117	200	0.669	
EXT DRO >C28-C36	<10.0	10.0	12/10/2024	ND					
Surrogate: 1-Chlorooctane	107	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	104	% 49.1-14	8						

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### Analytical Results For:

**ENSOLUM** TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: Sampling Type: Soil 12/11/2024

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Project Number: Sample Received By: 03C1558073 Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

### Sample ID: PH 10 0.5 (H247473-03)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2024	ND	2.26	113	2.00	6.91	
Toluene*	<0.050	0.050	12/10/2024	ND	2.16	108	2.00	5.61	
Ethylbenzene*	<0.050	0.050	12/10/2024	ND	2.15	108	2.00	4.27	
Total Xylenes*	<0.150	0.150	12/10/2024	ND	6.44	107	6.00	4.38	
Total BTEX	<0.300	0.300	12/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.4	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	12/11/2024	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2024	ND	236	118	200	1.40	
DRO >C10-C28*	<10.0	10.0	12/10/2024	ND	233	117	200	0.669	
EXT DRO >C28-C36	<10.0	10.0	12/10/2024	ND					
Surrogate: 1-Chlorooctane	93.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	88.6	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: 12/11/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

### Sample ID: PH 10A 4 (H247473-04)

RTFY 8021R

B1EX 8021B	mg	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2024	ND	2.26	113	2.00	6.91	
Toluene*	<0.050	0.050	12/10/2024	ND	2.16	108	2.00	5.61	
Ethylbenzene*	<0.050	0.050	12/10/2024	ND	2.15	108	2.00	4.27	
Total Xylenes*	<0.150	0.150	12/10/2024	ND	6.44	107	6.00	4.38	
Total BTEX	<0.300	0.300	12/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	12/11/2024	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2024	ND	236	118	200	1.40	
DRO >C10-C28*	<10.0	10.0	12/10/2024	ND	233	117	200	0.669	
EXT DRO >C28-C36	<10.0	10.0	12/10/2024	ND					
Surrogate: 1-Chlorooctane	103	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.2	% 49.1-14	8						

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### Analytical Results For:

**ENSOLUM** TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: Sampling Type: Soil 12/11/2024

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Project Number: Sample Received By: 03C1558073 Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

### Sample ID: PH 11 0.5 (H247473-05)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2024	ND	2.26	113	2.00	6.91	
Toluene*	<0.050	0.050	12/10/2024	ND	2.16	108	2.00	5.61	
Ethylbenzene*	<0.050	0.050	12/10/2024	ND	2.15	108	2.00	4.27	
Total Xylenes*	<0.150	0.150	12/10/2024	ND	6.44	107	6.00	4.38	
Total BTEX	<0.300	0.300	12/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.5	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	12/11/2024	ND	400	100	400	3.92	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2024	ND	236	118	200	1.40	
DRO >C10-C28*	<10.0	10.0	12/10/2024	ND	233	117	200	0.669	
EXT DRO >C28-C36	<10.0	10.0	12/10/2024	ND					
Surrogate: 1-Chlorooctane	92.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.0	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: 12/11/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

### Sample ID: PH 11A 4 (H247473-06)

BTEX 8021B	mg	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2024	ND	2.26	113	2.00	6.91	
Toluene*	<0.050	0.050	12/10/2024	ND	2.16	108	2.00	5.61	
Ethylbenzene*	<0.050	0.050	12/10/2024	ND	2.15	108	2.00	4.27	
Total Xylenes*	<0.150	0.150	12/10/2024	ND	6.44	107	6.00	4.38	
Total BTEX	<0.300	0.300	12/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	100	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/11/2024	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2024	ND	236	118	200	1.40	
DRO >C10-C28*	<10.0	10.0	12/10/2024	ND	233	117	200	0.669	
EXT DRO >C28-C36	<10.0	10.0	12/10/2024	ND					
Surrogate: 1-Chlorooctane	90.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.8	% 49.1-14	18						

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### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: 12/11/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

### Sample ID: PH 12 0.5 (H247473-07)

RTFY 8021R

B1EX 8021B	mg	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2024	ND	2.26	113	2.00	6.91	
Toluene*	<0.050	0.050	12/10/2024	ND	2.16	108	2.00	5.61	
Ethylbenzene*	<0.050	0.050	12/10/2024	ND	2.15	108	2.00	4.27	
Total Xylenes*	<0.150	0.150	12/10/2024	ND	6.44	107	6.00	4.38	
Total BTEX	<0.300	0.300	12/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.8	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	12/11/2024	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2024	ND	236	118	200	1.40	
DRO >C10-C28*	<10.0	10.0	12/10/2024	ND	233	117	200	0.669	
EXT DRO >C28-C36	<10.0	10.0	12/10/2024	ND					
Surrogate: 1-Chlorooctane	96.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.5	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: 12/11/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Analyzed By: JH

Project Location: XTO 32.181450, -103.833297

mg/kg

### Sample ID: PH 12A 4 (H247473-08)

BTEX 8021B

	9,	9	7	7: :					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2024	ND	2.26	113	2.00	6.91	
Toluene*	<0.050	0.050	12/10/2024	ND	2.16	108	2.00	5.61	
Ethylbenzene*	<0.050	0.050	12/10/2024	ND	2.15	108	2.00	4.27	
Total Xylenes*	<0.150	0.150	12/10/2024	ND	6.44	107	6.00	4.38	
Total BTEX	<0.300	0.300	12/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.8	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	12/11/2024	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2024	ND	236	118	200	1.40	
DRO >C10-C28*	<10.0	10.0	12/10/2024	ND	233	117	200	0.669	
EXT DRO >C28-C36	<10.0	10.0	12/10/2024	ND					
Surrogate: 1-Chlorooctane	105	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: 12/11/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

### Sample ID: PH 13 0.5 (H247473-09)

RTFY 8021R

B1EX 8021B	mg	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2024	ND	2.26	113	2.00	6.91	
Toluene*	<0.050	0.050	12/10/2024	ND	2.16	108	2.00	5.61	
Ethylbenzene*	<0.050	0.050	12/10/2024	ND	2.15	108	2.00	4.27	
Total Xylenes*	<0.150	0.150	12/10/2024	ND	6.44	107	6.00	4.38	
Total BTEX	<0.300	0.300	12/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.5	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	12/11/2024	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2024	ND	236	118	200	1.40	
DRO >C10-C28*	<10.0	10.0	12/10/2024	ND	233	117	200	0.669	
EXT DRO >C28-C36	<10.0	10.0	12/10/2024	ND					
Surrogate: 1-Chlorooctane	88.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.1	% 49.1-14	8						

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Celey D. Keene



### Analytical Results For:

ENSOLUM TRACY HILLARD 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: 12/11/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

### Sample ID: PH 13A 4 (H247473-10)

RTFY 8021R

B1EX 8021B	mg	/ <b>kg</b>	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2024	ND	2.26	113	2.00	6.91	
Toluene*	<0.050	0.050	12/10/2024	ND	2.16	108	2.00	5.61	
Ethylbenzene*	<0.050	0.050	12/10/2024	ND	2.15	108	2.00	4.27	
Total Xylenes*	<0.150	0.150	12/10/2024	ND	6.44	107	6.00	4.38	
Total BTEX	<0.300	0.300	12/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.2	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/11/2024	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2024	ND	236	118	200	1.40	
DRO >C10-C28*	<10.0	10.0	12/10/2024	ND	233	117	200	0.669	
EXT DRO >C28-C36	<10.0	10.0	12/10/2024	ND					
Surrogate: 1-Chlorooctane	104	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	101	% 49.1-14	8						

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Celey D. Keine



### **Notes and Definitions**

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Freene

Relinquished By:

Time;400

10.24

Received By

unless made in writing and received by Cardinal within 30 days after comp

ed by client, its subsidiaries

letion of the applicable

Date: Time:

Received By

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Observed Temp.

Ö ô

CHECKED BY

Turnaround Time: Cost Center:

Standard

Bacteria (only) Sample Condition

Observed Temp. Corrected Temp. °C

harmometer ID

REMARKS: NATS 1921 74279 3

Kerosolution Consultants 6-1

All Results are emailed. Please provide Email address:

em, TMorrissey@ensolum.com, KThomason@ensolum.com

☐ Yes

ONO

Add'I Phone #:

(Initials)

Cool Intact
Wyes Wyes
No No Sample Condition

Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinalfabsnm.com

Relinquished By:

analyses. All claims including those service. In no event shall Cardinal b

# 101 East Marland, Hobbs, NM 88240

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

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Project Name: PLU By Sin \$5 Project #: 030,55807 Phone #: City: Carlsbad Project Manager: Company Name: Ensolum, LLC PLEASE NOTE: Liability and Da Sampler Name: Joshua Boxley Project Location: 32 (8/450 -Address: 3122 National Parks Hwy Lab I.D. PHIO 1550 PHION PHOG A Sample I.D. 11HB Katherine PHILA 100 ムーエク YZIHIS PHINA H12 409 b L Kann 103,6433297 Project Owner: XTO Fax #: State: NM Depth (feet) 2 0.51 7 5-0 Z 3 2 5 S 12 Batter Zip: 88220 53 (G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER MATRIX SOIL OIL SLUDGE OTHER Fax #: Phone #: State: NM City: Carlsbad Attn: Colton Brown P.O. #: Company: XTO Energy Inc Address: 3104 E Green St ACID/BASE: PRESERV XICE / COOL BILL TO OTHER 1 DATE 423 SAMPLING 250 5h21 1216 123 1215 1205 140 150 288 278 TIME Chlorides HdT 2 **BTEX** ANALYSIS REQUEST

Page 13 of 13



December 16, 2024

KATHERINE KHAN
ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD, NM 88220

RE: PLU BIG SINKS 25 FED BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/10/24 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/04/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 01 0.5 (H247475-01)

BTEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.8	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	12/11/2024	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	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	96.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	87.6	% 49.1-14	8						

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Celey D. Keene



## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/04/2024

Reported: Sampling Type: Soil 12/16/2024

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Tamara Oldaker Project Number: 03C1558073 Sample Received By:

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 02 0.5 (H247475-02)

BTEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.6	% 71.5-13	4						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1840	16.0	12/11/2024	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	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	93.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.8	% 49.1-14	8						

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Celey D. Keene



## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/04/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 03 0.5 (H247475-03)

BTEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.6	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	12/11/2024	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	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	82.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	73.1	% 49.1-14	18						

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Celey D. Keene



## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/04/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

## Sample ID: CS 04 0.5 (H247475-04)

RTFY 8021R

B1EX 8021B	тд/кд		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.7	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2920	16.0	12/11/2024	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	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	108	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	95.1	% 49.1-14	8						

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Celey D. Keene



## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/04/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

## Sample ID: CS 05 0.5 (H247475-05)

RTFY 8021R

BIEX 8021B	mg/kg		Anaiyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.0	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	12/11/2024	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	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	108	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	96.4	% 49.1-14	8						

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Celey D. Keene



12/04/2024

## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date:

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Analyzed By: JH

Project Location: XTO 32.181450, -103.833297

mg/kg

## Sample ID: CS 06 0.5 (H247475-06)

BTEX 8021B

	9/	9	7	7 5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.4	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3200	16.0	12/11/2024	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	103	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	96.0	% 49.1-14	8						

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## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/04/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Sample Received By: Project Number: 03C1558073 Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 07 0.5 (H247475-07)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.7	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	12/11/2024	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	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	99.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	88.2	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/04/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

## Sample ID: CS 08 0.5 (H247475-08)

RTFY 8021R

B1EX 8021B	тд/кд		Anaiyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.8	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2960	16.0	12/11/2024	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	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	92.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	81.6	% 49.1-14	8						

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## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/04/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Project Number: Sample Received By: 03C1558073 Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 09 0.5 (H247475-09)

BTEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.1	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3640	16.0	12/11/2024	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	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	104 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	91.4	% 49.1-14	8						

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## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/04/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Project Number: Sample Received By: 03C1558073 Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 10 0.5 (H247475-10)

BTEX 8021B	mg/kg		Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.7	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3880	16.0	12/11/2024	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	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	112 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.4	% 49.1-14	8						

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12/09/2024

## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date:

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

## Sample ID: CS 11 0.5 (H247475-11)

RTFY 8021R

B1EX 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	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.4	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3000	16.0	12/11/2024	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	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	87.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	80.1	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Analyzed By: JH

Project Location: XTO 32.181450, -103.833297

mg/kg

## Sample ID: CS 12 0.5 (H247475-12)

BTEX 8021B

DILX GOZID	11197	ng .	Andryzo	u by. 311					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	< 0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	< 0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.5	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4000	16.0	12/11/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	90.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	79.3	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

## Sample ID: CS 13 0.5 (H247475-13)

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.1	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3080	16.0	12/11/2024	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	94.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	80.9	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

## Sample ID: CS 14 0.5 (H247475-14)

RTFY 8021R

B1EX 8021B	mg,	/ <b>kg</b>	Anaiyze	а ву: ЈН					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (P	ID 99.1	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3360	16.0	12/11/2024	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	99.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.1	% 49.1-14	8						
· ·									

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Sample Received By:

12/09/2024

Tamara Oldaker

## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date:

Reported: 12/16/2024 Sampling Type: Soil
Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact

Project Name: PLU BIG SINKS 25 FED BATTERY
Project Number: 03C1558073

Project Location: XTO 32.181450, -103.833297

#### Sample ID: CS 15 0.5 (H247475-15)

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	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.6	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4240	16.0	12/11/2024	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	96.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.5	% 49.1-14	18						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

## Sample ID: CS 16 0.5 (H247475-16)

RTFY 8021R

B1EX 8021B	mg/	кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.3	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3520	16.0	12/11/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	94.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	82.8	% 49.1-14	8						

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12/09/2024

## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date:

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Analyzed By: JH

Project Location: XTO 32.181450, -103.833297

mg/kg

## Sample ID: CS 17 0.5 (H247475-17)

BTEX 8021B

	9/	9	7	,					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.7	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3480	16.0	12/11/2024	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	97.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.0	% 49.1-14	8						

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12/09/2024

## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date:

Reported: Sampling Type: Soil 12/16/2024

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Sample Received By: Tamara Oldaker Project Number: 03C1558073

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 18 0.5 (H247475-18)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.9	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	12/11/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	97.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.2	% 49.1-14	8						

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12/09/2024

Soil

## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: Reported: Sampling Type:

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Sample Received By: Project Number: 03C1558073 Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

12/16/2024

## Sample ID: CS 19 0.5 (H247475-19)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.4	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4160	16.0	12/11/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	98.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	87.1	% 49.1-14	8						

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## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Project Number: Sample Received By: 03C1558073 Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 20 0.5 (H247475-20)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.23	111	2.00	3.51	
Toluene*	<0.050	0.050	12/11/2024	ND	2.12	106	2.00	4.00	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.13	106	2.00	4.46	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.38	106	6.00	5.06	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.6	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	100	200	3.62	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	194	97.2	200	4.04	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	102 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.2	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 21 0.5 (H247475-21)

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	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1620	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	79.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	88.3	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 22 0.5 (H247475-22)

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	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1250	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	69.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	76.4	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

## Sample ID: CS 23 0.5 (H247475-23)

RTFY 8021R

mg/	<u>9</u>	7,	a By: JH					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
<0.300	0.300	12/11/2024	ND					
102 9	% 71.5-13	4						
mg/	/kg	Analyze	d By: CT					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
768	16.0	12/11/2024	ND	432	108	400	3.77	
mg/	'kg	Analyze	d By: MS					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
<10.0	10.0	12/11/2024	ND					
84.0	% 48.2-13	4						
93.4	% 49.1-14	8						
	Result <0.050 <0.050 <0.050 <0.150 <0.300  102 9  mg/  Result 768  mg/  Result <10.0 <10.0 <10.0	Result Reporting Limit <0.050 0.050 <0.050 0.050 <0.050 0.050 <0.150 0.150 <0.300 0.300  102 % 71.5-13  mg/kg  Result Reporting Limit 768 16.0  mg/kg  Result Reporting Limit <10.0 10.0 <10.0 10.0 <10.0 10.0	Result         Reporting Limit         Analyzed           <0.050	Result         Reporting Limit         Analyzed         Method Blank           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           < 0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           <0.050	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           <0.050

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Celey D. Keene



12/09/2024

Soil

## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Reported:

Sampling Date: Sampling Type: 12/16/2024

Project Name: PLU BIG SINKS 25 FED BATTERY

Sampling Condition: Cool & Intact Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 24 0.5 (H247475-24)

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	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 5	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg/	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	80.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	90.9	% 49.1-14	8						

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## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Sample Received By: Project Number: 03C1558073 Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 25 0.5 (H247475-25)

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	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3600	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg/	'kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	72.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	81.1	% 49.1-14	8						

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## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Reported:

Project Name: PLU BIG SINKS 25 FED BATTERY

12/16/2024

Project Number: 03C1558073

Project Location: XTO 32.181450, -103.833297 Sampling Date: 12/09/2024

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Tamara Oldaker

#### Sample ID: CS 26 0.5 (H247475-26)

TEX 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	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	75.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.0	% 49.1-14	8						

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## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: Sampling Type: Soil 12/16/2024

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 27 0.5 (H247475-27)

BTEX 8021B	mg/kg		Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	992	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	77.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	90.1	% 49.1-14	8						

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12/09/2024

## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date:

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 28 0.5 (H247475-28)

TEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	84.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	94.6	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 29 0.5 (H247475-29)

BTEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	82.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	91.4	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 30 0.5 (H247475-30)

TEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3080	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	74.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	82.1	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date:

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 31 0.5 (H247475-31)

TEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1710	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	80.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	88.7	% 49.1-14	8						

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Sampling Condition:

Sample Received By:

12/09/2024

Cool & Intact

Tamara Oldaker

## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date:

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY
Project Number: 03C1558073

Project Location: XTO 32.181450, -103.833297

93.6 %

49.1-148

Sample ID: CS 32 0.5 (H247475-32)

TEX 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	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 %	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg/	kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	85.1 9	% 48.2-13	4						

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Surrogate: 1-Chlorooctadecane



## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: Reported:

12/16/2024 Project Name: PLU BIG SINKS 25 FED BATTERY

Project Number: 03C1558073

Project Location: XTO 32.181450, -103.833297 12/09/2024

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Tamara Oldaker

## Sample ID: CS 33 0.5 (H247475-33)

TEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	100	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	80.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	90.1	% 49.1-14	8						

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12/09/2024

## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date:

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 34 0.5 (H247475-34)

BTEX 8021B	mg/kg		Analyze	Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3200	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	78.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.5	% 49.1-14	18						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 35 0.5 (H247475-35)

BTEX 8021B	mg	/kg	Analyze	ed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3760	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	78.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.9	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 36 0.5 (H247475-36)

BTEX 8021B	mg	/kg	Analyze	ed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4960	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	81.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	90.0	% 49.1-14	8						

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## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: Sampling Type: Soil 12/16/2024

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Tamara Oldaker Project Number: 03C1558073 Sample Received By:

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 37 0.5 (H247475-37)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3000	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	85.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	94.7	% 49.1-14	8						

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## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Reported:

12/16/2024

Project Name: PLU BIG SINKS 25 FED BATTERY

Project Number: 03C1558073

Project Location: XTO 32.181450, -103.833297 Sampling Date: 12/09/2024

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Tamara Oldaker

## Sample ID: CS 38 0.5 (H247475-38)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3240	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	96.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	106	% 49.1-14	8						

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## Analytical Results For:

**ENSOLUM** KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 39 0.5 (H247475-39)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	< 0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3040	16.0	12/11/2024	ND	432	108	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	86.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	94.8	% 49.1-14	8						

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## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/09/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: CS 40 0.5 (H247475-40)

BTEX 8021B	mg	/kg	Analyze	ed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.21	111	2.00	4.59	
Toluene*	<0.050	0.050	12/11/2024	ND	2.24	112	2.00	2.62	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.16	108	2.00	1.96	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.78	113	6.00	2.51	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/11/2024	ND	416	104	400	3.77	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	210	105	200	1.87	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	191	95.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	89.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	97.7	% 49.1-14	8						

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Celey D. Keene



## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: XTO 32.181450, -103.833297

ma/ka

## Sample ID: PH 07 B 4 (H247475-41)

RTFY 8021R

B1EX 8021B	mg	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.05	102	2.00	3.26	QM-07
Toluene*	<0.050	0.050	12/11/2024	ND	2.03	102	2.00	3.56	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.03	102	2.00	4.04	QM-07
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.11	102	6.00	4.57	QM-07
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.8	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/11/2024	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	101	200	1.59	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	188	93.8	200	0.492	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	87.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.6	% 49.1-14	8						

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Celey D. Kreene



## Analytical Results For:

ENSOLUM KATHERINE KHAN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 12/10/2024 Sampling Date: 12/05/2024

Reported: 12/16/2024 Sampling Type: Soil

Project Name: PLU BIG SINKS 25 FED BATTERY Sampling Condition: Cool & Intact
Project Number: 03C1558073 Sample Received By: Tamara Oldaker

Project Location: XTO 32.181450, -103.833297

## Sample ID: PH 08 B 4 (H247475-42)

BTEX 8021B	mg	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2024	ND	2.05	102	2.00	3.26	
Toluene*	<0.050	0.050	12/11/2024	ND	2.03	102	2.00	3.56	
Ethylbenzene*	<0.050	0.050	12/11/2024	ND	2.03	102	2.00	4.04	
Total Xylenes*	<0.150	0.150	12/11/2024	ND	6.11	102	6.00	4.57	
Total BTEX	<0.300	0.300	12/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/11/2024	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2024	ND	201	101	200	1.59	
DRO >C10-C28*	<10.0	10.0	12/11/2024	ND	188	93.8	200	0.492	
EXT DRO >C28-C36	<10.0	10.0	12/11/2024	ND					
Surrogate: 1-Chlorooctane	86.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.1	% 49.1-14	8						

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Celey D. Keene



## **Notes and Definitions**

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Freene

## 101 East Marland, Hobbs, NM 88240

## CHAIN-OF-CUST

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FURM-000 K	Delivered By: (Circle One) Sampler - UPS - Bus - Ott	Relinquished By:		analyses. All claims including those service. In no event shall Cardinal b affiliates or successors arising out of	10 0	90	X	16	5	4	CI	7	, ,	Lab I.D. 1	FOR LAB USE ONLY	Sampler Name: Joshua Boxley	Project Location:	Project Name: PL	Project #: 03CIS	Phone #: 303	City: Carlsbad	Address: 3122 National Parks Hwy	Project Manager:	Company Name: Ensolum, LLC
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cannot accept verbal	Sample Cool Cool	Received By:	Received By:	deemed waived unless made in writing without limitation, business interruit Cardinal, regardless of whether such	any rising whether based in o								C 1 ×	(G)RAB OR (C)OME # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	MATRIX		297/	NATON A	r: XTO		Zip: 88220			
Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com	Condition CHECKED BY: Intact (Initials) S Pres Poly No	, and the second	a Chille	ALEASE MVTE. Leasing and utilinges, cardinal stating and utility of any terms of the application of the applications in the profession of the applications. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and reviewed by Cardinal within 30 days after completion of the application, the profession of the applications	portract or lon, shall be limited to the amo								N. 124. 24	SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER:	PRESERV.	Fax #:	Phone #:	State: NM Zip: 88220	City: Carlsbad	Address: 3104 E Green St	Attn: Colton Brown	Company: XTO Energy Inc	P.O. #:	BILL TO
changes to cel	Thermometer ID ***  Correction Factor -0	REMARKS: Incident: N Cost Center:	All Results are e	ys after completion of the ed by client, its subsidiaries ated reasons or otherwise.	24 1145		12/5	012	1250	0h2)	1225	1215	2000		SAMPLING			8220		reen St		ergy Inc		0
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m.com	_		Verbal Result:   Yes   No   Add'l Phone #:  All Results are emailed. Please provide Email address:  Bensolum.com, TMorrissey@ensolum.com  No   Redulum.onm, IMOV 15   Add   No   No   No   No   No   No   No																					ANALYSIS REQ
	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C   Yes   Yes   No   No Corrected Temp. °C		☐ Yes ☐ No Add'I Phone #: mailed. Please provide Email address: @ensolum.com, KThomason@ensolum.com, KThomason.com,		-																			REQUEST

## 101 East Marland, Hobbs, NM 88240

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

State: NM Zip: 88220 Attn: Colton Brown  Fax #: Address: 3104 E Green St  Project Owner: XTO  State: NM Zip: 88220 Attn: Colton Brown  Address: 3104 E Green St  Project Owner: XTO  State: NM Zip: 88220  Phone #:  Project Owner: XTO  State: NM Zip: 88220  Phone #:  PRESERV. SAMPLING  PRESERV. SAMPL	Company Name: Ensolum, LLC	Project Manager: Karl	Address: 3122 National Parks Hwy	City: Carlsbad	Phone #: 303 319	03615	Project Name: PLU	10	Sampler Name: Joshua Boxley	FOR LAB USE ONLY	Lab I.D. Sar	150 //	12 (5)	213 613	14 (5)	27 67	200	2) 81	19 0	20 05	PLEASE NOTE: Liability and Damage, analyses. All claims including those for service. In no event shall Cardinal be lit	Relinquished By:	Dalinguiched Ry	Velliduisiied py.
State: NM Zp: 88220 Attn: Colton Brown  Fax #: Address: 3104 E Green St  Project Owner: XTO City: Carlsbad  One pth Comer: XTO State: NM Zp: 88220  MATRIX PRESERV SAMPLING  PRESERV SAMPLING  PRESERV SAMPLING  One pth Colton Brown  ATRIX PRESERV SAMPLING  One pth Colton Brown  ATRIX PRESERV SAMPLING  One pth Colton Brown  ATRIX PRESERV SAMPLING  One pth Colton Brown  One pth Colton Brown  ATRIX PRESERV SAMPLING  One pth Colton Brown  ATRIX PRESERV SAMPLING  One pth Colton Brown  ATRIX PRESERV SAMPLING  One pth Colton Brown	nsolum, LLC		Parks Hwy			7		-	Boxley		nple I.D.	_	2	2	I		79	518	619	ore	<ul> <li>Cerdinal's liability an negligence and any of able for incidental or or</li> </ul>	. Ill late		Delivered By: (Circle One)
Received By:    P.O.#:   P.O.#		LIV.		State: NM	Fax #:	Project Owner	25 Fed .	.833.			Depth (feet)								_	2.0	d client's exclusive remedy for ther cause whatsoever shall b onsequental damages, includi	0		Corrected Temp. "C
Company: XTO Energy Inc  Attn: Colton Brown  Address: 3104 E Green St  City: Carlsbad  State: NM Zip: 88220  Phone #:  PRESERV SAMPLING  PRESERV SAMPLING  DATE TIME DATE TIME DATE  INC DATE TIME DATE  INC DATE TIME DATE  INC D				Zip: 88220	1	: XTO	SALAN	197 1		T	# CONTAINERS GROUNDWATER WASTEWATER SOIL	X								0	any claim arsing whether oesest a deemed waived unless made in g without limitation, business into	Receive	Received By:	Oi
SAMPLING  SAMPLI	BILL	P.O. #:	Company: XT	Attn: Colton I	Address: 310	City: Carlsba		Phone #:	Fax #:		SLUDGE OTHER: ACID/BASE: ICE / COOL	×								X	writing and received by Cardinal v rruptions, loss of use, or loss of p	in Milde		0
ING  ITIME  O  O  O  O  O  O  O  O  O  O  O  O  O	L 70		O Energy In	Brown	4 E Green S	d.	Zip: 88220			SAMPL	DATE	12.10							-	12024	within 30 days after o rofits incurred by clie he above stated reas	R	1	
HE Ves I No Add'l Phone #:  Time: Standard Bacteria (only) Sample Cool Intact  No Street Ves I No Intact  Observed  Standard No Cool Intact  Observed  No Cool Intact  Observed  No Correcte  Observed  Observ	-		ō		*					NG		)965 \	00/500	7.00	7007	075	1027	050	550	405	ompletion of the a nt, its subsidiaries, ons or otherwise.	Verbal Results a	REMARKS: Incident: Cost Center	Turnaround
Yes   No   Add'l Phone #: ed. Please provide Email address: solum.com, TMorrissey@ensolum.com, KThomas Consultants LLC.com  92/14279 S  Standard   Bacteria (only) Sample Co Rush   Cool   Intact   Observer   Cool   Intact   Observer   No   Correcte	1		_				_	_				X		+	+	-					pplicable	ilt:   Ire email  @en	SATI	Time:
Ex. NM ZID: 88220 Address: 3104 E Green St Company, XTO Energy Inc Company, XTO Energy Inc Company, XTO Energy Inc Company, XTO Energy Inc Coly: Carlsbadd  Address: 3104 E Green St City: Carlsbadd  State: NM Zip: 88220 Phone 8: Fax #:  1											X							1	1		Yes III	92/74	44	
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N, KThomas Sample Co Observe	ANALYSIS REQUEST	_	_												+					E		"I Phone #: mail address: ey@ensolum.con		Bacteria (only) Cool Intact Over Yes No No
on@enso	JEST		_						_											-		n, KThomason@enso		) Sample Condition Observed Temp. °C Corrected Temp. °C

## 101 East Marland, Hobbs, NM 88240

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(313) 333-2320			BILL TO		ANALYSIS REQUEST
1 -		P			_
tional Parks H	book is	C	Company: XTO Energy Inc	nc	
City: Carlsbad	State: NM	Zip: 88220 At	Attn: Colton Brown		
Phone #: 303 319 9604		A	Address: 3104 E Green St	St	
55807			City: Carlsbad		
Project Name: PLU BIO SINKS	25 Fed .	the hand	State: NM Zip: 88220		
on: 22.14	50,-103,833297		Phone #:		
oshua		77	Fax #:		
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING	LING	
Lab I.D. Sample I.D.	Depth (feet)	RAB OR (C)OMP. CONTAINERS COUNDWATER ASTEWATER UL UDGE CHER:	ID/BASE: E/COOL THER:	BTEX TPH	X310
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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether blased in contract or bit, shall be instead to the arrown post by the process of the applicable analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analyses. All claims in children within and received by claims as subsidiaries, service, in no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits increased by claims.	lity and client's exclusive remedy for any any other cause whatsoever shall be de al or consequental damages, including w	nt's exclusive remedy for any claim arising whether Based in contract or tort, shall be istrated to the cause whatscever shall be deemed waived unless made in writing and received by Cardinal within a quental damages, including without limitation, business interruptions, loss of use, or loss of professional quental damages, including without limitation, business interruptions, loss of use, or loss of professional professional damages.	tort, shall be lethilled to the although peak eceived by Cardinal within 30 days after is of use, or loss of profits incurred by cl	amount para by the committee of the applicable to the applicable to completion of the applicable to curred by client, its subsidiaries.	
affiliates or successors arising out of or reliated to the performan Relinquished By:	Date: (Z-/D-24	Received By:	Makelle March	re en	Verbal Result:       □ Yes       □ No         Add'l Phone #:         All Results are emailed. Please provide Email address:         Qensolum.com, TMorrissey@ensolum.com, KThomason@ensolum.com         WKO Pashukan Consultation Address:         Quantity   Q
Relinquished By:	Date:	Received By:		REMARKS: NAS 192 1742795 Incident: Cost Center:	742793
(Circle O	T.mp. °C	Sample Condition Cool Intact Cool Intact	CHECKED BY:	6:	Standard Bacteria (only) Sample Condition  Rush Cool Intact Observed Temp.
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Sampler - UPS - Bus - Other:

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallábsnm.com

Corrected Temp. °C

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

May  State: NM Zip: 88220 Attn: Colton Brown  Anderess: 3104 E Green St  Project Owner: XTO City: Carisbad  Project Owner: XTO City: Carisbad  Project Owner: XTO City: Carisbad  Phone #:  Project Owner: XTO City: Sazzo  Phone		(5/5) 393-2326 1	FAX (5/5) 393-24/6	4/6						_
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State: NM Zip: 88220  Attn: Colton Brown  Attn: Colton Brown  Address: 3104 E Green S  Project Owner: XTO  City: Carlsbad  City: Carlsbad  State: NM Zip: 88220  MATRIX  Phone #:  Pax #:  PRESERV. SAMP	roject Manager:	Katherine	MM		P.O. #:					
State: NIM Zip: 88220  Address: 3104 E Green S  Project Owner: XTO  City: Carlsbad  State: NM Zip: 88220  MXS 75 Fed William Zip: 88220  Phone #:  Fax	Address: 3122 Na	ational Parks Hwy			Company: XTO Energy	Inc	_	_		
Address: 3104 E Green S  1558 075 Project Owner: XTO City: Carlsbad  PLU Bio Simks 15 Feet Bibbly  Project Owner: XTO State: NM Zip: 88220  Phone #:  Fax #:  Joshua Boxley  Depth (Feet)  Depth (City: Carlsbad  Phone #:  Fax #:  AATRIX PRESERV. SAMPL  PRESERV. SAMPL  AATRIX PRESERV. SAMPL  Fax #:  Fax #:  AATRIX PRESERV. SAMPL  PRESERV. SAMPL  Fax #:  AATRIX PRESERV. SAMPL  PRESERV. SAMPL  AATRIX PRESERV. SAMPL  PAX #:  AATRIX PRESERV. SAMPL  AATRIX PRESERV. SAMPL  PAX #:  AATRIX PRESERV. SAMPL  AATRIX PRESERV. SAMPL  PAX #:  AATRIX PRESERV. SAMPL  AATRIX PRESERV. SAMPL  PAX #:  AATRIX PRESERV. SAMPL  AATRIX PRESE	City: Carlsbad		State: NM	Zip: 88220	Attn: Colton Brown		_			
Project Owner: XTO  City: Carlsbad  State: NM Zip: 88220  WKS 25 F26 BMH2 Fax #:  Fax	hone #: 503	19	Fax #:		Address: 3104 E Green	St	_	_		
Phone #:    Fax #:	roiect #: 03CI	556075	Project Owne	r: XTO	City: Carlsbad		_	_		
Depth (C) S ST297    Fax #: Fa	roject Name:	- 1	35	MAN AND AND AND AND AND AND AND AND AND A						_
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Depth (C) OMP.    C   C   C   C   C   C   C   C   C	Sampler Name:	Joshua Boxley								_
Lab I.D. Sample I.D. (feet)    Committee	FOR LAB USE ONLY			MATRIX		LING				_
### The provided By:    Date:   Desirated By:   Turnascound plane;   Stanfard   Date:   Stanfard   Stanfard   Stanfard   Date:   Stanfard   Sta	Lab I.D.	Sample I.D.	Depth (feet)	CONTAINERS ROUNDWATER ASTEWATER DIL	THER: CID/BASE: EE/COOL THER:					
32 CS 33 34 CS 34 35 CS 35 35 CS 35 36 CS 35 36 CS 35 37 CS 35 38 CS 35 38 CS 35 38 CS 35 38 CS 35 38 CS 35 38 CS 36 38	12	1450	2,0	X	N 12824	× 0521	X			
33 C5.35  34 C5.36  35 C5.35  36 C5.36  37 C5.37  38 C5.36  38 C5.36  38 C5.36  39 C5.36  30 C5.	36	25.53				1255	-			
35 C5 35  36 C5 36  37 C5 31  38 C5 36  38 C5 36  38 C5 36  38 C5 36  39 C5 36  39 C5 36  30 C5 31  30 C5	N					1250				_
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Time:  Delivered By: Circle One)  O 2 2 Sample Condition  O 3 CHECKED BY:  Tumaround Time:  Standard D 3 Sample Condition  O 2 Sample Condition  O 3 Sample Condition  O 3 Sample Condition  O 3 Sample Condition  O 3 Sample Condition  O 3 Sample Condition  O 4 Sample Condition  O 5 Sample Conditio	36	3253				1270		-		
Time:  Delivered By: (Circle One)  Observed Temp. *C	75	622				1042				
TREASE NOTE: Liability and Demages. Continuit's liability and client's activative minesty for any claim arising whether fixed in contract or bot, shall be limited to the applicable analyses. All claims including those for incidental or consequential damages, including whoold installation, business interruptions, lose of use, or lose of profiles incurred by Cardinal installation, business interruptions, lose of use, or lose of profiles incurred by client, its subcidents.  Relinquished By:    Date:   Date:   Date:   Received By:   Time:   Cost Center:   Cost Ce	25	27,23				1045				
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether fossible in content of tot, shall be deemed whether such do the amount pold by the client for the analyses. All claims including those for negligence and any other cause whatevower shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable affiliates or successors arising out of or related to the performance of services interruptions, loss of use, or loss of profile incurred by client, its subsidiaries.  Relinquished By:    Date:   Date:   Received By:	25	05.50				Sult	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
PLEASE NOTE: Liability and Damages. Cardinall's liability and clearfts acclusive remoty for any claim arising whether feased in normand or fort, shall be limited to the amount paul by the contribution of the applicable analyses. All claims including those for negligence and any other clause whatsoever shall be deemed whether unless and envisional within 30 days after completion of the applicable service. In no event shall be liable for tradenial or consequential damages, including without limitation, business interruptions, loss of jose of profite incurred by clerk, its subsidiaries.  Relinquished By:    Date:   Date:   Received By:   Cardinal interruptions and in white such claim is based upon any of the above stated reasons or otherwise.   Yes   No   Add'l Phone #:	4	00052	10.5	01 4	1 129.24	1228 /	1	-		L
Date: Date: Received By:  Time: 400  Date: Received By:  Time: Sample Gondition CHECKED BY:	PLEASE NOTE: Liability ar analyses, All claims includi service. In no event shall C	d Damages. Cardinal's liability ar ng those for negligence and any c ardinal be liable for incidental or c	d client's exclusive remedy to ther cause whatsoever shall b consequental damages, includ	r any claim arising whether 5aséd in contr be deemed walved unless made in writing ling without limitation, business interruption	act or tort, shall be limited to the amount pak and received by Cardinal within 30 days afte is, loss of use, or loss of profits incurred by o	d by the client for the applicable completion of the applicable (lient, its subsidiaries, asons or otherwise.				1
Date: Received By:  Time:  Cle One) Observed Tamp. *C // 2 Sample Condition CHECKED BY:	affiliates or successors affel Relinquished B	ng out of or related to the perform	Date: 10-2	Received By:	Mahle V.	Verbal Result: All Results are en	☐ Yes ☐ No Inailed. Please providensolum.com, TMor	Add'l Phone #: le Email address: rissey@ensolum.com,	, KThomason@ensolum.c	om
Observed Tamp. *C 7 % Sample Condition CHECKED BY: Turnaround Time: Standard Bacteria (only) S	Relinquished B	S.	Date:			Incident: NAK	3192174279	/ "		
Contract Con	Delivered By: (C	ircle One)	Observed Temp.	3.4		Turnaround Time	Standard	_ /	Sample Condition Observed Temp. °C	

Relinquished By:

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Observed Temp. °C

w

CHECKED BY: (Initials)

> Turnaround Time: Cost Center:

☐ Yes ☐ Yes ☐ No ☐ No Cool Intact

Corrected Temp. °C Observed Temp.

Bacteria (only) Sample Condition

c

ô

Time:

Received By

REMARKS. 145/42/14279 5

All Results are emailed. Please provide Email address:

@ensetun.com, TMorrissey@ensolum.com, KThomason@ensolum.com

Relinquished By:

Date: 10-24

## 101 East Marland, Hobbs, NM 88240

## CHAIN-OF-IS REQUEST

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	(575) 393-2326 FAX (5/5) 393-24/0	X (5/5) 393-24	4/6					ANALYSIS REQUEST	_
Company Name: Ensolum, LLC	Ensolum, LLC				BILL TO	1	1		
roject Manager:	Korhenne Kahn	22		P.O. #:		_			
Address: 3122 Na	Address: 3122 National Parks Hwy			Company: XTO Energy Inc	Energy Inc	_			
City: Carlsbad		State: NM	Zip: 88220	Attn: Colton Brown	rown	_			
Phone #: 763	719 9604	Fax #:		Address: 3104 E Green St	E Green St				
Project #: 03615660 73	500073	Project Owner: XTO	r: XTO	City: Carlsbad					
Project Name:	Project Name: PLU BIN GIRKS	25	Fob Buttery	State: NM Z	Zip: 88220				
Project Location:	Project Location: 32, 18, 1450	103,833297	797 /	Phone #:					
Sampler Name: Joshua Boxley	oshua Boxley			Fax	CAMPI INC	_			
FOR LAB USE ONLY			MATRIX	PREVERV.	SAME LING				
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OM # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER:		Chlorides	X3T8		
In his	21 LOHD	2		K	SIM ME5'21	5	X		
17	190kg		×		125,24 1335	7	X		A A
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					the amount hold by the clie	nt for the	-		
PLEASE NOTE: Liability an analyses. All claims includir	nd Damages. Cardinal's liability and one thouse for negligence and any other	dent's exclusive remedy to r cause whatsoever shall	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or lord, shall be limited to the amount place by the client within 30 days after completion of the applicable arealyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable arealyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the cause whatsoever shall be deemed waived unless made in writing and received by Clerk after the cause whatsoever shall be deemed waived unless made in writing and received by Clerk after the property of the cause whatsoever shall be deemed waived unless made in writing and received by Clerk after the cause what waived waived unless made in writing and received by Clerk after the cause whatsoever shall be deemed waived unless made in writing and received by Clerk after the cause whatsoever shall be deemed waived unless made in writing and received by Clerk after the cause what waived and the cause of the cause when the cause what waived waived unless made in writing and received by Clerk after the cause when the cause w	ontract or tort, shall be limited thing and received by Cardinal without loss of use, or loss of pro-	o the amount paid by the circletion (thin 30 days after completion offs incurred by client, its sub	of the applicable sidiaries,			
service. In no event shall Cardinal be liable for should in above stated reasons of office were	ardinal be liable to incommunity or con-	andreament annual and annual							



January 27, 2025

KATHERINE KHAN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: PLU BS 25 FED BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 01/24/25 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keene

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



## Analytical Results For:

ENSOLUM, LLC KATHERINE KHAN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 01/24/2025 Reported: 01/27/2025

Project Name: PLU BS 25 FED BATTERY

Project Number: 03C1558073
Project Location: XTO 32.18145, -103.833297

Sampling Date: 01/23/2025

Sampling Type: Soil
Sampling Condition: Cool & Intact

Sample Received By: Shalyn Rodriguez

Sample ID: FS 06 4' (H250449-01)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2025	ND	2.22	111	2.00	4.64	
Toluene*	<0.050	0.050	01/24/2025	ND	2.19	109	2.00	7.29	
Ethylbenzene*	<0.050	0.050	01/24/2025	ND	2.20	110	2.00	6.96	
Total Xylenes*	<0.150	0.150	01/24/2025	ND	6.58	110	6.00	6.64	
Total BTEX	<0.300	0.300	01/24/2025	ND					
Surrogate: 4-Bromofluorobenzene (PID	116	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3360	16.0	01/27/2025	ND	416	104	400	7.41	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/25/2025	ND	206	103	200	1.30	
DRO >C10-C28*	<10.0	10.0	01/25/2025	ND	205	102	200	1.83	
EXT DRO >C28-C36	<10.0	10.0	01/25/2025	ND					
Surrogate: 1-Chlorooctane	103	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	101	% 49.1-14	8						

A ..... I ..... . J D. ... 711

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



## Analytical Results For:

ENSOLUM, LLC KATHERINE KHAN 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 01/24/2025 Reported: 01/27/2025

PLU BS 25 FED BATTERY

Project Name: Project Number: 03C1558073

Project Location: XTO 32.18145, -103.833297 Sampling Date: 01/23/2025

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez

### Sample ID: SW 05 0-4' (H250449-02)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/24/2025	ND	2.22	111	2.00	4.64	
Toluene*	<0.050	0.050	01/24/2025	ND	2.19	109	2.00	7.29	
Ethylbenzene*	<0.050	0.050	01/24/2025	ND	2.20	110	2.00	6.96	
Total Xylenes*	<0.150	0.150	01/24/2025	ND	6.58	110	6.00	6.64	
Total BTEX	<0.300	0.300	01/24/2025	ND					
Surrogate: 4-Bromofluorobenzene (PID	120 5	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1600	16.0	01/27/2025	ND	416	104	400	7.41	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/25/2025	ND	206	103	200	1.30	
DRO >C10-C28*	<10.0	10.0	01/25/2025	ND	205	102	200	1.83	
EXT DRO >C28-C36	<10.0	10.0	01/25/2025	ND					
Surrogate: 1-Chlorooctane	101 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	101 9	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



## **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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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Freene

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST Chloride 4500 BTEX 8021 **TPH 8015** 1523 TIME 1538 Address: 3104 E Greene St Company: XTO Energy, Inc SAMPLING 88220 1/23/25 123/25 BILL TO Attn: Colton Brown Zip: City: Carlsbad **OTHER** PRESERV State: NM Phone #: XX ICE / COOL P.O. #: Fax #: ACID/BASE **STHER** 江北 看地下 SCUDGE MATRIX OIL X X SOIL XTO Energy **MASTEWATER** Zip: 79701 **GROUNDWATER** # CONTAINERS 4 (G)RAB OR (C)OMP. Project Owner: Depth State: TX (feet) トーつ Fax #: 7 Project Location: 32.18145, -103.833297 Address: 601 N Marienfeld Street, Suite 400 Project Name: PLU BS 25 Fed Battery Sample I.D. Project Manager: Katherine Khan Sampler Name: Uriel Santillana Company Name: Ensolum, LLC Sons E506 Phone #: 303.319.9604 Project #: 03C1558073 Hasoung FOR LAB USE ONLY City: Midland Lab I.D.

ody for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the final be deemed walved unless made in writing and received by Cardinal within 30 days after completion of the applicable ncurred by client, its subsidiaries ons, loss of use, or loss of profits analyses. All claims including those for negligence and any other cause whatsoever a service. In no event shall Cardinal be liable LEASE NOTE: Liability and Da

Verbal Result: 

Verbal ktromason@ensolum.com Bacteria (only) Sample Condition Corrected Temp. °C Cool Intact REMARKS: Incident Number: nAB1921742793 Thermometer #13 #1480 Standard urnaround Time: CHECKED BY: Se dinitials) Spectaion Sample Condition
Cool Intact
Tes Pres Received By: Received By Corrected Tomp. "C. L. 1 Observed Temp. "C Time Time: Sampler - UPS - Bus - Other: Delivered By: (Circle One) Relinquished By: Relinquished B

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

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

**CARDINAL** Laboratories 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 445659

## **QUESTIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	445659
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

### QUESTIONS

Prerequisites	
Incident ID (n#)	nAB1921742793
Incident Name	NAB1921742793 PLU BIG SINKS 25 FEDERAL BATTERY @ 30-015-39018
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-39018] POKER LAKE UNIT CVX JV BS #005H
Incident Facility	[fAPP2123047138] BIG SINKS 25 1

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PLU BIG SINKS 25 FEDERAL BATTERY
Date Release Discovered	07/07/2019
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
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	
Material(s) released, please answer all that apply below. Any calculations or specific justifications fo	or the volumes provided should be attached to the follow-up C-141 submission.
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion   Other (Specify)   Produced Water   Released: 68 BBL   Recovered: 55 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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## State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

QUESTIONS, Page 2

Action 445659

QUESTI	ONS (continued)
Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380 Action Number: 445659 Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)
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	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e	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 s	T ·
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	Not answered.
	ation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative ted or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of valuation in the follow-up C-141 submission.
to report and/or file certain release notifications and perform corrective actions for releathe OCD does not relieve the operator of liability should their operations have failed to a	knowledge and understand that pursuant to OCD rules and regulations all operators are require ases which may endanger public health or the environment. The acceptance of a C-141 report by adequately investigate and remediate contamination that pose a threat to groundwater, surface t does not relieve the operator of responsibility for compliance with any other federal, state, or
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 03/26/2025

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, Page 3

Action 445659

**QUESTIONS** (continued)

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	445659
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

## QUESTIONS

Site Characterization		
Please answer all the questions in this group (only required when seeking remediation plan approva release discovery date.	l and beyond). This information must be provided to the appropriate district office no later than 90 days after the	
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	Attached Document	
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 1 and 5 (mi.)	
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	Greater than 5 (mi.)	
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)	
Any other fresh water well or spring	Greater than 5 (mi.)	
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)	
A wetland	Between 1 and 5 (mi.)	
A subsurface mine	Between 1 and 5 (mi.)	
An (non-karst) unstable area	Greater than 5 (mi.)	
Categorize the risk of this well / site being in a karst geology	Low	
A 100-year floodplain	Between 1 and 5 (mi.)	
Did the release impact areas not on an exploration, development, production, or storage site	No	

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	
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contaminati	ion associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
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)	14600	
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	1320	
GRO+DRO (EPA SW-846 Method 8015M)	1320	
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 complet which includes the anticipated timelines for beginning and completing the remediation.	ted efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC	
On what estimated date will the remediation commence	10/22/2019	
On what date will (or did) the final sampling or liner inspection occur	01/23/2025	
On what date will (or was) the remediation complete(d)	01/23/2025	
What is the estimated surface area (in square feet) that will be reclaimed	7190	
What is the estimated volume (in cubic yards) that will be reclaimed	1065	
What is the estimated surface area (in square feet) that will be remediated	7190	
What is the estimated volume (in cubic yards) that will be remediated 1065		
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.		

significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

General Information Phone: (505) 629-6116

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

QUESTIONS, Page 4

Action 445659

QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	445659
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

### 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	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]	
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

I hereby agree and sign off to the above statement

Title: Environmental Advisor
Email: colton.s.brown@exxonmobil.com
Date: 03/26/2025

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.

Released to Imaging: 5/13/2025 9:12:25 AM

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, Page 5

Action 445659

**QUESTIONS** (continued)

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	445659
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

### QUESTIONS

Deferral Requests Only	
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.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

Sante Fe Main Office Phone: (505) 476-3441 General Information

Phone: (505) 629-6116
Online Phone Directory
<a href="https://www.emnrd.nm.gov/ocd/contact-us">https://www.emnrd.nm.gov/ocd/contact-us</a>

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

QUESTIONS, Page 6

Action 445659

**QUESTIONS** (continued)

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	445659
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

### QUESTIONS

Remediation Closure Request

Sampling Event Information	
Last sampling notification (C-141N) recorded 426413	
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	02/03/2025
What was the (estimated) number of samples that were to be gathered	1
What was the sampling surface area in square feet	200

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	7190
What was the total volume (cubic yards) remediated	1065
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	540
What was the total volume (in cubic yards) reclaimed	80
Summarize any additional remediation activities not included by answers (above)	"Soil delineation sampling, excavation activities, and confirmation sampling were conducted at the Site to address the July 7, 2019 release of produced water. Following excavation, laboratory analytical results from delineation and confirmation sampling indicate that all COC concentrations were in compliance with the Closure Criteria and waste-containing soil were fully defined to the reclamation standard in the top 4 feet of soil. Due to the presence of multiple utilities at the active Site, the release was remediated on-pad to Closure Criteria for safety reasons. Following the delineation and excavation activities conducted in 2025, approximately 6,650 square feet of waste-containing soil was delineated within the top 4 feet of soil and present at sample locations CS01 through CS05, CS07 through CS18, CS19 through CS32, CS34 through CS39, and PH01 through PH08. Following Site decommissioning, an estimated 985 cubic yards of waste-containing soil will be remediated. The presence of the waste-containing soil present on-pad does not cause an imminent risk to human health, the environment, or groundwater. XTO will remediate this soil reporting COC concentrations exceeding reclamation requirement but below Closure Criteria prior to Site reclamation."

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Name: Colton Brown
Title: Environmental Advisor
Email: colton.s.brown@exxonmobil.com
Date: 03/26/2025

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

QUESTIONS, Page 7

Action 445659

**QUESTIONS** (continued)

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	445659
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

### QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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

CONDITIONS

Action 445659

### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	445659
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

### CONDITIONS

Created By	$^{\prime}$	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAB1921742793 PLU BIG SINKS 25 FEDERAL BATTERY, thank you. This Remediation Closure Report is approved.	5/13/2025