

July 1, 2024

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

Re: Closure Request

James Ranch Unit 2 702H

Incident Number nAPP2211654411

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* to document remedial actions completed at the James Ranch Unit 2 702H (Site). The purpose of the remedial activities was to verify the depth to groundwater beneath the Site and excavate impacted soil as described in the October 4, 2022 *Remediation Work Plan (Work Plan)*, which was approved by the New Mexico Oil Conservation Division (NMOCD). The following *Closure Request* describes depth to groundwater assessment, excavation of impacted soil, and confirmation soil sampling results and respectfully requests closure of the remediation for Incident Number nAPP2211654411. XTO anticipates reclamation activities will be completed following any major facility reconstruction or pad abandonment, whichever occurs first.

BACKGROUND

The Site is located in Unit K, Section 25, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.36263°, -103.83621°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On April 13, 2022, during hydraulic fracturing (frac) operations, hosing separated and resulted in the release of 55 barrels (bbls) of produced water treated with friction reducer into a temporary lined containment and onto the well pad. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 40 bbls of treated produced water were recovered. XTO reported the release immediately to the NMOCD via email on April 15, 2022, and submitted a Release Notification Form C-141 on April 26, 2022. The release was assigned Incident Number nAPP2211654411.

In September 2022, Ensolum personnel were onsite to oversee delineation activities to assess for the presence or absence of impacted soil. Following delineation activities and a review of laboratory analytical results, the *Work Plan* was submitted on October 4, 2022. The *Work Plan* proposed excavation of impacted soil identified during the delineation activities. An estimated 775 cubic yards of impacted soil would be removed to a maximum depth of 1 foot below ground surface (bgs). The *Work Plan* was approved on December 28, 2022 with the following conditions of approval:

 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

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XTO Energy, Inc Closure Request James Ranch Unit 2 702H

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.

 Please make sure the floor confirmation samples are delineated/excavated to meet closure criteria standards for proven depth to water determination. Sidewall samples should be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release.

A copy of the approved *Work Plan* and all NMOCD Correspondence is included in Appendix A. The following Closure Request summarizes implementation of the approved *Work Plan*.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Per the conditions of approval for the approved *Work Plan*, a depth to groundwater boring was installed approximately 437 feet southwest of the Site (Figure 1) on April 14, 2023. The New Mexico Office of the State Engineer (NMOSE) soil boring, permitted as C-4731 (soil boring BH01) was advanced utilizing an air-rotary drill rig, which was completed to a total depth of 106 feet bgs. A geologist was onsite to observe the lithology and document the presence of water, if any, on a lithologic/soil sampling log, which is provided in Appendix B. Following the completion of drilling, the boring was revisited after a 72-hour waiting period to determine if slow infilling of groundwater would be present in the boring. Observations and measurements of the boring indicated groundwater was not present to a total depth of 106 feet bgs. As such, depth to groundwater appears to have been adequately assessed and it is determined to be greater than 100 feet bgs.

Based on the results of the Site Characterization in the approved *Work Plan* and depth to groundwater assessment described above, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

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

EXCAVATION ACTIVITIES

On May 18, 2023, Ensolum was onsite to oversee excavation of impacted soil as described in the *Work Plan*. The excavation was completed utilizing a hydrovac truck, track hoe, backhoe, and transport vehicles, which were directed by previous soil samples laboratory analytical results and field screening results for volatile organic compounds (VOCs) and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Based on field screening data, the excavation was completed to a depth of 1-foot bgs. The excavation extent was mapped utilizing a handheld Global Positioning System (GPS) unit and is depicted on Figure 2. Photographic documentation of excavation activities is included in Appendix C.

Following removal of soil, Ensolum personnel collected 5-point composite soil samples representing up to 200 square feet from the floor and/or sidewall of the excavation. 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. Floor soil samples FS01 through FS09 were collected



XTO Energy, Inc Closure Request James Ranch Unit 2 702H

at a depth of 1-foot bgs. Due to the shallow depth of the excavation, sidewall soil was incorporated into the composite soil samples.

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 Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of concern (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.

Laboratory analytical results indicated all COCs in soil from the confirmation floor soil samples were in compliance with the Closure Criteria with the exception of floor soil samples FS01 and FS03, which exceeded the TPH Closure Criteria. As such, Ensolum returned to the Site on June 8, 2023, to excavate residual impacted soil identified in the vicinity of floor soil samples FS01 and FS03.

Soil in the vicinity of floor soil sample FS01 was excavated to 1.5 feet bgs and a second confirmation sample, FS01A, was collected in the same manner as described above. Soil in the vicinity of floor soil sample FS03 was excavated to a final depth of 2 feet bgs and a second confirmation soil sample, FS03A, was collected. Due to the extension of the depth of the excavation, sidewall soil samples SW01 (collected between the ground surface and 1.5 feet bgs) and SW02 (collected between the ground surface and 2 feet bgs) were included in the confirmation sampling suite. Laboratory analytical results for floor soil samples FS01A and FS03A and sidewall soil samples SW01 and SW02 indicated all COC concentrations were in compliance with the Closure Criteria. Confirmation soil sample locations are depicted on Figure 2 and laboratory analytical results are summarized on Table 1. All laboratory analytical reports are included in Appendix D.

The final excavation extent measured 1,735 square feet in areal extent and a total of 100 cubic yards of impacted soil was removed and properly transported and disposed of at the R360 landfill in Hobbs, New Mexico. The excavation was backfilled due to the heavy operational activities present at the Site.

ADDITIONAL DELINEATION ACTIVITIES

Due to the presence of drilling and completion operations around the release, options for placement of lateral delineation soil samples were limited. Ensolum visited the Site on September 7, 2023, to complete lateral delineation activities. Delineation to the east and south was presented in the approved *Work Plan*. Two soil samples, SS05 and SS06, were collected at 0.5 feet bgs to the west and north, respectively, of the release extent. The soil samples were analyzed for the same COCs as described above. Laboratory analytical results indicated all COCs in soil samples SS05 and SS06 were in compliance with the Closure Criteria and the reclamation requirement, confirming the lateral extent of the release to the west and north. The delineation soil samples are depicted on Figure 3 and laboratory analytical results are summarized on Table 1.

CLOSURE REQUEST

Following the release of produced water at the Site in April 2022, XTO excavated approximately 100 cubic yards of impacted soil, which was properly disposed of at an approved landfill, and met closure criteria standards for proven depth to water determination as requested in the conditions of approval. Depth to water was investigated and confirmed to be greater than 100 feet bgs, corroborating the desktop Site characterization and application for identifying the appropriate Site-specific Closure Criteria. Lateral delineation of soil to 600 mg/kg chloride and 100 mg/kg TPH was completed to the north and west.



XTO Energy, Inc Closure Request James Ranch Unit 2 702H

Soil requiring reclamation at the time of pad abandonment remains in place. Although all laboratory analytical results for all final confirmation soil samples indicate impacted soil has been removed from the Site, an estimated 4,000 cubic yards of soil of waste-containing soil, to an estimated depth of 1 foot bgs appears to be present at the facility. XTO believes the work completed to date fulfills the requirements of the approved *Work Plan* and conditions of approval for addressing the release. As such, XTO respectfully requests closure for the remediation of Incident Number nAPP2211654411 and proposes to complete reclamation activities following major facility reconstruction pad abandonment whichever occurs first. If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely, Ensolum, LLC

Daniel R. Moir, PG Senior Managing Geologist

cc: Amy Ruth, XTO Amanda Garica, XTO

Bureau of Land Management

Ashley L. Ager, M.S., PG Principal

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Appendices:

Figure 1 Site Location Map

Figure 2 Excavation Soil Sample Locations
Figure 3 Delineation Soil Sample Locations
Table 1 Soil Sample Analytical Results

Appendix A October 4, 2022 Remediation Work Plan and NMOCD Correspondence

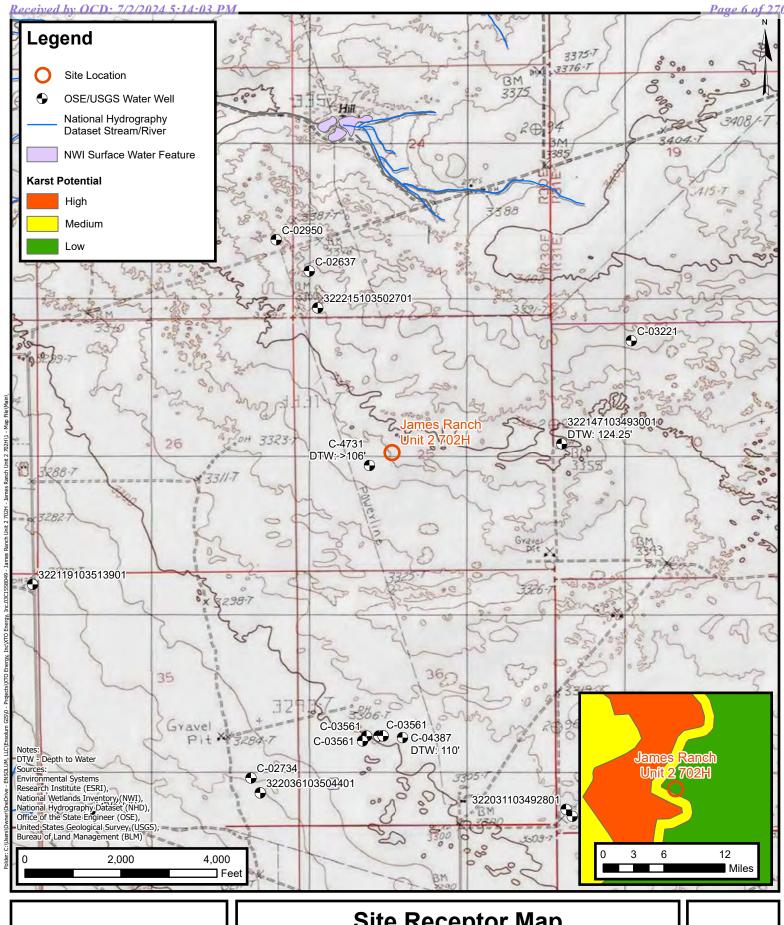
Appendix B Lithologic / Soil Sampling Log

Appendix C Photographic Log

Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation



Figures





Site Receptor Map

XTO Energy, Inc. James Ranch Unit 2 702H Incident Number: nAPP2211654411 Unit K, Section 25, Township 22 South, Range 30 East, in Eddy County, New Mexico **FIGURE**





Excavation Soil Sample Locations

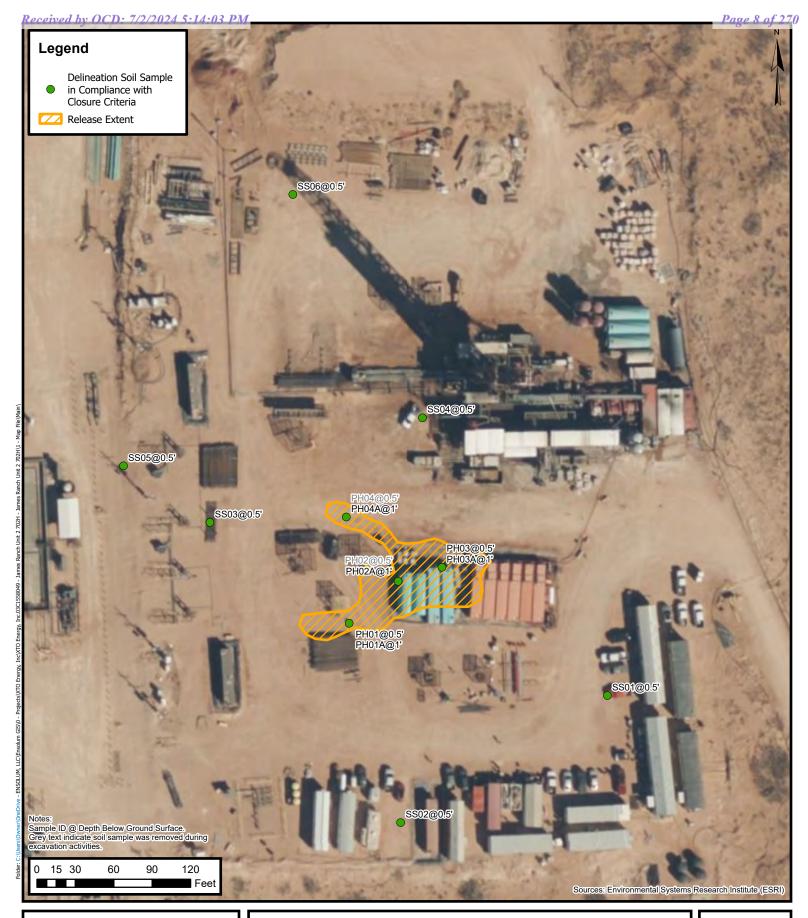
XTO Energy, Inc.

James Ranch Unit 2 702H

Incident Number: nAPP2211654411

Unit K, Section 25, Township 22 South, Range 30 East, in Eddy County, New Mexico
NA

FIGURE 2





Delineation Soil Sample LocationsXTO Energy, Inc.

James Ranch Unit 2 702H
Incident Number: nAPP2211654411
Unit K, Section 25, Township 22 South, Range 30 East
Eddy County, New Mexico

FIGURE 3



Tables

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TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS James Ranch Unit 2 702H XTO Energy, Inc. Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)		
NMOCD Table I C	losure Criteria (I	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000		
	Delineation Soil Samples											
SS01	09/07/2022	0.5'	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	527		
SS02	09/07/2022	0.5'	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	206		
SS03	09/07/2022	0.5'	<0.00200	<0.00399	<50.0	182	66.6	182	249	465		
SS04	09/07/2022	0.5'	<0.00199	<0.00398	<49.9	471	<49.9	471	471	550		
SS05	09/07/2023	0.5'	<0.00201	<0.00402	<50.5	<50.5	<50.5	<50.5	<50.5	57.7		
SS06	09/07/2023	0.5'	<0.00202	<0.00404	<49.9	51.3	<49.9	51.3	51.3	419		
PH01	09/06/2022	0.5	<0.00200	<0.00401	<50.0	344	<50.0	344	344	2,100		
PH01A	09/06/2022	1	<0.00202	< 0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	1,280		
PH02	09/06/2022	0.5	<0.00200	<0.00399	< 50.0	1,230	< 50.0	1,230	1,230	8,000		
PH02A	09/06/2022	1	<0.00200	< 0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	1,960		
PH03	09/06/2022	0.5	<0.00200	<0.00401	<49.9	110	<49.9	110	110	7,740		
PH03A	09/06/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	4,710		
PH04	09/06/2022	0.5	<0.00200	<0.00399	<49.9	1,230	<49.9	1,230	1,230	5,900		
PH04A	09/06/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	739		
				Confi	rmation Soil Sa	amples						
FS01	05/18/2023	4	<0.000387	<0.00102	<15.0	1910	<15.0	1,910	1,910	8,700		
FS01A	06/08/2023	1.5	<0.00198	<0.00396	<50.0	158	<50.0	158	158	1,620		
FS02	05/18/2023	1	<0.000389	<0.00102	<14.9	189	<14.9	189	189	1,510		
FS03	05/18/2023	1	<0.000383	<0.00101	<14.9	1490	<14.9	1,490	1,490	7,960		
FS03A	06/08/2023	2	<0.00202	<0.00403	<49.9	78.8	<49.9	78.8	78.8	688		
FS04	05/18/2023	1	<0.000383	<0.00100	<15.0	198	<15.0	198	198	1,780		
FS05	05/18/2023	1	<0.000384	<0.00101	<15.0	157	<15.0	157	157	1,850		
FS06	05/18/2023	1	<0.000387	<0.00102	<15.0	142	<15.0	142	142	1,860		
FS07	05/18/2023	1	<0.000389	<0.00102	<14.9	118	<14.9	118	118	1,510		
FS08	05/18/2023	1	<0.000383	<0.00101	<14.9	145	<14.9	145	145	1,620		
FS09	05/18/2023	1	<0.000383	<0.00100	<15.0	138	<15.0	138	138	1,450		

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TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS James Ranch Unit 2 702H XTO Energy, Inc. Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)		10	50	NE	NE	NE	1,000	2,500	20,000	
SW01	06/08/2023	0-1.5	<0.00200	<0.00401	<50.0	211	<50.0	211	211	471
SW02	06/08/2023	0-2	<0.00202	<0.00403	<49.9	267	75.4	267	342	778

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 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics DRO: Diesel Range Organics

ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon

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APPENDIX A

October 4, 2022 Remediation Work Plan

and NMOCD Correspondence



October 4, 2022

District II New Mexico Oil Conservation Division 811 S. First St. Artesia, New Mexico 88210

Re: Remediation Work Plan

James Ranch Unit 2 702H

Incident Number nAPP2211654411

Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared the following Remediation Work Plan (Work Plan) to document the site assessment activities completed to date and propose a work plan to address the impacted soil identified at the James Ranch Unit 2 702H (Site). The purpose of the site assessment activities was to delineate the lateral and vertical extent of impacted soil resulting from a release of recycled water at the Site. The following Work Plan proposes to excavate of the top one foot of impacted soil.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit K, Section 25, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.36263° N, 103.83621° W) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management.

On April 13, 2022, during hydraulic fracturing (frac) operations, hosing separated and resulted in the release of 55 barrels (bbls) of produced water treated with friction reducer into a temporary lined containment and onto the well pad. A vacuum truck was immediately dispatched to the Site to recover the free-standing fluids; approximately 40 bbls of treated produced water were recovered. XTO reported the release immediately to the NMOCD via email on April 15, 2022 and submitted a Release Notification Form C-141 on April 26, 2022. The release was assigned Incident Number nAPP2211654411.

Produced water is recycled through filtering and separation, then mixed in a blender with friction reducer and used as hydraulic fracturing fluid during the well completion process. The safety data sheet (SDS) for friction reducer is provided in the appendices.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized 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). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

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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 closest permitted groundwater well with depth to groundwater data is USGS well 322215103502701, located approximately 0.6 miles northwest of the Site. The groundwater well has a reported depth to groundwater of 419 feet bgs and an unknown total depth. Ground surface elevation at the groundwater well location is 3,360 feet above mean sea level (amsl), which is approximately 14 feet higher in elevation than the Site. There are additional water wells and recently drilled soil borings located within 1.5 miles of the Site in all cardinal directions which indicate regional depth to water is greater than 100 feet bgs. There are no regional or Site-specific hydrological conditions, such as shallow surface water, karst features, wetlands, or vegetation that suggest the Site is conducive to shallow groundwater. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a dry wash, located approximately 4,982 feet northeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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 AND DELINEATION ACTIVITIES

Once ongoing frac operations were complete, a Site visit was conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. The temporary containment had been removed at the time of the Site visit. The release extent was mapped utilizing a handheld Global Positioning System (GPS) unit and is depicted on Figure 2.

Between September 6, 2022 and September 7, 2022, delineation activities were conducted at the Site to assess the lateral and vertical extent of impacted soil. Potholes PH01 through PH04 were advanced via track mounted backhoe within the release extent. The potholes were advanced to a maximum depth of 1 foot bgs. Discrete delineation soil samples were collected from each pothole at depths of 0.5 feet to 1 foot bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the potholes were logged on lithologic/soil sampling logs, which are included in Appendix B. Additionally, lateral delineation (horizontal definition) soil samples (SS01 and SS02) were collected from a depth of 0.5 feet bgs to the south and east of the release extent to confirm the lateral extent of the release did not reach the pad boundary. The delineation soil sample locations are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix C.

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



at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of 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.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from potholes PH02 and PH04 collected at 0.5 feet bgs, indicated that TPH-GRO/TPH-DRO concentrations exceeded the Closure Criteria. The concentrations identified in the terminal depth sample, collected at 1 foot bgs, were compliant with the Closure Criteria and successfully defined the vertical extent of impacted soil.

Laboratory analytical results for the delineation soil samples collected from potholes PH01 and PH03, as well as lateral delineation samples SS01 and SS02, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with Closure Criteria and defined the lateral extent of the impacted soil. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix D.

PROPOSED REMEDIATION WORK PLAN

The results of the delineation soil sampling suggest soil containing elevated TPH-GRO/TPH-DRO concentrations extend across a 3,450 square foot area and extends to maximum depth of 1 foot bgs. Based on the extent and volume of impacted soil, XTO proposes excavation of the hydrocarbon impacted soil. Excavation will proceed laterally until sidewall samples confirm TPH-GRO/TPH-DRO concentrations are compliant with the Closure Criteria. An estimated 775 cubic yards of soil will be excavated. The excavated soil will be transferred a New Mexico approved landfill facility for disposal. The excavation will be backfilled and recontoured to match pre-existing conditions. XTO will complete excavation activities and submit a Closure Request within 90 days of the date of approval of this Work Plan by the NMOCD.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely, **Ensolum, LLC**

Tacoma Morrissey Senior Geologist

Mouissey

cc: Garrett Green, XTO

Shelby Pennington, XTO Bureau of Land Management Ashley L. Ager, M.S., P.G. Program Director

Ashley L. Ager

Appendices:

Figure 1 Site Location Map

Figure 2 Delineation Soil Sample Locations

James Ranch Unit 2 702H



Table 1 Soil Sample Analytical Results
Appendix A Referenced Well Records
Appendix B Lithologic / Soil Sampling Logs

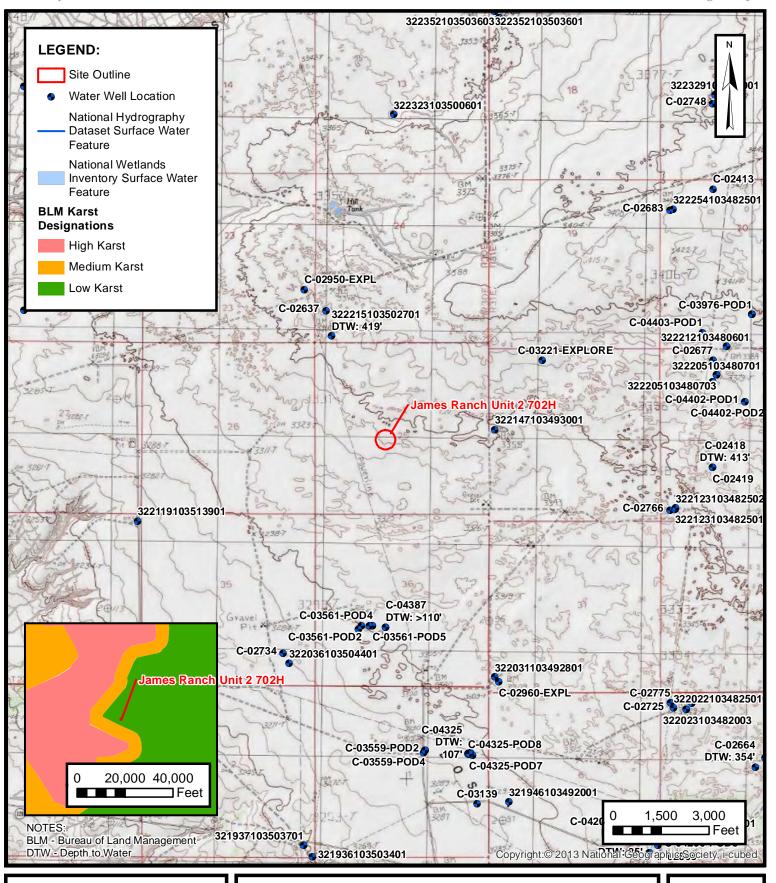
Appendix C Photographic Log

Appendix D Laboratory Analytical Reports & Chain-of-Custody Documentation

Appendix E NMOCD Notifications Appendix F Friction Reducer SDS



FIGURES



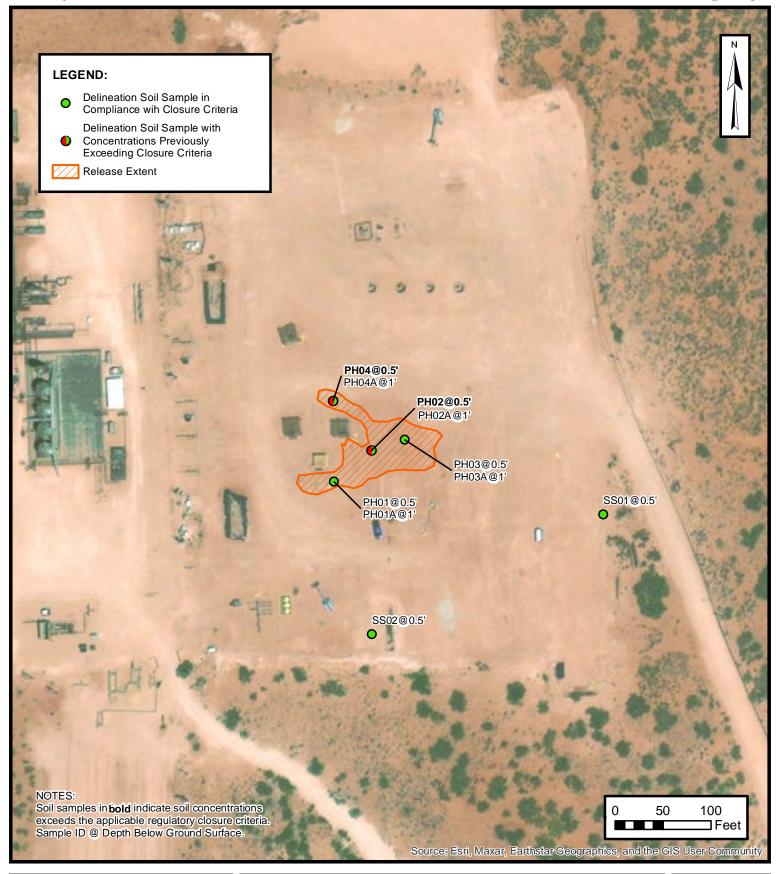


SITE RECEPTOR MAP

XTO ENERGY, INC JAMES RANCH UNIT 2 702H NAPP2211654411

Unit K, Sec 25, T22S, R30E Eddy County, New Mexico FIGURE

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DELINEATION SOIL SAMPLE LOCATIONS

XTO ENERGY, INC JAMES RANCH UNIT 2 702H NAPP2211654411 Unit K, Sec 25, T22S, R30E Eddy County, New Mexico **FIGURE**

2



TABLES

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TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS James Ranch Unit 2 702H XTO Energy, Inc. Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
	Delineation Soil Samples									
SS01	09/07/2022	0.5'	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	527
SS02	09/07/2022	0.5'	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	206
PH01	09/06/2022	0.5	<0.00200	<0.00401	<50.0	344	<50.0	344	344	2,100
PH01A	09/06/2022	1	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	1,280
PH02	09/06/2022	0.5	<0.00200	<0.00399	<50.0	1,230	<50.0	1,230	1,230	8,000
PH02A	09/06/2022	1	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	1,960
PH03	09/06/2022	0.5	<0.00200	<0.00401	<49.9	110	<49.9	110	110	7,740
PH03A	09/06/2022	1	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	4,710
PH04	09/06/2022	0.5	<0.00200	<0.00399	<49.9	1,230	<49.9	1,230	1,230	5,900
PH04A	09/06/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	739

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 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics DRO: Diesel Range Organics ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Ensolum 1 of 1



APPENDIX A

Referenced Well Records



USGS Home Contact USGS Search USGS

National Water Information System: Web Interface

USGS Water Resources	Data Category:	ory: Geographic A		a:	
oodo water resources	Groundwater	~	United States	~	GO
				_	

Click to hideNews Bulletins

- Explore the NEW <u>USGS National Water Dashboard</u> interactive map to access realtime water <u>data</u> from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: <u>Next Generation Monitoring Location Page</u>

Search Results -- 1 sites found

site_no list =

• 322215103502701

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 322215103502701 22S.30E.24.3334 P-14

Available data for this site Groundwater: Field measurements GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

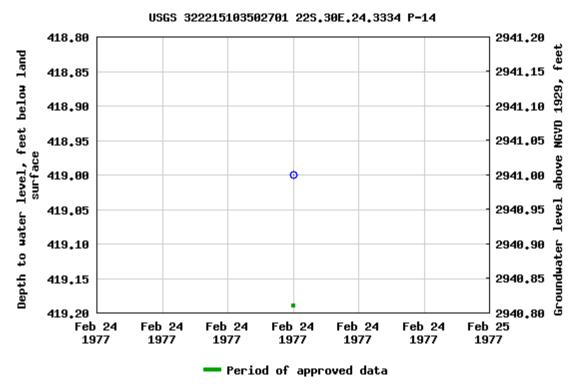
Latitude 32°22'15", Longitude 103°50'27" NAD27

Land-surface elevation 3,360 feet above NGVD29

This well is completed in the Other aquifers (N99990THER) national aquifer.

Output formats

1	<u> </u>
	<u>Table of data</u>
	<u>Tab-separated data</u>
	Graph of data
	Reselect period



Breaks in the plot represent a gap of at least one year between field measurements. <u>Download a presentation-quality graph</u>

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility

FOIA

Privacy

Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels

URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: <u>USGS Water Data Support Team</u>

Page Last Modified: 2022-09-29 13:11:10 EDT

0.7 0.64 nadww01

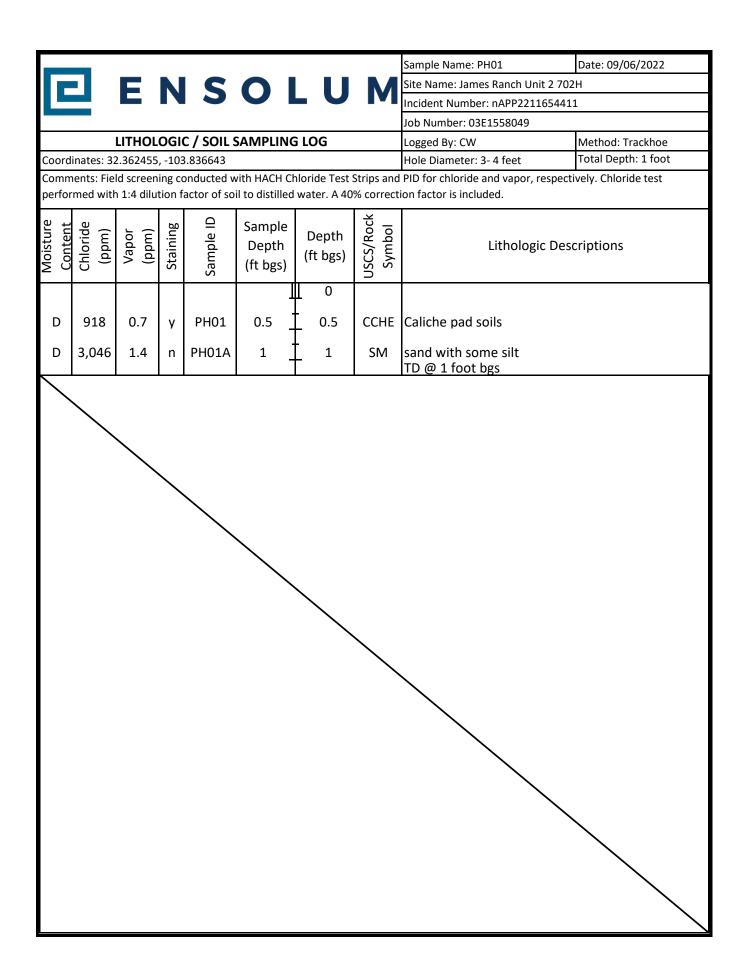


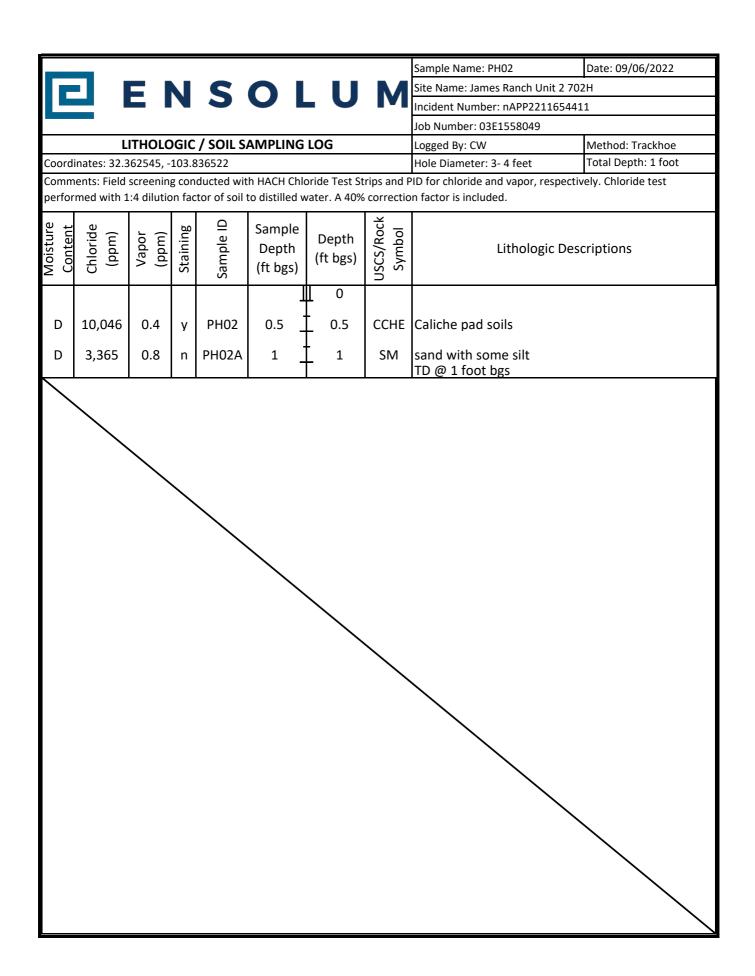
11				LT Environ	montal	Inc		Identifier:	Date:
LT Environ	mental, Inc.			508 West St	evens S	treet		BH01 (C-04387)	1/18-1/21/20
Advancing	Opportunity '			Carlsbad, New	Mexico	88220		Project Name:	RP Number:
4			Co	ompliance · Engir	neering · I	Remediatio	on	JRU 29	2RP-3302, 2RP-3726, 2RP-4040, 2RP-3082
		LITE	IOLOG	SIC / SOIL SA				Logged By: BB, FS, WM	Method: Sonic Drill
Lat/Long: 32.346	: 278,-103.835	5913			Field Scre	ening: NA		Hole Diameter: 6"	Total Depth: 110'
Commen	ts: screenings, l	ithology re	marks only	N.	1			· · · · · · · · · · · · · · · · · · ·	<u> </u>
		lulology lel					l u		
Moisture Content	Chloride (ppm)	n)	Staining	Sample#	Depth	Sample	Soil/Rock Type	* :	(D. 1
fois Cont	Chloride (ppm)	Vapor (ppm)	tain	amp	(ft.	Depth	oil/Roc Type	Litholog	gy/Remarks
	5		S	S.	bgs.)		S		
D			N		0	0'	CCHE		d d. d. C
						+ 0.3	SP	SAND, dry, reddish brown, poor no odor, no stain	rly graded, fine-very fine, soft
						11			
D			N		10'	5'	CCHE	CALICHE, dry, tan-off white, fe	w subangular gravel, trace fine
D			N		10	12.5'	SP-SM	sand, no odor, no stain silty SAND, dry, reddish brown,	poorly graded, fine grained, few
					•	T		tan-off white subangular gravel,	
D			N		20'	\mathbb{H}			
ע			IN		20	23'	ML-S	SILTSTONE, dry, reddish brown	n, moderatley consolidated, 2mm
					-	1		caliche inclusions, trace off-whit	
D			N		30'	4		odor	
					30	tl			
M			N		•	37'		moist	
					40'	H			
					40	Ħ			
D			N		•	45'		dry	
					50'	H			
D			N		30	tl			
						T			
D			N		60'	58'	CL-S	CLAYSTONE, dry, reddish brow consolidated with some silty dole	
D			11		00	†l		stain, no odor	onnite inclusions (1-2mm), no
						I		,	
D			N		70'	H			
					/0	†l			
D			N		•	Ţ			
					80'	H			
D			N		00	†l			
					•	I			
D			N		90'	\mathbb{H}			
ע			11		90	†l			
					•	Ħ			
D			N		100'	\mathbb{H}			
M			N		100	102'		moist	
					-	Ţ			
M			N		110'	\parallel		Total Depth 110 feet bgs	
171			11		110	†l		15 mi 25 pm 110 1001 0gs	
					-	I			

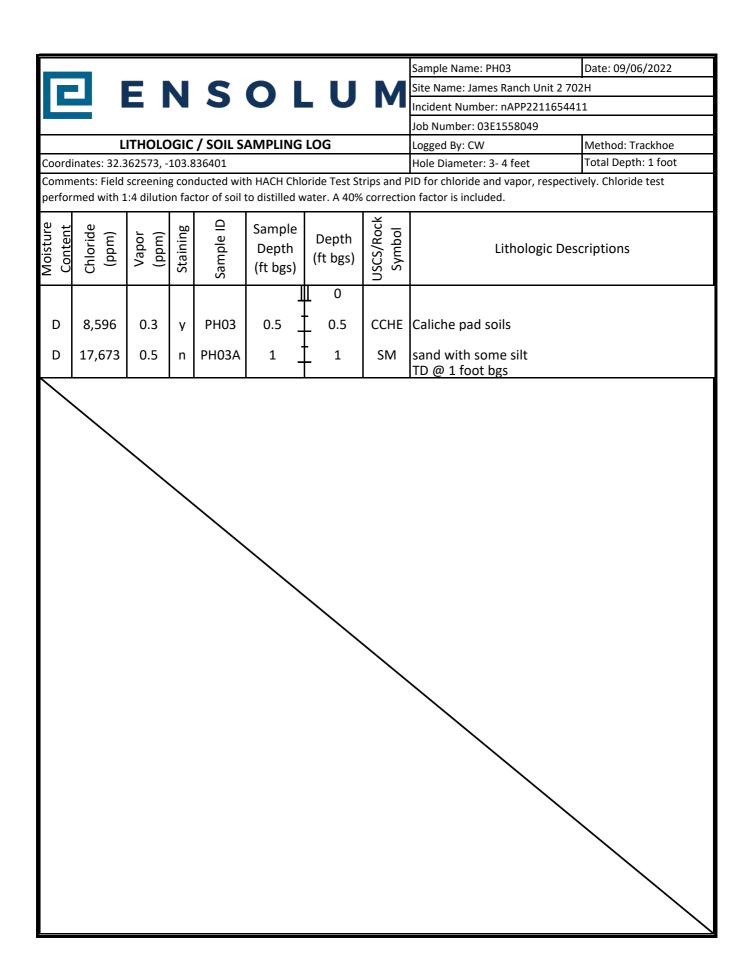


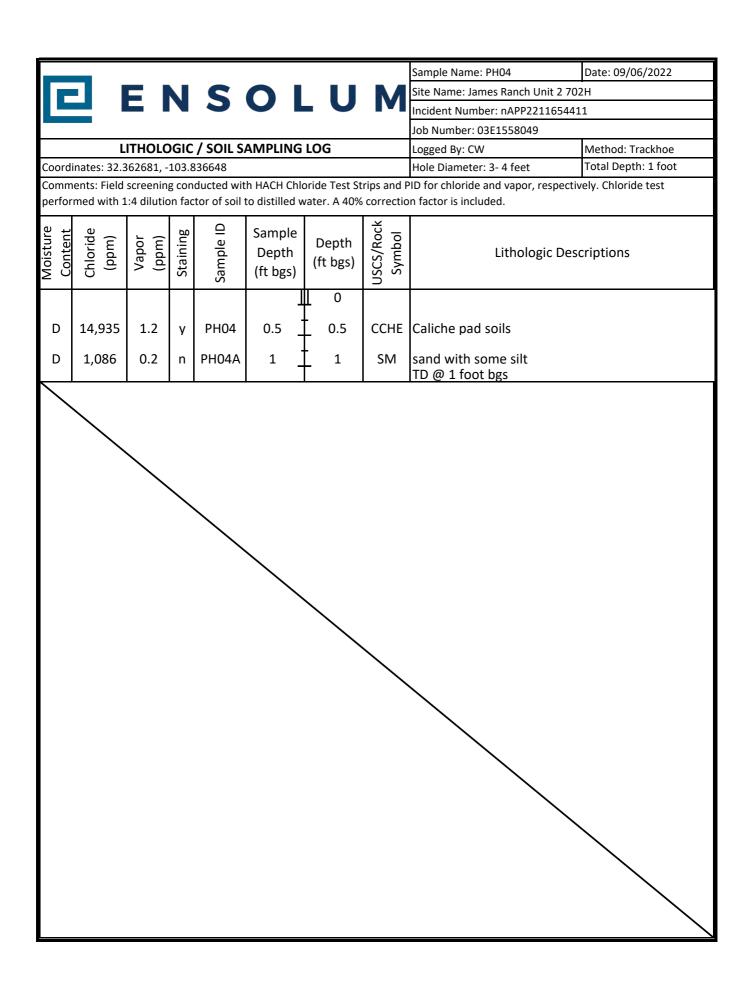
APPENDIX B

Lithologic Soil Sampling Logs











APPENDIX C

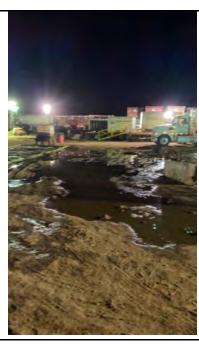
Photographic Log



Photographic Log
XTO Energy, Inc.
James Ranch Unit 2 702H
Incident Number nAPP2211654411



Photograph 1 Date: April 14, 2022 Description: View of the release and temporary containment facing north.



Photograph 2 Date: April 14, 2022 Description: View of the release and temporary containment facing south.



Photograph 3 Date: Sept 6, 2022 Description: View of release extent during delineation activities, facing southeast.



Photograph 4 Date: Sept 6, 2022

Description: View of release extent and nearby wellhead equipment during delineation activities, facing northeast.



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad 1089 N Canal St. Carlsbad, NM 88220 Tel: (575)988-3199

Laboratory Job ID: 890-2895-1

Laboratory Sample Delivery Group: 03E1558049/03E1558019

Client Project/Site: JRU DI 2 707H/JRU DI 2 702H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 9/19/2022 9:58:25 AM

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: JRU DI 2 707H/JRU DI 2 702H Laboratory Job ID: 890-2895-1 SDG: 03E1558049/03E1558019

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QC Association Summary	11
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Certification Summary	14
Method Summary	15
Sample Summary	16
Chain of Custody	17
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Definitions/Glossary

Job ID: 890-2895-1 Client: Ensolum Project/Site: JRU DI 2 707H/JRU DI 2 702H

SDG: 03E1558049/03E1558019

Qualifiers

GC VOA

Qualifier **Qualifier Description**

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**

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 Colony Forming Unit CFU **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 MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

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) TFF Toxicity Equivalent Quotient (Dioxin) **TEQ**

TNTC Too Numerous To Count

Eurofins Carlsbad

Case Narrative

Client: Ensolum

Project/Site: JRU DI 2 707H/JRU DI 2 702H

Job ID: 890-2895-1 SDG: 03E1558049/03E1558019

Job ID: 890-2895-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2895-1

Receipt

The sample was received on 9/8/2022 9:30 AM. 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 4.8°C

GC VOA

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.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Matrix: Solid

Lab Sample ID: 890-2895-1

Client Sample Results

Client: Ensolum Job ID: 890-2895-1

Project/Site: JRU DI 2 707H/JRU DI 2 702H SDG: 03E1558049/03E1558019

Date Collected: 09/07/22 09:35 Date Received: 09/08/22 09:30

Client Sample ID: SS02

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/16/22 13:13	09/18/22 09:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/16/22 13:13	09/18/22 09:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/16/22 13:13	09/18/22 09:58	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		09/16/22 13:13	09/18/22 09:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/16/22 13:13	09/18/22 09:58	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		09/16/22 13:13	09/18/22 09:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			09/16/22 13:13	09/18/22 09:58	1
1,4-Difluorobenzene (Surr)	108		70 - 130			09/16/22 13:13	09/18/22 09:58	1
- Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			09/19/22 09:23	1
- Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			09/12/22 10:21	1
- Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	-	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/10/22 08:34	09/10/22 17:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/10/22 08:34	09/10/22 17:42	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/10/22 08:34	09/10/22 17:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			09/10/22 08:34	09/10/22 17:42	1
o-Terphenyl	94		70 - 130			09/10/22 08:34	09/10/22 17:42	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

DFBZ = 1,4-Difluorobenzene (Surr)

Surrogate Summary

Job ID: 890-2895-1 Client: Ensolum Project/Site: JRU DI 2 707H/JRU DI 2 702H SDG: 03E1558049/03E1558019

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Accep	tance Lim
		BFB1	DFBZ1		
_ab Sample ID	Client Sample ID	(70-130)	(70-130)		
380-19252-A-1-E MS	Matrix Spike	101	98		
380-19252-A-1-F MSD	Matrix Spike Duplicate	108	100		
390-2895-1	SS02	104	108		
_CS 880-34677/1-A	Lab Control Sample	104	99		
_CSD 880-34677/2-A	Lab Control Sample Dup	102	92		
MB 880-34413/5-A	Method Blank	103	113		
MB 880-34677/5-A	Method Blank	106	106		
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)	
890-2895-1	SS02	100	94	
890-2900-A-1-E MS	Matrix Spike	97	88	
890-2900-A-1-F MSD	Matrix Spike Duplicate	99	90	
LCS 880-34143/2-A	Lab Control Sample	116	117	
LCSD 880-34143/3-A	Lab Control Sample Dup	117	121	
MB 880-34143/1-A	Method Blank	114	111	
Surrogate Legend				

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2895-1 SDG: 03E1558049/03E1558019 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34413/5-A

Matrix: Solid Analysis Batch: 34644 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34413

1

	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/13/22 14:26	09/17/22 13:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/13/22 14:26	09/17/22 13:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/13/22 14:26	09/17/22 13:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/13/22 14:26	09/17/22 13:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/13/22 14:26	09/17/22 13:45	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		09/13/22 14:26	09/17/22 13:45	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	09/13/22 14:26	09/17/22 13:45	1
1,4-Difluorobenzene (Surr)	113		70 - 130	09/13/22 14:26	09/17/22 13:45	1

Lab Sample ID: MB 880-34677/5-A

Matrix: Solid

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 34677

Analysis Batch: 34644

MR MR Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Benzene <0.00200 U 0.00200 mg/Kg 09/16/22 13:13 09/18/22 01:52 Toluene <0.00200 U 0.00200 mg/Kg 09/16/22 13:13 09/18/22 01:52 Ethylbenzene <0.00200 U 0.00200 mg/Kg 09/16/22 13:13 09/18/22 01:52 <0.00400 U 0.00400 09/16/22 13:13 09/18/22 01:52 m-Xylene & p-Xylene mg/Kg <0.00200 U 0.00200 09/16/22 13:13 09/18/22 01:52 o-Xylene mg/Kg Xylenes, Total <0.00400 U 0.00400 mg/Kg 09/16/22 13:13 09/18/22 01:52

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	09/16/22 13:13	09/18/22 01:52	1
1,4-Difluorobenzene (Surr)	106		70 - 130	09/16/22 13:13	09/18/22 01:52	1

Lab Sample ID: LCS 880-34677/1-A

Matrix: Solid

Analysis Batch: 34644

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 34677

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07598		mg/Kg		76	70 - 130	
Toluene	0.100	0.07427		mg/Kg		74	70 - 130	
Ethylbenzene	0.100	0.07874		mg/Kg		79	70 - 130	
m-Xylene & p-Xylene	0.200	0.1639		mg/Kg		82	70 - 130	
o-Xylene	0.100	0.08391		mg/Kg		84	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	104	70 - 130
1.4-Difluorobenzene (Surr)	99	70 - 130

Lab Sample ID: LCSD 880-34677/2-A

Matrix: Solid							Prep 7	Type: To	tal/NA			
Analysis Batch: 34644						Prep Batch: 3						
	Spike	LCSD	LCSD				%Rec		RPD			
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit			
Benzene	0.100	0.07327		mg/Kg		73	70 - 130	4	35			

Client: Ensolum Job ID: 890-2895-1 SDG: 03E1558049/03E1558019 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-34677/2-A

Matrix: Solid Analysis Batch: 34644 Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 34677

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.08021		mg/Kg		80	70 - 130	8	35
Ethylbenzene	0.100	0.08135		mg/Kg		81	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1765		mg/Kg		88	70 - 130	7	35
o-Xylene	0.100	0.09069		mg/Kg		91	70 - 130	8	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 880-19252-A-1-E MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 34644										Batch: 34	677
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
<u> </u>	-0.00001		0.0000	0.00540		""			70 100		

Benzene <0.00201 U 0.0998 0.08548 mg/Kg 86 70 - 130 Toluene 0.0998 70 - 130 <0.00201 U 0.08620 mg/Kg 86 Ethylbenzene 0.0998 70 - 130 <0.00201 U 0.08822 mg/Kg 88 0.200 0.1859 93 70 - 130 m-Xylene & p-Xylene <0.00402 U mg/Kg o-Xylene <0.00201 U 0.0998 0.09455 mg/Kg 95 70 - 130

MS MS %Recovery Qualifier Limits Surrogate 4-Bromofluorobenzene (Surr) 101

70 - 130 1,4-Difluorobenzene (Surr) 70 - 130 98

Lab Sample ID: 880-19252-A-1-F MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 34644									Prep	Batch:	34677
	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	0.08554		mg/Kg		86	70 - 130	0	35
Toluene	<0.00201	U	0.0996	0.08821		mg/Kg		89	70 - 130	2	35
Ethylbenzene	<0.00201	U	0.0996	0.08834		mg/Kg		89	70 - 130	0	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1887		mg/Kg		95	70 - 130	1	35
o-Xylene	< 0.00201	U	0.0996	0.09680		mg/Kg		97	70 - 130	2	35

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	108	70 - 130
1,4-Difluorobenzene (Surr)	100	70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Analysis Batch: 34139

Lab Sample ID: MB 880-34143/1-A Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 34143

мв мв Result Qualifier RL Unit Prepared Gasoline Range Organics <50.0 U 50.0 mg/Kg 09/10/22 08:34 09/10/22 10:04

(GRO)-C6-C10

Eurofins Carlsbad

Prep Type: Total/NA

o-Terphenyl

QC Sample Results

Client: Ensolum Job ID: 890-2895-1 Project/Site: JRU DI 2 707H/JRU DI 2 702H

SDG: 03E1558049/03E1558019

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-34143/1-A **Matrix: Solid** Analysis Batch: 34139

MB MB

111

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 34143

09/10/22 10:04

09/10/22 08:34

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/10/22 08:34	09/10/22 10:04	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/10/22 08:34	09/10/22 10:04	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane			70 - 130			09/10/22 08:34	09/10/22 10:04	

Lab Sample ID: LCS 880-34143/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA Analysis Batch: 34139 Prep Batch: 34143

70 - 130

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1026 103 70 - 130 mg/Kg (GRO)-C6-C10 1000 933.9 Diesel Range Organics (Over mg/Kg 93 70 - 130 C10-C28)

LCS LCS Qualifier Limits Surrogate %Recovery 1-Chlorooctane 70 - 130 116 o-Terphenyl 117 70 - 130

Lab Sample ID: LCSD 880-34143/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 34139 Prep Batch: 34143

Spike LCSD LCSD %Rec RPD

	-								
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	902.3		mg/Kg		90	70 - 130	13	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	908.5		mg/Kg		91	70 - 130	3	20
C10-C28)									

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	121		70 - 130

Lab Sample ID: 890-2900-A-1-E MS Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Total/NA Analysis Batch: 34139 Prep Batch: 34143

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	822.0		mg/Kg		81	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	897.4		mg/Kg		88	70 - 130

Diesel Range Organics (Over	<49.9 U	997	897.4	mg/Kg	88	70 - 130
C10-C28)						
		_				
	MS MS	S				
Surrogate	%Recovery Qu	ualifier Limits				
1-Chlorooctane	97	70 - 130				
o-Terphenyl	88	70 - 130				

Client: Ensolum Job ID: 890-2895-1 SDG: 03E1558049/03E1558019 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-2900-A-1-F MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA Analysis Batch: 34139 Prep Batch: 34143

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	<49.9	U	999	849.1		mg/Kg		83	70 - 130	3	20	
(GRO)-C6-C10												
Diesel Range Organics (Over	<49.9	U	999	935.9		mg/Kg		92	70 - 130	4	20	
C10-C28)												

C10-C28)

MSD MSD %Recovery Qualifier Limits Surrogate 1-Chlorooctane 70 - 130 99 o-Terphenyl 90 70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34100/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34369

мв мв Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 mg/Kg 09/13/22 12:02

Lab Sample ID: LCS 880-34100/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 34369

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	240.2		mg/Kg		96	90 - 110	 _

Lab Sample ID: LCSD 880-34100/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34369

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	240.3		mg/Kg		96	90 - 110	0	20	

Lab Sample ID: 890-2892-A-8-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34369

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	223		249	473.2		ma/Ka	_	100	90 110	

Lab Sample ID: 890-2892-A-8-C MSD Client Sample ID: Matrix Spike Duplicate **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34369

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	223		249	472.5		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum Project/Site: JRU DI 2 707H/JRU DI 2 702H Job ID: 890-2895-1

SDG: 03E1558049/03E1558019

GC VOA

Prep Batch: 34413

L	ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
N	IB 880-34413/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 34644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2895-1	SS02	Total/NA	Solid	8021B	34677
MB 880-34413/5-A	Method Blank	Total/NA	Solid	8021B	34413
MB 880-34677/5-A	Method Blank	Total/NA	Solid	8021B	34677
LCS 880-34677/1-A	Lab Control Sample	Total/NA	Solid	8021B	34677
LCSD 880-34677/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34677
880-19252-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	34677
880-19252-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34677

Prep Batch: 34677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2895-1	SS02	Total/NA	Solid	5035	
MB 880-34677/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34677/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34677/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-19252-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-19252-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2895-1	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34139

Lab Sample ID 890-2895-1	Client Sample ID SS02	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 34143
MB 880-34143/1-A	Method Blank	Total/NA	Solid	8015B NM	34143
LCS 880-34143/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34143
LCSD 880-34143/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34143
890-2900-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	34143
890-2900-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34143

Prep Batch: 34143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2895-1	SS02	Total/NA	Solid	8015NM Prep	
MB 880-34143/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34143/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34143/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2900-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2900-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2895-1	SS02	Total/NA	Solid	8015 NM	

QC Association Summary

 Client: Ensolum
 Job ID: 890-2895-1

 Project/Site: JRU DI 2 707H/JRU DI 2 702H
 SDG: 03E1558049/03E1558019

HPLC/IC

Leach Batch: 34100

Lab Sample ID 890-2895-1	Client Sample ID SS02	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-34100/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34100/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34100/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2892-A-8-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2892-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2895-1	SS02	Soluble	Solid	300.0	34100
MB 880-34100/1-A	Method Blank	Soluble	Solid	300.0	34100
LCS 880-34100/2-A	Lab Control Sample	Soluble	Solid	300.0	34100
LCSD 880-34100/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34100
890-2892-A-8-B MS	Matrix Spike	Soluble	Solid	300.0	34100
890-2892-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34100

y 270

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Lab Chronicle

 Client: Ensolum
 Job ID: 890-2895-1

 Project/Site: JRU DI 2 707H/JRU DI 2 702H
 SDG: 03E1558049/03E1558019

Client Sample ID: SS02 Lab Sample ID: 890-2895-1

Date Collected: 09/07/22 09:35
Date Received: 09/08/22 09:30
Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	34677	09/16/22 13:13	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34644	09/18/22 09:58	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34773	09/19/22 09:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34268	09/12/22 10:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34143	09/10/22 08:34	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34139	09/10/22 17:42	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34100	09/09/22 12:23	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34369	09/13/22 14:23	CH	EET MID

Laboratory References:

EET 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: 890-2895-1 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Total TPH

Total BTEX

SDG: 03E1558049/03E1558019

Laboratory: Eurofins Midland

8015 NM

Total BTEX

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	ority Program		Identification Number	Expiration Date	
Texas	NE	ELAP	T104704400-22-24	06-30-23	
Texas	NE	ELAP	1104704400-22-24	06-30-23	
The following analytes	are included in this report, bu	ut the laboratory is not certifie	ed by the governing authority. This list ma	ay include analytes for wh	
The following analytes the agency does not o	• •	ut the laboratory is not certifie	ed by the governing authority. This list ma	ay include analytes for wh	

Solid

Solid

Method Summary

Client: Ensolum

Method

Total BTEX 8015 NM

8015B NM

8015NM Prep

DI Leach

300.0

5035

8021B

Project/Site: JRU DI 2 707H/JRU DI 2 702H

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

Job ID: 890-2895-1

EET MID

EET MID

SDG: 03E1558049/03E1558019

Protocol	Laboratory
SW846	EET MID
TAL SOP	EET MID
SW846	EET MID
SW846	EET MID
MCAWW	EET MID
211/8/16	EET 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:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Carlsbad

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Sample Summary

Client: Ensolum

Project/Site: JRU DI 2 707H/JRU DI 2 702H

Job ID: 890-2895-1

SDG: 03E1558049/03E1558019

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2895-1	SS02	Solid	09/07/22 09:35	09/08/22 09:30	0.5

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eurofins

Chain of Custody

3122 National Parks Hwy Tacoma Morrissey Bill to: (if different) Company Name: 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 XTO Energy 3104 E. Green St. Garrett Green

UEST Preservative Codes	ANALYSIS REQUEST
Deliverables: EDD	
Reporting: Level II 🗍 Level III 🗍 PST/JST 📗 TRRP 📗 Level IV 🗍	
State of Project:	
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	
Work Order Comments	
www.xenco.com Page of 1	
	988-3199
	794-1296
Work Order No:) 509-3334
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		3	6		5
			4		3
			48.22950	S ()	
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)
	ssigns standard terms and conditions le to circumstances beyond the control be enforced unless previously negotiated.	co, its affiliates and subcontractors. It assigns : curred by the client if such losses are due to cir enco, but not analyzed. These terms will be enf	om client company to Eurofins Xence bility for any losses or expenses inches ample submitted to Eurofins X	nples constitutes a valid purchase order framples and shall not assume any responsion to each project and a charge of \$5 for each	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$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 negotia
170 / 7471	Se Ag TI U Hg: 1631 / 245.1 / 7470 / 7471	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se A	RCRA Sb As Ba Be Co		Circle Method(s) and Metal(s) to be analyzed
Sn U V Zn	Mn Mo Ni K Se Ag SiO ₂ Na Sr Tl Sn U V Zn	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn	1 Al Sb As Ba Be B C	8RCRA 13PPM Texas 1	Total 200.7 / 6010 200.8 / 6020:
			/		
			/		
			<i>*</i>		
				_	

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Zn Acetate+NaOH: Zn Na₂S₂O₃: NaSO₃ NaHSO₄: NABIS H₃PO₄: HP

NaOH+Ascorbic Acid: SAPC

Sample Comments

SAMPLE RECEIPT

Temp Blank: (Yes) 8

Yes)No

FORMU

No

Parameters

Cooler Custody Seals: Samples Received Intact:

Yes No Yes No

Temperature Reading: Correction Factor: Thermometer ID:

CHLORIDES (EPA: 300.0)

890-2895 Chain of Custody

Corrected Temperature

ample Custody Seals:

Sample Identification

Matrix ഗ

Date Sampled

Time Sampled

Depth

Grab/

TPH (8015) BTEX (8021

Comp

Cont # of

9/7/2022

9:35

0.5

G

Cost Center:

1632561001/1632571001

nAPP2211654411/ nAPP2208349430

ncident ID:

Sampler's Name: Project Location: Project Number: Project Name:

Connor Whitman

Due Date:

✓ Routine

Rush

Turn Around

Garret.Green@ExxonMobil.com

City, State ZIP:

Carlsbad, NM 88220

TAT starts the day received by the lab, if received by 4:30pm

HCL: HC

Cool: Cool

MeOH: Me HNO3: HN

None: NO

DI Water: H₂O

H₂S0₄: H₂

NaOH: Na

City, State ZIP

Carlsbad, NM 88220

JRU DI 2 707H/JRU DI 2 702H 03E1558049 / 03E1558019

Project Manager:

Company Name:

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2895-1

SDG Number: 03E1558049/03E1558019

List Source: Eurofins Carlsbad

Login Number: 2895 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: 890-2895-1 SDG Number: 03E1558049/03E1558019

List Source: Eurofins Midland

Login Number: 2895 List Number: 2 List Creation: 09/09/22 11:04 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	

Released to Imaging: 7/24/2024 4:25:11 PM

Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad 1089 N Canal St. Carlsbad, NM 88220 Tel: (575)988-3199

Laboratory Job ID: 890-2896-1

Laboratory Sample Delivery Group: 03E1558049/03E1558019

Client Project/Site: JRU DI 2 707H/JRU DI 2 702H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 9/20/2022 11:38:07 AM

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: JRU DI 2 707H/JRU DI 2 702H Laboratory Job ID: 890-2896-1 SDG: 03E1558049/03E1558019

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Definitions/Glossary

Job ID: 890-2896-1 Client: Ensolum Project/Site: JRU DI 2 707H/JRU DI 2 702H

SDG: 03E1558049/03E1558019

Qualifiers

GC VOA Qualifier

F1 MS and/or MSD recovery exceeds control limits. F2

MS/MSD RPD exceeds control limits

Qualifier Description

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

S1+ Surrogate recovery exceeds control limits, high biased. 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

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: JRU DI 2 707H/JRU DI 2 702H

Job ID: 890-2896-1 SDG: 03E1558049/03E1558019

Job ID: 890-2896-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2896-1

Receipt

The sample was received on 9/8/2022 9:30 AM. 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 4.8°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34690 and analytical batch 880-34832 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.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-19067-A-51-F). 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: Surrogate recovery for the following samples were outside control limits: (LCS 880-34144/2-A) and (LCSD 880-34144/3-A). 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.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Matrix: Solid

Lab Sample ID: 890-2896-1

Client Sample Results

Client: Ensolum

Job ID: 890-2896-1

Project/Site: JRU DI 2 7071/ JRU DI 2 7021/

SPC: 03F4F59040/03F4F59040

Project/Site: JRU DI 2 707H/JRU DI 2 702H SDG: 03E1558049/03E1558019

Client Sample ID: SS01
Date Collected: 09/07/22 10:30
Date Received: 09/08/22 09:30

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 07:31	
Toluene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 07:31	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 07:31	
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		09/16/22 16:06	09/20/22 07:31	
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 07:31	
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		09/16/22 16:06	09/20/22 07:31	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	101		70 - 130			09/16/22 16:06	09/20/22 07:31	
1,4-Difluorobenzene (Surr)	101		70 - 130			09/16/22 16:06	09/20/22 07:31	
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Method: 8015 NM - Diesel Range	Organics (DR)	0) (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			09/12/22 11:26	
Method: 8015B NM - Diesel Rang	je Organics (Di	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/10/22 08:45	09/10/22 13:21	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/10/22 08:45	09/10/22 13:21	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/10/22 08:45	09/10/22 13:21	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	74		70 - 130			09/10/22 08:45	09/10/22 13:21	
o-Terphenyl	81		70 - 130			09/10/22 08:45	09/10/22 13:21	
Method: 300.0 - Anions, Ion Chro								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	527		5.00	mg/Kg			09/13/22 14:28	

DFBZ = 1,4-Difluorobenzene (Surr)

Surrogate Summary

 Client: Ensolum
 Job ID: 890-2896-1

 Project/Site: JRU DI 2 707H/JRU DI 2 702H
 SDG: 03E1558049/03E1558019

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

-				Percent Surrogate
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-19067-A-51-D MS	Matrix Spike	88	109	
880-19067-A-51-E MSD	Matrix Spike Duplicate	88	109	
890-2896-1	SS01	101	101	
LCS 880-34690/1-A	Lab Control Sample	89	101	
LCSD 880-34690/2-A	Lab Control Sample Dup	84	104	
MB 880-34689/5-B	Method Blank	101	117	
MB 880-34690/5-A	Method Blank	101	113	
Surrogate Legend				
BFB = 4-Bromofluoroben	zene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid Prep Type: Total/NA

		1CO1	OTPH1	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
90-2894-A-1-C MS	Matrix Spike	89	93	
90-2894-A-1-D MSD	Matrix Spike Duplicate	89	91	
90-2896-1	SS01	74	81	
.CS 880-34144/2-A	Lab Control Sample	116	133 S1+	
.CSD 880-34144/3-A	Lab Control Sample Dup	114	132 S1+	
/IB 880-34144/1-A	Method Blank	96	108	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Carlsbad

Released to Imaging: 7/24/2024 4:25:11 PM

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Client: Ensolum Job ID: 890-2896-1 SDG: 03E1558049/03E1558019 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34689/5-B

Matrix: Solid Analysis Batch: 34832 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34689

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/16/22 15:45	09/19/22 17:24	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101	70 - 130	09/16/22 15:45	09/19/22 17:24	1
1,4-Difluorobenzene (Surr)	117	70 - 130	09/16/22 15:45	09/19/22 17:24	1

Lab Sample ID: MB 880-34690/5-A

Client Sample ID: Method Blank

Matrix: Solid							Prep Type:	Total/NA
Analysis Batch: 34832							Prep Bato	:h: 34690
	МВ	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 05:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 05:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 05:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/16/22 16:06	09/20/22 05:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 05:00	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/16/22 16:06	09/20/22 05:00	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	09/16/22 16:06	09/20/22 05:00	1
1,4-Difluorobenzene (Surr)	113		70 - 130	09/16/22 16:06	09/20/22 05:00	1

Lab Sample ID: LCS 880-34690/1-A

Matrix: Solid

Analysis Batch: 34832

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34690

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09325		mg/Kg		93	70 - 130	
Toluene	0.100	0.08049		mg/Kg		80	70 - 130	
Ethylbenzene	0.100	0.07759		mg/Kg		78	70 - 130	
m-Xylene & p-Xylene	0.200	0.1618		mg/Kg		81	70 - 130	
o-Xylene	0.100	0.08093		mg/Kg		81	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	89	70 - 130
1.4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: LCSD 880-34690/2-A

Matrix: Solid

Analysis Batch: 34832

Client Sample ID: Lab	Control Sample Dup
	Date of Taxable Taxable I/NIA

Prep Type: Total/NA

Prep Batch: 34690

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09922		mg/Kg		99	70 - 130	6	35

Job ID: 890-2896-1 Client: Ensolum Project/Site: JRU DI 2 707H/JRU DI 2 702H SDG: 03E1558049/03E1558019

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-34690/2-A

Matrix: Solid Analysis Batch: 34832

Client Sample I	D: I	Lab	Control	Sample	Du
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Prep Type: Total/NA Prep Batch: 34690

%Rec **RPD** %Rec Limits **RPD** Limit D 70 - 130 35 85 5 5 35

Spike LCSD LCSD Analyte Added Result Qualifier Unit Toluene 0.100 0.08461 mg/Kg Ethylbenzene 0.100 0.08148 mg/Kg 81 70 - 130 m-Xylene & p-Xylene 0.200 0.1684 84 70 - 130 35 mg/Kg o-Xylene 0.100 0.08379 mg/Kg 84 70 - 130 3 35

LCSD LCSD %Recovery Qualifier Limits Surrogate 70 - 130 4-Bromofluorobenzene (Surr) 84 1,4-Difluorobenzene (Surr) 104 70 - 130

Lab Sample ID: 880-19067-A-51-D MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid Analysis Batch: 34832

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	0.00286	F2 F1	0.0998	0.02851	F1	mg/Kg		26	70 - 130
Toluene	0.00518	F2 F1	0.0998	0.02409	F1	mg/Kg		19	70 - 130
Ethylbenzene	0.00860	F2 F1	0.0998	0.02194	F1	mg/Kg		13	70 - 130
m-Xylene & p-Xylene	0.0175	F2 F1	0.200	0.04087	F1	mg/Kg		12	70 - 130
o-Xylene	0.00724	F2 F1	0.0998	0.02291	F1	mg/Kg		16	70 - 130

MS MS Qualifier Surrogate %Recovery Limits 70 - 130 4-Bromofluorobenzene (Surr) 88 109 1,4-Difluorobenzene (Surr) 70 - 130

Lab Sample ID: 880-19067-A-51-E MSD

Matrix: Solid

Analysis Batch: 34832

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 34690

Prep Batch: 34690

Sample Sample MSD MSD %Rec RPD Spike Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Benzene 0.00286 F2 F1 0.0990 0.05017 F2 F1 48 70 - 130 55 35 mg/Kg Toluene 0.00518 F2 F1 0.0990 0.04534 F2 F1 mg/Kg 41 70 - 130 61 35 Ethylbenzene 0.00860 F2 F1 0.0990 0.04136 F2 F1 mg/Kg 33 70 - 130 61 35 0.198 30 70 - 130 m-Xylene & p-Xylene 0.0175 F2 F1 0.07749 F2 F1 mg/Kg 62 35 0.0990 o-Xylene 0.00724 F2 F1 0.04246 F2 F1 mg/Kg 36 70 - 130 60 35

MSD Qualifier Limits Surrogate %Recovery 4-Bromofluorobenzene (Surr) 88 70 - 130 1,4-Difluorobenzene (Surr) 109 70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-34144/1-A

Matrix: Solid

Analysis Batch: 34141

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 34144

мв мв Analyte Result Qualifier RL Unit Prepared Dil Fac <50.0 U 50.0 09/10/22 08:45 09/10/22 10:04 Gasoline Range Organics mg/Kg (GRO)-C6-C10

Client: Ensolum Job ID: 890-2896-1 SDG: 03E1558049/03E1558019 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-34144/1-A **Matrix: Solid**

Lab Sample ID: LCS 880-34144/2-A

Matrix: Solid

Analysis Batch: 34141

Analysis Batch: 34141

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34144

ı		IIID	1410													
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac							
	Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/10/22 08:45	09/10/22 10:04	1							
	Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/10/22 08:45	09/10/22 10:04	1							

MB MB

MR MR

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	09/10/22 08:45	09/10/22 10:04	1
o-Terphenyl	108		70 - 130	09/10/22 08:45	09/10/22 10:04	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34144

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 819.2 82 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 765.4 mg/Kg 77 70 - 130 C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	116		70 - 130
o-Terphenyl	133	S1+	70 - 130

Lab Sample ID: LCSD 880-34144/3-A

Matrix: Solid

Analysis Batch: 34141

Client Sample ID: Lab Control Sample Dup	
Prep Type: Total/NA	
Prep Batch: 34144	

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	844.5		mg/Kg		84	70 - 130	3	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	758.8		mg/Kg		76	70 - 130	1	20	
C10-C28)										

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 114 70 - 130 o-Terphenyl 132 S1+ 70 - 130

Lab Sample ID: 890-2894-A-1-C MS

Matrix: Solid

Analysis Batch: 34141

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 34144

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits <49.9 U 997 899.6 70 - 130 Gasoline Range Organics 88 mg/Kg (GRO)-C6-C10 997 730.7 70 Diesel Range Organics (Over <49.9 U mg/Kg 70 - 130

C10-C28)

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: 890-2894-A-1-D MSD

QC Sample Results

Client: Ensolum Job ID: 890-2896-1 SDG: 03E1558049/03E1558019 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 34144

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	998	878.0		mg/Kg		86	70 - 130	2	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	998	733.6		mg/Kg		70	70 - 130	0	20
C40 C20\											

C10-C28)

Matrix: Solid

Analysis Batch: 34141

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	91		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34100/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34369

мв мв

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 U	5.00	mg/Kg			09/13/22 12:02	1

Lab Sample ID: LCS 880-34100/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 34369

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	240.2		mg/Kg		96	90 - 110	

Lab Sample ID: LCSD 880-34100/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 34369

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	240.3		mg/Kg		96	90 - 110	0	20	

Lab Sample ID: 890-2892-A-8-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34369

	Sample	Sample	Spike	IVIS	IVIS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	223		249	473.2		mg/Kg		100	90 - 110	

Lab Sample ID: 890-2892-A-8-C MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 34369

Allalysis Datell. 34303											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	223		249	472.5		mg/Kg		100	90 - 110		20

Eurofins Carlsbad

Prep Type: Soluble

QC Association Summary

Client: Ensolum Project/Site: JRU DI 2 707H/JRU DI 2 702H Job ID: 890-2896-1

SDG: 03E1558049/03E1558019

GC VOA

Prep Batch: 34689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34689/5-B	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2896-1	SS01	Total/NA	Solid	5035	
MB 880-34690/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34690/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34690/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-19067-A-51-D MS	Matrix Spike	Total/NA	Solid	5035	
880-19067-A-51-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2896-1	SS01	Total/NA	Solid	8021B	34690
MB 880-34689/5-B	Method Blank	Total/NA	Solid	8021B	34689
MB 880-34690/5-A	Method Blank	Total/NA	Solid	8021B	34690
LCS 880-34690/1-A	Lab Control Sample	Total/NA	Solid	8021B	34690
LCSD 880-34690/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34690
880-19067-A-51-D MS	Matrix Spike	Total/NA	Solid	8021B	34690
880-19067-A-51-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34690

Analysis Batch: 34922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2896-1	SS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2896-1	SS01	Total/NA	Solid	8015B NM	34144
MB 880-34144/1-A	Method Blank	Total/NA	Solid	8015B NM	34144
LCS 880-34144/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34144
LCSD 880-34144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34144
890-2894-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34144
890-2894-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34144

Prep Batch: 34144

Lab Sample ID 890-2896-1	Client Sample ID SS01	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-34144/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34144/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2894-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2894-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2896-1	SS01	Total/NA	Solid	8015 NM	

QC Association Summary

 Client: Ensolum
 Job ID: 890-2896-1

 Project/Site: JRU DI 2 707H/JRU DI 2 702H
 SDG: 03E1558049/03E1558019

HPLC/IC

Leach Batch: 34100

Lab Sample ID 890-2896-1	Client Sample ID SS01	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-34100/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34100/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34100/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2892-A-8-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2892-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2896-1	SS01	Soluble	Solid	300.0	34100
MB 880-34100/1-A	Method Blank	Soluble	Solid	300.0	34100
LCS 880-34100/2-A	Lab Control Sample	Soluble	Solid	300.0	34100
LCSD 880-34100/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34100
890-2892-A-8-B MS	Matrix Spike	Soluble	Solid	300.0	34100
890-2892-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34100

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Lab Chronicle

Client: Ensolum Job ID: 890-2896-1 Project/Site: JRU DI 2 707H/JRU DI 2 702H SDG: 03E1558049/03E1558019

Client Sample ID: SS01 Lab Sample ID: 890-2896-1

Date Collected: 09/07/22 10:30 Matrix: Solid Date Received: 09/08/22 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	34690	09/16/22 16:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34832	09/20/22 07:31	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34922	09/20/22 09:49	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34281	09/12/22 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34144	09/10/22 08:45	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34141	09/10/22 13:21	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34100	09/09/22 12:23	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34369	09/13/22 14:28	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: 890-2896-1 Project/Site: JRU DI 2 707H/JRU DI 2 702H SDG: 03E1558049/03E1558019

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Pr	rogram	Identification Number	Expiration Date
Texas	NI	ELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of		ut 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 RTEY		Solid	Total RTEY	

Method Summary

Client: Ensolum

Project/Site: JRU DI 2 707H/JRU DI 2 702H

Job ID: 890-2896-1

SDG: 03E1558049/03E1558019

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	MCAWW	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

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:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Sample Summary

Client: Ensolum

Project/Site: JRU DI 2 707H/JRU DI 2 702H

Job ID: 890-2896-1

SDG: 03E1558049/03E1558019

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2896-1	SS01	Solid	09/07/22 10:30	09/08/22 09:30	0.5

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eurofins

Chain of Custody n. 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 Bill to: (if different) Company Name: XTO Energy Address: 3104 E. Green St. City, State ZIP: Carlsbad, NM 88220 Turn Around Turn Around Pres. atts: Rush Code Trurn Around Pres. Trurn Around Pres. ANALYSIS REQ. ANALYSIS REQ. Date: Rush Code Date: Rush	Bill to: (if Company Address: City, State Email: Garret City, State Em
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9/20/2022

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2896-1

SDG Number: 03E1558049/03E1558019

Login Number: 2896 List Source: Eurofins Carlsbad

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	

Page 18 of 19

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2896-1 SDG Number: 03E1558049/03E1558019

List Source: Eurofins Midland

Login Number: 2896 List Number: 2 List Creation: 09/09/22 11:04 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	





Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad 1089 N Canal St. Carlsbad, NM 88220 Tel: (575)988-3199

Laboratory Job ID: 890-2902-1

Laboratory Sample Delivery Group: 03E1558049

Client Project/Site: JRU DI 2 702H

For:

eurofins

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

RAMER

Authorized for release by: 9/20/2022 11:33:18 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

EOL **Have a Question?**

.....LINKS

Review your project results through

Received by OCD: 7/2/2024 5:14:03 PM

Visit us at:

www.eurofinsus.com/Env Released to Imaging: 7/24/2024 4:25:11 PM

Results relate only to the items tested and the sample(s) as received by the laboratory.

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

Client: Ensolum
Project/Site: JRU DI 2 702H
Laboratory Job ID: 890-2902-1
SDG: 03E1558049

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Definitions/Glossary

Job ID: 890-2902-1 Client: Ensolum Project/Site: JRU DI 2 702H

SDG: 03E1558049

Qualifiers

GC VOA

Qualifier **Qualifier Description**

S1+ Surrogate recovery exceeds control limits, high biased. U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

U Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier **Qualifier Description**

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)

Released to Imaging: 7/24/2024 4:25:11 PM

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Project/Site: JRU DI 2 702H

Job ID: 890-2902-1

SDG: 03E1558049

Job ID: 890-2902-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2902-1

Receipt

The samples were received on 9/8/2022 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 4.8°C

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCS 880-34801/1-A). 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

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.

Client Sample Results

 Client: Ensolum
 Job ID: 890-2902-1

 Project/Site: JRU DI 2 702H
 SDG: 03E1558049

Client Sample ID: PH01 Lab Solution Collected: 09/06/22 11:30

Lab Sample ID: 890-2902-1

Matrix: Solid

Sample Depth: 0.5

Date Received: 09/08/22 09:30

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 03:29	
Toluene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 03:29	•
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 03:29	•
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		09/15/22 14:33	09/20/22 03:29	
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 03:29	•
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		09/15/22 14:33	09/20/22 03:29	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	114		70 - 130			09/15/22 14:33	09/20/22 03:29	-
1,4-Difluorobenzene (Surr)	89		70 - 130			09/15/22 14:33	09/20/22 03:29	:
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			09/20/22 09:23	
Analyte Total TPH	344	Qualifier		Unit mg/Kg	D	Prepared	Analyzed 09/12/22 10:21	Dil Fa
			30.0	mg/kg			09/12/22 10.21	
Method: 8015B NM - Diesel Rang								
Analyte		Qualifier	RL	Unit	D	Prepared		
Gasoline Range Organics							Analyzed	
(GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/10/22 08:34	Analyzed 09/10/22 13:21	
(GRO)-C6-C10 Diesel Range Organics (Over	<50.0 344	U	50.0	mg/Kg	— <u> </u>			
(GRO)-C6-C10						09/10/22 08:34	09/10/22 13:21	
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	344	U	50.0	mg/Kg		09/10/22 08:34 09/10/22 08:34	09/10/22 13:21	
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	344 <50.0	U	50.0 50.0	mg/Kg		09/10/22 08:34 09/10/22 08:34 09/10/22 08:34	09/10/22 13:21 09/10/22 13:21 09/10/22 13:21	Dil Fa
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	344 <50.0 <i>%Recovery</i>	U	50.0 50.0 <i>Limits</i>	mg/Kg	_ =	09/10/22 08:34 09/10/22 08:34 09/10/22 08:34 <i>Prepared</i>	09/10/22 13:21 09/10/22 13:21 09/10/22 13:21 Analyzed	Dil Fa
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	344 <50.0 	U Qualifier	50.0 50.0 <u>Limits</u> 70 - 130	mg/Kg	_ =	09/10/22 08:34 09/10/22 08:34 09/10/22 08:34 Prepared 09/10/22 08:34	09/10/22 13:21 09/10/22 13:21 09/10/22 13:21 09/10/22 13:21 Analyzed 09/10/22 13:21	Dil Fac
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	344 <50.0 **Recovery 94 89 omatography -	U Qualifier	50.0 50.0 <u>Limits</u> 70 - 130	mg/Kg	D_	09/10/22 08:34 09/10/22 08:34 09/10/22 08:34 Prepared 09/10/22 08:34	09/10/22 13:21 09/10/22 13:21 09/10/22 13:21 09/10/22 13:21 Analyzed 09/10/22 13:21	Dil Fac

Client Sample ID: PH01A Lab Sample ID: 890-2902-2

Date Collected: 09/06/22 13:55

Date Received: 09/08/22 09:30

Matrix: Solid

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/15/22 14:33	09/20/22 03:49	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/15/22 14:33	09/20/22 03:49	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/15/22 14:33	09/20/22 03:49	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		09/15/22 14:33	09/20/22 03:49	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		09/15/22 14:33	09/20/22 03:49	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		09/15/22 14:33	09/20/22 03:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			09/15/22 14:33	09/20/22 03:49	

Eurofins Carlsbad

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09/20/22 09:23

09/13/22 15:36

Client Sample Results

 Client: Ensolum
 Job ID: 890-2902-1

 Project/Site: JRU DI 2 702H
 SDG: 03E1558049

Client Sample ID: PH01A Lab Sample ID: 890-2902-2

Date Collected: 09/06/22 13:55

Date Received: 09/08/22 09:30

Matrix: Solid

Sample Depth: 1

Total BTEX

l	Method: 8021B - Volatile Organic Com	pounas ((GC) (Contir	iuea)					
l	Surrogate	6Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
l	1,4-Difluorobenzene (Surr)	76		70 - 130			09/15/22 14:33	09/20/22 03:49	1
ſ	_ Method: Total BTEX - Total BTEX Calc	ulation							
l	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Method: 8015 NM - Diesel Range O	Organics (DRO) (GC)						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9 U	49.9	mg/Kg			09/12/22 10:21	1

0.00403

mg/Kg

mg/Kg

Unit

mg/Kg

Prepared

<0.00403 U

1280

Result Qualifier

1230

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/10/22 08:34	09/10/22 13:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		09/10/22 08:34	09/10/22 13:42	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/10/22 08:34	09/10/22 13:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chloroctane	01		70 130			00/10/22 08:34	00/10/22 13:42	

o-Terpnenyi	84	70 - 130		(09/10/22 08:34	09/10/22 13:42	7
Method: 300.0 - Anions, Ion Chromatogra	aphy - Soluble						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample ID: PH02

Date Collected: 09/06/22 11:35

Lab Sample ID: 890-2902-3

Matrix: Solid

25.0

Date Collected: 09/06/22 11:35 Date Received: 09/08/22 09:30

Sample Depth: 0.5

Chloride

Analyte

Total TPH

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:10	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:10	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:10	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/15/22 14:33	09/20/22 04:10	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:10	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/15/22 14:33	09/20/22 04:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130			09/15/22 14:33	09/20/22 04:10	1
1,4-Difluorobenzene (Surr)	92		70 - 130			09/15/22 14:33	09/20/22 04:10	1
Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/20/22 09:23	1

Eurofins Carlsbad

Analyzed

09/12/22 10:21

RL

50.0

2

3

5

7

9

11

13

Dil Fac

Lab Sample ID: 890-2902-3

Lab Sample ID: 890-2902-4

Matrix: Solid

Client Sample Results

Client: Ensolum Job ID: 890-2902-1 Project/Site: JRU DI 2 702H SDG: 03E1558049

Client Sample ID: PH02

Date Collected: 09/06/22 11:35 Date Received: 09/08/22 09:30

Sample Depth: 0.5

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		09/10/22 08:34	09/10/22 14:04	1
Diesel Range Organics (Over C10-C28)	1230		50.0	mg/Kg		09/10/22 08:34	09/10/22 14:04	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/10/22 08:34	09/10/22 14:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130			09/10/22 08:34	09/10/22 14:04	1
o-Terphenyl	89		70 - 130			09/10/22 08:34	09/10/22 14:04	1
— Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8000	•	100	mg/Kg			09/13/22 15:51	20

Client Sample ID: PH02A

Date Collected: 09/06/22 14:00

Date Received: 09/08/22 09:30

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:30	1
m-Xylene & p-Xylene	< 0.00399	U	0.00399	mg/Kg		09/15/22 14:33	09/20/22 04:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:30	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/15/22 14:33	09/20/22 04:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130			09/15/22 14:33	09/20/22 04:30	1
1,4-Difluorobenzene (Surr)	88		70 - 130			09/15/22 14:33	09/20/22 04:30	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/20/22 09:23	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			09/12/22 10:21	1
Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		09/10/22 08:34	09/10/22 14:26	1
Diesel Range Organics (Over	<49.8	U	49.8	mg/Kg		09/10/22 08:34	09/10/22 14:26	1
C10-C28)								
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		09/10/22 08:34	09/10/22 14:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			09/10/22 08:34	09/10/22 14:26	1
o-Terphenyl	92		70 - 130			09/10/22 08:34	09/10/22 14:26	1

Lab Sample ID: 890-2902-4

Client Sample Results

Client: Ensolum Job ID: 890-2902-1 Project/Site: JRU DI 2 702H SDG: 03E1558049

Client Sample ID: PH02A

Date Collected: 09/06/22 14:00 Date Received: 09/08/22 09:30

Sample Depth: 1

Method: 300.0 - Anions, Ion Chrom	natography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1960		24.8	mg/Kg			09/13/22 15:55	5

Client Sample ID: PH03 Lab Sample ID: 890-2902-5 Matrix: Solid

Date Collected: 09/06/22 11:40 Date Received: 09/08/22 09:30

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:51	1
Ethylbenzene	0.00256		0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:51	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		09/15/22 14:33	09/20/22 04:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 04:51	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		09/15/22 14:33	09/20/22 04:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130			09/15/22 14:33	09/20/22 04:51	1
1,4-Difluorobenzene (Surr)	86		70 - 130			09/15/22 14:33	09/20/22 04:51	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			09/20/22 09:23	1
Analyte Total TPH	Result 110	Qualifier	RL 49.9	mg/Kg	<u>D</u>	Prepared	Analyzed 09/12/22 10:21	Dil Fac
Method: 8015B NM - Diesel Ran	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		09/10/22 08:34	09/10/22 14:48	1
Diesel Range Organics (Over C10-C28)	110		49.9	mg/Kg		09/10/22 08:34	09/10/22 14:48	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/10/22 08:34	09/10/22 14:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130			09/10/22 08:34	09/10/22 14:48	1
o-Terphenyl	90		70 - 130			09/10/22 08:34	09/10/22 14:48	1
		Calubia						
Method: 300.0 - Anions, Ion Chr	omatography -	Soluble						
Method: 300.0 - Anions, Ion Chr ^{Analyte}	•	Qualifier	RL	Unit mg/Kg	D	Prepared	Analyzed	Dil Fac

Lab Sample ID: 890-2902-6

Client Sample Results

 Client: Ensolum
 Job ID: 890-2902-1

 Project/Site: JRU DI 2 702H
 SDG: 03E1558049

Client Sample ID: PH03A

Date Collected: 09/06/22 14:05 Date Received: 09/08/22 09:30

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/15/22 14:33	09/20/22 05:11	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/15/22 14:33	09/20/22 05:11	1
Ethylbenzene	< 0.00201	U	0.00201	mg/Kg		09/15/22 14:33	09/20/22 05:11	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/15/22 14:33	09/20/22 05:11	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/15/22 14:33	09/20/22 05:11	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/15/22 14:33	09/20/22 05:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130			09/15/22 14:33	09/20/22 05:11	1
1,4-Difluorobenzene (Surr)	83		70 - 130			09/15/22 14:33	09/20/22 05:11	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			09/20/22 09:23	1
Analyte Total TPH	Kesuit <49.9	Qualifier U	49.9 ——	Unit mg/Kg	D	Prepared	Analyzed 09/12/22 10:21	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			09/12/22 10:21	1
Method: 8015B NM - Diesel Rang	O! (D							
	ge Organics (D	RO) (GC)						
Analyte		RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics		Qualifier	RL 49.9	Unit mg/Kg	<u>D</u>	Prepared 09/10/22 08:34	Analyzed 09/10/22 15:09	
Gasoline Range Organics	Result	Qualifier U			<u>D</u>			1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9 <49.9	Qualifier U	49.9	mg/Kg	<u>D</u>	09/10/22 08:34 09/10/22 08:34	09/10/22 15:09 09/10/22 15:09	1
	Result <49.9	Qualifier U	49.9	mg/Kg	<u>D</u>	09/10/22 08:34	09/10/22 15:09	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result	Qualifier U U U	49.9 49.9 49.9 Limits	mg/Kg	<u>D</u>	09/10/22 08:34 09/10/22 08:34 09/10/22 08:34 <i>Prepared</i>	09/10/22 15:09 09/10/22 15:09	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result	Qualifier U U U	49.9 49.9 49.9	mg/Kg	<u> </u>	09/10/22 08:34 09/10/22 08:34 09/10/22 08:34	09/10/22 15:09 09/10/22 15:09 09/10/22 15:09	1 1 1 Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result	Qualifier U U U	49.9 49.9 49.9 Limits	mg/Kg	<u>D</u>	09/10/22 08:34 09/10/22 08:34 09/10/22 08:34 <i>Prepared</i>	09/10/22 15:09 09/10/22 15:09 09/10/22 15:09 Analyzed	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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 Soluble	49.9 49.9 49.9 Limits 70 - 130	mg/Kg	<u>D</u>	09/10/22 08:34 09/10/22 08:34 09/10/22 08:34 Prepared 09/10/22 08:34	09/10/22 15:09 09/10/22 15:09 09/10/22 15:09 Analyzed 09/10/22 15:09	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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	49.9 49.9 49.9 Limits 70 - 130	mg/Kg	<u>D</u>	09/10/22 08:34 09/10/22 08:34 09/10/22 08:34 Prepared 09/10/22 08:34	09/10/22 15:09 09/10/22 15:09 09/10/22 15:09 Analyzed 09/10/22 15:09	Dil Fac

Client Sample ID: PH04

Date Collected: 09/06/22 11:45 Date Received: 09/08/22 09:30

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 05:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 05:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 05:32	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/15/22 14:33	09/20/22 05:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/20/22 05:32	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/15/22 14:33	09/20/22 05:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			09/15/22 14:33	09/20/22 05:32	1

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Lab Sample ID: 890-2902-7

Matrix: Solid

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Client Sample Results

 Client: Ensolum
 Job ID: 890-2902-1

 Project/Site: JRU DI 2 702H
 SDG: 03E1558049

Client Sample ID: PH04 Lab Sample ID: 890-2902-7

Date Collected: 09/06/22 11:45
Date Received: 09/08/22 09:30
Matrix: Solid

Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	85		70 - 130			09/15/22 14:33	09/20/22 05:32	1
Method: Total BTEX - Total BTE)	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			09/20/22 09:23	1
- Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1230	-	49.9	mg/Kg			09/12/22 10:21	1
Method: 8015B NM - Diesel Rand	ge Organics (D	RO) (GC)						
	• •	RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Gasoline Range Organics	• •	Qualifier	RL 49.9	Unit mg/Kg	D	Prepared 09/10/22 08:34	Analyzed 09/10/22 15:53	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier			<u>D</u>			Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)		Qualifier U	49.9	mg/Kg	<u>D</u>	09/10/22 08:34	09/10/22 15:53	Dil Fac 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9	Qualifier U	49.9	mg/Kg	<u> </u>	09/10/22 08:34 09/10/22 08:34	09/10/22 15:53 09/10/22 15:53	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9 1230 <49.9	Qualifier U	49.9 49.9 49.9	mg/Kg	<u>D</u>	09/10/22 08:34 09/10/22 08:34 09/10/22 08:34	09/10/22 15:53 09/10/22 15:53 09/10/22 15:53	1 1

 Analyte
 Result Chloride
 Qualifier
 RL Sample ID: PH04A
 Unit mg/Kg
 D Prepared mg/Kg
 Analyzed 09/13/22 16:10
 Dil Fac 10

 Client Sample ID: PH04A
 Lab Sample ID: 890-2902-8

Date Collected: 09/06/22 14:10 Date Received: 09/08/22 09:30

Method: 300.0 - Anions, Ion Chromatography - Soluble

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/15/22 14:33	09/20/22 05:52	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/15/22 14:33	09/20/22 05:52	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		09/15/22 14:33	09/20/22 05:52	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/15/22 14:33	09/20/22 05:52	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		09/15/22 14:33	09/20/22 05:52	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/15/22 14:33	09/20/22 05:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			09/15/22 14:33	09/20/22 05:52	1
1,4-Difluorobenzene (Surr)	86		70 - 130			09/15/22 14:33	09/20/22 05:52	1
- Method: Total BTEX - Total B	ΓEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/20/22 09:23	1
- Method: 8015 NM - Diesel Rar	nge Organics (DR	O) (GC)						

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09/12/22 10:21

50.0

mg/Kg

<50.0 U

Matrix: Solid

Total TPH

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Lab Sample ID: 890-2902-8

Client Sample Results

 Client: Ensolum
 Job ID: 890-2902-1

 Project/Site: JRU DI 2 702H
 SDG: 03E1558049

Client Sample ID: PH04A

Date Collected: 09/06/22 14:10 Date Received: 09/08/22 09:30

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		09/10/22 08:34	09/10/22 16:15	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		09/10/22 08:34	09/10/22 16:15	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/10/22 08:34	09/10/22 16:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130			09/10/22 08:34	09/10/22 16:15	1
o-Terphenyl	98		70 - 130			09/10/22 08:34	09/10/22 16:15	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

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Surrogate Summary

 Client: Ensolum
 Job ID: 890-2902-1

 Project/Site: JRU DI 2 702H
 SDG: 03E1558049

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)	
880-18965-A-1-G MS	Matrix Spike	113	106	
880-18965-A-1-H MSD	Matrix Spike Duplicate	109	105	
890-2902-1	PH01	114	89	
890-2902-2	PH01A	117	76	
890-2902-3	PH02	117	92	
890-2902-4	PH02A	114	88	
890-2902-5	PH03	115	86	
890-2902-6	PH03A	115	83	
890-2902-7	PH04	109	85	
890-2902-8	PH04A	116	86	
LCS 880-34597/1-A	Lab Control Sample	120	103	
LCS 880-34801/1-A	Lab Control Sample	131 S1+	98	
LCSD 880-34597/2-A	Lab Control Sample Dup	115	106	
LCSD 880-34801/2-A	Lab Control Sample Dup	128	97	
MB 880-34597/5-A	Method Blank	103	89	
MB 880-34801/5-A	Method Blank	104	84	

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)	
890-2900-A-1-E MS	Matrix Spike	97	88	
890-2900-A-1-F MSD	Matrix Spike Duplicate	99	90	
890-2902-1	PH01	94	89	
890-2902-2	PH01A	91	84	
890-2902-3	PH02	94	89	
890-2902-4	PH02A	100	92	
890-2902-5	PH03	95	90	
890-2902-6	PH03A	93	87	
890-2902-7	PH04	93	89	
890-2902-8	PH04A	108	98	
LCS 880-34143/2-A	Lab Control Sample	116	117	
LCSD 880-34143/3-A	Lab Control Sample Dup	117	121	
MB 880-34143/1-A	Method Blank	114	111	
Surrogate Legend				

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OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-2902-1 SDG: 03E1558049 Project/Site: JRU DI 2 702H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34597/5-A

Matrix: Solid

Analysis Batch: 34746

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34597

	МВ	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/19/22 22:01	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/19/22 22:01	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/19/22 22:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/15/22 14:33	09/19/22 22:01	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/15/22 14:33	09/19/22 22:01	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/15/22 14:33	09/19/22 22:01	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	09/15/22 14:33	09/19/22 22:01	1
1,4-Difluorobenzene (Surr)	89		70 - 130	09/15/22 14:33	09/19/22 22:01	1

Lab Sample ID: LCS 880-34597/1-A

Matrix: Solid

Analysis Batch: 34746

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34597

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08304	-	mg/Kg		83	70 - 130	
Toluene	0.100	0.07619		mg/Kg		76	70 - 130	
Ethylbenzene	0.100	0.08173		mg/Kg		82	70 - 130	
m-Xylene & p-Xylene	0.200	0.1722		mg/Kg		86	70 - 130	
o-Xylene	0.100	0.09898		mg/Kg		99	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	120	70 - 130
1,4-Difluorobenzene (Surr)	103	70 - 130

Lab Sample ID: LCSD 880-34597/2-A

Matrix: Solid

Analysis Batch: 34746

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 34597

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08511		mg/Kg		85	70 - 130	2	35	
Toluene	0.100	0.07870		mg/Kg		79	70 - 130	3	35	
Ethylbenzene	0.100	0.08172		mg/Kg		82	70 - 130	0	35	
m-Xylene & p-Xylene	0.200	0.1710		mg/Kg		85	70 - 130	1	35	
o-Xylene	0.100	0.09826		mg/Kg		98	70 - 130	1	35	

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	115	70 - 130
1,4-Difluorobenzene (Surr)	106	70 - 130

Lab Sample ID: MB 880-34801/5-A

Matrix: Solid

Analysis Batch: 34746

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34801

		MB	M

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg	_	09/19/22 10:02	09/19/22 11:26	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/19/22 10:02	09/19/22 11:26	1

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QC Sample Results

Job ID: 890-2902-1 Client: Ensolum Project/Site: JRU DI 2 702H SDG: 03E1558049

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-34801/5-A

Matrix: Solid

Analysis Batch: 34746

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34801

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Ethylbenzene <0.00200 U 0.00200 09/19/22 10:02 09/19/22 11:26 mg/Kg m-Xylene & p-Xylene <0.00400 0.00400 mg/Kg 09/19/22 10:02 09/19/22 11:26 o-Xylene <0.00200 U 0.00200 09/19/22 10:02 09/19/22 11:26 mg/Kg Xylenes, Total <0.00400 U 0.00400 mg/Kg 09/19/22 10:02 09/19/22 11:26

MB MB

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prep	pared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	09/19/2	22 10:02	09/19/22 11:26	1
1,4-Difluorobenzene (Surr)	84		70 - 130	09/19/2	22 10:02	09/19/22 11:26	1

Lab Sample ID: LCS 880-34801/1-A

Matrix: Solid

Analysis Batch: 34746

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34801

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.08639 0.100 mg/Kg 86 70 - 130 Toluene 0.100 0.08783 88 70 - 130 mg/Kg Ethylbenzene 0.100 0.09574 96 70 - 130 mg/Kg m-Xylene & p-Xylene 0.200 0.2089 104 70 - 130 mg/Kg o-Xylene 0.100 0.1183 mg/Kg 118 70 - 130

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: LCSD 880-34801/2-A

Matrix: Solid

Analysis Batch: 34746

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 34801

Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Benzene 0.100 0.08424 mg/Kg 84 70 - 130 3 35 Toluene 0.100 0.08924 mg/Kg 89 70 - 130 2 35 Ethylbenzene 0.100 0.09986 mg/Kg 100 70 - 130 35 0.200 0.2198 70 - 130 35 m-Xylene & p-Xylene mg/Kg 110 0.100 o-Xylene 0.1256 mg/Kg 126 70 - 130 35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	128	70 - 130
1,4-Difluorobenzene (Surr)	97	70 - 130

Lab Sample ID: 880-18965-A-1-G MS

Matrix: Solid

Analysis Batch: 34746

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 34801

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Benzene	<0.00199	U	0.0998	0.09703		mg/Kg		97	70 - 130
Toluene	<0.00199	U	0.0998	0.09095		mg/Kg		91	70 - 130
Ethylbenzene	<0.00199	U	0.0998	0.09396		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1947		mg/Kg		98	70 - 130

Prep Batch: 34801

QC Sample Results

Job ID: 890-2902-1 Client: Ensolum Project/Site: JRU DI 2 702H SDG: 03E1558049

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-18965-A-1-G MS Client Sample ID: Matrix Spike **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 34746

Sample Sample Spike MS MS Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits o-Xylene <0.00199 U 0.0998 0.1099 110 70 - 130 mg/Kg

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 880-18965-A-1-H MSD Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 34746									Prep Batch: 348			
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	<0.00199	U	0.0996	0.08949		mg/Kg		90	70 - 130	8	35	
Toluene	<0.00199	U	0.0996	0.08282		mg/Kg		83	70 - 130	9	35	
Ethylbenzene	<0.00199	U	0.0996	0.08351		mg/Kg		84	70 - 130	12	35	
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1723		mg/Kg		86	70 - 130	12	35	
o-Xylene	< 0.00199	U	0.0996	0.09731		mg/Kg		98	70 - 130	12	35	

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 109 70 - 130 1,4-Difluorobenzene (Surr) 105 70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-34143/1-A

Matrix: Solid

Analysis Batch: 34139

	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		09/10/22 08:34	09/10/22 10:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/10/22 08:34	09/10/22 10:04	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/10/22 08:34	09/10/22 10:04	1

	МВ	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	09/10/22 08:34	09/10/22 10:04	1
o-Terphenyl	111		70 - 130	09/10/22 08:34	09/10/22 10:04	1

Lab Sample ID: LCS 880-34143/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 34139

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1026 mg/Kg 103 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 933.9 mg/Kg 93 70 - 130

C10-C28)

Prep Batch: 34143

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34143

Job ID: 890-2902-1

SDG: 03E1558049

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

LCS LCS

Lab Sample ID: LCS 880-34143/2-A Client Sample ID: Lab Control Sample

Matrix: Solid

Client: Ensolum

Analysis Batch: 34139

Project/Site: JRU DI 2 702H

Prep Type: Total/NA

Prep Batch: 34143

Surrogate %Recovery Qualifier Limits 1-Chlorooctane 116 70 - 130 o-Terphenyl 117 70 - 130

Lab Sample ID: LCSD 880-34143/3-A Client Sample ID: Lab Control Sample Dup

Matrix: Solid Analysis Batch: 34139

Prep Type: Total/NA Prep Batch: 34143

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 1000 902.3 90 70 - 13013 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 908.5 91 mg/Kg 70 - 1303 20

LCSD LCSD Surrogate %Recovery Qualifier Limits 70 - 130 1-Chlorooctane 117

121 70 - 130 o-Terphenyl

Lab Sample ID: 890-2900-A-1-E MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 34139

Sample Sample MS MS Spike Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <49.9 U 997 822.0 mg/Kg 81 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 997 897.4 mg/Kg 88 70 - 130

C10-C28)

C10-C28)

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 97 o-Terphenyl 88 70 - 130

Lab Sample ID: 890-2900-A-1-F MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Prep Type: Total/NA Analysis Batch: 34139 Prep Batch: 34143

Sample Sample MSD MSD RPD Spike %Rec

Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit U 999 849.1 83 Gasoline Range Organics <49.9 mg/Kg 70 - 130 20 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 999 935.9 mg/Kg 92 70 - 130 20 C10-C28)

MSD MSD %Recovery Qualifier Surrogate Limits 1-Chlorooctane 99 70 - 130 90 70 - 130 o-Terphenyl

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Prep Batch: 34143

QC Sample Results

Job ID: 890-2902-1 Client: Ensolum Project/Site: JRU DI 2 702H

SDG: 03E1558049

Prep Type: Soluble

Client Sample ID: PH04A

Prep Type: Soluble

Client Sample ID: Method Blank

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34103/1-A

Matrix: Solid

Analysis Batch: 34370

MB MB

Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 09/13/22 14:52

Lab Sample ID: LCS 880-34103/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 34370

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 241.8 mg/Kg 97 90 - 110

Lab Sample ID: LCSD 880-34103/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 34370

LCSD LCSD %Rec RPD Spike Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Chloride 250 242.1 mg/Kg 90 - 110

Lab Sample ID: 890-2902-8 MS Client Sample ID: PH04A **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 34370

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Qualifier Unit %Rec Result Limits 968.5 Chloride 739 250 90 - 110 mg/Kg

Lab Sample ID: 890-2902-8 MSD

Matrix: Solid

Analysis Batch: 34370

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 739 970.6 mg/Kg 93 90 - 110 0 20

QC Association Summary

Client: Ensolum Job ID: 890-2902-1 Project/Site: JRU DI 2 702H SDG: 03E1558049

GC VOA

Prep Batch: 34597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2902-1	PH01	Total/NA	Solid	5035	
890-2902-2	PH01A	Total/NA	Solid	5035	
890-2902-3	PH02	Total/NA	Solid	5035	
890-2902-4	PH02A	Total/NA	Solid	5035	
890-2902-5	PH03	Total/NA	Solid	5035	
890-2902-6	PH03A	Total/NA	Solid	5035	
890-2902-7	PH04	Total/NA	Solid	5035	
890-2902-8	PH04A	Total/NA	Solid	5035	
MB 880-34597/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34597/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34597/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 34746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2902-1	PH01	Total/NA	Solid	8021B	34597
890-2902-2	PH01A	Total/NA	Solid	8021B	34597
890-2902-3	PH02	Total/NA	Solid	8021B	34597
890-2902-4	PH02A	Total/NA	Solid	8021B	34597
890-2902-5	PH03	Total/NA	Solid	8021B	34597
890-2902-6	PH03A	Total/NA	Solid	8021B	34597
890-2902-7	PH04	Total/NA	Solid	8021B	34597
890-2902-8	PH04A	Total/NA	Solid	8021B	34597
MB 880-34597/5-A	Method Blank	Total/NA	Solid	8021B	34597
MB 880-34801/5-A	Method Blank	Total/NA	Solid	8021B	34801
LCS 880-34597/1-A	Lab Control Sample	Total/NA	Solid	8021B	34597
LCS 880-34801/1-A	Lab Control Sample	Total/NA	Solid	8021B	34801
LCSD 880-34597/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34597
LCSD 880-34801/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34801
880-18965-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	34801
880-18965-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34801

Prep Batch: 34801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34801/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34801/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34801/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-18965-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
880-18965-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2902-1	PH01	Total/NA	Solid	Total BTEX	
890-2902-2	PH01A	Total/NA	Solid	Total BTEX	
890-2902-3	PH02	Total/NA	Solid	Total BTEX	
890-2902-4	PH02A	Total/NA	Solid	Total BTEX	
890-2902-5	PH03	Total/NA	Solid	Total BTEX	
890-2902-6	PH03A	Total/NA	Solid	Total BTEX	
890-2902-7	PH04	Total/NA	Solid	Total BTEX	
890-2902-8	PH04A	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum

Job ID: 890-2902-1 Project/Site: JRU DI 2 702H SDG: 03E1558049

GC Semi VOA

Analysis Batch: 34139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2902-1	PH01	Total/NA	Solid	8015B NM	34143
890-2902-2	PH01A	Total/NA	Solid	8015B NM	34143
890-2902-3	PH02	Total/NA	Solid	8015B NM	34143
890-2902-4	PH02A	Total/NA	Solid	8015B NM	34143
890-2902-5	PH03	Total/NA	Solid	8015B NM	34143
890-2902-6	PH03A	Total/NA	Solid	8015B NM	34143
890-2902-7	PH04	Total/NA	Solid	8015B NM	34143
890-2902-8	PH04A	Total/NA	Solid	8015B NM	34143
MB 880-34143/1-A	Method Blank	Total/NA	Solid	8015B NM	34143
LCS 880-34143/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34143
LCSD 880-34143/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34143
890-2900-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	34143
890-2900-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34143

Prep Batch: 34143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2902-1	PH01	Total/NA	Solid	8015NM Prep	
890-2902-2	PH01A	Total/NA	Solid	8015NM Prep	
890-2902-3	PH02	Total/NA	Solid	8015NM Prep	
890-2902-4	PH02A	Total/NA	Solid	8015NM Prep	
890-2902-5	PH03	Total/NA	Solid	8015NM Prep	
890-2902-6	PH03A	Total/NA	Solid	8015NM Prep	
890-2902-7	PH04	Total/NA	Solid	8015NM Prep	
890-2902-8	PH04A	Total/NA	Solid	8015NM Prep	
MB 880-34143/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34143/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34143/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2900-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2900-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2902-1	PH01	Total/NA	Solid	8015 NM	
890-2902-2	PH01A	Total/NA	Solid	8015 NM	
890-2902-3	PH02	Total/NA	Solid	8015 NM	
890-2902-4	PH02A	Total/NA	Solid	8015 NM	
890-2902-5	PH03	Total/NA	Solid	8015 NM	
890-2902-6	PH03A	Total/NA	Solid	8015 NM	
890-2902-7	PH04	Total/NA	Solid	8015 NM	
890-2902-8	PH04A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 34103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2902-1	PH01	Soluble	Solid	DI Leach	
890-2902-2	PH01A	Soluble	Solid	DI Leach	
890-2902-3	PH02	Soluble	Solid	DI Leach	
890-2902-4	PH02A	Soluble	Solid	DI Leach	
890-2902-5	PH03	Soluble	Solid	DI Leach	
890-2902-6	PH03A	Soluble	Solid	DI Leach	

QC Association Summary

 Client: Ensolum
 Job ID: 890-2902-1

 Project/Site: JRU DI 2 702H
 SDG: 03E1558049

HPLC/IC (Continued)

Leach Batch: 34103 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2902-7	PH04	Soluble	Solid	DI Leach	
890-2902-8	PH04A	Soluble	Solid	DI Leach	
MB 880-34103/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34103/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34103/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2902-8 MS	PH04A	Soluble	Solid	DI Leach	
890-2902-8 MSD	PH04A	Soluble	Solid	DI Leach	

Analysis Batch: 34370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2902-1	PH01	Soluble	Solid	300.0	34103
890-2902-2	PH01A	Soluble	Solid	300.0	34103
890-2902-3	PH02	Soluble	Solid	300.0	34103
890-2902-4	PH02A	Soluble	Solid	300.0	34103
890-2902-5	PH03	Soluble	Solid	300.0	34103
890-2902-6	PH03A	Soluble	Solid	300.0	34103
890-2902-7	PH04	Soluble	Solid	300.0	34103
890-2902-8	PH04A	Soluble	Solid	300.0	34103
MB 880-34103/1-A	Method Blank	Soluble	Solid	300.0	34103
LCS 880-34103/2-A	Lab Control Sample	Soluble	Solid	300.0	34103
LCSD 880-34103/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34103
890-2902-8 MS	PH04A	Soluble	Solid	300.0	34103
890-2902-8 MSD	PH04A	Soluble	Solid	300.0	34103

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Client: Ensolum

Project/Site: JRU DI 2 702H

Job ID: 890-2902-1 SDG: 03E1558049

Client Sample ID: PH01

Date Collected: 09/06/22 11:30 Date Received: 09/08/22 09:30 Lab Sample ID: 890-2902-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	34597	09/15/22 14:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34746	09/20/22 03:29	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			34901	09/20/22 09:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34266	09/12/22 10:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34143	09/10/22 08:34	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34139	09/10/22 13:21	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	34103	09/09/22 12:30	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	34370	09/13/22 15:31	CH	EET MID

Client Sample ID: PH01A

Date Collected: 09/06/22 13:55

Date Received: 09/08/22 09:30

Lab Sample ID: 890-2902-2

Matrix: Solid

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Prep 5035 Total/NA 4.96 g 5 mL 34597 09/15/22 14:33 MR EET MID Total/NA 8021B 5 mL **EET MID** Analysis 1 5 mL 34746 09/20/22 03:49 AJ Total/NA Total BTEX 34901 09/20/22 09:23 Analysis A.I **EET MID** 1 Total/NA Analysis 8015 NM 34266 09/12/22 10:21 SM **EET MID** Total/NA 34143 09/10/22 08:34 Prep 8015NM Prep 10.03 g 10 mL AM EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 34139 09/10/22 13:42 SM **EET MID** Soluble 09/09/22 12:30 Leach DI Leach 5 g 50 mL 34103 KS **EET MID** Soluble Analysis 300.0 5 50 mL 50 mL 34370 09/13/22 15:36 СН **EET MID**

Client Sample ID: PH02

Date Collected: 09/06/22 11:35 Date Received: 09/08/22 09:30 Lab Sample ID: 890-2902-3

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34597	09/15/22 14:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34746	09/20/22 04:10	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			34901	09/20/22 09:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34266	09/12/22 10:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34143	09/10/22 08:34	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34139	09/10/22 14:04	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34103	09/09/22 12:30	KS	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	34370	09/13/22 15:51	CH	EET MID

Client Sample ID: PH02A

Date Collected: 09/06/22 14:00 Date Received: 09/08/22 09:30 Lab Sample ID: 890-2902-4

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34597	09/15/22 14:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34746	09/20/22 04:30	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			34901	09/20/22 09:23	AJ	EET MID

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Lab Chronicle

 Client: Ensolum
 Job ID: 890-2902-1

 Project/Site: JRU DI 2 702H
 SDG: 03E1558049

SDG: 03E1558049

Client Sample ID: PH02A
Date Collected: 09/06/22 14:00
Date Received: 09/08/22 09:30

Lab Sample ID: 890-2902-4

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			34266	09/12/22 10:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	34143	09/10/22 08:34	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34139	09/10/22 14:26	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	34103	09/09/22 12:30	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	34370	09/13/22 15:55	CH	EET MID

Client Sample ID: PH03 Lab Sample ID: 890-2902-5

Date Collected: 09/06/22 11:40

Date Received: 09/08/22 09:30

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	34597	09/15/22 14:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34746	09/20/22 04:51	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			34901	09/20/22 09:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34266	09/12/22 10:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34143	09/10/22 08:34	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34139	09/10/22 14:48	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	34103	09/09/22 12:30	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34370	09/13/22 16:00	CH	EET MID

Client Sample ID: PH03A Lab Sample ID: 890-2902-6

Date Collected: 09/06/22 14:05
Date Received: 09/08/22 09:30
Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	34597	09/15/22 14:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34746	09/20/22 05:11	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			34901	09/20/22 09:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34266	09/12/22 10:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	34143	09/10/22 08:34	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34139	09/10/22 15:09	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34103	09/09/22 12:30	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34370	09/13/22 16:05	CH	EET MID

Client Sample ID: PH04 Lab Sample ID: 890-2902-7

Date Collected: 09/06/22 11:45
Date Received: 09/08/22 09:30
Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34597	09/15/22 14:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34746	09/20/22 05:32	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			34901	09/20/22 09:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34266	09/12/22 10:21	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.02 g 1 uL	10 mL 1 uL	34143 34139	09/10/22 08:34 09/10/22 15:53	AM SM	EET MID EET MID

Eurofins Carlsbad

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Lab Chronicle

 Client: Ensolum
 Job ID: 890-2902-1

 Project/Site: JRU DI 2 702H
 SDG: 03E1558049

Client Sample ID: PH04

Date Collected: 09/06/22 11:45 Date Received: 09/08/22 09:30 Lab Sample ID: 890-2902-7

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	34103	09/09/22 12:30	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	34370	09/13/22 16:10	CH	EET MID

Client Sample ID: PH04A Lab Sample ID: 890-2902-8

Date Collected: 09/06/22 14:10

Matrix: Solid

Date Received: 09/08/22 09:30

	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	34597	09/15/22 14:33	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34746	09/20/22 05:52	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			34901	09/20/22 09:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34266	09/12/22 10:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	34143	09/10/22 08:34	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34139	09/10/22 16:15	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	34103	09/09/22 12:30	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34370	09/13/22 16:15	CH	EET MID

Laboratory References:

EET 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: 890-2902-1 Project/Site: JRU DI 2 702H

SDG: 03E1558049

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority Texas		ogram	Identification Number	Expiration Date			
		ELAP	T104704400-22-24	06-30-23			
The following analytes	are included in this report, bu	ut the laboratory is not certifi	ied by the governing authority. This list ma	v include analytes for			
the agency does not of	· '	,	isa sy are gererining addressing.	ly molado analytoo loi			
the agency does not of Analysis Method	· '	Matrix	Analyte	y molade analytee for			
0 ,	fer certification.	•	, , ,				

Method Summary

Client: Ensolum

Project/Site: JRU DI 2 702H

Job ID: 890-2902-1

SDG: 03E1558049

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	MCAWW	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

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:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum

Project/Site: JRU DI 2 702H

Job ID: 890-2902-1

SDG: 03E1558049

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2902-1	PH01	Solid	09/06/22 11:30	09/08/22 09:30	0.5
890-2902-2	PH01A	Solid	09/06/22 13:55	09/08/22 09:30	1
890-2902-3	PH02	Solid	09/06/22 11:35	09/08/22 09:30	0.5
890-2902-4	PH02A	Solid	09/06/22 14:00	09/08/22 09:30	1
890-2902-5	PH03	Solid	09/06/22 11:40	09/08/22 09:30	0.5
890-2902-6	PH03A	Solid	09/06/22 14:05	09/08/22 09:30	1
890-2902-7	PH04	Solid	09/06/22 11:45	09/08/22 09:30	0.5
890-2902-8	PH04A	Solid	09/06/22 14:10	09/08/22 09:30	1

Environment Testing

Company Name:

Ensolum

Project Manager:

Tacoma Morrissey

Bill to: (if different)

City, State ZIP:

303-887-2946 Carlsbad, NM 88220 3122 National Parks Hwy

Email: | Garret.Green@ExxonMobil.com

City, State ZIP:

Carlsbad, NM 88220 3104 E. Green St XTO Energy Garrett Green

Address: Company Name:

Project Location: Project Number:

Due Date: ✓ Routine

Project Name:

JRU DI 2 702H 03E1558049

Turn Around

Rush

None: NO

DI Water: H₂O MeOH: Me

Chain of Custody

Midfand, 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 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Preservative Codes	REQUEST	ANALYSIS REQUEST
ADaPT Other:	Deliverables: EDD ADa	
Reporting: Level II Level III PST/UST TRRP Level IV	Reporting: Level II Level III P	
1	State of Project:	
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	Program: UST/PST PRP Bro	
Work Order Comments	Work Order	
m Page / of /	www.xenco.com	
		988-3199
		794-1296
0:	Work Order No:	509-3334

	3 Com litton	Relinquished by: (Signature)	otice: Signature of this document a f service. Eurofins Xenco will be lia f Eurofins Xenco. A minimum char,	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010 2			PH04Å	PH04	РН03 Å	PH03	PH02 Å	PH02	PH01 A	PH01	Sample Identification	Total Containers:	Sample Custody Seals: Y	Cooler Custody Seals: Y	Samples Received Intact:	SAMPLE RECEIPT	PO #	Sampler's Name:	Floject Location.
	A	iture)	and relinquishment able only for the co ge of \$85.00 will be	(s) to be analy	200.8 / 6020:		ナ	S	S	S	S	S	S	တ	S	n Matrix		Yes No NA	Yes No MA	(Key No	Temp Blank:		Connor Whitman	
	insuel	Received	of samples const st of samples and applied to each p	/zed	8R(*	9/6/2022	9/6/2022	9/6/2022	9/6/2022	9/6/2022	9/6/2022	9/6/2022	9/6/2022	Date Sampled	Corrected Temperature	Temperature Reading	Correction Factor	Thermometer ID	Red No			
	le &	Received by: (Signature)	itutes a valid pur shall not assum roject and a cha	TCLP / SPLP 6010: 8RCRA	8RCRA 13PPM			01.51	45	50:01	oh: 11	14:00	11:35	13:55	11:30	Time Sampled	mperature:	Reading:	actor:	·ID: 7	Wet ice:	the lab, if received by 4:30pm	TAT starts the day received by	
	test	re)	chase order fro any responsib rge of \$5 for ea	P 6010: 8F	A Texas 11 Al Sb As Ba Be	1		6	0.5 G	2 G	0.5 G	<u>1</u> G	0.5 G	1 G	0.5 G	Depth Comp	4.8	C	E. 0-	na -00	No No	/ed by 4:30pm	lay received by	
	3/16		m client co ility for any ch sample	1 11	AI SI					-	-	-	-	<u>-</u>	-	p Cont			Pa	aran	nete	_	Ì	
	66/	Date/Time	mpany to losses or submitted	Sb As Ba	As B	_	Ļ	×	×	×	×	×	×	×	×	CHLOF		S (E	PA:	300.	0)			_
	25.63	me	Eurofins X expenses to Eurofin	ෂ	m		-	×	×	×	×	×	×	×	×	TPH (8								_
on a		Relinquished by: (Signature)	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 assign 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 of Eurofins Xenco. A minimum 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 a	Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Cd Ca Cr Co Cu Fe Pb Mg Mi													-	890-2902 Chain of Custody					
		Received by: (Signature)	signs standard terms and conditions to circumstances beyond the control be enforced unless previously negotiated.	Ag TI U Hg: 1631 / 245.1 / 7470 / 747	X Se						AFE		Cos	nAPP	Incic		Nac	ZnA		Nan	Н ₃ РС	H ₂ SC	HCL: HC	
Revised Date 08/25/2020 Rev 2020 2		Date/Time		1 / 7470 / 7471	r TI Sn U V Zn							1632561001 (63257 100)	Cost Center:	nAPP2211654411	Incident ID:	Sample Comments	NaOH+ASCORDIC ACID: SAPC	Zn Acetate+NaOH: Zn	Na ₂ S ₂ O ₃ ; NaSO ₃	NaHSO4: NABIS	H ₃ PO ₄ : HP	H ₂ SO ₄ : H ₂ NaOH: Na		

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2902-1

SDG Number: 03E1558049

List Source: Eurofins Carlsbad

Login Number: 2902 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: 890-2902-1 SDG Number: 03E1558049

Login Number: 2902
List Source: Eurofins Midland
List Number: 2
List Creation: 09/09/22 11:04 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	N/A	

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<6mm (1/4").



APPENDIX E

NMOCD Notifications

From: <u>Green, Garrett J</u>

To: ocd.enviro@state.nm.us; Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; Nobui, Jennifer, EMNRD

Cc: <u>DelawareSpills /SM; Tacoma Morrissey; Aimee Cole</u>

Subject: XTO-Extension Request - James Ranch Unit 2 702H / NAPP2211654411

Date: Wednesday, June 29, 2022 11:18:51 AM

[**EXTERNAL EMAIL**]

Extension Request - James Ranch Unit 2 702H / NAPP2211654411

XTO is requesting an extension for the current deadline of July 12, 2022 for submitting a remediation work plan or closure request required in 19.15.29.12.B.(1) NMAC at the James Ranch Unit 2 702H (Incident Number NAPP2211654411). The release occurred on April 13, 2022 during frac operations. Initial assessment of the release has been completed, however; remediation activities could not be completed until frac operations were complete. XTO operations has been providing status updates and has indicated the Site is clear as of June 23, 2022. In order to complete remediation activities and submit a remediation work plan or closure request, XTO is requesting an extension until September 5, 2022.

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

From: Hamlet, Robert, EMNRD

To: Collins, Melanie

Cc: DelawareSpills /SM; Tacoma Morrissey; Green, Garrett J; Pennington, Shelby G; Bratcher, Mike, EMNRD; Nobui,

Jennifer, EMNRD; Nobui, Jennifer, EMNRD

Subject: (Final Extension) - James Ranch Unit DI 2 707H & 702H - Incident Numbers NAPP2208349430 &

NAPP2211654411

Date: Thursday, September 1, 2022 2:15:35 PM

Attachments: <u>image003.png</u>

[**EXTERNAL EMAIL**]

RE: Incident #NAPP2208349430 and #NAPP2211654411

Melanie,

Your request for an extension to **October 5th, 2022** is approved. This will be the **final extension** for these releases. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced

Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us

http://www.emnrd.state.nm.us/OCD/



From: Collins, Melanie <melanie.collins@exxonmobil.com>

Sent: Thursday, September 1, 2022 10:56 AM

To: Enviro, OCD, EMNRD <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>; Tacoma Morrissey

<tmorrissey@ensolum.com>; Green, Garrett J <garrett.green@exxonmobil.com>; Pennington,

Shelby G <shelby.g.pennington@exxonmobil.com>

Subject: [EXTERNAL] XTO-Extension Request- James Ranch Unit DI 2 707H & 702H - Incident Numbers NAPP2208349430 & NAPP2211654411

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

ΑII,

XTO is requesting an extension for the current deadline of September 5, 2022 for submitting a remediation work plan or closure request required in 19.15.29.12.B.(1) NMAC at the sites James

Ranch Unit DI 2 707H & 702H (Incident Numbers NAPP2208349430 & NAPP2211654411). The releases occurred on March 9, 2022 and April 13, 2022, respectively, during pressure testing and frac operations. Initial assessment of the releases has been completed, however; no additional remediation work has been completed due to ongoing frac and flowback operations. NMOCD approved a 90-day extension for each release with a new due date of September 5, 2022. XTO operations has been providing status updates weekly. The Site was scheduled to be clear in June; however, the timeline for the fracing operations was extended, which delayed the start of remediation. The Site is clear and delineation and excavation work is scheduled to begin September 6, 2022. In order to complete the remediation activities and submit a remediation work plan or closure request, XTO is requesting a second 30-day extension for both releases until October 5, 2022.

Thank you,

Melanie Collins

ENERGY

Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

From: Green, Garrett J

To: ocd.enviro@state.nm.us; mike.bratcher@state.nm.us; Hamlet, Robert, EMNRD

Cc: Tacoma Morrissey

Subject: XTO - Sampling Notification (Week of 8/29/22 - 9/2/22)

Date: Friday, August 26, 2022 3:15:37 PM

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of August 29, 2022.

Monday

- Brushy Draw West 25 / nAPP2216138431
- Big Sinks 2-24-30 / nAPP2219644709 & nAPP2220224382

Tuesday

- Brushy Draw West 25 / nAPP2216138431
- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- ADU 816/ NAB1435334641

Wednesday

- Brushy Draw West 25 / nAPP2216138431
- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- ADU 816/ NAB1435334641
- PLU Pierce Canyon 12 / nAPP2222044186

Thursday

- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- JRU DI2/ nAPP2211654411 & nAPP2208349430

Friday

- PLU 21 BD 123-124 & 104 / nAPP2211651017, nAPP2211151438, nAPP2210942764, & nAPP2209736479
- PLU S Frac Pond / nAPP2211150068

Thank you!

Garrett Green

Environmental Coordinator Delaware Business Unit (575) 200-0729

Garrett.Green@ExxonMobil.com



APPENDIX F

Friction Reducer SDS



SAFETY DATA SHEET

Issuing Date 01-Aug-2019 Revision Date 01-Aug-2019 Revision Number 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name POLYglide Xcel-200

Other means of identification

Product Code(s) 10497

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use No information available

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address Manufacturer Address

PfP Industries PfP Industries 29738 Goynes Rd. 29738 Goynes Rd. Katy, TX 77493 Katy, TX 77493

Emergency telephone number

Company Phone Number 281-371-2000

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids Category 4

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Warning

Combustible liquid

EN / AGHS Page 1/8

10497 - POLYglide Xcel-200

Revision Date 01-Aug-2019

Appearance Opaque Physical state Liquid Odor Mineral Oil

Precautionary Statements - Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Information

May be harmful in contact with skin Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical name	CAS No	Weight-%	Trade secret
Petroleum distillates, hydrotreated light	64742-47-8	40 - 70	

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present

and easy to do. Continue rinsing.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s)

involved, take precautions to protect themselves and prevent spread of contamination.

Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

EN / AGHS Page 2/8

Revision Date 01-Aug-2019

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the

chemical

Keep product and empty container away from heat and sources of ignition. In the event of

fire, cool tanks with water spray.

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See

section 8 for more information. Take precautionary measures against static discharges. Do

not touch or walk through spilled material.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage

if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far

ahead of liquid spill for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert

absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Do not breathe vapor or mist. Keep away from heat,

hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from

heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular

national regulations. Store in accordance with local regulations.

EN / AGHS Page 3/8

Revision Date 01-Aug-2019

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or

level that contributes to the hazard classification of the mixture) which have an exposure

limit applicable in the region for which this safety data sheet is intended or other

recommended limit. At this time, the other relevant constituents have no known exposure

limits from the sources listed here.

Appropriate engineering controls

Engineering controls Showers

Eyewash stations

Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not

be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Opaque

Color Milky white to yellow

Odor Mineral Oil

Odor threshold No information available

Property Values Remarks • Method

pH No data available None known
Melting point / freezing point No data available None known
Boiling point / boiling range No data available None known

Flash point >= 67 °C / 153 °F

Evaporation rate No data available None known Flammability (solid, gas) No data available None known

Flammability Limit in Air None known

Upper flammability limit: No data available
Lower flammability limit: No data available

Vapor pressureNo data availableNone knownVapor densityNo data availableNone known

Relative density 0.97 - 1.03 Water solubility Miscible in water

Solubility in other solvents No data available None known
Partition coefficient No data available None known
Autoignition temperature No data available None known
Decomposition temperature No data available None known

 Decomposition temperature
 No data available
 None known

 Kinematic viscosity
 ≥150 mm²/s

Dynamic viscosity No data available None known

Explosive properties No information available Oxidizing properties No information available

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Revision Date 01-Aug-2019

Other Information

Softening point

Molecular weight

VOC Content (%)

Liquid Density

No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Heat, flames and sparks.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document.

 ATEmix (oral)
 5,005.00 mg/kg

 ATEmix (dermal)
 2,002.00 mg/kg

 ATEmix (inhalation-dust/mist)
 5.20 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum distillates, hydrotreated light 64742-47-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat)4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

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Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Petroleum distillates, hydrotreated light 64742-47-8		2.4: 96 h Oncorhynchus mykiss mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 2.2: 96 h Lepomis macrochirus mg/L LC50 static		4720: 96 h Den-dronereides heteropoda mg/L LC50

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated. Product does not sustain combustion (49 CFR 173.120(b)(3))

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Does not comply
IECSC Complies
KECL Complies

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PICCS Complies
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

US State Regulations

This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

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Revision Date 01-Aug-2019

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA Health hazards 2 Flammability 2 Instability 0 Physical and chemical

properties -

HMIS Health hazards 2 Flammability 2 Physical hazards 0 Personal protection X

Issuing Date 01-Aug-2019

Revision Date 01-Aug-2019

Revision Note No information available.

Disclaimer

The data supplied herein is for use only in connection with occupational safety and health. The information provided in this Safety Data Sheet is believed to be correct as of the date issued. Updates to this information may be obtained by contacting (either reference contact location or website). PfP Industries MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. This information is not meant to be an all-inclusive document on worldwide hazard communication regulations. Each user of the material described herein must evaluate the conditions of use and design, many of which will be solely within the user's knowledge and control, and the appropriate protective actions, including proper notification and training of employees, necessary to prevent employee exposures, property damage or release to the environment.

End of Safety Data Sheet

EN / AGHS Page 8/8



NMOCD Correspondence

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>

Sent: Thursday, August 31, 2023 10:01 AM

To: Collins, Melanie <melanie.collins@exxonmobil.com>

Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Hamlet, Robert, EMNRD

<Robert.Hamlet@emnrd.nm.gov>

Subject: RE: [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)

External Email - Think Before You Click

Hi Melanie,

The OCD has received your notification. When reporting sampling at multiple locations it is required to provide the date and time for each location. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced Environmental Bureau EMNRD-Oil Conservation Division 1220 S. St. Francis Drive | Santa Fe, NM 87505 (505)469-7520 | Shelly. Wells@emnrd.nm.gov http://www.emnrd.state.nm.us/OCD/

From: Collins, Melanie < melanie.collins@exxonmobil.com >

Sent: Thursday, August 31, 2023 8:49 AM

To: Enviro, OCD, EMNRD < OCD.Enviro@emnrd.nm.gov>; spills@slo.state.nm.us
Cc: bbelill@ensolum.com; Green, Garrett J < garrett.green@exxonmobil.com>
Subject: [EXTERNAL] XTO - Sampling Notification (Week of 9/5/23 - 9/8/23)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

XTO plans to complete final sampling activities at the sites listed below for the week of September 5, 2023.

Tuesday

• PLU 18 TWR Sat Battery / nAPP2230551957

Wednesday

- PLU 18 TWR Sat Battery / nAPP2230551957
- James Ranch Unit 19 Tank Battery / NAPP2322348507 (SLO)

Thursday

- PLU 18 TWR Sat Battery / nAPP2230551957
- James Ranch Unit 2 702H / nAPP2211654411
- JRU 108 / nAPP2217931599
- Hudson 1 Fed Com 9H / nAPP2322645119

Friday

- PLU 18 TWR Sat Battery / nAPP2230551957
- JRU 108 / nAPP2217931599
- Hudson 1 Fed Com 9H / nAPP2322645119

Thank you,

Melanie Collins



Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

From: Collins, Melanie

To: Ashley Ager; Ben Belill; Kalei Jennings; Tacoma Morrissey; Stuart Hyde

Cc: Green, Garrett J; Pennington, Shelby G

Subject: FW: The Oil Conservation Division (OCD) has approved the application, Application ID: 148555

Date: Tuesday, January 3, 2023 10:49:21 AM

Attachments: <u>image001.png</u>

[**EXTERNAL EMAIL**]

JRU 2 702

Melanie Collins



Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756

From: OCDOnline@state.nm.us [mailto:OCDOnline@state.nm.us]

Sent: Wednesday, December 28, 2022 2:10 PM

To: Collins, Melanie <melanie.collins@exxonmobil.com>

Subject: The Oil Conservation Division (OCD) has approved the application, Application ID: 148555

External Email - Think Before You Click

To whom it may concern (c/o Melanie Collins for XTO ENERGY, INC),

The OCD has approved the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2211654411, with the following conditions:

• Workplan/Remediation Plan is approved with the following conditions: • 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. • Workplan/Remediation Plan is approved with the following conditions: Please make sure the floor confirmation samples are delineated/excavated to meet closure criteria standards for proven depth to water determination. Sidewall samples should be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release.

The signed C-141 can be found in the OCD Online: Imaging under the incident ID (n#).

If you have any questions regarding this application, please contact me.

Thank you,
Jocelyn Harimon
Environmental Specialist
575-748-1283
Jocelyn.Harimon@emnrd.nm.gov

New Mexico Energy, Minerals and Natural Resources Department 1220 South St. Francis Drive Santa Fe, NM 87505 From: <u>Collins, Melanie</u>

To: ocd.enviro (ocd.enviro@emnrd.nm.gov); Bratcher, Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Hamlet,

Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov)

Cc: <u>Green, Garrett J; Tacoma Morrissey; DelawareSpills /SM</u>
Subject: XTO - Sampling Notification (Week of 6/5/23 - 6/9/23)

Date: Thursday, June 1, 2023 12:49:06 PM

Attachments: image001.png

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of June 5, 2023.

Monday

PLU Phantom Banks 25-25-30 Battery / nAPP2310044397

Tuesday

- PLU Phantom Banks 25-25-30 Battery / nAPP2310044397
- PLU BS 15H / NAB1821157574

Wednesday

- James Ranch Unit 2 702H / nAPP2211654411
- Outrider Fed 28 501H / nAPP2306054654

Thursday

Nash Deep East / nAPP2308136642

Friday

• Nash Deep East / nAPP2308136642

Thank you,

Melanie Collins



Environmental Technician

melanie.collins@exxonmobil.com

432-556-3756



APPENDIX B

Lithologic / Soil Sampling Log / Well Log Record

								Sample Name: BH01 (C-4731)	Date: 4/14/2023				
	7						B. 4		, ,				
			N	3		_ U	IVI	Site Name: JRU D12 CTB Incident Number:					
								Job Number: 03C1558019 and 03C	1558049				
		LITHOL	OGI	C / SOIL S	SAMPLING	LOG		Logged By: Peter Van Patten Method: Air Rotary					
Coord		2.361936						Hole Diameter: 8"	Total Depth: 106'				
			-		ed while dril	ling; no grou	ındwater	after 72 hr	·				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol						
Dry	,	-	N	-	- 1	<u> </u>	SP-SM	Sand (surface sample): dark to poorly graded, few caliche gr					
Dry	-	-	N	-	· · ·	- _ 10 -	SP-SM	Sand: brownish red, very fine graded, some silt, no stain, n	e - fine grain, moderatly io odor				
Dry	-	-	N	-	 -	20	SP-SM	Sand: pinkish red, very fine-f graded, silty, no stain, no od	ine grain, moderatly or				
Dry	-	-	N	-		- _ 30 -	SP-SM	A Sand: brownish red, very fine - fine grain, moder graded, some silt, no stain, no odor					
Dry	-	-	N	-		40	SP-SM	M SAA (Same As Above)					
					_	-		gravel, no stain, no odor					
Dry	-	-	N	-	- - -	50	SP-SM	SAA					
Dry	-	-	N	-	- - -	- _ 60 -	SP-SM	SAA					
Dry	-	-	N	-	· -	<u>7</u> 0	SP-SM	SAA					
Dry	-	-	N	-	·	- _ 80 -	SP-SM	Sand: pinkish red, very fine - graded, trace gypsum crysta	fin grain, moderatly ls, no stain, no odor				
Dry	-	-	N	-	- -	90	SP-SM	SAA, increasing gypsum crys	tals				
Dry	-	-	N	-	- - - -	_ _ 100 -	SP-SM						
					- -	110		TD at 106' below ground sur	face				
					-	120							



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

NOI	OSE POD NO C-4731 Po	,	NO.)			WELL TAG ID NO. BH01			OSE FILE NO(S C-4731	S).				
OCAT)	WELL OWNE XTO Energ		E(S)						PHONE (OPTIO 575-200-072					
GENERAL AND WELL LOCATION	WELL OWNE 3104 E. Gr			DDRESS					CITY Carlsbad		STAT NM	88220	ZIP	
Q.	WELL			DE	GREES	GREES MINUTES SECONDS								
L AI	LOCATIO	N I	LATIT	FLIDE	31	21	42.	.96 _N	* ACCURACY	CY REQUIRED: ONE TENTH OF A SECOND				
VERAI	(FROM GP	rs) –		GITUDE	103	50	16.		* DATUM REQUIRED: WGS 84					
1. GE	DESCRIPTION Unit K, See				STREET ADD	RESS AND COMMON	N LANDM	IARKS – PLS	S (SECTION, TO	WNSHJIP, RANGE) WH	ERE AV	/AILABLE		
	LICENSE NO).		NAME OF LICENSED	DRILLER					NAME OF WELL DR	ILLING	COMPANY		
	118	38			SCARBO	ROUGH DRILL				SCARBOR	OUGI	H DRILLING II	NC	
	DRILLING S' 4/14,			DRILLING ENDED 4/14/23	DEPTH OF CO	OMPLETED WELL (F	T)		LE DEPTH (FT) 106	DEPTH WATER FIR	ST ENC N			
Z	COMPLETEI	O WELL I	S:	ARTESIAN	✓ DRY HO	LE SHALLO	W (UNCC	ONFINED)		STATIC WATER LEV		COMPLETED WE	LL (FT)	
T10	DRILLING FI	LUID:		✓ AIR	MUD	ADDITIV	ES – SPE	CIFY:		I				
2. DRILLING & CASING INFORMATION	DRILLING M	IETHOD:		✓ ROTARY	П НАММЕ	R CABLE T	OOL	ОТНЕ	R – SPECIFY:					
NF(DEPTH (feet bgl) BORE HOLE			CASING	MATERIAL ANI	D/OR CASING			CASING CASIN		SING WALL	SLOT		
INGI	FROM	TC)	DIAM (inches)	GRADE (include each casing string, and CASING CONNECTION TYPE			NECTION	INSIDE DIAM.	1	HICKNESS (inches)	SIZE (inches)		
CAS		104		` ′	note	sections of screen))	(add coupl	YPE (inches)			(menes)	(, , , ,	
8	0	106	5	8		NA								
NI														
III														
DI														
2														
	DEPTH	(feet bgl	1)	BORE HOLE	L	IST ANNULAR SI	EAL MA	TERIAL A	AND	AMOUNT		METHO)	D OF	
AL	FROM	TC)	DIAM. (inches)	GRA	VEL PACK SIZE	-RANGI	E BY INTE	RVAL	(cubic feet)		PLACEM		
ERI							NA							
IAT														
IR N														
ULA														
ANNULAR MATERIAL														
3. A														
FOR	OSE INTER	NAL U	SE						WR-20	0 WELL RECORD	& LOC	G (Version 04/30	0/19)	

POD NO.

TRN NO.

WELL TAG ID NO.

PAGE 1 OF 2

Released to Imaging: 7/24/2024 4:25:11 PM

FILE NO.

LOCATION

	DEPTH (f	eet bgl)		COLOR AND TYPE OF MATERIAL ENCOUNTERED -	WATER	ESTIMATED
			THICKNESS	INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONE	WATER BEARING?	YIELD FOR WATER-
	FROM	TO	(feet)	(attach supplemental sheets to fully describe all units)	(YES / NO)	BEARING
						ZONES (gpm)
	0	10	10	Dark Red very fine Sand	Y VN	
	10	80	70	Red-brown very fine Sand	Y ✓ N	
	80	106	30	Pink/red very fine sand with gypsum crystals	Y ✓N	
				Y N		
				Y N		
L			Y N			
WE					Y N	
OF					Y N	
4. HYDROGEOLOGIC LOG OF WELL					Y N	
[]					Y N	
)OT					Y N	
3EO					Y N	
RO					Y N	
HXD					Y N	
4					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING STRATA:	TOTAL ESTIMATED	
	PUMF	. Па [.]	IR LIFT	BAILER OTHER – SPECIFY: NA	WELL YIELD (gpm):	0.00
				DOTTER STEELT.		
7	WELL TEST			ACH A COPY OF DATA COLLECTED DURING WELL TESTING, IN ME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OV		
TEST; RIG SUPERVISION						JB.
RVI	MISCELLAN	NEOUS INF	FORMATION: Bo	oring was backfilled and properly abandoned following OSE proce	dures.	
UPE						
S						
I; R						
TES	PRINT NAM	IE(S) OF DI	RILL RIG SUPER	VISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CON	ISTRUCTION OTHER TI	HAN LICENSEE:
'n	LANE SCA	RBOROU	GH			
H				AT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOI WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HA		
6. SIGNATURE				WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMP		
NA		/ one	Scarlowy		0.510.4.10.0.0	
SIG.		C	9/	LANE SCARBOROUGH	06/01/2023	
9		SIGNAT	URE OF DRILLE	R / PRINT SIGNEE NAME	DATE	

FOR OSE INTERNAL USE	WR-20 WELL RECORD & LOG (Version 04/30/2019)				
FILE NO.	POD NO.		TRN NO.		
LOCATION		WELL	. TAG ID NO.	PAGE 2 OF 2	



APPENDIX C

Photographic Log



Photographic Log

XTO Energy, Inc James Ranch Unit 2 702H Incident Number nAPP2211654411





Description: Soil staining in release footprint

View: West



Photograph: 2 Date: 09/07/2022 Description: Soil staining in release and delineation activities

View: Northwest



Photograph: 3 Date:06/08/2023

Description: Ongoing excavation activities

View: West



Photograph: 4 Date: 09/07/2023

Description: Backfilling activities and additional soil sampling

View: East



APPENDIX D

Laboratory Analytical Reports & Chain-of-Custody Documentation





Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad 1089 N Canal St. Carlsbad, NM 88220 Tel: (575)988-3199

Laboratory Job ID: 890-2897-1

Laboratory Sample Delivery Group: 03E1558049/03E1558019

Client Project/Site: JRU DI 2 707H/JRU DI 2 702H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

JURAMER

Authorized for release by: 9/20/2022 11:38:05 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS

Review your project results through

Have a Question?



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 7/24/2024 4:25:11 PM

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.

1

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Н

Client: Ensolum Project/Site: JRU DI 2 707H/JRU DI 2 702H Laboratory Job ID: 890-2897-1 SDG: 03E1558049/03E1558019

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QC Association Summary	11
Lab Chronicle	13
Certification Summary	14
Method Summary	15
Sample Summary	16
Chain of Custody	17
Receint Checklists	18

2

3

4

6

8

10

11

13

14

Definitions/Glossary

Job ID: 890-2897-1 Client: Ensolum Project/Site: JRU DI 2 707H/JRU DI 2 702H

SDG: 03E1558049/03E1558019

Qualifiers

GC VOA Qualifier

Qualifier Description F1 MS and/or MSD recovery exceeds control limits.

F2 MS/MSD RPD exceeds control limits

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

S1+ Surrogate recovery exceeds control limits, high biased. 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

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

Eurofins Carlsbad

Case Narrative

Client: Ensolum

Project/Site: JRU DI 2 707H/JRU DI 2 702H

Job ID: 890-2897-1 SDG: 03E1558049/03E1558019

Job ID: 890-2897-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2897-1

Receipt

The sample was received on 9/8/2022 9:30 AM. 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 4.8°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34690 and analytical batch 880-34832 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.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-19067-A-51-F). 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: Surrogate recovery for the following samples were outside control limits: (LCS 880-34144/2-A) and (LCSD 880-34144/3-A). 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.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: Ensolum

Project/Site: JRU DI 2 707H/JRU DI 2 702H

Job ID: 890-2897-1

SDG: 03E1558049/03E1558019

Client Sample ID: SS03

Date Collected: 09/07/22 09:45 Date Received: 09/08/22 09:30

Sample Depth: 0.5

C28-C36)

Surrogate

o-Terphenyl

Analyte

Chloride

1-Chlorooctane

Lab Sample ID: 890-2897-1

Prepared

09/10/22 08:45

09/10/22 08:45

Prepared

Analyzed

09/10/22 13:42

09/10/22 13:42

Analyzed

09/13/22 15:07

Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 07:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 07:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 07:52	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		09/16/22 16:06	09/20/22 07:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 07:52	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		09/16/22 16:06	09/20/22 07:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			09/16/22 16:06	09/20/22 07:52	1
1,4-Difluorobenzene (Surr)	105		70 - 130			09/16/22 16:06	09/20/22 07:52	1
Method: Total BTEX - Total BTE Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			RL 0.00399	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 09/20/22 09:49	Dil Fac
Analyte Total BTEX	Result <0.00399	U			<u>D</u>	Prepared		
Analyte Total BTEX Method: 8015 NM - Diesel Rang	Result <0.00399	U (GC)	0.00399	mg/Kg			09/20/22 09:49	1
Analyte Total BTEX	Result <0.00399	U			<u>D</u>	Prepared Prepared		
Analyte Total BTEX Method: 8015 NM - Diesel Rang Analyte	Result <0.00399	O) (GC) Qualifier	0.00399	mg/Kg			09/20/22 09:49 Analyzed	1
Analyte Total BTEX Method: 8015 NM - Diesel Rang Analyte Total TPH	ge Organics (DR) Result 249 nge Organics (D	O) (GC) Qualifier	0.00399	mg/Kg			09/20/22 09:49 Analyzed	Dil Fac
Analyte Total BTEX Method: 8015 NM - Diesel Rang Analyte Total TPH Method: 8015B NM - Diesel Rang	ge Organics (DR) Result 249 nge Organics (D	O) (GC) Qualifier RO) (GC) Qualifier	0.00399 RL 50.0	mg/Kg Unit mg/Kg	<u>D</u>	Prepared	09/20/22 09:49 Analyzed 09/12/22 11:26	Dil Fac
Analyte Total BTEX Method: 8015 NM - Diesel Rang Analyte Total TPH Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	ge Organics (DR) Result 249 nge Organics (DR) Result Result Result	O) (GC) Qualifier RO) (GC) Qualifier	0.00399 RL 50.0	mg/Kg Unit mg/Kg Unit	<u>D</u>	Prepared Prepared	09/20/22 09:49 Analyzed 09/12/22 11:26 Analyzed	Dil Fac Dil Fac

Limits

70 - 130

70 - 130

RL

4.99

Unit

mg/Kg

%Recovery

Method: 300.0 - Anions, Ion Chromatography - Soluble

80

80

465

Result Qualifier

Qualifier

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Dil Fac

Dil Fac

DFBZ = 1,4-Difluorobenzene (Surr)

Surrogate Summary

 Client: Ensolum
 Job ID: 890-2897-1

 Project/Site: JRU DI 2 707H/JRU DI 2 702H
 SDG: 03E1558049/03E1558019

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

_				Percent Surrogate Re
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-19067-A-51-D MS	Matrix Spike	88	109	
880-19067-A-51-E MSD	Matrix Spike Duplicate	88	109	
890-2897-1	SS03	101	105	
LCS 880-34690/1-A	Lab Control Sample	89	101	
LCSD 880-34690/2-A	Lab Control Sample Dup	84	104	
MB 880-34689/5-B	Method Blank	101	117	
MB 880-34690/5-A	Method Blank	101	113	
Surrogate Legend				
BFB = 4-Bromofluoroben	zene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
_ab Sample ID	Client Sample ID	(70-130)	(70-130)	
390-2894-A-1-C MS	Matrix Spike	89	93	
390-2894-A-1-D MSD	Matrix Spike Duplicate	89	91	
390-2897-1	SS03	80	80	
_CS 880-34144/2-A	Lab Control Sample	116	133 S1+	
_CSD 880-34144/3-A	Lab Control Sample Dup	114	132 S1+	
MB 880-34144/1-A	Method Blank	96	108	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: Ensolum Job ID: 890-2897-1 SDG: 03E1558049/03E1558019 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34689/5-B

Matrix: Solid Analysis Batch: 34832 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34689

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/16/22 15:45	09/19/22 17:24	1

MB MB

MR MR

<0.00200 U

<0.00400 U

Result Qualifier

Surrogate	%Recovery Qu	ıalifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101	70 - 130	09/16/22 15:45	09/19/22 17:24	1
1,4-Difluorobenzene (Surr)	117	70 - 130	09/16/22 15:45	09/19/22 17:24	1

RL

0.00200

0.00400

Lab Sample ID: MB 880-34690/5-A

Matrix: Solid

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

Analysis Batch: 34832

Client Sample ID: Method Blank

Analyzed

09/20/22 05:00

09/20/22 05:00

Prepared

09/16/22 16:06

09/16/22 16:06

Prep Type: Total/NA

Prep Batch: 34690

Dil Fac

<0.00200 U 0.00200 mg/Kg 09/16/22 16:06 09/20/22 05:00 <0.00200 U 0.00200 mg/Kg 09/16/22 16:06 09/20/22 05:00 0.00400 09/16/22 16:06 09/20/22 05:00 <0.00400 U mg/Kg <0.00200 U 0.00200 09/20/22 05:00 mg/Kg 09/16/22 16:06

Unit

mg/Kg

mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepare	d Ana	alyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	09/16/22 1	6:06 09/20/	/22 05:00	1
1,4-Difluorobenzene (Surr)	113		70 - 130	09/16/22 1	6:06 09/20/	/22 05:00	1

Lab Sample ID: LCS 880-34690/1-A

Matrix: Solid

Analysis Batch: 34832

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34690

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09325		mg/Kg		93	70 - 130	 _
Toluene	0.100	0.08049		mg/Kg		80	70 - 130	
Ethylbenzene	0.100	0.07759		mg/Kg		78	70 - 130	
m-Xylene & p-Xylene	0.200	0.1618		mg/Kg		81	70 - 130	
o-Xylene	0.100	0.08093		mg/Kg		81	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	89	70 _ 130
1.4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: LCSD 880-34690/2-A

Matrix: Solid

Analysis Batch: 34832

Client Sample ID: Lat	Control Sample Dup
	Prep Type: Total/NA

Prep Batch: 34690

	Spike	LCSD LCSD				%Rec		RPD	
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.09922	mg/Kg		99	70 - 130	6	35	

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Client: Ensolum Job ID: 890-2897-1 SDG: 03E1558049/03E1558019 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-34690/2-A

Matrix: Solid Analysis Batch: 34832 Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 34690

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.08461		mg/Kg		85	70 - 130	5	35
Ethylbenzene	0.100	0.08148		mg/Kg		81	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1684		mg/Kg		84	70 - 130	4	35
o-Xylene	0.100	0.08379		mg/Kg		84	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	84		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 880-19067-A-51-D MS Client Sample ID: Matrix Spike Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 34832									Prep	Batch: 34690
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.00286	F2 F1	0.0998	0.02851	F1	mg/Kg		26	70 - 130	
Toluene	0.00518	F2 F1	0.0998	0.02409	F1	mg/Kg		19	70 - 130	
Ethylbenzene	0.00860	F2 F1	0.0998	0.02194	F1	mg/Kg		13	70 - 130	
m-Xylene & p-Xylene	0.0175	F2 F1	0.200	0.04087	F1	mg/Kg		12	70 - 130	
o-Xylene	0.00724	F2 F1	0.0998	0.02291	F1	mg/Kg		16	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	88	70 - 130
1,4-Difluorobenzene (Surr)	109	70 - 130

Lab Sample ID: 880-19067-A-51-E MSD

Matrix: Solid

Analysis Batch: 34832

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 34690

%Rec Spike MSD MSD RPD Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Benzene 0.00286 F2 F1 0.0990 0.05017 F2 F1 mg/Kg 48 70 - 130 55 35 Toluene 0.00518 F2 F1 0.0990 0.04534 F2 F1 mg/Kg 41 70 - 130 61 35 Ethylbenzene 0.00860 F2 F1 0.0990 0.04136 F2 F1 mg/Kg 70 - 130 35 0.198 m-Xylene & p-Xylene 0.0175 F2 F1 0.07749 F2 F1 30 70 - 130 62 35 mg/Kg 0.0990 0.04246 F2 F1 o-Xylene 0.00724 F2 F1 mq/Kq 70 - 130 35

MSD MSD

мв мв Result Qualifier

<50.0 U

Surrogate	%Recovery Qualifie	r Limits
4-Bromofluorobenzene (Surr)	88	70 - 130
1,4-Difluorobenzene (Surr)	109	70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-34144/1-A

Gasoline Range Organics

Analysis Batch: 34141

Client Sample ID: Method Blank Prep Type: Total/NA

Prepared

09/10/22 08:45

Prep Batch: 34144

09/10/22 10:04

(GRO)-C6-C10

Matrix: Solid

Eurofins Carlsbad

RL

50.0

Unit

mg/Kg

Job ID: 890-2897-1 Client: Ensolum SDG: 03E1558049/03E1558019 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-34144/1-A **Matrix: Solid**

Lab Sample ID: LCS 880-34144/2-A

Analysis Batch: 34141

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34144

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		09/10/22 08:45	09/10/22 10:04	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/10/22 08:45	09/10/22 10:04	1

MB MB

MB MB

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	1-Chlorooctane	96		70 - 130	09/10/22 08:45	09/10/22 10:04	1
l	o-Terphenyl	108		70 - 130	09/10/22 08:45	09/10/22 10:04	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34144

Analysis Batch: 34141 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 819.2 mg/Kg 82 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 765.4 77 70 - 130 mg/Kg C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	116		70 - 130
o-Terphenyl	133	S1+	70 - 130

Lab Sample ID: LCSD 880-34144/3-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 34141

Prep Type: Total/NA

Prep Batch: 34144

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	844.5		mg/Kg		84	70 - 130	3	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	758.8		mg/Kg		76	70 - 130	1	20	
040,000)										

C10-C28)

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	132	S1+	70 - 130

Lab Sample ID: 890-2894-A-1-C MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 34141

Prep Type: Total/NA

Prep Batch: 34144

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	997	899.6		mg/Kg		88	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U	997	730.7		mg/Kg		70	70 - 130	
C40 C30)										

C10-C28)

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	93		70 - 130

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Client: Ensolum Job ID: 890-2897-1 SDG: 03E1558049/03E1558019 Project/Site: JRU DI 2 707H/JRU DI 2 702H

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-2894-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA Analysis Batch: 34141 Prep Batch: 34144

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	998	878.0		mg/Kg		86	70 - 130	2	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	998	733.6		mg/Kg		70	70 - 130	0	20
C10-C28\											

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	91		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34103/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34370

мв мв

Analyte	Result (Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00 l	U	5.00	mg/Kg			09/13/22 14:52	1

Lab Sample ID: LCS 880-34103/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34370

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	241.8		mg/Kg		97	90 - 110	

Lab Sample ID: LCSD 880-34103/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34370

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	2/12 1		ma/Ka		07	90 110		20	

Lab Sample ID: 890-2897-1 MS **Client Sample ID: SS03 Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34370

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	465		250	712 2		ma/Ka	_	99	90 110	

Lab Sample ID: 890-2897-1 MSD

Matrix: Solid

Analysis Batch: 34370

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	465		250	712.5		mg/Kg		99	90 - 110	0	20

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Client Sample ID: SS03

Prep Type: Soluble

QC Association Summary

Client: Ensolum Project/Site: JRU DI 2 707H/JRU DI 2 702H Job ID: 890-2897-1

SDG: 03E1558049/03E1558019

GC VOA

Prep Batch: 34689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34689/5-B	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2897-1	SS03	Total/NA	Solid	5035	
MB 880-34690/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34690/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34690/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-19067-A-51-D MS	Matrix Spike	Total/NA	Solid	5035	
880-19067-A-51-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2897-1	SS03	Total/NA	Solid	8021B	34690
MB 880-34689/5-B	Method Blank	Total/NA	Solid	8021B	34689
MB 880-34690/5-A	Method Blank	Total/NA	Solid	8021B	34690
LCS 880-34690/1-A	Lab Control Sample	Total/NA	Solid	8021B	34690
LCSD 880-34690/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34690
880-19067-A-51-D MS	Matrix Spike	Total/NA	Solid	8021B	34690
880-19067-A-51-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34690

Analysis Batch: 34923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2897-1	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2897-1	SS03	Total/NA	Solid	8015B NM	34144
MB 880-34144/1-A	Method Blank	Total/NA	Solid	8015B NM	34144
LCS 880-34144/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34144
LCSD 880-34144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34144
890-2894-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34144
890-2894-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34144

Prep Batch: 34144

Lab Sample ID 890-2897-1	Client Sample ID SS03	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-34144/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34144/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2894-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2894-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2897-1	SS03	Total/NA	Solid	8015 NM	

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QC Association Summary

 Client: Ensolum
 Job ID: 890-2897-1

 Project/Site: JRU DI 2 707H/JRU DI 2 702H
 SDG: 03E1558049/03E1558019

HPLC/IC

Leach Batch: 34103

Lab Sample ID 890-2897-1	Client Sample ID SS03	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-34103/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34103/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34103/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2897-1 MS	SS03	Soluble	Solid	DI Leach	
890-2897-1 MSD	SS03	Soluble	Solid	DI Leach	

Analysis Batch: 34370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2897-1	SS03	Soluble	Solid	300.0	34103
MB 880-34103/1-A	Method Blank	Soluble	Solid	300.0	34103
LCS 880-34103/2-A	Lab Control Sample	Soluble	Solid	300.0	34103
LCSD 880-34103/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34103
890-2897-1 MS	SS03	Soluble	Solid	300.0	34103
890-2897-1 MSD	SS03	Soluble	Solid	300.0	34103

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Lab Chronicle

 Client: Ensolum
 Job ID: 890-2897-1

 Project/Site: JRU DI 2 707H/JRU DI 2 702H
 SDG: 03E1558049/03E1558019

Client Sample ID: SS03 Lab Sample ID: 890-2897-1

Date Collected: 09/07/22 09:45
Date Received: 09/08/22 09:30
Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	34690	09/16/22 16:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34832	09/20/22 07:52	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34923	09/20/22 09:49	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34282	09/12/22 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	34144	09/10/22 08:45	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34141	09/10/22 13:42	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	34103	09/09/22 12:30	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34370	09/13/22 15:07	CH	EET MID

Laboratory References:

EET 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: 890-2897-1 Project/Site: JRU DI 2 707H/JRU DI 2 702H

SDG: 03E1558049/03E1558019

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	P	rogram	Identification Number	Expiration Date
Texas		IELAP	T104704400-22-24	06-30-23
The following analytes the agency does not of	• '	out the laboratory is not certific	ed by the governing authority. This list ma	ay include analytes for wl
Analysis Method	Prep Method	Matrix	Analyte	
			, triary to	
8015 NM		Solid	Total TPH	

Method Summary

Client: Ensolum

Project/Site: JRU DI 2 707H/JRU DI 2 702H

Job ID: 890-2897-1

SDG: 03E1558049/03E1558019

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	MCAWW	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

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:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Carlsbad

Sample Summary

Client: Ensolum

Project/Site: JRU DI 2 707H/JRU DI 2 702H

Job ID: 890-2897-1

SDG: 03E1558049/03E1558019

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2897-1	SS03	Solid	09/07/22 09:45	09/08/22 09:30	0.5

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13

112

Relinquished by: (Signature)

とも

98.30

930

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date 08/25/2020 Rev. 2020.

Received by: (Signature)

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 Eurofins Xenco. A minimum 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 negotiated.

eurofins:

Chain of Custody

Midland, TX (432) 704-5440, San A Hobbs, NM (575) 392-7550, Ca EL Paso, TX (915) 585-3443, L Houston, TX (281) 240-4200. Dallas, TX (214) 902-0300

Project Manager: Ta	Tacoma Morrissey		Bill to: (if different)	Garrett Green		Work	Work Order Comments
	Ensolum		Company Name:	XTO Energy		Program: UST/PST PRP[Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
	3122 National Parks Hwy		Address:	3104 E. Green St.		State of Project:	
e ZIP:	Carlsbad, NM 88220		City, State ZIP:	Carlsbad, NM 88220		Reporting: Level II Level III Level III PST/UST TRRP	PST/UST TRRP Level IV
	303-887-2946	Email	Email: Garret.Green@ExxonMobil.com	ExxonMobil.com		Deliverables: EDD	ADaPT Other
Name:	JRU DI 2 707H/JRU DI 2 702H		Turn Around		ANALYSIS REQUES	UEST	Preservative Codes
9	03E1558049 / 03E1558019	√ Rou	3	Pres.			None: NO DI Water: H ₂ O
		Due Date:					Cool: Cool MeOH: Me
Sampler's Name:	Connor Whitman	TAT starts t	TAT starts the day received by				HCL: HC HNO3: HN
PO #		the lab, if re	the lab, if received by 4:30pm	rs			H ₂ S0 ₄ : H ₂ NaOH: Na
SAMPLE RECEIPT	Temp Blank:	(Yes) No Wet Ice:	(Yes) No	nete 0)			H₃PO₄: HP
Samples Received Intact:	(Yes) No	Thermometer ID:	FOOMS				NaHSO ₄ : NABIS
Cooler Custody Seals:	Yes No	N/A Correction Factor:	0.0	_			Na ₂ S ₂ O ₃ : NaSO ₃
Sample Custody Seals:	Yes No W/A Tem	N/A Temperature Reading:	Sign		oso-2097 Chain of Custody	Custody	Zn Acetate+NaOH: Zn
Total Containers:		Corrected Temperature:	8.4	015)			NaOH+Ascorbic Acid: SAPC
Sample Identification	Matrix	Date Time Sampled Sampled	Depth Grab/ # of Cont	CHLOR TPH (80			Sample Comments
SS03	S 9/	9/7/2022 9:45	0.5 G	1 × ×			Incident ID:
	\dashv						nAPP2211654411/ nAPP2208349430
							Cost Center:
	4						1632561001/1632571001
	/	/					AFE:
				-/			
Total 200.7 / 6010	200.8 / 6020:	8RCRA 13F	13PPM Texas 11	Al Sb As Ba Be B Cd	Ca Cr Co Cu Fe	Pb Mg Mn Mo Ni K Se Ag	SiO2 Na Sr TI Sn U V Zn
e Method(s) and	Circle Method(s) and Metal(s) to be analyzed	TCLP / S	TCLP / SPLP 6010: 8RCRA	RA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag	C- C- C- Dr Mn Mo		Hg: 1631 / 245.1 / 7470 / 7471
	,				כו כט כט דט ואווו ואוט	TI U	

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2897-1

CDC Number: 0354550040/0354550040

SDG Number: 03E1558049/03E1558019

Login Number: 2897 List Source: Eurofins Carlsbad

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: 890-2897-1

SDG Number: 03E1558049/03E1558019

Login Number: 2897 **List Source: Eurofins Midland** List Number: 2 List Creation: 09/09/22 11:04 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	N/A	

9/20/2022

<6mm (1/4").





Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad 1089 N Canal St. Carlsbad, NM 88220 Tel: (575)988-3199

Laboratory Job ID: 890-2899-1

Laboratory Sample Delivery Group: 03E1558049/ 03E1558019

Client Project/Site: JRU DI 2 707H/ JRU DI 2 702H

For:

Ensolum 705 W. Wadley Suite 210 Midland, Texas 79701

Attn: Tacoma Morrissey

MAMER

Authorized for release by: 9/20/2022 11:39:29 AM

Jessica Kramer, Project Manager (432)704-5440

Jessica.Kramer@et.eurofinsus.com

Links

Review your project results through

Have a Question?



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 7/24/2024 4:25:11 PM

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.

This report has been electronically signed and authorized by the signatory. Electronic

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Client: Ensolum Project/Site: JRU DI 2 707H/ JRU DI 2 702H Laboratory Job ID: 890-2899-1 SDG: 03E1558049/ 03E1558019

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Definitions/Glossary

Job ID: 890-2899-1 Client: Ensolum Project/Site: JRU DI 2 707H/ JRU DI 2 702H

SDG: 03E1558049/ 03E1558019

Qualifiers

GC VOA

Qualifier **Qualifier Description** F1 MS and/or MSD recovery exceeds control limits. F2 MS/MSD RPD exceeds control limits

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description** S1+ Surrogate recovery exceeds control limits, high biased. 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

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**

RPD

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

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: JRU DI 2 707H/ JRU DI 2 702H

Job ID: 890-2899-1 SDG: 03E1558049/ 03E1558019

Job ID: 890-2899-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-2899-1

Receipt

The sample was received on 9/8/2022 9:29 AM. 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 4.8°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-34690 and analytical batch 880-34832 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.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-19067-A-51-F). 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: Surrogate recovery for the following samples were outside control limits: (LCS 880-34144/2-A) and (LCSD 880-34144/3-A). 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.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Matrix: Solid

Lab Sample ID: 890-2899-1

Client Sample Results

Client: Ensolum

Job ID: 890-2899-1

Project/Site: IRLUDI 2 707H/ IRLUDI 2 702H

SDG: 03E1558049/ 03E1558019

Project/Site: JRU DI 2 707H/ JRU DI 2 702H SDG: 03E1558049/ 03E1558019

Date Collected: 09/07/22 09:30 Date Received: 09/08/22 09:29

Client Sample ID: SS04

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		09/16/22 16:06	09/20/22 08:12	1
Toluene	<0.00199	U	0.00199	mg/Kg		09/16/22 16:06	09/20/22 08:12	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		09/16/22 16:06	09/20/22 08:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		09/16/22 16:06	09/20/22 08:12	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		09/16/22 16:06	09/20/22 08:12	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		09/16/22 16:06	09/20/22 08:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			09/16/22 16:06	09/20/22 08:12	1
1,4-Difluorobenzene (Surr)	102		70 - 130			09/16/22 16:06	09/20/22 08:12	1
- Method: Total BTEX - Total BTE)	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			09/20/22 09:49	1
Analyte Total TPH	Result 471	Qualifier	RL 49.9	Unit mg/Kg	D	Prepared	Analyzed 09/12/22 11:26	Dil Fac
TOTAL TEN	47.1		43.3	mg/rtg				1
							09/12/22 11.20	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)					09/12/22 11.20	1
	• •	RO) (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Gasoline Range Organics	• •	Qualifier	RL 49.9	Unit mg/Kg	<u>D</u>	Prepared 09/10/22 08:45		
Analyte Gasoline Range Organics	Result	Qualifier			<u>D</u>	<u> </u>	Analyzed	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9	Qualifier U	49.9	mg/Kg	<u>D</u>	09/10/22 08:45	Analyzed 09/10/22 14:04	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9	Qualifier U	49.9	mg/Kg	<u>D</u>	09/10/22 08:45 09/10/22 08:45	Analyzed 09/10/22 14:04 09/10/22 14:04	Dil Fac
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <49.9 471 <49.9	Qualifier U	49.9 49.9 49.9	mg/Kg	<u>D</u>	09/10/22 08:45 09/10/22 08:45 09/10/22 08:45	Analyzed 09/10/22 14:04 09/10/22 14:04 09/10/22 14:04	Dil Fac 1 1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <49.9 471 <49.9 %Recovery	Qualifier U	49.9 49.9 49.9 <i>Limits</i>	mg/Kg	<u> </u>	09/10/22 08:45 09/10/22 08:45 09/10/22 08:45 Prepared	Analyzed 09/10/22 14:04 09/10/22 14:04 09/10/22 14:04 Analyzed	Dil Fac
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	49.9 49.9 49.9 Limits 70 - 130	mg/Kg	<u>D</u>	09/10/22 08:45 09/10/22 08:45 09/10/22 08:45 Prepared 09/10/22 08:45	Analyzed 09/10/22 14:04 09/10/22 14:04 09/10/22 14:04 Analyzed 09/10/22 14:04	Dil Fac 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 o-Terphenyl	Result	Qualifier U U Qualifier	49.9 49.9 49.9 Limits 70 - 130	mg/Kg	<u>D</u>	09/10/22 08:45 09/10/22 08:45 09/10/22 08:45 Prepared 09/10/22 08:45	Analyzed 09/10/22 14:04 09/10/22 14:04 09/10/22 14:04 Analyzed 09/10/22 14:04	Dil Fac 1 1 1 Dil Fac

DFBZ = 1,4-Difluorobenzene (Surr)

OTPH = o-Terphenyl

Surrogate Summary

Client: Ensolum Job ID: 890-2899-1 Project/Site: JRU DI 2 707H/ JRU DI 2 702H SDG: 03E1558049/ 03E1558019

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

_				Percent Surrogate Re
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-19067-A-51-D MS	Matrix Spike	88	109	
880-19067-A-51-E MSD	Matrix Spike Duplicate	88	109	
890-2899-1	SS04	104	102	
LCS 880-34690/1-A	Lab Control Sample	89	101	
LCSD 880-34690/2-A	Lab Control Sample Dup	84	104	
MB 880-34689/5-B	Method Blank	101	117	
MB 880-34690/5-A	Method Blank	101	113	
Surrogate Legend				
BFB = 4-Bromofluorobenzer	ne (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Rec	overy (Acce
		1001	OTPH1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-2894-A-1-C MS	Matrix Spike	89	93		
890-2894-A-1-D MSD	Matrix Spike Duplicate	89	91		
890-2899-1	SS04	78	88		
LCS 880-34144/2-A	Lab Control Sample	116	133 S1+		
LCSD 880-34144/3-A	Lab Control Sample Dup	114	132 S1+		
MB 880-34144/1-A	Method Blank	96	108		
Surrogate Legend					
1CO = 1-Chlorooctane					

Client: Ensolum Job ID: 890-2899-1 SDG: 03E1558049/ 03E1558019 Project/Site: JRU DI 2 707H/ JRU DI 2 702H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-34689/5-B

Matrix: Solid Analysis Batch: 34832 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 34689

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/16/22 15:45	09/19/22 17:24	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/16/22 15:45	09/19/22 17:24	1

MB MB

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	09	0/16/22 15:45	09/19/22 17:24	1
1,4-Difluorobenzene (Surr)	117		70 - 130	09	9/16/22 15:45	09/19/22 17:24	1

Lab Sample ID: MB 880-34690/5-A

Client Sample ID: Method Blank

Matrix: Solid							Prep Type:	Total/NA
Analysis Batch: 34832							Prep Batcl	ո։ 34690
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ronzono	<0.00200	П	0.00200	malka		00/16/22 16:06	00/20/22 05:00	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 05:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 05:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 05:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/16/22 16:06	09/20/22 05:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/16/22 16:06	09/20/22 05:00	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		09/16/22 16:06	09/20/22 05:00	1

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Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	09/16/22 16:06	09/20/22 05:00	1
1,4-Difluorobenzene (Surr)	113		70 - 130	09/16/22 16:06	09/20/22 05:00	1

Lab Sample ID: LCS 880-34690/1-A

Matrix: Solid

Analysis Batch: 34832

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 34690

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09325		mg/Kg		93	70 - 130	
Toluene	0.100	0.08049		mg/Kg		80	70 - 130	
Ethylbenzene	0.100	0.07759		mg/Kg		78	70 - 130	
m-Xylene & p-Xylene	0.200	0.1618		mg/Kg		81	70 - 130	
o-Xylene	0.100	0.08093		mg/Kg		81	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	89	70 - 130
1.4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: LCSD 880-34690/2-A

Matrix: Solid

Analysis Batch: 34832

Client Sample ID: Lab Control	Sam	ple Dup
Prep Ty	/pe: ⁻	Total/NA

Prep Batch: 34690

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09922		mg/Kg		99	70 - 130	6	35

Client: Ensolum Job ID: 890-2899-1 SDG: 03E1558049/ 03E1558019 Project/Site: JRU DI 2 707H/ JRU DI 2 702H

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-34690/2-A

Matrix: Solid Analysis Batch: 34832 Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 34690

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	0.100	0.08461		mg/Kg		85	70 - 130	5	35
Ethylbenzene	0.100	0.08148		mg/Kg		81	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.1684		mg/Kg		84	70 - 130	4	35
o-Xylene	0.100	0.08379		mg/Kg		84	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	84		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 880-19067-A-51-D MS Client Sample ID: Matrix Spike

Matrix: Solid

Analysis Batch: 34832

Prep Type: Total/NA

Prep Batch: 34690

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.00286	F2 F1	0.0998	0.02851	F1	mg/Kg		26	70 - 130	
Toluene	0.00518	F2 F1	0.0998	0.02409	F1	mg/Kg		19	70 - 130	
Ethylbenzene	0.00860	F2 F1	0.0998	0.02194	F1	mg/Kg		13	70 - 130	
m-Xylene & p-Xylene	0.0175	F2 F1	0.200	0.04087	F1	mg/Kg		12	70 - 130	
o-Xylene	0.00724	F2 F1	0.0998	0.02291	F1	mg/Kg		16	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	88	70 - 130
1,4-Difluorobenzene (Surr)	109	70 - 130

Lab Sample ID: 880-19067-A-51-E MSD

Matrix: Solid

Analysis Batch: 34832

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 34690

7 tildiyolo Batolii 6 1002											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.00286	F2 F1	0.0990	0.05017	F2 F1	mg/Kg		48	70 - 130	55	35
Toluene	0.00518	F2 F1	0.0990	0.04534	F2 F1	mg/Kg		41	70 - 130	61	35
Ethylbenzene	0.00860	F2 F1	0.0990	0.04136	F2 F1	mg/Kg		33	70 - 130	61	35
m-Xylene & p-Xylene	0.0175	F2 F1	0.198	0.07749	F2 F1	mg/Kg		30	70 - 130	62	35
o-Xylene	0.00724	F2 F1	0.0990	0.04246	F2 F1	mg/Kg		36	70 - 130	60	35

MSD MSD

мв мв Result Qualifier

<50.0 U

Surrogate	%Recovery Qualific	er Limits
4-Bromofluorobenzene (Surr)	88	70 - 130
1,4-Difluorobenzene (Surr)	109	70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-34144/1-A

Matrix: Solid

Analysis Batch: 34141

Gasoline Range Organics

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 34144

Prepared 09/10/22 08:45 09/10/22 10:04

(GRO)-C6-C10

Eurofins Carlsbad

50.0

Unit

mg/Kg

Client: Ensolum Job ID: 890-2899-1 SDG: 03E1558049/ 03E1558019 Project/Site: JRU DI 2 707H/ JRU DI 2 702H

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-34144/1-A **Matrix: Solid**

Lab Sample ID: LCS 880-34144/2-A

Analysis Batch: 34141

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 34144

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Diesel Range Organics (Over <50.0 U 50.0 mg/Kg 09/10/22 08:45 09/10/22 10:04 C10-C28) OII Range Organics (Over C28-C36) 50.0 09/10/22 08:45 09/10/22 10:04 <50.0 U mg/Kg

MB MB

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	09/10/22 08:45	09/10/22 10:04	1
o-Terphenyl	108		70 - 130	09/10/22 08:45	09/10/22 10:04	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 34144

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 819.2 mg/Kg 82 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 765.4 mg/Kg 77 70 - 130 C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits			
1-Chlorooctane	116		70 - 130			
o-Terphenyl	133	S1+	70 - 130			

Lab Sample ID: LCSD 880-34144/3-A

Matrix: Solid

Matrix: Solid

Analysis Batch: 34141

Analysis Batch: 34141

Prep Type: Total/NA Prep Batch: 34144

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	844.5		mg/Kg		84	70 - 130	3	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	758.8		mg/Kg		76	70 - 130	1	20	
C10-C28)										

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	132	S1+	70 - 130

Lab Sample ID: 890-2894-A-1-C MS Client Sample ID: Matrix Spike **Matrix: Solid**

Analysis Batch: 34141

Prep Type: Total/NA Prep Batch: 34144

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	997	899.6		mg/Kg		88	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U	997	730.7		mg/Kg		70	70 - 130	
040,000)										

C10-C28)

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	93		70 - 130

Job ID: 890-2899-1 Client: Ensolum Project/Site: JRU DI 2 707H/ JRU DI 2 702H SDG: 03E1558049/ 03E1558019

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-2894-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid Analysis Batch: 34141 Prep Type: Total/NA Prep Batch: 34144

Sample Sample Spike MSD MSD RPD Result Qualifier Added Limit Analyte Result Qualifier Unit %Rec Limits RPD Gasoline Range Organics <49.9 U 998 878.0 mg/Kg 86 70 - 130 2 20 (GRO)-C6-C10 998 Diesel Range Organics (Over <49.9 U 733.6 mg/Kg 70 70 - 1300

C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	91		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-34103/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34370

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			09/13/22 14:52	1

Lab Sample ID: LCS 880-34103/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 34370

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	241.8		mg/Kg		97	90 - 110	

Lab Sample ID: LCSD 880-34103/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 34370

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	242.1		mg/Kg	_	97	90 - 110		20	

Lab Sample ID: 890-2897-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 34370

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	465		250	712.2		mg/Kg		99	90 - 110	

Lab Sample ID: 890-2897-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Prep Type: Soluble**

Matrix: Solid Analysis Batch: 34370

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Added Result Qualifier Analyte %Rec Limits RPD Limit Unit D 250 712.5 Chloride 465 90 - 110 mg/Kg

QC Association Summary

Client: Ensolum Project/Site: JRU DI 2 707H/ JRU DI 2 702H Job ID: 890-2899-1

SDG: 03E1558049/ 03E1558019

GC VOA

Prep Batch: 34689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-34689/5-B	Method Blank	Total/NA	Solid	5035	

Prep Batch: 34690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2899-1	SS04	Total/NA	Solid	5035	
MB 880-34690/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-34690/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-34690/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-19067-A-51-D MS	Matrix Spike	Total/NA	Solid	5035	
880-19067-A-51-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 34832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2899-1	SS04	Total/NA	Solid	8021B	34690
MB 880-34689/5-B	Method Blank	Total/NA	Solid	8021B	34689
MB 880-34690/5-A	Method Blank	Total/NA	Solid	8021B	34690
LCS 880-34690/1-A	Lab Control Sample	Total/NA	Solid	8021B	34690
LCSD 880-34690/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	34690
880-19067-A-51-D MS	Matrix Spike	Total/NA	Solid	8021B	34690
880-19067-A-51-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	34690

Analysis Batch: 34924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2899-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 34141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2899-1	SS04	Total/NA	Solid	8015B NM	34144
MB 880-34144/1-A	Method Blank	Total/NA	Solid	8015B NM	34144
LCS 880-34144/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	34144
LCSD 880-34144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	34144
890-2894-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	34144
890-2894-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	34144

Prep Batch: 34144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2899-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-34144/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-34144/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-34144/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2894-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2894-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 34283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2899-1	SS04	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum Job ID: 890-2899-1 Project/Site: JRU DI 2 707H/ JRU DI 2 702H SDG: 03E1558049/ 03E1558019

HPLC/IC

Leach Batch: 34103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2899-1	SS04	Soluble	Solid	DI Leach	
MB 880-34103/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-34103/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-34103/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2897-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2897-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 34370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2899-1	SS04	Soluble	Solid	300.0	34103
MB 880-34103/1-A	Method Blank	Soluble	Solid	300.0	34103
LCS 880-34103/2-A	Lab Control Sample	Soluble	Solid	300.0	34103
LCSD 880-34103/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	34103
890-2897-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	34103
890-2897-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	34103

Lab Chronicle

 Client: Ensolum
 Job ID: 890-2899-1

 Project/Site: JRU DI 2 707H/ JRU DI 2 702H
 SDG: 03E1558049/ 03E1558019

Client Sample ID: SS04 Lab Sample ID: 890-2899-1

Date Collected: 09/07/22 09:30

Date Received: 09/08/22 09:29

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	34690	09/16/22 16:06	MR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	34832	09/20/22 08:12	MR	EET MID
Total/NA	Analysis	Total BTEX		1			34924	09/20/22 09:49	AJ	EET MID
Total/NA	Analysis	8015 NM		1			34283	09/12/22 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	34144	09/10/22 08:45	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	34141	09/10/22 14:04	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	34103	09/09/22 12:30	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	34370	09/13/22 15:26	CH	EET MID

Laboratory References:

EET 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: 890-2899-1 Project/Site: JRU DI 2 707H/ JRU DI 2 702H

SDG: 03E1558049/ 03E1558019

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
exas		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: JRU DI 2 707H/ JRU DI 2 702H

Job ID: 890-2899-1

SDG: 03E1558049/ 03E1558019

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	MCAWW	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

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:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum

Project/Site: JRU DI 2 707H/ JRU DI 2 702H

Job ID: 890-2899-1

SDG: 03E1558049/ 03E1558019

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2899-1	SS04	Solid	09/07/22 09:30	09/08/22 09:29	0.5

3

4

5

9

10

12

13

12

2

2

3

<u>4</u> 5

7

9

12

13

eurofins

Environment Testing

Xenco

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, NIM (575) 392-7550, Carlsbad, NIM (575) 988-3199

Work Order No:

Www.xenco.com Page of Work Order Comments Work Order Comments Program: UST/PST PRP Brownfields RRC Superfund State of Project: Reporting: Level III Level III PST/UST TRRP Level IV Deliverables: EDD ADaPT Other:	Work Order Comments am: UST/PST PRP Brownfields RRC S of Project: ting: Level III Level III PST/UST TRRP rrables: EDD ADaPT Other:
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Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)		Relinquished by: (Signature)
	ighs standard termine and controls to circumstances beyond the control enforced unless previously negotiated.	votice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Euronis Xenco, its armiaes and succontractors, it assigns sentiaed us in control of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$5.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated of the control of the con	m client company to Eurorins Xenc lilty for any losses or expenses inc h sample submitted to Eurofins Xe	votice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its attributes and succontractors. It associates the client of the contractors are the provided in the contractors are the client of such contractors are the client of such contractors. It is not an applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms 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 applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms 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 applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco.	nent and relinquishment of sample liable only for the cost of san charge of \$85,00 will be applied	ce: Signature of this docum ervice. Eurofins Xenco will urofins Xenco. A minimum
	to de la constantion de la con					
7470 / 7471	e Ag Ti U Hg: 1631/245.1/7470/7471	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag	CRA Sb As Ba Be Cd	TCLP / SPLP 6010: 8R	Circle Method(s) and Metal(s) to be analyzed	cle Method(s) and N
Sn U V Zn	Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn	BRCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn I	Al Sh As Ba Be BC	8RCRA 13PPM Texas 11	200.8 / 6020:	Total 200.7 / 6010 200.8 / 6020:

								Т				ADa		Bro
-	Sample	NaOH+Ascorbic Acid: SAPC	Zn Acetate+NaOH: Zn	Na ₂ S ₂ O ₃ : NaSO ₃	NaHSO ₄ : NABIS	H ₃ PO ₄ : HP	H ₂ SO ₄ : H ₂	HCL: HC	Cool: Cool	None: NO	Preserv	ADaPT Other		wnfields 🗌 RRC
	Sample Comments	oic Acid: SAPC	aOH: Zn	Ö	SS		NaOH: Na	HNO3: HN	MeOH: Me	DI Water: H ₂ O	Preservative Codes	3	P Level IV]Brownfields
													340	

SAMPLE RECEIPT

Temp Blank:

(es No

Wet Ice:

No

Parameters

Project Number:
Project Location:
Sampler's Name:

Connor Whitman

Due Date:

✓ Routine

Rush

Code

Turn Around

TAT starts the day received by the lab, if received by 4:30pm

City, State ZIP:

Carlsbad, NM 88220 303-887-2946

Email: | Garret.Green@ExxonMobil.com

City, State ZIP:

Bill to: (if different)
Company Name:

Garrett Green
XTO Energy
3104 E. Green St.

Carlsbad, NM 88220

JRU DI 2 707H/JRU DI 2 702H 03E1558049 / 03E1558019 Company Name: Address:

Tacoma Morrissey

3122 National Parks Hwy

Samples Received Intact:
Cooler Custody Seals:
Sample Custody Seals:

Yes No WA

Correction Factor:

Thermometer ID:

Temperature Reading

CHLORIDES (EPA: 300.0)

890-2899 Chain of Custody

Corrected Temperature:

Sample Identification SS04

Matrix S

Date Sampled

Sampled 9:30

Time

Depth

Grab/ Comp

of

TPH (8015) BTEX (8021

9/7/2022

0.5

G

AFE:

Cost Center:

1632561001/1632571001

nAPP2211654411/ nAPP2208349430

Incident ID:

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2899-1

SDG Number: 03E1558049/ 03E1558019

Login Number: 2899 List Source: Eurofins Carlsbad

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	

Page 18 of 19

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-2899-1

SDG Number: 03E1558049/ 03E1558019

List Source: Eurofins Midland

List Creation: 09/09/22 11:04 AM

Login Number: 2899 List Number: 2

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	

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701

Generated 5/25/2023 11:26:17 AM

JOB DESCRIPTION

James Ranch Unit 2 702H SDG NUMBER 03C14558049

JOB NUMBER

890-4685-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Brianna Tel

Generated 5/25/2023 11:26:17 AM

Authorized for release by Brianna Teel, Project Manager Brianna.Teel@et.eurofinsus.com Designee for Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440 __

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Client: Ensolum

Project/Site: James Ranch Unit 2 702H

Laboratory Job ID: 890-4685-1

SDG: 03C14558049

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Definitions/Glossary

Client: Ensolum Job ID: 890-4685-1 Project/Site: James Ranch Unit 2 702H

SDG: 03C14558049

Qualifiers

GC VOA

Qualifier **Qualifier Description** *+ LCS and/or LCSD is outside acceptance limits, high biased. S1+ Surrogate recovery exceeds control limits, high biased. U Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

S1+ Surrogate recovery exceeds control limits, high biased. U 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 Colony Forming Unit **CFU** Contains No Free Liquid CNF

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)

EPA recommended "Maximum Contaminant Level" MCL MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit MI 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 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)

Too Numerous To Count **TNTC**

Job ID: 890-4685-1

Case Narrative

Client: Ensolum

SDG: 03C14558049 Project/Site: James Ranch Unit 2 702H

Job ID: 890-4685-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-4685-1

Receipt

The samples were received on 5/18/2023 12:25 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

Receipt Exceptions

The following samples analyzed were received and analyzed from an unpreserved bulk soil jar: FS01 (890-4685-1), FS02 (890-4685-2), FS03 (890-4685-3), FS04 (890-4685-4), FS05 (890-4685-5), FS06 (890-4685-6), FS07 (890-4685-7), FS08 (890-4685-8) and FS09 (890-4685-9).

GC VOA

Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-53896 and analytical batch 880-53992 recovered outside control limits for the following analytes: Benzene, m-Xylene & p-Xylene and o-Xylene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS01 (890-4685-1) and (890-4680-A-1-G). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-53899 and analytical batch 880-53992 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-53896/1-A), (LCS 880-53899/1-A), (LCSD 880-53896/2-A) and (LCSD 880-53899/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS09 (890-4685-9), (890-4680-A-1-E MS) and (890-4680-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (CCV 880-53992/20), (CCV 880-53992/33) and (CCV 880-53992/51). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS01 (890-4685-1), (890-4679-A-1-E), (890-4679-A-1-C MS) and (890-4679-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-53899 and analytical batch 880-53992 was outside the upper control limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-53992 recovered above the upper control limit for Benzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-53992 recovered above the upper control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes: therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS02 (890-4685-2), FS03 (890-4685-3), FS04 (890-4685-4) and FS05 (890-4685-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS06 (890-4685-6), FS07 (890-4685-7) and FS08

Case Narrative

Client: Ensolum

Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Job ID: 890-4685-1

Job ID: 890-4685-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

(890-4685-8). 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: The surrogate recovery for the blank associated with preparation batch 880-53720 and analytical batch 880-53715 was outside the upper control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300 ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-53744 and analytical batch 880-53903 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.

Client: Ensolum Job ID: 890-4685-1 Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Client Sample ID: FS01 Lab Sample ID: 890-4685-1 Date Collected: 05/18/23 08:20

Matrix: Solid

Date Received: 05/18/23 12:25

Sample Depth: 1'

Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201	U *+	0.00201	0.000387	mg/Kg		05/22/23 15:18	05/23/23 20:45	
Toluene	<0.00201	U	0.00201	0.000459	mg/Kg		05/22/23 15:18	05/23/23 20:45	
Ethylbenzene	<0.00201	U	0.00201	0.000568	mg/Kg		05/22/23 15:18	05/23/23 20:45	
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	0.00102	mg/Kg		05/22/23 15:18	05/23/23 20:45	
o-Xylene	<0.00201	U *+	0.00201	0.000346	mg/Kg		05/22/23 15:18	05/23/23 20:45	
Xylenes, Total	<0.00402	U *+	0.00402	0.00102	mg/Kg		05/22/23 15:18	05/23/23 20:45	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	237	S1+	70 - 130				05/22/23 15:18	05/23/23 20:45	
1,4-Difluorobenzene (Surr)	80		70 - 130				05/22/23 15:18	05/23/23 20:45	
Method: TAL SOP Total BTEX	(- Total BTE	X Calcula	tion						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402	0.00102	ma/Ka			05/24/23 11:34	
					99				
Method: SW846 8015 NM - Di Analyte	esel Range ((DRO) (GC)		Unit	<u>D</u>	Prepared	Analyzed	
Method: SW846 8015 NM - Di Analyte	esel Range	Organics ((DRO) (GC)			<u>D</u>	Prepared	Analyzed 05/22/23 09:17	
Method: SW846 8015 NM - Di Analyte Total TPH	esel Range (Result	Organics (Qualifier	(DRO) (GC) RL 49.9	15.0	Unit	<u>D</u>	Prepared		
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I	esel Range (Result 1910)	Organics (Qualifier	(DRO) (GC) RL 49.9	15.0	Unit	<u>D</u>	Prepared Prepared		
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics	esel Range (Result 1910)	Organics Qualifier Organics Qualifier Qualifier	$\frac{(DRO) (GC)}{RL}$ $\frac{RL}{49.9}$ $\frac{(DRO) (GC)}{R}$	15.0	Unit mg/Kg		•	05/22/23 09:17	Dil Fa
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	esel Range (Result 1910) Diesel Range (Result	Organics Qualifier Organics Qualifier Qualifier	(DRO) (GC) RL 49.9 6 (DRO) (GC) RL	15.0	Unit mg/Kg		Prepared 05/19/23 07:57	05/22/23 09:17 Analyzed	Dil Fa
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	esel Range (Result 1910) Diesel Range (Result <49.9	Organics Qualifier Organics Qualifier U	(DRO) (GC) RL 49.9 6 (DRO) (GC) RL 49.9	15.0 15.0 15.0	Unit mg/Kg Unit mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 13:24	Dil Fa
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	esel Range (Result 1910) Diesel Range (Result <49.9 1910	Organics Qualifier Organics Qualifier U	(DRO) (GC) RL 49.9 6 (DRO) (GC) RL 49.9	15.0 15.0 15.0 15.0	Unit mg/Kg Unit mg/Kg mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 13:24 05/19/23 13:24	Dil Fa
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH	esel Range (Result 1910) Diesel Range (Result 49.9) 1910	Organics Qualifier Organics Qualifier U	(DRO) (GC) RL 49.9 6 (DRO) (GC) RL 49.9 49.9	15.0 15.0 15.0 15.0	Unit mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 13:24 05/19/23 13:24	Dil Fa
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH Surrogate	Result 1910	Organics Qualifier Organics Qualifier U	(DRO) (GC) RL 49.9 6 (DRO) (GC) RL 49.9 49.9 49.9	15.0 15.0 15.0 15.0	Unit mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 13:24 05/19/23 13:24 05/19/23 13:24 05/19/23 13:24	Dil Fa
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Total TPH Surrogate 1-Chlorooctane	esel Range (Result 1910) Diesel Range (Result 49.9) 1910 49.9 1910 %Recovery	Organics Qualifier Organics Qualifier U	(DRO) (GC) RL 49.9 6 (DRO) (GC) RL 49.9 49.9 49.9 Limits	15.0 15.0 15.0 15.0	Unit mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57 Prepared 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 13:24 05/19/23 13:24 05/19/23 13:24 05/19/23 13:24 Analyzed	Dil Fa
Method: SW846 8015 NM - Di Analyte Total TPH Method: SW846 8015B NM - I 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 Method: EPA 300.0 - Anions,	esel Range (Organics Qualifier Organics Qualifier U U Qualifier	(DRO) (GC) RL 49.9 6 (DRO) (GC) RL 49.9 49.9 49.9 49.9 Limits 70 - 130 70 - 130	15.0 15.0 15.0 15.0	Unit mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57 Prepared 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 13:24 05/19/23 13:24 05/19/23 13:24 Analyzed 05/19/23 13:24	Dil Fa

Lab Sample ID: 890-4685-2 **Client Sample ID: FS02 Matrix: Solid**

100

7.92 mg/Kg

8700

Date Collected: 05/18/23 08:25 Date Received: 05/18/23 12:25

Sample Depth: 1

Chloride

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *+	0.00202	0.000389	mg/Kg		05/22/23 15:18	05/24/23 13:05	1
Toluene	<0.00202	U *+	0.00202	0.000461	mg/Kg		05/22/23 15:18	05/24/23 13:05	1
Ethylbenzene	<0.00202	U *+	0.00202	0.000571	mg/Kg		05/22/23 15:18	05/24/23 13:05	1
m-Xylene & p-Xylene	<0.00404	U *+	0.00404	0.00102	mg/Kg		05/22/23 15:18	05/24/23 13:05	1
o-Xylene	<0.00202	U *+	0.00202	0.000347	mg/Kg		05/22/23 15:18	05/24/23 13:05	1
Xylenes, Total	< 0.00404	U *+	0.00404	0.00102	mg/Kg		05/22/23 15:18	05/24/23 13:05	1

Eurofins Carlsbad

05/22/23 17:41

Client Sample Results

Client: Ensolum Job ID: 890-4685-1 Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Client Sample ID: FS02 Lab Sample ID: 890-4685-2

Date Collected: 05/18/23 08:25 **Matrix: Solid** Date Received: 05/18/23 12:25

Sample Depth: 1

Surrogate	%Recovery Qualifier	Limits	Prepared Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	277 S1+	70 - 130	05/22/23 15:18 05/24/23 13:05	1
1,4-Difluorobenzene (Surr)	73	70 - 130	05/22/23 15:18 05/24/23 13:05	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

l	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
ı	Total BTEX	<0.00404	U	0.00404	0.00102 mg/Kg		_	05/24/23 15:08	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result Qual	lifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	189	49.8	14.9 mg/Kg			05/22/23 09:17	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	14.9	mg/Kg		05/19/23 07:57	05/19/23 13:46	1
Diesel Range Organics (Over C10-C28)	189		49.8	14.9	mg/Kg		05/19/23 07:57	05/19/23 13:46	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	14.9	mg/Kg		05/19/23 07:57	05/19/23 13:46	1
Total TPH	189		49.8	14.9	mg/Kg		05/19/23 07:57	05/19/23 13:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	05/19/23 07:57	05/19/23 13:46	1
o-Terphenyl	94		70 - 130	05/19/23 07:57	05/19/23 13:46	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D)	Prepared	Analyzed	Dil Fac
Chloride	1510		24.9	1.97	mg/Kg				05/22/23 17:46	5

Lab Sample ID: 890-4685-3 **Client Sample ID: FS03** Date Collected: 05/18/23 08:30 **Matrix: Solid**

Date Received: 05/18/23 12:25

Sample Depth: 1

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199	0.000383	mg/Kg		05/22/23 15:18	05/24/23 13:31	1
Toluene	<0.00199	U *+	0.00199	0.000454	mg/Kg		05/22/23 15:18	05/24/23 13:31	1
Ethylbenzene	<0.00199	U *+	0.00199	0.000563	mg/Kg		05/22/23 15:18	05/24/23 13:31	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	0.00101	mg/Kg		05/22/23 15:18	05/24/23 13:31	1
o-Xylene	<0.00199	U *+	0.00199	0.000343	mg/Kg		05/22/23 15:18	05/24/23 13:31	1
Xylenes, Total	<0.00398	U *+	0.00398	0.00101	mg/Kg		05/22/23 15:18	05/24/23 13:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	317	S1+	70 - 130				05/22/23 15:18	05/24/23 13:31	1
1,4-Difluorobenzene (Surr)	98		70 - 130				05/22/23 15:18	05/24/23 13:31	1

Method: TAL SOP Total BTEX	- Total BTE	X Calculati	ion					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	0.00101 mg/Kg			05/24/23 15:08	1

Matrix: Solid

Lab Sample ID: 890-4685-3

Client: Ensolum

Job ID: 890-4685-1

Project/Site: James Ranch Unit 2 702H

SDG: 03C14558049

Client Sample ID: FS03

Date Collected: 05/18/23 08:30 Date Received: 05/18/23 12:25

Sample Depth: 1

 Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

 Analyte
 Result
 Qualifier
 RL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Total TPH
 1490
 49.8
 14.9
 mg/Kg
 05/22/23 09:17
 1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) Result Qualifier Analyte RLUnit Prepared Analyzed Dil Fac <49.8 U Gasoline Range Organics 49.8 14.9 mg/Kg 05/19/23 07:57 05/19/23 14:08 (GRO)-C6-C10 **Diesel Range Organics (Over** 1490 49.8 14.9 mg/Kg 05/19/23 07:57 05/19/23 14:08 C10-C28) Oll Range Organics (Over C28-C36) <49.8 U 49.8 14.9 mg/Kg 05/19/23 07:57 05/19/23 14:08 **Total TPH** 1490 49.8 14.9 mg/Kg 05/19/23 07:57 05/19/23 14:08 %Recovery Qualifier Surrogate Limits Prepared Analyzed Dil Fac <u>05/19/23 07:57</u> <u>05/19/23 14:08</u> 1-Chlorooctane 92 70 - 130 o-Terphenyl 93 70 - 130 05/19/23 07:57 05/19/23 14:08

Method: EPA 300.0 - Anions, Ion Chromatography - SolubleAnalyteResultQualifierRLUnitDPreparedAnalyzedDil FacChloride79601007.90mg/Kg05/22/23 17:5220

Client Sample ID: FS04

Lab Sample ID: 890-4685-4

Matrix: Solid

Date Collected: 05/18/23 08:35 Date Received: 05/18/23 12:25

Sample Depth: 1'

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199	0.000383	mg/Kg		05/22/23 15:18	05/24/23 13:57	1
Toluene	<0.00199	U *+	0.00199	0.000453	mg/Kg		05/22/23 15:18	05/24/23 13:57	1
Ethylbenzene	< 0.00199	U *+	0.00199	0.000562	mg/Kg		05/22/23 15:18	05/24/23 13:57	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	0.00100	mg/Kg		05/22/23 15:18	05/24/23 13:57	1
o-Xylene	<0.00199	U *+	0.00199	0.000342	mg/Kg		05/22/23 15:18	05/24/23 13:57	1
Xylenes, Total	<0.00398	U *+	0.00398	0.00100	mg/Kg		05/22/23 15:18	05/24/23 13:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	284	S1+	70 - 130				05/22/23 15:18	05/24/23 13:57	1
1,4-Difluorobenzene (Surr)	71		70 - 130				05/22/23 15:18	05/24/23 13:57	1

Method: IAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	U	Jnit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	0.00100 m	ng/Kg			05/24/23 15:08	1

Method: SW846 8015 NM - Die	sel Range C	Organics (I	ORO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	198		50.0	15.0 mg/Kg			05/22/23 09:17	1

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 14:29	1
Diesel Range Organics (Over C10-C28)	198		50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 14:29	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 14:29	1

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Lab Sample ID: 890-4685-4

Client: Ensolum Job ID: 890-4685-1 Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Client Sample ID: FS04

Sample Depth: 1

Date Collected: 05/18/23 08:35	Matrix: Solid
Date Received: 05/18/23 12:25	
Sample Donth: 1'	

Method: SW846 8015 Analyte	_	Qualifier	RL	(Oontin	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	198		50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 14:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				05/19/23 07:57	05/19/23 14:29	1
o-Terphenyl	91		70 - 130				05/19/23 07:57	05/19/23 14:29	1
Method: EPA 300.0 - /	Anions, Ion Chroma	tography -	Soluble						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1780		24.9	1.97	mg/Kg			05/22/23 19:45	5

Lab Sample ID: 890-4685-5 **Client Sample ID: FS05** Date Collected: 05/18/23 09:30 Matrix: Solid

Date Received: 05/18/23 12:25

Sample Depth: 1'

Method: SW846 8021B - Vo		-			l lmi4	_	Dramarad	Amalumad	Dil For
Analyte		Qualifier	RL		Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200	0.000384	mg/Kg		05/22/23 15:18	05/24/23 14:23	1
Toluene	< 0.00200	U *+	0.00200	0.000455	mg/Kg		05/22/23 15:18	05/24/23 14:23	1
Ethylbenzene	<0.00200	U *+	0.00200	0.000564	mg/Kg		05/22/23 15:18	05/24/23 14:23	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399	0.00101	mg/Kg		05/22/23 15:18	05/24/23 14:23	1
o-Xylene	<0.00200	U *+	0.00200	0.000343	mg/Kg		05/22/23 15:18	05/24/23 14:23	1
Xylenes, Total	<0.00399	U *+	0.00399	0.00101	mg/Kg		05/22/23 15:18	05/24/23 14:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	338	S1+	70 - 130				05/22/23 15:18	05/24/23 14:23	1
1,4-Difluorobenzene (Surr)	78		70 - 130				05/22/23 15:18	05/24/23 14:23	1

Method: TAL SOP Total BTEX	- Total BTE	X Calculat	ion						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	0.00101	mg/Kg			05/24/23 15:08	1
Marker de OMO 40 0045 NM Dia	I D /	.	DDO\ (00\						

Method: SW846 8015 NM - Dies	el Range	Organics (D	RO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	157		49.9	15.0 mg/Kg			05/22/23 09:17	1

-									-
Method: SW846 8015B NM - [Diesel Range	Organics	(DRO) (GC)						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	15.0	mg/Kg		05/19/23 07:57	05/19/23 14:51	1
Diesel Range Organics (Over C10-C28)	157		49.9	15.0	mg/Kg		05/19/23 07:57	05/19/23 14:51	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		05/19/23 07:57	05/19/23 14:51	1
Total TPH	157		49.9	15.0	mg/Kg		05/19/23 07:57	05/19/23 14:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130				05/19/23 07:57	05/19/23 14:51	1
o-Terphenyl	94		70 - 130				05/19/23 07:57	05/19/23 14:51	1

Client Sample Results

Client: Ensolum Job ID: 890-4685-1 SDG: 03C14558049

Project/Site: James Ranch Unit 2 702H

Client Sample ID: FS05 Lab Sample ID: 890-4685-5 Date Collected: 05/18/23 09:30 **Matrix: Solid** Date Received: 05/18/23 12:25

Sample Depth: 1'

Method: EPA 300.0 - Anions, I	on Chromat	ography -	Soluble						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1850		25.3	1.99	mg/Kg			05/22/23 20:01	5

Client Sample ID: FS06 Lab Sample ID: 890-4685-6 Matrix: Solid

Date Collected: 05/18/23 09:35 Date Received: 05/18/23 12:25

Sample Depth: 1'

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201	0.000387	mg/Kg		05/22/23 15:18	05/24/23 14:49	1
Toluene	<0.00201	U *+	0.00201	0.000459	mg/Kg		05/22/23 15:18	05/24/23 14:49	1
Ethylbenzene	<0.00201	U *+	0.00201	0.000568	mg/Kg		05/22/23 15:18	05/24/23 14:49	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402	0.00102	mg/Kg		05/22/23 15:18	05/24/23 14:49	1
o-Xylene	<0.00201	U *+	0.00201	0.000346	mg/Kg		05/22/23 15:18	05/24/23 14:49	1
Xylenes, Total	<0.00402	U *+	0.00402	0.00102	mg/Kg		05/22/23 15:18	05/24/23 14:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	316	S1+	70 - 130				05/22/23 15:18	05/24/23 14:49	1
1,4-Difluorobenzene (Surr)	73		70 - 130				05/22/23 15:18	05/24/23 14:49	1

WELLIOU. TAL SUP TOTAL DIEX	- IUIAI DIE	A Calculat	IOH					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	0.00102 mg/Kg			05/24/23 15:08	1
_								

Method: SW846 8015 NM - Die	sel Range Or	ganics (D	RO) (GC)					
Analyte	Result Q	ualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	142		49.9	15.0 mg/Kg			05/22/23 09:17	1

Method: SW846 8015B NM - E	Diesel Range	Organics	(DRO) (GC)						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	15.0	mg/Kg		05/19/23 07:57	05/19/23 15:13	1
Diesel Range Organics (Over C10-C28)	142		49.9	15.0	mg/Kg		05/19/23 07:57	05/19/23 15:13	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	15.0	mg/Kg		05/19/23 07:57	05/19/23 15:13	1
Total TPH	142		49.9	15.0	mg/Kg		05/19/23 07:57	05/19/23 15:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				05/19/23 07:57	05/19/23 15:13	1
o-Terphenyl	98		70 - 130				05/19/23 07:57	05/19/23 15:13	1

Method: EPA 300.0 - Anions, Id	on Chromatography - S	oluble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1860	24.9	1.97 mg/Kg			05/22/23 20:06	5

Client: Ensolum

Job ID: 890-4685-1

Project/Site: James Ranch Unit 2 702H

SDG: 03C14558049

Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Client Sample ID: FS07

Date Collected: 05/18/23 09:45

Date Received: 05/18/23 12:25

Lab Sample ID: 890-4685-7

Matrix: Solid

Sample Depth: 1'

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *+	0.00202	0.000389	mg/Kg		05/22/23 15:18	05/24/23 15:15	1
Toluene	<0.00202	U *+	0.00202	0.000461	mg/Kg		05/22/23 15:18	05/24/23 15:15	1
Ethylbenzene	<0.00202	U *+	0.00202	0.000571	mg/Kg		05/22/23 15:18	05/24/23 15:15	1
m-Xylene & p-Xylene	<0.00404	U *+	0.00404	0.00102	mg/Kg		05/22/23 15:18	05/24/23 15:15	1
o-Xylene	< 0.00202	U *+	0.00202	0.000347	mg/Kg		05/22/23 15:18	05/24/23 15:15	1
Xylenes, Total	<0.00404	U *+	0.00404	0.00102	mg/Kg		05/22/23 15:18	05/24/23 15:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	300	S1+	70 - 130				05/22/23 15:18	05/24/23 15:15	1
1,4-Difluorobenzene (Surr)	81		70 - 130				05/22/23 15:18	05/24/23 15:15	1
Method: TAL SOP Total BTE	(- Total BTE	X Calculat	tion						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	0.00102	mg/Kg			05/24/23 15:08	1
Method: SW846 8015 NM - Di	esel Range	Organics (DRO) (GC)						
Method: SW846 8015 NM - Di Analyte	_	Organics (Qualifier	DRO) (GC) RL		Unit	D	Prepared	Analyzed	Dil Fac
	_		, , , ,	14.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 05/22/23 09:17	
Analyte Total TPH	Result 118	Qualifier	RL 49.8			<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - I	Result 118 Diesel Range	Qualifier Organics	RL 49.8		mg/Kg			05/22/23 09:17	1
Analyte Total TPH • Method: SW846 8015B NM - I Analyte	Result 118 Diesel Range Result	Qualifier Organics Qualifier	RL 49.8 6 (DRO) (GC RL)	mg/Kg Unit	<u>D</u>	Prepared	05/22/23 09:17 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics	Result 118 Diesel Range	Qualifier Organics Qualifier	RL 49.8)	mg/Kg			05/22/23 09:17	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result 118 Diesel Range Result	Qualifier Organics Qualifier	RL 49.8 6 (DRO) (GC RL	14.9	mg/Kg Unit		Prepared 05/19/23 07:57	05/22/23 09:17 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result 118 Diesel Range Result <49.8	Qualifier Organics Qualifier U	RL 49.8 6 (DRO) (GC RL 49.8	14.9 14.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 15:56	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result 118 Diesel Range Result <49.8	Qualifier Organics Qualifier U	RL 49.8 6 (DRO) (GC RL 49.8 49.8	14.9 14.9 14.9	mg/Kg Unit mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 15:56 05/19/23 15:56	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10	Result 118 Diesel Range Result <49.8 49.8	Qualifier Organics Qualifier U	RL 49.8 6 (DRO) (GC RL 49.8 49.8	14.9 14.9 14.9	mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 15:56 05/19/23 15:56 05/19/23 15:56	1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH	Result 118 Diesel Range Result <49.8 118 <49.8 118	Qualifier Organics Qualifier U	RL 49.8 (DRO) (GC RL 49.8 49.8 49.8	14.9 14.9 14.9	mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 15:56 05/19/23 15:56 05/19/23 15:56	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - I Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH Surrogate	Result 118 Diesel Range Result <49.8 118 <49.8 118 %Recovery	Qualifier Organics Qualifier U	RL 49.8 (DRO) (GC RL 49.8 49.8 49.8 49.8	14.9 14.9 14.9	mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57 Prepared 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 15:56 05/19/23 15:56 05/19/23 15:56 05/19/23 15:56 Analyzed	Dil Fac
Analyte Total TPH Method: SW846 8015B NM - I 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 118	Qualifier Organics Qualifier U U	RL 49.8 (DRO) (GC RL 49.8 49.8 49.8 49.8 20.130 70 - 130 70 - 130	14.9 14.9 14.9	mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57 05/19/23 07:57 Prepared 05/19/23 07:57	05/22/23 09:17 Analyzed 05/19/23 15:56 05/19/23 15:56 05/19/23 15:56 Analyzed 05/19/23 15:56	1 Dil Fac

Client Sample ID: FS08

Date Collected: 05/18/23 09:55

Lab Sample ID: 890-4685-8

Matrix: Solid

25.2

1510

1.99 mg/Kg

Date Collected: 05/18/23 09:55 Date Received: 05/18/23 12:25

Sample Depth: 1'

Chloride

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199	0.000383	mg/Kg		05/22/23 15:18	05/24/23 15:41	1
Toluene	<0.00199	U *+	0.00199	0.000454	mg/Kg		05/22/23 15:18	05/24/23 15:41	1
Ethylbenzene	<0.00199	U *+	0.00199	0.000563	mg/Kg		05/22/23 15:18	05/24/23 15:41	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	0.00101	mg/Kg		05/22/23 15:18	05/24/23 15:41	1
o-Xylene	< 0.00199	U *+	0.00199	0.000343	mg/Kg		05/22/23 15:18	05/24/23 15:41	1
Xylenes, Total	< 0.00398	U *+	0.00398	0.00101	mg/Kg		05/22/23 15:18	05/24/23 15:41	1

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05/22/23 20:22

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Job ID: 890-4685-1

Client: Ensolum Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Client Sample ID: FS08 Lab Sample ID: 890-4685-8 Date Collected: 05/18/23 09:55

Matrix: Solid

Date Received: 05/18/23 12:25 Sample Depth: 1'

Surrogate	%Recovery Qualifier	Limits	Prepared Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	331 S1+	70 - 130	05/22/23 15:18 05/24/23 15:41	1
1,4-Difluorobenzene (Surr)	79	70 - 130	05/22/23 15:18 05/24/23 15:41	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac <0.00398 U Total BTEX 0.00398 0.00101 mg/Kg 05/24/23 15:08

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Result Qualifier D Analyte Unit Prepared Analyzed Dil Fac 49.8 05/22/23 09:17 **Total TPH** 145 14.9 mg/Kg

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) Result Qualifier D **Analyte** Unit Prepared Analyzed Dil Fac Gasoline Range Organics <49.8 U 49.8 14.9 mg/Kg 05/19/23 07:57 05/19/23 16:18 (GRO)-C6-C10 05/19/23 07:57 05/19/23 16:18 **Diesel Range Organics (Over** 145 49.8 14.9 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) <49.8 U 49.8 14.9 mg/Kg 05/19/23 07:57 05/19/23 16:18 49.8 14.9 mg/Kg 05/19/23 07:57 05/19/23 16:18 **Total TPH** 145 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac

1-Chlorooctane 89 70 - 130 05/19/23 07:57 05/19/23 16:18 92 70 - 130 05/19/23 07:57 05/19/23 16:18 o-Terphenyl

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier Unit RL D Prepared Analyzed Dil Fac 1620 24.9 Chloride 1.97 mg/Kg 05/22/23 20:28

Client Sample ID: FS09 Lab Sample ID: 890-4685-9 Date Collected: 05/18/23 10:10 Matrix: Solid

Date Received: 05/18/23 12:25

Sample Depth: 1'

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199	0.000383	mg/Kg		05/22/23 15:18	05/24/23 16:07	1
Toluene	<0.00199	U *+	0.00199	0.000453	mg/Kg		05/22/23 15:18	05/24/23 16:07	1
Ethylbenzene	<0.00199	U *+	0.00199	0.000562	mg/Kg		05/22/23 15:18	05/24/23 16:07	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	0.00100	mg/Kg		05/22/23 15:18	05/24/23 16:07	1
o-Xylene	< 0.00199	U *+	0.00199	0.000342	mg/Kg		05/22/23 15:18	05/24/23 16:07	1
Xylenes, Total	<0.00398	U *+	0.00398	0.00100	mg/Kg		05/22/23 15:18	05/24/23 16:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	345	S1+	70 - 130				05/22/23 15:18	05/24/23 16:07	1
1,4-Difluorobenzene (Surr)	84		70 - 130				05/22/23 15:18	05/24/23 16:07	1
- Method: TAL SOP Total BT	EX - Total BTE	X Calculat	ion						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	0.00100	mg/Kg			05/25/23 08:44	

Matrix: Solid

Client Sample Results

Client: Ensolum

Job ID: 890-4685-1

Project/Site: James Ranch Unit 2 702H

SDG: 03C14558049

Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Client Sample ID: FS09

Lab Sample ID: 890-4685-9

Date Collected: 05/18/23 10:10 Date Received: 05/18/23 12:25

Sample Depth: 1'

Method: SW846 8015 NM - Die	sel Range (Organics (I	DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	138		50.0	15.0 mg/Kg			05/22/23 09:17	1

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 16:39	1
Diesel Range Organics (Over C10-C28)	138		50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 16:39	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 16:39	1
Total TPH	138		50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 16:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				05/19/23 07:57	05/19/23 16:39	1
o-Terphenyl	91		70 - 130				05/19/23 07:57	05/19/23 16:39	1

Method: EPA 300.0 - Anions, I	on Chromatography -	Soluble					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1450	24.8	1.96 mg/Kg			05/22/23 20:33	5

Surrogate Summary

Client: Ensolum Job ID: 890-4685-1 Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1	rogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-4679-A-1-C MS	Matrix Spike	174 S1+	72	
890-4679-A-1-D MSD	Matrix Spike Duplicate	182 S1+	103	
890-4680-A-1-E MS	Matrix Spike	193 S1+	111	
890-4680-A-1-F MSD	Matrix Spike Duplicate	187 S1+	92	
890-4685-1	FS01	237 S1+	80	
890-4685-2	FS02	277 S1+	73	
890-4685-3	FS03	317 S1+	98	
890-4685-4	FS04	284 S1+	71	
890-4685-5	FS05	338 S1+	78	
890-4685-6	FS06	316 S1+	73	
890-4685-7	FS07	300 S1+	81	
890-4685-8	FS08	331 S1+	79	
890-4685-9	FS09	345 S1+	84	
LCS 880-53896/1-A	Lab Control Sample	132 S1+	75	
LCS 880-53899/1-A	Lab Control Sample	233 S1+	141 S1+	
LCSD 880-53896/2-A	Lab Control Sample Dup	157 S1+	79	
LCSD 880-53899/2-A	Lab Control Sample Dup	237 S1+	146 S1+	
MB 880-53896/5-A	Method Blank	112	77	
MB 880-53899/5-A	Method Blank	158 S1+	71	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid Prep Type: Total/NA

		1001	Percent Su OTPH1	,
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-28597-A-1-E MS	Matrix Spike	90	82	
880-28597-A-1-F MSD	Matrix Spike Duplicate	89	80	
890-4685-1	FS01	98	97	
890-4685-2	FS02	92	94	
890-4685-3	FS03	92	93	
890-4685-4	FS04	89	91	
890-4685-5	FS05	91	94	
890-4685-6	FS06	95	98	
890-4685-7	FS07	90	93	
890-4685-8	FS08	89	92	
890-4685-9	FS09	89	91	
LCS 880-53720/2-A	Lab Control Sample	72	71	
LCSD 880-53720/3-A	Lab Control Sample Dup	77	74	
MB 880-53720/1-A	Method Blank	160 S1+	171 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-4685-1 Project/Site: James Ranch Unit 2 702H

SDG: 03C14558049

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-53896/5-A

Matrix: Solid

Analysis Batch: 53992

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 53896

	MB	IVIB							
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		05/22/23 14:48	05/23/23 16:24	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		05/22/23 14:48	05/23/23 16:24	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		05/22/23 14:48	05/23/23 16:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		05/22/23 14:48	05/23/23 16:24	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		05/22/23 14:48	05/23/23 16:24	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		05/22/23 14:48	05/23/23 16:24	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	05/22/23 14:48	05/23/23 16:24	1
1,4-Difluorobenzene (Surr)	77		70 - 130	05/22/23 14:48	05/23/23 16:24	1

Lab Sample ID: LCS 880-53896/1-A

Matrix: Solid

Analysis Batch: 53992

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 53896

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Benzene 70 - 130 0.100 0.1201 mg/Kg 120 Toluene 0.100 0.1080 mg/Kg 70 - 130 108 Ethylbenzene 0.100 0.1096 mg/Kg 70 - 130 110 0.200 m-Xylene & p-Xylene 0.2323 mg/Kg 116 70 - 130 o-Xylene 0.100 0.1127 mg/Kg 113 70 - 130

LCS LCS

Surrogate	%Recovery	Qualifier	Limits		
4-Bromofluorobenzene (Surr)	132	S1+	70 - 130		
1,4-Difluorobenzene (Surr)	75		70 - 130		

Lab Sample ID: LCSD 880-53896/2-A

Matrix: Solid

Analysis Batch: 53992

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 53896

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1413	*+	mg/Kg		141	70 - 130	16	35
Toluene	0.100	0.1275		mg/Kg		128	70 - 130	17	35
Ethylbenzene	0.100	0.1270		mg/Kg		127	70 - 130	15	35
m-Xylene & p-Xylene	0.200	0.2712	*+	mg/Kg		136	70 - 130	15	35
o-Xylene	0.100	0.1329	*+	mg/Kg		133	70 - 130	16	35

LCSD LCSD

Sample Sample

<0.00202 U*+

<0.00202 U

Result Qualifier

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	157	S1+	70 - 130
1,4-Difluorobenzene (Surr)	79		70 - 130

Lab Sample ID: 890-4680-A-1-E MS

Matrix: Solid

Analyte

Benzene

Toluene

Analysis Batch: 53992

Client Sample ID: Matrix Spike Prep Type: Total/NA

Prep Batch: 53896

%Rec

%Rec	Limits	
111	70 - 130	
00	70 120	

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Spike

Added

0.0998

0.0998

MS MS

0.1104

0.09861

Result Qualifier

Unit

mg/Kg

mg/Kg

Client: Ensolum Job ID: 890-4685-1 Project/Site: James Ranch Unit 2 702H

SDG: 03C14558049

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-4680-A-1-E MS **Matrix: Solid**

Analysis Batch: 53992

Client Sample ID: Matrix Spike Prep Type: Total/NA

Prep Batch: 53896

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00202	U	0.0998	0.1001		mg/Kg		100	70 - 130	
m-Xylene & p-Xylene	< 0.00403	U *+	0.200	0.2079		mg/Kg		104	70 - 130	
o-Xylene	<0.00202	U *+	0.0998	0.09933		mg/Kg		100	70 - 130	

MS MS

Surrogate	%Recovery	Qualifier	Limits		
4-Bromofluorobenzene (Surr)	193	S1+	70 - 130		
1,4-Difluorobenzene (Surr)	111		70 - 130		

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 53896

Lab Sample ID: 890-4680-A-1-F MSD **Matrix: Solid**

Analysis Batch: 53992

•	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00202	U *+	0.101	0.1118		mg/Kg	_	111	70 - 130	1	35
Toluene	<0.00202	U	0.101	0.09698		mg/Kg		96	70 - 130	2	35
Ethylbenzene	<0.00202	U	0.101	0.08860		mg/Kg		88	70 - 130	12	35
m-Xylene & p-Xylene	<0.00403	U *+	0.202	0.1832		mg/Kg		91	70 - 130	13	35
o-Xylene	<0.00202	U *+	0.101	0.08797		mg/Kg		87	70 - 130	12	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	187	S1+	70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: MB 880-53899/5-A

Matrix: Solid

Analysis Batch: 53992

Client Sample ID: Method Blank **Prep Type: Total/NA**

Prep Batch: 53899

-	MB	MB							
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	0.000385	mg/Kg		05/22/23 15:18	05/24/23 06:10	1
Toluene	<0.00200	U	0.00200	0.000456	mg/Kg		05/22/23 15:18	05/24/23 06:10	1
Ethylbenzene	<0.00200	U	0.00200	0.000565	mg/Kg		05/22/23 15:18	05/24/23 06:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	0.00101	mg/Kg		05/22/23 15:18	05/24/23 06:10	1
o-Xylene	<0.00200	U	0.00200	0.000344	mg/Kg		05/22/23 15:18	05/24/23 06:10	1
Xylenes, Total	<0.00400	U	0.00400	0.00101	mg/Kg		05/22/23 15:18	05/24/23 06:10	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	158	S1+	70 - 130	05/22/23 15:18 05/24/23 06:10	1
1,4-Difluorobenzene (Surr)	71		70 - 130	05/22/23 15:18 05/24/23 06:10	1

Lab Sample ID: LCS 880-53899/1-A

Matrix: Solid

Analysis Batch: 53992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
D. D. C. B. C.

Prep Batch: 53899

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1828	*+	mg/Kg		183	70 - 130	
Toluene	0.100	0.1504	*+	mg/Kg		150	70 - 130	
Ethylbenzene	0.100	0.1439	*+	mg/Kg		144	70 - 130	
m-Xylene & p-Xylene	0.200	0.3027	*+	mg/Kg		151	70 - 130	

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LCS LCS

Client: Ensolum Project/Site: James Ranch Unit 2 702H

Job ID: 890-4685-1

SDG: 03C14558049

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-53899/1-A

Matrix: Solid

Analysis Batch: 53992

Lab Sample ID: LCSD 880-53899/2-A

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 53899

%Rec

Spike Analyte Added Result Qualifier Unit %Rec Limits o-Xylene 0 100 0 1519 *+ mg/Kg 152 70 - 130

LCS LCS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 233 S1+ 70 - 130 1,4-Difluorobenzene (Surr) 70 - 130 141 S1+

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Matrix: Solid Analysis Batch: 53992

Prep Batch: 53899 **RPD**

LCSD LCSD Spike %Rec Added Result Qualifier Unit D %Rec Limits **RPD** Limit Analyte 0.1682 *+ Benzene 0.100 mg/Kg 168 70 - 130 8 35 Toluene 0.100 0.1519 *+ mg/Kg 152 70 - 130 35 145 Ethylbenzene 0.100 0.1449 *+ mg/Kg 70 - 130 m-Xylene & p-Xylene 0.200 0.3028 *+ 151 70 - 130 mg/Kg o-Xylene 0.100 0.1575 *+ mg/Kg 157 70 - 130

35 35 35

LCSD LCSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 237 S1+ 70 - 130 1,4-Difluorobenzene (Surr) 146 S1+ 70 - 130

Lab Sample ID: 890-4679-A-1-C MS

Matrix: Solid

Analysis Batch: 53992

Client Sample ID: Matrix Spike Prep Type: Total/NA

Prep Batch: 53899

_	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U *+	0.0998	0.1223		mg/Kg		123	70 - 130	
Toluene	<0.00200	U *+	0.0998	0.1086		mg/Kg		109	70 - 130	
Ethylbenzene	<0.00200	U *+	0.0998	0.1006		mg/Kg		101	70 - 130	
m-Xylene & p-Xylene	<0.00401	U *+	0.200	0.2114		mg/Kg		106	70 - 130	
o-Xylene	<0.00200	U *+	0.0998	0.1046		mg/Kg		105	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 174 S1+ 70 - 130 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) 72 70 - 130

Lab Sample ID: 890-4679-A-1-D MSD

Matrix: Solid

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analysis Batch: 53992									Prep E	Batch: {	53899
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U *+	0.100	0.1287		mg/Kg		128	70 - 130	5	35
Toluene	<0.00200	U *+	0.100	0.1171		mg/Kg		117	70 - 130	8	35
Ethylbenzene	<0.00200	U *+	0.100	0.1115		mg/Kg		111	70 - 130	10	35
m-Xylene & p-Xylene	<0.00401	U *+	0.200	0.2335		mg/Kg		117	70 - 130	10	35
o-Xylene	<0.00200	U *+	0.100	0.1159		mg/Kg		116	70 - 130	10	35

Client: Ensolum Job ID: 890-4685-1 Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-4679-A-1-D MSD

Matrix: Solid

Analysis Batch: 53992

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 53899

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	182	S1+	70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-53720/1-A

Matrix: Solid

Analysis Batch: 53715

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53720

мв мв

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 08:23	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 08:23	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 08:23	1
Total TPH	<50.0	U	50.0	15.0	mg/Kg		05/19/23 07:57	05/19/23 08:23	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
1-Chlorooctane	160	S1+	70 - 130	05/19/23 07:57 05/19/23 08:2	3 1
o-Terphenyl	171	S1+	70 - 130	05/19/23 07:57 05/19/23 08:2	3 1

Lab Sample ID: LCS 880-53720/2-A

Matrix: Solid

Analysis Batch: 53715

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 53720

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 862.7 mg/Kg 86 70 - 130 (GRO)-C6-C10 1000 823.8 Diesel Range Organics (Over mg/Kg 82 70 - 130

C10-C28)

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	72	70 - 130
o-Terphenyl	71	70 - 130

Lab Sample ID: LCSD 880-53720/3-A

Matrix: Solid

Analysis Batch: 53715

Client Sample ID: I	Lab (Control	Sample	e Dup
		Pron Ty	me: Tot	tal/NA

Prep Batch: 53720

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	773.4		mg/Kg		77	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	1000	807.4		mg/Kg		81	70 - 130	2	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	77		70 - 130
o-Terphenyl	74		70 - 130

Client: Ensolum Job ID: 890-4685-1 Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-28597-A-1-E MS **Client Sample ID: Matrix Spike**

Matrix: Solid

Analysis Batch: 53715

Prep Type: Total/NA

Prep Batch: 53720

	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	999	881.1		mg/Kg		88	70 - 130	
Diesel Range Organics (Over C10-C28)	28.4	J	999	936.4		mg/Kg		91	70 - 130	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: 880-28597-A-1-F MSD

Matrix: Solid

Analysis Batch: 53715

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA Prep Batch: 53720

Sample Sample Spike MSD MSD %Rec **RPD** Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Gasoline Range Organics <50.0 U 999 951.5 95 70 - 130 8 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 999 2 20 28.4 J 915.9 mg/Kg 89 70 - 130

C10-C28)

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	80		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53784/1-A **Client Sample ID: Method Blank Matrix: Solid Prep Type: Soluble**

Analysis Batch: 53793

MB MB

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	0.395	mg/Kg			05/22/23 18:14	1

Lab Sample ID: LCS 880-53784/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 53793

	Spike	LCS LCS			%Rec	
Analyte	Added	Result Qualifier	Unit D	%Rec	Limits	
Chloride	250	253.0	ma/Ka	101	90 - 110	

Lab Sample ID: LCSD 880-53784/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 53793

Analysis Baton. 60700									
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	254.0		mg/Kg		102	90 - 110	0	20

Client: Ensolum Job ID: 890-4685-1 Project/Site: James Ranch Unit 2 702H

SDG: 03C14558049

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4685-4 MS Client Sample ID: FS04 **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 53793

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Unit %Rec Limits Analyte D Chloride 1780 1250 3017 mg/Kg 100 90 - 110

Lab Sample ID: 890-4685-4 MSD Client Sample ID: FS04 **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 53793

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Analyte 1780 1250 99 90 - 110 Chloride 3014 mg/Kg n

Lab Sample ID: MB 880-53744/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 53903

MB MB

Result Qualifier RL Unit **Analyte** D Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 0.395 mg/Kg 05/22/23 15:10

Lab Sample ID: LCS 880-53744/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 53903

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit %Rec Limits Chloride 236.9 250 mg/Kg 95 90 - 110

Lab Sample ID: LCSD 880-53744/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 53903

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit RPD %Rec Limits Limit Chloride 250 236.6 95 90 - 110 mg/Kg

Lab Sample ID: 880-28587-A-10-C MS **Client Sample ID: Matrix Spike Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 53903

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier %Rec Analyte Unit D Limits 69.1 F1 250 Chloride 290.0 F1 mg/Kg 88 90 - 110

Lab Sample ID: 880-28587-A-10-D MSD **Client Sample ID: Matrix Spike Duplicate Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 53903

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier %Rec Analyte D Limits RPD Limit Unit 69.1 F1 Chloride 250 288.0 F1 88 mg/Kg 90 - 110

Client: Ensolum

Project/Site: James Ranch Unit 2 702H

Job ID: 890-4685-1 SDG: 03C14558049

GC VOA

Prep Batch: 53896

Lab Sample ID MB 880-53896/5-A	Client Sample ID Method Blank	Prep Type Total/NA	Matrix Solid	Method 5035	Prep Batch
LCS 880-53896/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53896/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4680-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-4680-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 53899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-1	FS01	Total/NA	Solid	5035	
890-4685-2	FS02	Total/NA	Solid	5035	
890-4685-3	FS03	Total/NA	Solid	5035	
890-4685-4	FS04	Total/NA	Solid	5035	
890-4685-5	FS05	Total/NA	Solid	5035	
890-4685-6	FS06	Total/NA	Solid	5035	
890-4685-7	FS07	Total/NA	Solid	5035	
890-4685-8	FS08	Total/NA	Solid	5035	
890-4685-9	FS09	Total/NA	Solid	5035	
MB 880-53899/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53899/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53899/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4679-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-4679-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 53992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-1	FS01	Total/NA	Solid	8021B	53899
890-4685-2	FS02	Total/NA	Solid	8021B	53899
890-4685-3	FS03	Total/NA	Solid	8021B	53899
890-4685-4	FS04	Total/NA	Solid	8021B	53899
890-4685-5	FS05	Total/NA	Solid	8021B	53899
890-4685-6	FS06	Total/NA	Solid	8021B	53899
890-4685-7	FS07	Total/NA	Solid	8021B	53899
890-4685-8	FS08	Total/NA	Solid	8021B	53899
890-4685-9	FS09	Total/NA	Solid	8021B	53899
MB 880-53896/5-A	Method Blank	Total/NA	Solid	8021B	53896
MB 880-53899/5-A	Method Blank	Total/NA	Solid	8021B	53899
LCS 880-53896/1-A	Lab Control Sample	Total/NA	Solid	8021B	53896
LCS 880-53899/1-A	Lab Control Sample	Total/NA	Solid	8021B	53899
LCSD 880-53896/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53896
LCSD 880-53899/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53899
890-4679-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	53899
890-4679-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	53899
890-4680-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	53896
890-4680-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	53896

Analysis Batch: 54075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-1	FS01	Total/NA	Solid	Total BTEX	
890-4685-2	FS02	Total/NA	Solid	Total BTEX	
890-4685-3	FS03	Total/NA	Solid	Total BTEX	
890-4685-4	FS04	Total/NA	Solid	Total BTEX	

Job ID: 890-4685-1 Client: Ensolum Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

GC VOA (Continued)

Analysis Batch: 54075 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-5	FS05	Total/NA	Solid	Total BTEX	
890-4685-6	FS06	Total/NA	Solid	Total BTEX	
890-4685-7	FS07	Total/NA	Solid	Total BTEX	
890-4685-8	FS08	Total/NA	Solid	Total BTEX	
890-4685-9	FS09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 53715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-1	FS01	Total/NA	Solid	8015B NM	53720
890-4685-2	FS02	Total/NA	Solid	8015B NM	53720
890-4685-3	FS03	Total/NA	Solid	8015B NM	53720
890-4685-4	FS04	Total/NA	Solid	8015B NM	53720
890-4685-5	FS05	Total/NA	Solid	8015B NM	53720
890-4685-6	FS06	Total/NA	Solid	8015B NM	53720
890-4685-7	FS07	Total/NA	Solid	8015B NM	53720
890-4685-8	FS08	Total/NA	Solid	8015B NM	53720
890-4685-9	FS09	Total/NA	Solid	8015B NM	53720
MB 880-53720/1-A	Method Blank	Total/NA	Solid	8015B NM	53720
LCS 880-53720/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53720
LCSD 880-53720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53720
880-28597-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	53720
880-28597-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	53720

Prep Batch: 53720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-1	FS01	Total/NA	Solid	8015NM Prep	
890-4685-2	FS02	Total/NA	Solid	8015NM Prep	
890-4685-3	FS03	Total/NA	Solid	8015NM Prep	
890-4685-4	FS04	Total/NA	Solid	8015NM Prep	
890-4685-5	FS05	Total/NA	Solid	8015NM Prep	
890-4685-6	FS06	Total/NA	Solid	8015NM Prep	
890-4685-7	FS07	Total/NA	Solid	8015NM Prep	
890-4685-8	FS08	Total/NA	Solid	8015NM Prep	
890-4685-9	FS09	Total/NA	Solid	8015NM Prep	
MB 880-53720/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53720/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28597-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28597-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-1	FS01	Total/NA	Solid	8015 NM	
890-4685-2	FS02	Total/NA	Solid	8015 NM	
890-4685-3	FS03	Total/NA	Solid	8015 NM	
890-4685-4	FS04	Total/NA	Solid	8015 NM	
890-4685-5	FS05	Total/NA	Solid	8015 NM	
890-4685-6	FS06	Total/NA	Solid	8015 NM	
890-4685-7	FS07	Total/NA	Solid	8015 NM	

Client: Ensolum Project/Site: James Ranch Unit 2 702H Job ID: 890-4685-1

SDG: 03C14558049

GC Semi VOA (Continued)

Analysis Batch: 53851 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-8	FS08	Total/NA	Solid	8015 NM	
890-4685-9	FS09	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 53744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-1	FS01	Soluble	Solid	DI Leach	
890-4685-2	FS02	Soluble	Solid	DI Leach	
890-4685-3	FS03	Soluble	Solid	DI Leach	
MB 880-53744/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53744/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53744/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-28587-A-10-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-28587-A-10-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 53784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-4	FS04	Soluble	Solid	DI Leach	
890-4685-5	FS05	Soluble	Solid	DI Leach	
890-4685-6	FS06	Soluble	Solid	DI Leach	
890-4685-7	FS07	Soluble	Solid	DI Leach	
890-4685-8	FS08	Soluble	Solid	DI Leach	
890-4685-9	FS09	Soluble	Solid	DI Leach	
MB 880-53784/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53784/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53784/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4685-4 MS	FS04	Soluble	Solid	DI Leach	
890-4685-4 MSD	FS04	Soluble	Solid	DI Leach	

Analysis Batch: 53793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-4	FS04	Soluble	Solid	300.0	53784
890-4685-5	FS05	Soluble	Solid	300.0	53784
890-4685-6	FS06	Soluble	Solid	300.0	53784
890-4685-7	FS07	Soluble	Solid	300.0	53784
890-4685-8	FS08	Soluble	Solid	300.0	53784
890-4685-9	FS09	Soluble	Solid	300.0	53784
MB 880-53784/1-A	Method Blank	Soluble	Solid	300.0	53784
LCS 880-53784/2-A	Lab Control Sample	Soluble	Solid	300.0	53784
LCSD 880-53784/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53784
890-4685-4 MS	FS04	Soluble	Solid	300.0	53784
890-4685-4 MSD	FS04	Soluble	Solid	300.0	53784

Analysis Batch: 53903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4685-1	FS01	Soluble	Solid	300.0	53744
890-4685-2	FS02	Soluble	Solid	300.0	53744
890-4685-3	FS03	Soluble	Solid	300.0	53744
MB 880-53744/1-A	Method Blank	Soluble	Solid	300.0	53744
LCS 880-53744/2-A	Lab Control Sample	Soluble	Solid	300.0	53744

Eurofins Carlsbad

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Client: Ensolum

Project/Site: James Ranch Unit 2 702H

SDG: 03C14558049

HPLC/IC (Continued)

Analysis Batch: 53903 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-53744/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53744
880-28587-A-10-C MS	Matrix Spike	Soluble	Solid	300.0	53744
880-28587-A-10-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	53744

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Project/Site: James Ranch Unit 2 702H

Client Sample ID: FS01

Client: Ensolum

Lab Sample ID: 890-4685-1

Matrix: Solid

Date Collected: 05/18/23 08:20 Date Received: 05/18/23 12:25

	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	53899	05/22/23 15:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53992	05/23/23 20:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54075	05/24/23 11:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			53851	05/22/23 09:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53720	05/19/23 07:57	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53715	05/19/23 13:24	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	53744	05/19/23 09:51	СН	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	53903	05/22/23 17:41	CH	EET MID

Client Sample ID: FS02 Lab Sample ID: 890-4685-2

Date Collected: 05/18/23 08:25 **Matrix: Solid**

Date Received: 05/18/23 12:25

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	53899	05/22/23 15:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53992	05/24/23 13:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54075	05/24/23 15:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			53851	05/22/23 09:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	53720	05/19/23 07:57	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53715	05/19/23 13:46	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53744	05/19/23 09:51	СН	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53903	05/22/23 17:46	CH	EET MID

Client Sample ID: FS03 Lab Sample ID: 890-4685-3 Date Collected: 05/18/23 08:30 **Matrix: Solid**

Date Received: 05/18/23 12:25

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53899	05/22/23 15:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53992	05/24/23 13:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54075	05/24/23 15:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			53851	05/22/23 09:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53720	05/19/23 07:57	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53715	05/19/23 14:08	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	53744	05/19/23 09:51	CH	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	53903	05/22/23 17:52	CH	EET MID

Client Sample ID: FS04 Lab Sample ID: 890-4685-4 Date Collected: 05/18/23 08:35 Matrix: Solid

Date Received: 05/18/23 12:25

	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	53899	05/22/23 15:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53992	05/24/23 13:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54075	05/24/23 15:08	SM	EET MID

SDG: 03C14558049

Client Sample ID: FS04

Lab Sample ID: 890-4685-4

Date Collected: 05/18/23 08:35 Date Received: 05/18/23 12:25

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			53851	05/22/23 09:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53720	05/19/23 07:57	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53715	05/19/23 14:29	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53784	05/19/23 14:41	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53793	05/22/23 19:45	CH	EET MID

Lab Sample ID: 890-4685-5

Date Collected: 05/18/23 09:30 Date Received: 05/18/23 12:25

Client Sample ID: FS05

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	53899	05/22/23 15:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53992	05/24/23 14:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54075	05/24/23 15:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			53851	05/22/23 09:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53720	05/19/23 07:57	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53715	05/19/23 14:51	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	53784	05/19/23 14:41	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53793	05/22/23 20:01	CH	EET MID

Client Sample ID: FS06 Lab Sample ID: 890-4685-6

Date Collected: 05/18/23 09:35 Date Received: 05/18/23 12:25

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	53899	05/22/23 15:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53992	05/24/23 14:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54075	05/24/23 15:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			53851	05/22/23 09:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53720	05/19/23 07:57	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53715	05/19/23 15:13	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53784	05/19/23 14:41	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53793	05/22/23 20:06	CH	EET MID

Client Sample ID: FS07 Lab Sample ID: 890-4685-7 Date Collected: 05/18/23 09:45 Matrix: Solid

Date Received: 05/18/23 12:25

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	53899	05/22/23 15:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53992	05/24/23 15:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54075	05/24/23 15:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			53851	05/22/23 09:17	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.05 g 1 uL	10 mL 1 uL	53720 53715	05/19/23 07:57 05/19/23 15:56		EET MID EET MID

Job ID: 890-4685-1

Client: Ensolum Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Client Sample ID: FS07 Lab Sample ID: 890-4685-7

Date Collected: 05/18/23 09:45 **Matrix: Solid** Date Received: 05/18/23 12:25

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	53784	05/19/23 14:41	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53793	05/22/23 20:22	CH	EET MID

Client Sample ID: FS08 Lab Sample ID: 890-4685-8

Date Collected: 05/18/23 09:55 Matrix: Solid Date Received: 05/18/23 12:25

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53899	05/22/23 15:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53992	05/24/23 15:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54075	05/24/23 15:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			53851	05/22/23 09:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	53720	05/19/23 07:57	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53715	05/19/23 16:18	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53784	05/19/23 15:26	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53793	05/22/23 20:28	CH	EET MID

Lab Sample ID: 890-4685-9 **Client Sample ID: FS09**

Date Collected: 05/18/23 10:10 **Matrix: Solid** Date Received: 05/18/23 12:25

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	53899	05/22/23 15:18	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53992	05/24/23 16:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54075	05/25/23 08:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			53851	05/22/23 09:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53720	05/19/23 07:57	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53715	05/19/23 16:39	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	53784	05/19/23 15:26	SMC	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	53793	05/22/23 20:33	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: 890-4685-1 Project/Site: James Ranch Unit 2 702H SDG: 03C14558049

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority		Program	Identification Number	Expiration Date
Texas		NELAP	T104704400-22-25	06-30-23
The following analyte the agency does not o	offer certification.	,	not certified by the governing authority.	This list may include analytes for which
Analysis Mothod	Dron Mothod	Matrix	Analyta	
Analysis Method	Prep Method	Matrix	Analyte	
Analysis Method 8015 NM	Prep Method	Matrix Solid	Analyte Total TPH	
	Prep Method 8015NM Prep			

Method Summary

Client: Ensolum

Project/Site: James Ranch Unit 2 702H

Job ID: 890-4685-1

SDG: 03C14558049

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: James Ranch Unit 2 702H

Job ID: 890-4685-1

SDG: 03C14558049

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4685-1	FS01	Solid	05/18/23 08:20	05/18/23 12:25	1'
890-4685-2	FS02	Solid	05/18/23 08:25	05/18/23 12:25	1
890-4685-3	FS03	Solid	05/18/23 08:30	05/18/23 12:25	1
890-4685-4	FS04	Solid	05/18/23 08:35	05/18/23 12:25	1'
890-4685-5	FS05	Solid	05/18/23 09:30	05/18/23 12:25	1'
890-4685-6	FS06	Solid	05/18/23 09:35	05/18/23 12:25	1'
890-4685-7	FS07	Solid	05/18/23 09:45	05/18/23 12:25	1'
890-4685-8	FS08	Solid	05/18/23 09:55	05/18/23 12:25	1'
890-4685-9	FS09	Solid	05/18/23 10:10	05/18/23 12:25	1'

Relinquished by: (Signature)

Circle Method(s) and Metal(s) to be analyzed

Total 200.7 / 6010

200.8 / 6020:

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu

F509 FSOS F507 FSOL 200 F504 E203 F502 FSO!

1010

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245 356

2000

930

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Received by: (Signature)

5-18-23

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Date/Time

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Xenco Environment

13 14

Chain of Custody

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					Testing
City, State ZIP:	Address:	Company Name:	Bill to: (if different)	EL Paso, TX Hobbs, NM (Midland, TX (4
Carlsbad, NM 88220	3104 E. Green St.	XTO Energy	Garrett Green	EL Paso, TX (915) 885-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
Reporting: Level II	State of Project:	Program: UST/PS1			W

Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	S	www	ANCIN
PRP Brownfield	Work Order Comments	www.xenco.com P	WORK Order No.
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3199	www.xenco.com Page of
	ion
Progra	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund
State	
Report	Reporting: Level III ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Delive	Deliverables: EDD ☐ ADaPT ☐ Other:
ALYSIS REQUEST	Preservative Codes
	None
	Cool: Cool MeOH: Me
	H ₃ PO ₄ : HP
	Na ₂ S ₂ O ₃ : NaSO ₃
4685 Chain of Custody	
-	NaOH+Ascorbic Acid: SAPC
	Sample Comments
	Incident ID:
	nAPP2211654411
	1632571001
	AFE:
Cu Fe Pb Mg Mn	n MoNiK Se Ag SiO₂Na Sr Ti Sn U V Zn
Pb Mn Mo Ni Se Ag	Ag TI U Hg: 1631/245.1/7470/7471
ubcontractors. It assigns s such losses are due to cir	such losses are due to circumstances beyond the conditions
od. Incoc terms will be em	
d by: (Signature)	Received by: (Signature) Date/Time

Samples Received Intact: SAMPLE RECEIPT

Temp Blank

Wet Ice:

N_O

Thermometer ID: Yes) No

FOOM

Parameters

Cooler Custody Seals: ample Custody Seals:

Yes No. Yes

X

Temperature Reading: Correction Factor:

CHLORIDES (EPA: 3000.0)

Corrected Temperature:

No

otal Containers:

Sample Identification

Matrix

Sampled 5/18/23

Sampled

Time

Depth

Comp Grab/

Cont # of

TPH (8015) BTEX (8021)

820

825

000

Date

Sampler's Name:

Connor Whitman

Due Date:

✓ Routine

Rush

Code

Turn Around

TAT starts the day received by the lab, if received by 4:30pm

Project Location:

Project Number:

roject Name:

James Ranch Unit 2 702H

03C1558049

Phone: City, State ZIP:

303-887-2946 Carlsbad, NM 88220 3122 National Parks Hwy

Email: | Garrett.Green@ExxonMobil.com

Project Manager:

Tacoma Morrissey

Company Name:

Ensolum

\ddress:

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-4685-1 SDG Number: 03C14558049

Login Number: 4685 **List Source: Eurofins Carlsbad**

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.	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: 890-4685-1 SDG Number: 03C14558049

Login Number: 4685 **List Source: Eurofins Midland** List Creation: 05/19/23 10:35 AM List Number: 2

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	N/A	

<6mm (1/4").

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 6/19/2023 3:10:37 PM

JOB DESCRIPTION

James Ranch Unit 2 702H SDG NUMBER 03C1558049

JOB NUMBER

890-4801-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220



Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated 6/19/2023 3:10:37 PM

6/19/2023

Authorized for release by Jessica Kramer, Project Manager <u>Jessica.Kramer@et.eurofinsus.com</u> (432)704-5440 Client: Ensolum
Project/Site: James Ranch Unit 2 702H
Laboratory Job ID: 890-4801-1
SDG: 03C1558049

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Definitions/Glossary

Job ID: 890-4801-1 Client: Ensolum Project/Site: James Ranch Unit 2 702H

SDG: 03C1558049

Qualifiers

GC VOA

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

S1+ Surrogate recovery exceeds control limits, high biased. 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) MPN Most Probable Number 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: 890-4801-1 Project/Site: James Ranch Unit 2 702H SDG: 03C1558049

Job ID: 890-4801-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-4801-1

Receipt

The samples were received on 6/9/2023 8:30 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 5.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: FS01A (890-4801-1) and FS03A (890-4801-2).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (CCV 880-55657/64). Evidence of matrix interferences is not obvious.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-55657 recovered outside the control limit for Benzene, m-Xylene & p-Xylene and o-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-55657/64).

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

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Matrix: Solid

Lab Sample ID: 890-4801-1

Client Sample Results

Client: Ensolum Job ID: 890-4801-1
Project/Site: James Ranch Unit 2 702H SDG: 03C1558049

Client Sample ID: FS01A

Date Collected: 06/08/23 13:30 Date Received: 06/09/23 08:30

Sample Depth: 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		06/15/23 13:41	06/17/23 10:17	1
Toluene	<0.00198	U	0.00198	mg/Kg		06/15/23 13:41	06/17/23 10:17	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		06/15/23 13:41	06/17/23 10:17	1
m-Xylene & p-Xylene	< 0.00396	U	0.00396	mg/Kg		06/15/23 13:41	06/17/23 10:17	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		06/15/23 13:41	06/17/23 10:17	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		06/15/23 13:41	06/17/23 10:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			06/15/23 13:41	06/17/23 10:17	1
1,4-Difluorobenzene (Surr)	97		70 - 130			06/15/23 13:41	06/17/23 10:17	1
Method: TAL SOP Total BTEX	(- Total BTEX Cald	culation						
Method: TAL SOP Total BTEX	(- Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit ma/Ka	<u>D</u>	Prepared	Analyzed	Dil Fac
		Qualifier	RL 0.00396	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 06/19/23 15:33	Dil Fac
Analyte Total BTEX	Result <0.00396	Qualifier U	0.00396		<u>D</u>	Prepared		Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Did	Result <0.00396	Qualifier U	0.00396		D	Prepared Prepared		Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Did Analyte	Result <0.00396	Qualifier U	0.00396 GC)	mg/Kg			06/19/23 15:33	1
Analyte	Result <0.00396 esel Range Organ Result 158	Qualifier U ics (DRO) ((Qualifier	0.00396 GC) RL 50.0	mg/Kg			06/19/23 15:33 Analyzed	1 Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Did Analyte Total TPH Method: SW846 8015B NM - Did Method:	Result <0.00396 esel Range Organ Result 158 Diesel Range Orga	Qualifier U ics (DRO) ((Qualifier	0.00396 GC) RL 50.0	mg/Kg			06/19/23 15:33 Analyzed	1 Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Did Analyte Total TPH	Result <0.00396 esel Range Organ Result 158 Diesel Range Orga	Qualifier U ics (DRO) (Qualifier unics (DRO) Qualifier	0.00396 GC) RL 50.0 (GC)	mg/Kg Unit mg/Kg	<u>D</u>	Prepared	06/19/23 15:33 Analyzed 06/14/23 09:50	Dil Fac

Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg	06/12/23 10:46	06/13/23 17:55	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130		06/12/23 10:46	06/13/23 17:55	1
o-Terphenyl	124		70 - 130		06/12/23 10:46	06/13/23 17:55	1

Method: EPA 300.0 - Anions, Ion C							
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1620	24.8	mg/Kg			06/13/23 17:26	5

Client Sample ID: FS03A

Date Collected: 06/08/23 13:20 Date Received: 06/09/23 08:30

Sample Depth: 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		06/15/23 13:41	06/17/23 10:37	1
Toluene	<0.00202	U	0.00202	mg/Kg		06/15/23 13:41	06/17/23 10:37	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		06/15/23 13:41	06/17/23 10:37	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		06/15/23 13:41	06/17/23 10:37	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		06/15/23 13:41	06/17/23 10:37	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		06/15/23 13:41	06/17/23 10:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			06/15/23 13:41	06/17/23 10:37	1

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Lab Sample ID: 890-4801-2

Matrix: Solid

Client Sample Results

Client: Ensolum Job ID: 890-4801-1
Project/Site: James Ranch Unit 2 702H SDG: 03C1558049

Client Sample ID: FS03A Lab Sample ID: 890-4801-2

Date Collected: 06/08/23 13:20 Matrix: Solid
Date Received: 06/09/23 08:30

Sample Depth: 2

Chloride

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	105		70 - 130			06/15/23 13:41	06/17/23 10:37	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			06/19/23 15:33	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	78.8		49.9	mg/Kg			06/14/23 09:50	1
Analyte	Result	Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015B NM - Die	•	. ,	(GC)					
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		06/12/23 10:46	06/13/23 18:18	1
Diesel Range Organics (Over	78.8		49.9	mg/Kg		06/12/23 10:46	06/13/23 18:18	1
C10-C28)	70.0		40.0	mg/rtg		00/12/20 10:40	00/10/20 10:10	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/12/23 10:46	06/13/23 18:18	1
	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Surrogate			70 - 130			06/12/23 10:46	06/13/23 18:18	
Surrogate 1-Chlorooctane	107		70 - 700					

4.96

mg/Kg

688

Eurofins Carlsbad

06/13/23 17:46

Surrogate Summary

Client: Ensolum Job ID: 890-4801-1
Project/Site: James Ranch Unit 2 702H SDG: 03C1558049

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)	
890-4801-1	FS01A	101	97	
890-4801-1 MS	FS01A	108	90	
890-4801-1 MSD	FS01A	107	91	
890-4801-2	FS03A	111	105	
LCS 880-55615/1-A	Lab Control Sample	113	98	
LCSD 880-55615/2-A	Lab Control Sample Dup	114	93	
MB 880-55607/5-A	Method Blank	96	98	
MB 880-55615/5-A	Method Blank	96	95	

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 L
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-4801-1	FS01A	106	124	
890-4801-2	FS03A	107	129	
890-4807-A-1-D MS	Matrix Spike	108	119	
890-4807-A-1-E MSD	Matrix Spike Duplicate	108	118	
LCS 880-55253/2-A	Lab Control Sample	100	119	
LCSD 880-55253/3-A	Lab Control Sample Dup	97	113	
MB 880-55253/1-A	Method Blank	114	146 S1+	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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QC Sample Results

Client: Ensolum Job ID: 890-4801-1 Project/Site: James Ranch Unit 2 702H SDG: 03C1558049

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-55607/5-A

Lab Sample ID: MB 880-55615/5-A

Matrix: Solid

Analysis Batch: 55657

Matrix: Solid Analysis Batch: 55657 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 55607

1

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/15/23 12:47	06/16/23 23:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/15/23 12:47	06/16/23 23:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/15/23 12:47	06/16/23 23:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		06/15/23 12:47	06/16/23 23:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/15/23 12:47	06/16/23 23:07	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/15/23 12:47	06/16/23 23:07	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	06/15/23 12:47	06/16/23 23:07	1
1,4-Difluorobenzene (Surr)	98		70 - 130	06/15/23 12:47	06/16/23 23:07	1

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 55615

MR MR Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac Benzene <0.00200 U 0.00200 mg/Kg 06/15/23 13:41 06/17/23 09:54 Toluene <0.00200 U 0.00200 mg/Kg 06/15/23 13:41 06/17/23 09:54 Ethylbenzene <0.00200 U 0.00200 mg/Kg 06/15/23 13:41 06/17/23 09:54 0.00400 m-Xylene & p-Xylene <0.00400 U mg/Kg 06/15/23 13:41 06/17/23 09:54 06/17/23 09:54 o-Xylene <0.00200 U 0.00200 mg/Kg 06/15/23 13:41 Xylenes, Total <0.00400 U 0.00400 06/15/23 13:41 06/17/23 09:54 mg/Kg

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	06/15/23 13:41	06/17/23 09:54	1
1,4-Difluorobenzene (Surr)	95		70 - 130	06/15/23 13:41	06/17/23 09:54	1

Lab Sample ID: LCS 880-55615/1-A

Matrix: Solid

Analysis Batch: 55657

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 55615

Spike LCS LCS %Rec Result Qualifier Analyte Added Unit %Rec Limits Benzene 0.100 0.07916 mg/Kg 79 70 - 130 Toluene 0.100 0.09006 mg/Kg 90 70 - 130 Ethylbenzene 0.100 0.08464 mg/Kg 85 70 - 130 m-Xylene & p-Xylene 0.200 0.1782 mg/Kg 89 70 - 130 0.100 0.08915 70 - 130 o-Xylene mg/Kg 89

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1.4-Difluorobenzene (Surr)	98	70 - 130

Lab Sample ID: LCSD 880-55615/2-A

Matrix: Solid

Analysis Batch: 55657

Client Sample ID: Lab	Control Sample Dup
	Dren Times Tetal/NIA

Prep Type: Total/NA

Prep Batch: 55615

	Spike	LCSD LCSD				70KeC		KFD	
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.08161	mg/Kg		82	70 - 130	3	35	

LCCD LCCD

Chiles

Eurofins Carlsbad

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QC Sample Results

Job ID: 890-4801-1 Client: Ensolum Project/Site: James Ranch Unit 2 702H SDG: 03C1558049

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-55615/2-A

Matrix: Solid

Analysis Batch: 55657

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 55615

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit D Toluene 0.100 0.09528 95 70 - 130 35 mg/Kg 6 Ethylbenzene 0.100 0.08855 mg/Kg 89 70 - 130 0.200 0.1850 70 - 130 m-Xylene & p-Xylene mg/Kg 93 35 o-Xylene 0.100 0.09202 mg/Kg 92 70 - 130 3

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: 890-4801-1 MS

Matrix: Solid

Analysis Batch: 55657

Client Sample ID: FS01A Prep Type: Total/NA

Prep Batch: 55615

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00198	U	0.0996	0.08938		mg/Kg	_	89	70 - 130	
Toluene	<0.00198	U	0.0996	0.09497		mg/Kg		95	70 - 130	
Ethylbenzene	<0.00198	U	0.0996	0.07746		mg/Kg		78	70 - 130	
m-Xylene & p-Xylene	<0.00396	U	0.199	0.1549		mg/Kg		78	70 - 130	
o-Xylene	<0.00198	U	0.0996	0.07600		mg/Kg		76	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	108	70 - 130
1,4-Difluorobenzene (Surr)	90	70 - 130

Lab Sample ID: 890-4801-1 MSD

Matrix: Solid

Analysis Batch: 55657

Client Sample ID: FS01A

Prep Type: Total/NA

Prep Batch: 55615

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00198	U	0.0992	0.08729		mg/Kg		88	70 - 130	2	35
Toluene	<0.00198	U	0.0992	0.09099		mg/Kg		92	70 - 130	4	35
Ethylbenzene	<0.00198	U	0.0992	0.07383		mg/Kg		74	70 - 130	5	35
m-Xylene & p-Xylene	<0.00396	U	0.198	0.1477		mg/Kg		74	70 - 130	5	35
o-Xylene	<0.00198	U	0.0992	0.07341		mg/Kg		74	70 - 130	3	35

MSD MSD

Surrogate	%Recovery	Qualifier	er Limits			
4-Bromofluorobenzene (Surr)	107		70 - 130			
1,4-Difluorobenzene (Surr)	91		70 - 130			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-55253/1-A

Matrix: Solid

Analysis Batch: 55372

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 55253

мв мв Result Qualifier RL Unit Prepared <50.0 U 50.0 mg/Kg 06/12/23 10:46 06/13/23 09:46 Gasoline Range Organics

(GRO)-C6-C10

o-Terphenyl

o-Terphenyl

06/12/23 10:46

06/13/23 09:46

QC Sample Results

Client: Ensolum Job ID: 890-4801-1
Project/Site: James Ranch Unit 2 702H SDG: 03C1558049

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

146 S1+

119

Lab Sample ID: MB 880-55253/1-A

Matrix: Solid

Analysis Batch: 55372

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55253

		MB	МВ						
Aı	nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	esel Range Organics (Over 10-C28)	<50.0	U	50.0	mg/Kg		06/12/23 10:46	06/13/23 09:46	1
0	I Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/12/23 10:46	06/13/23 09:46	1
		MB	МВ						
Sı	urrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-	Chlorooctane	114		70 - 130			06/12/23 10:46	06/13/23 09:46	1

70 - 130

Lab Sample ID: LCS 880-55253/2-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 55372 Prep Batch: 55253 LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 900.1 90 70 - 130 mg/Kg (GRO)-C6-C10 1000 1169 Diesel Range Organics (Over mg/Kg 117 70 - 130C10-C28) LCS LCS Qualifier Limits Surrogate %Recovery 1-Chlorooctane 70 - 130 100

Lab Sample ID: LCSD 880-55253/3-A

Client Sample ID: Lab Control Sample Dup
Matrix: Solid

Analysis Batch: 55372

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55253

70 - 130

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier %Rec Limits RPD Limit Unit D Gasoline Range Organics 1000 950.4 mg/Kg 95 70 - 130 20 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1090 mg/Kg 109 70 - 130 7 20 C10-C28)

 Surrogate
 %Recovery
 Qualifier
 Limits

 1-Chlorooctane
 97
 70 - 130

 o-Terphenyl
 113
 70 - 130

Lab Sample ID: 890-4807-A-1-D MS

Client Sample ID: Matrix Spike

Matrix: Solid Prep Type: Total/NA
Analysis Batch: 55372 Prep Batch: 55253

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	<49.9	U	1000	1227		mg/Kg		120	70 - 130	
(GRO)-C6-C10										
Diesel Range Organics (Over	<49.9	U	1000	874.4		mg/Kg		83	70 - 130	
C10-C28)										

10	C10-C28)			
		MS	MS	
5	Surrogate	%Recovery	Qualifier	Limits
1	1-Chlorooctane	108		70 _ 130
6	o-Terphenyl	119		70 - 130

QC Sample Results

Client: Ensolum Job ID: 890-4801-1 Project/Site: James Ranch Unit 2 702H SDG: 03C1558049

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Comple Comple

Lab Sample ID: 890-4807-A-1-E MSD Client Sample ID: Matrix Spike Duplicate

Med Med

Matrix: Solid

Analysis Batch: 55372

			Prep 1	Type: To	tal/NA
			Prep	Batch:	55253
			%Rec		RPD
nit	D	%Rec	Limits	RPD	Limit

	Sample	Sample	Spike	MSD	MISD				%Rec		KPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U	998	1205		mg/Kg		118	70 - 130	2	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	998	867.7		mg/Kg		83	70 - 130	1	20
C10-C28)											

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	118		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-55340/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 55377

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			06/13/23 16:27	1

Lab Sample ID: LCS 880-55340/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble**

Analysis Batch: 55377

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	260.0		mg/Kg		104	90 - 110	

Lab Sample ID: LCSD 880-55340/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 55377

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	259.9		mg/Kg		104	90 - 110	0	20	

Lab Sample ID: 880-29371-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 55377

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	36.1		248	282.8		ma/Ka		100	90 110	

Lab Sample ID: 880-29371-A-1-C MSD Client Sample ID: Matrix Spike Duplicate **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 55377

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	36.1		248	283.1		mg/Kg		100	90 - 110	0	20

Client: Ensolum

Project/Site: James Ranch Unit 2 702H

Job ID: 890-4801-1

SDG: 03C1558049

GC VOA

Prep Batch: 55607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-55607/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 55615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4801-1	FS01A	Total/NA	Solid	5035	
890-4801-2	FS03A	Total/NA	Solid	5035	
MB 880-55615/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55615/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55615/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4801-1 MS	FS01A	Total/NA	Solid	5035	
890-4801-1 MSD	FS01A	Total/NA	Solid	5035	

Analysis Batch: 55657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4801-1	FS01A	Total/NA	Solid	8021B	55615
890-4801-2	FS03A	Total/NA	Solid	8021B	55615
MB 880-55607/5-A	Method Blank	Total/NA	Solid	8021B	55607
MB 880-55615/5-A	Method Blank	Total/NA	Solid	8021B	55615
LCS 880-55615/1-A	Lab Control Sample	Total/NA	Solid	8021B	55615
LCSD 880-55615/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55615
890-4801-1 MS	FS01A	Total/NA	Solid	8021B	55615
890-4801-1 MSD	FS01A	Total/NA	Solid	8021B	55615

Analysis Batch: 55848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4801-1	FS01A	Total/NA	Solid	Total BTEX	
890-4801-2	FS03A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 55253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4801-1	FS01A	Total/NA	Solid	8015NM Prep	
890-4801-2	FS03A	Total/NA	Solid	8015NM Prep	
MB 880-55253/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55253/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55253/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4807-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4807-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 55372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4801-1	FS01A	Total/NA	Solid	8015B NM	55253
890-4801-2	FS03A	Total/NA	Solid	8015B NM	55253
MB 880-55253/1-A	Method Blank	Total/NA	Solid	8015B NM	55253
LCS 880-55253/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55253
LCSD 880-55253/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55253
890-4807-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	55253
890-4807-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	55253

Client: Ensolum

Project/Site: James Ranch Unit 2 702H

Job ID: 890-4801-1 SDG: 03C1558049

GC Semi VOA

Analysis Batch: 55482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4801-1	FS01A	Total/NA	Solid	8015 NM	
890-4801-2	FS03A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 55340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4801-1	FS01A	Soluble	Solid	DI Leach	
890-4801-2	FS03A	Soluble	Solid	DI Leach	
MB 880-55340/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-55340/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-55340/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-29371-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-29371-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 55377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4801-1	FS01A	Soluble	Solid	300.0	55340
890-4801-2	FS03A	Soluble	Solid	300.0	55340
MB 880-55340/1-A	Method Blank	Soluble	Solid	300.0	55340
LCS 880-55340/2-A	Lab Control Sample	Soluble	Solid	300.0	55340
LCSD 880-55340/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	55340
880-29371-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	55340
880-29371-A-1-C MSD	Matrix Snike Dunlicate	Soluble	Solid	300.0	55340

Eurofins Carlsbad

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Lab Chronicle

Client: Ensolum Job ID: 890-4801-1 Project/Site: James Ranch Unit 2 702H SDG: 03C1558049

Client Sample ID: FS01A

Date Collected: 06/08/23 13:30 Date Received: 06/09/23 08:30

Lab Sample ID: 890-4801-1

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	55615	06/15/23 13:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55657	06/17/23 10:17	SM	EET MID
Total/NA	Analysis	Total BTEX		1			55848	06/19/23 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			55482	06/14/23 09:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	55253	06/12/23 10:46	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55372	06/13/23 17:55	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	55340	06/12/23 14:36	KS	EET MID
Soluble	Analysis	300.0		5			55377	06/13/23 17:26	CH	EET MID

Client Sample ID: FS03A

Date Collected: 06/08/23 13:20

Date Received: 06/09/23 08:30

Lab Sample	ID: 890-4801-2
------------	----------------

Matrix: Solid

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 Total/NA Prep 4.96 g 5 mL 55615 06/15/23 13:41 EL EET MID 8021B Total/NA 5 mL 55657 06/17/23 10:37 **EET MID** Analysis 1 5 mL SM Total/NA Total BTEX 55848 06/19/23 15:33 SM Analysis 1 **EET MID** Total/NA Analysis 8015 NM 55482 06/14/23 09:50 ΑJ **EET MID** Total/NA 55253 06/12/23 10:46 Prep 8015NM Prep 10.03 g 10 mL AJ EET MID Total/NA Analysis 8015B NM 1 uL 1 uL 55372 06/13/23 18:18 ΑJ **EET MID** Soluble 5.04 g KS **EET MID** Leach DI Leach 50 mL 55340 06/12/23 14:36 Soluble Analysis 300.0 55377 06/13/23 17:46 СН **EET MID**

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: James Ranch Unit 2 702H
SDG: 03C1558049

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	NI	ELAP	T104704400-22-25	06-30-23	
The fellowing analytes			and the state of the contraction		
the agency does not of	. ,	ut the laboratory is not certific	ed by the governing authority. This list ma	ay include analytes for	
0 ,	. ,	ut the laboratory is not certilion Matrix	ed by the governing authority. This list ma	ay include analytes for	
the agency does not of	fer certification.	•	, , ,	ay include analytes for	

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Method Summary

Client: Ensolum Project/Site: James Ranch Unit 2 702H Job ID: 890-4801-1 SDG: 03C1558049

C 10000 1 3	

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: James Ranch Unit 2 702H

Job ID: 890-4801-1

SDG: 03C1558049

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Dani
890-4801-1	FS01A	Solid	06/08/23 13:30	06/09/23 08:30	Depth 1.5
890-4801-2	FS03A	Solid	06/08/23 13:20	06/09/23 08:30	2

121314

eurofins :

City, State ZIP:

Carlsbad, NM 88220 3122 National Parks Hwy

City, State ZIP:

Carlsbad, NM 88220

Reporting: Level II 🗌 Level III 🗎 PST/UST 📗 TRRP 📗

Level IV

Deliverables: EDD

ADaPT 🗆

State of Project:

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

Work Order Comments

www.xenco.com

Page

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3104 E. Green St

Company Name: Bill to: (if different)

XTO Energy Garrett Green

Company Name: Project Manager

Ensolum

Tacoma Morrissey

Xenco **Environment Testing**

Chain of Custody

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 Houston, TX (281) 240-4200. Datlas, TX (214) 902-0300

Work Order No:

Phone: 30	303-887-2946	Email: Garrett Green@ExxonMobil.com	@ExxonN	obil.com	Delive	Deliverables, EDD L.J. ADari L.	Cale
Project Name:	James Ranch Unit 2 702H	Turn Around			ANALYSIS REQUEST	Pr	Preservative Codes
Project Number:	03C1558049	Routine Rush	Pres. Code			None: NO	IO DI Water: H ₂ O
Project Location:		Due Date:				Cool: Cool	ool MeOH: Me
Sampler's Name:	Connor Whitman	TAT starts the day received by				HCL: HC	C HNO3: HN
PO#		the lab, if received by 4:30pm	rs			H ₂ SO ₄ : H ₂	H ₂ NaOH: Na
SAMPLE RECEIPT	Temp Blank: Wes No	Wet Ice: Yes No	nete			H ₃ PO ₄ : HP	+
Samples Received Intact:	t Yes No Thermometer ID	FOR MIM! OIL				NaHSO	NaHSO ₄ : NABIS
Cooler Custody Seals:	Yes No N/A C				890-4801 Chain of C.:.		Na ₂ S ₂ O ₃ : NaSO ₃
Sample Custody Seals:	Yes No N/A Temperature Reading:	Reading: 5 - 2	(EF			After an Indiana, and the second of the seco	Zn Acetate+NaOH: Zn
Total Containers:		mperature: 5-0	IDES	15)		NaOH+	NaOH+Ascorbic Acid: SAPC
Sample Identification	cation Matrix Sampled	Time Depth Grab/	CO # Of CHLOR	TPH (80	BTEX (S	Sample Comments
FSOIA	5 6/8/23	130 15 C	1/			Incident ID:	it ID:
FSO3A	5 6/8/23	1:20 2 6	-	/			nAPP2211654411
/-							
/						Cost Center	enter:
	1						1632571001
						AFE:	
			/				
		Cu	1	1			
Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be		B Cd Ca Cr Co Cu Fe Pb Mg Mn	Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn	Sn U V Zn
Circle Method(s) and	Circle Method(s) and Metal(s) to be analyzed	TCLP / SPLP 6010: 8R	CRA Sb	As Ba B	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se	Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 747	7470 / 7471
otice: Signature of this docu	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors	tutes a valid purchase order from c	lient company	to Eurofins	nco, its affiliates and subcontractors. It assigns s	It assigns standard terms and conditions	
f Eurofins Xenco. A minimus	ill be liable only for the cost of samples and im charge of \$85.00 will be applied to each p	shall not assume any responsibility roject and a charge of \$5 for each:	ample submit	ed to Eurofi	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 it such losses are the control in the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client is such losses are the control in such as the cost of samples and shall be enforced unless previously negotiated of samples. A minimum 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 negotiated	orced unless previously negotiated.	
Relinquished by: (Signature))	Received by: (Signature)	Dat	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Colon	Dary	8	6.9	0.9.33 830	300		

Login Sample Receipt Checklist

 Client: Ensolum
 Job Number: 890-4801-1

 SDG Number: 03C1558049

Login Number: 4801 List Source: Eurofins Carlsbad

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-4801-1 SDG Number: 03C1558049

List Source: Eurofins Midland

Login Number: 4801 List Number: 2

List Creation: 06/12/23 08:53 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	

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey Ensolum 601 N. Marienfeld St. Suite 400 Midland, Texas 79701 Generated 6/19/2023 3:10:37 PM

JOB DESCRIPTION

James Ranch Unit 2 702H SDG NUMBER 03C158049

JOB NUMBER

890-4802-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated 6/19/2023 3:10:37 PM

Authorized for release by Jessica Kramer, Project Manager Jessica.Kramer@et.eurofinsus.com (432)704-5440

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Client: Ensolum Laboratory Job ID: 890-4802-1 Project/Site: James Ranch Unit 2 702H

SDG: 03C158049

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Definitions/Glossary

Job ID: 890-4802-1 Client: Ensolum Project/Site: James Ranch Unit 2 702H

SDG: 03C158049

Qualifiers

GC VOA

Qualifier **Qualifier Description**

Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier **Qualifier Description**

S1+ Surrogate recovery exceeds control limits, high biased. 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) MPN Most Probable Number 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: 890-4802-1 Project/Site: James Ranch Unit 2 702H SDG: 03C158049

Job ID: 890-4802-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-4802-1

Receipt

The samples were received on 6/9/2023 8:30 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 5.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SW01 (890-4802-1) and SW02 (890-4802-2).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (CCV 880-55657/64). Evidence of matrix interferences is not obvious.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-55657 recovered outside the control limit for Benzene, m-Xylene & p-Xylene and o-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-55657/64).

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

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum Job ID: 890-4802-1
Project/Site: James Ranch Unit 2 702H SDG: 03C158049

Client Sample ID: SW01

Date Collected: 06/08/23 13:40

Lab Sample ID: 890-4802-1

Matrix: Solid

Date Collected: 06/08/23 13:40
Date Received: 06/09/23 08:30

Sample Depth: 0 - 1.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/15/23 13:41	06/17/23 10:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/15/23 13:41	06/17/23 10:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/15/23 13:41	06/17/23 10:58	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		06/15/23 13:41	06/17/23 10:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/15/23 13:41	06/17/23 10:58	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		06/15/23 13:41	06/17/23 10:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			06/15/23 13:41	06/17/23 10:58	1
1,4-Difluorobenzene (Surr)	102		70 - 130			06/15/23 13:41	06/17/23 10:58	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			06/19/23 15:33	1
Analyte	Result	Qualifier	RL	Unit	D	Danamanad		
Total TPH						Prepared	Analyzed 06/14/23 09:50	Dil Fac
Total TPH	211	<u> </u>	50.0	mg/Kg		Prepared	Analyzed 06/14/23 09:50	
Method: SW846 8015B NM - Dies	211 sel Range Orga	nics (DRO)	50.0 (GC)	mg/Kg			06/14/23 09:50	1
Method: SW846 8015B NM - Dies Analyte	211 sel Range Orga Result	nics (DRO) Qualifier	50.0 (GC)	mg/Kg	<u>D</u>	Prepared	06/14/23 09:50 Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics	211 sel Range Orga	nics (DRO) Qualifier	50.0 (GC)	mg/Kg			06/14/23 09:50	
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	211 sel Range Orga Result	nics (DRO) Qualifier	50.0 (GC)	mg/Kg		Prepared	06/14/23 09:50 Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte	sel Range Orga Result <50.0	nics (DRO) Qualifier U	50.0 (GC) RL 50.0	mg/Kg Unit mg/Kg		Prepared 06/12/23 10:46	06/14/23 09:50 Analyzed 06/13/23 18:40	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	sel Range Orga Result <50.0 211	nics (DRO) Qualifier U	50.0 (GC) RL 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 06/12/23 10:46 06/12/23 10:46	06/14/23 09:50 Analyzed 06/13/23 18:40 06/13/23 18:40	1 Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	211 sel Range Orga Result <50.0 211 <50.0	nics (DRO) Qualifier U	50.0 (GC) RL 50.0 50.0 50.0	mg/Kg Unit mg/Kg mg/Kg		Prepared 06/12/23 10:46 06/12/23 10:46 06/12/23 10:46	06/14/23 09:50 Analyzed 06/13/23 18:40 06/13/23 18:40	Dil Face 1 1 1 Dil Face
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	211 sel Range Orga Result <50.0 211 <50.0 %Recovery 124	nics (DRO) Qualifier U	50.0 (GC) RL 50.0 50.0 50.0 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 06/12/23 10:46 06/12/23 10:46 06/12/23 10:46 Prepared	Analyzed 06/13/23 18:40 06/13/23 18:40 06/13/23 18:40 Analyzed	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	211 sel Range Orga Result <50.0 211 <50.0 %Recovery 124 145	U Qualifier U Qualifier S1+	50.0 (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 06/12/23 10:46 06/12/23 10:46 06/12/23 10:46 Prepared 06/12/23 10:46	06/14/23 09:50 Analyzed 06/13/23 18:40 06/13/23 18:40 Analyzed 06/13/23 18:40	Dil Fac
Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36) Surrogate 1-Chlorooctane o-Terphenyl	211 Sel Range Orga Result	U Qualifier U Qualifier S1+	50.0 (GC) RL 50.0 50.0 50.0 Limits 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 06/12/23 10:46 06/12/23 10:46 06/12/23 10:46 Prepared 06/12/23 10:46	06/14/23 09:50 Analyzed 06/13/23 18:40 06/13/23 18:40 Analyzed 06/13/23 18:40	1 Dil Fac

Client Sample ID: SW02 Lab Sample ID: 890-4802-2

Date Collected: 06/08/23 14:00 Date Received: 06/09/23 08:30

Sample Depth: 0 - 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		06/15/23 13:41	06/17/23 11:19	1
Toluene	<0.00202	U	0.00202	mg/Kg		06/15/23 13:41	06/17/23 11:19	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		06/15/23 13:41	06/17/23 11:19	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		06/15/23 13:41	06/17/23 11:19	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		06/15/23 13:41	06/17/23 11:19	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		06/15/23 13:41	06/17/23 11:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			06/15/23 13:41	06/17/23 11:19	1

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Matrix: Solid

Client Sample Results

Client: Ensolum Job ID: 890-4802-1 Project/Site: James Ranch Unit 2 702H SDG: 03C158049

Client Sample ID: SW02 Lab Sample ID: 890-4802-2

Date Collected: 06/08/23 14:00 Matrix: Solid Date Received: 06/09/23 08:30

Sample Depth: 0 - 2

Chloride

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	105		70 - 130			06/15/23 13:41	06/17/23 11:19	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			06/19/23 15:33	1
Method: SW846 8015 NM - Die	sel Range Organ	ics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
			40.0				06/14/23 09:50	1
	342 iesel Range Orga	nics (DRO)	49.9	mg/Kg			00/14/23 09.30	'
Total TPH	342		49.9	mg/Kg			00/14/23 09.50	1
Total TPH Method: SW846 8015B NM - Di Analyte	iesel Range Orga Result	Qualifier	(GC)	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8015B NM - Di Analyte Gasoline Range Organics	iesel Range Orga	Qualifier	(GC)		<u>D</u>	Prepared 06/12/23 10:46		Dil Fac
Method: SW846 8015B NM - Di Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	iesel Range Orga Result	Qualifier	(GC)	Unit	<u>D</u>		Analyzed	Dil Fac
Method: SW846 8015B NM - Di	Result <49.9	Qualifier	(GC) RL 49.9	<mark>Unit</mark> mg/Kg	<u>D</u>	06/12/23 10:46	Analyzed 06/13/23 19:02	1
Method: SW846 8015B NM - Di Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over	Result <49.9	Qualifier U	(GC) RL 49.9	Unit mg/Kg mg/Kg	<u> </u>	06/12/23 10:46 06/12/23 10:46	Analyzed 06/13/23 19:02 06/13/23 19:02	1
Method: SW846 8015B NM - Di Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <49.9 267 75.4	Qualifier U	(GC) RL 49.9 49.9 49.9	Unit mg/Kg mg/Kg	<u>D</u>	06/12/23 10:46 06/12/23 10:46 06/12/23 10:46	Analyzed 06/13/23 19:02 06/13/23 19:02 06/13/23 19:02	1 1

4.95

mg/Kg

778

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06/13/23 17:57

Surrogate Summary

Client: Ensolum

Project/Site: James Ranch Unit 2 702H

SDG: 03C158049

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)	
390-4801-A-1-C MS	Matrix Spike	108	90	
890-4801-A-1-D MSD	Matrix Spike Duplicate	107	91	
890-4802-1	SW01	111	102	
890-4802-2	SW02	110	105	
_CS 880-55615/1-A	Lab Control Sample	113	98	
LCSD 880-55615/2-A	Lab Control Sample Dup	114	93	
MB 880-55607/5-A	Method Blank	96	98	
MB 880-55615/5-A	Method Blank	96	95	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid Prep Type: Total/NA

_			
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4802-1	SW01	124	145 S1+
890-4802-2	SW02	105	125
890-4807-A-1-D MS	Matrix Spike	108	119
890-4807-A-1-E MSD	Matrix Spike Duplicate	108	118
LCS 880-55253/2-A	Lab Control Sample	100	119
LCSD 880-55253/3-A	Lab Control Sample Dup	97	113
MB 880-55253/1-A	Method Blank	114	146 S1+

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-4802-1 SDG: 03C158049 Project/Site: James Ranch Unit 2 702H

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-55607/5-A

Analysis Batch: 55657

Matrix: Solid

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 55607

Prep Batch: 55615

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/15/23 12:47	06/16/23 23:07	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/15/23 12:47	06/16/23 23:07	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/15/23 12:47	06/16/23 23:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		06/15/23 12:47	06/16/23 23:07	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/15/23 12:47	06/16/23 23:07	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/15/23 12:47	06/16/23 23:07	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	0	06/15/23 12:47	06/16/23 23:07	1
1,4-Difluorobenzene (Surr)	98		70 - 130	0	06/15/23 12:47	06/16/23 23:07	1

Lab Sample ID: MB 880-55615/5-A **Client Sample ID: Method Blank** Prep Type: Total/NA

Matrix: Solid

Analysis Batch: 55657

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/15/23 13:41	06/17/23 09:54	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/15/23 13:41	06/17/23 09:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/15/23 13:41	06/17/23 09:54	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		06/15/23 13:41	06/17/23 09:54	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/15/23 13:41	06/17/23 09:54	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		06/15/23 13:41	06/17/23 09:54	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130	06/15/23 13:4:	06/17/23 09:54	1
1,4-Difluorobenzene (Surr)	95		70 - 130	06/15/23 13:4:	06/17/23 09:54	1

Lab Sample ID: LCS 880-55615/1-A

Matrix: Solid

Analysis Batch: 55657

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 55615

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.07916		mg/Kg	_	79	70 - 130	
Toluene	0.100	0.09006		mg/Kg		90	70 - 130	
Ethylbenzene	0.100	0.08464		mg/Kg		85	70 - 130	
m-Xylene & p-Xylene	0.200	0.1782		mg/Kg		89	70 - 130	
o-Xylene	0.100	0.08915		mg/Kg		89	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifi	er Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1,4-Difluorobenzene (Surr)	98	70 - 130

Lab Sample ID: LCSD 880-55615/2-A

Matrix: Solid

Analysis Batch: 55657

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Prep Batch: 55615

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08161		mg/Kg		82	70 - 130	3	35

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Client: Ensolum Job ID: 890-4802-1 Project/Site: James Ranch Unit 2 702H SDG: 03C158049

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-55615/2-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 55657 Prep Batch: 55615 Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit D Toluene 0.100 0.09528 95 70 - 130 35 mg/Kg 6 Ethylbenzene 0.100 0.08855 mg/Kg 89 70 - 130 35 0.200 m-Xylene & p-Xylene 0.1850 93 70 - 130 35 mg/Kg

0.09202

mg/Kg

92

70 - 130

3

0.100

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: 890-4801-A-1-C MS Client Sample ID: Matrix Spike

Analysis Batch: 55657

o-Xylene

Matrix: Solid Prep Type: Total/NA Prep Batch: 55615

Sample	Sample	Spike	MS	MS				%Rec
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
<0.00198	U	0.0996	0.08938		mg/Kg		89	70 - 130
<0.00198	U	0.0996	0.09497		mg/Kg		95	70 - 130
<0.00198	U	0.0996	0.07746		mg/Kg		78	70 - 130
<0.00396	U	0.199	0.1549		mg/Kg		78	70 - 130
<0.00198	U	0.0996	0.07600		mg/Kg		76	70 - 130
	Result <0.00198 <0.00198 <0.00198 <0.00396	Sample Result Qualifier	Result Qualifier Added	Result Qualifier Added Result <0.00198	Result Qualifier Added Result Qualifier <0.00198	Result Qualifier Added Result Qualifier Unit <0.00198	Result Qualifier Added Result Qualifier Unit D <0.00198	Result Qualifier Added Result Qualifier Unit D %Rec <0.00198

MS MS Qualifier %Recovery Limits Surrogate 70 - 130 4-Bromofluorobenzene (Surr) 108 70 - 130 1,4-Difluorobenzene (Surr) 90

Lab Sample ID: 890-4801-A-1-D MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Prep Type: Total/NA **Analysis Batch: 55657** Prep Batch: 55615 MSD MSD RPD Sample Sample Spike %Rec

Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00198	U	0.0992	0.08729		mg/Kg		88	70 - 130	2	35
Toluene	<0.00198	U	0.0992	0.09099		mg/Kg		92	70 - 130	4	35
Ethylbenzene	<0.00198	U	0.0992	0.07383		mg/Kg		74	70 - 130	5	35
m-Xylene & p-Xylene	<0.00396	U	0.198	0.1477		mg/Kg		74	70 - 130	5	35
o-Xylene	<0.00198	U	0.0992	0.07341		mg/Kg		74	70 - 130	3	35

MSD MSD %Recovery Qualifier Limits Surrogate 4-Bromofluorobenzene (Surr) 107 70 - 130 1,4-Difluorobenzene (Surr) 70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-55253/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 55372 MB MB

Analyte Result Qualifier RL Unit Prepared Gasoline Range Organics <50.0 U 50.0 mg/Kg 06/12/23 10:46 06/13/23 09:46

(GRO)-C6-C10

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Prep Batch: 55253

35

Client: Ensolum Job ID: 890-4802-1 Project/Site: James Ranch Unit 2 702H SDG: 03C158049

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-55253/1-A **Matrix: Solid**

Analysis Batch: 55372

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 55253

Analyte Result Qualifier RL Unit Prepared Analyzed Dil Fac <50.0 U 50.0 06/12/23 10:46 06/13/23 09:46 Diesel Range Organics (Over mg/Kg C10-C28) OII Range Organics (Over C28-C36) 50.0 06/12/23 10:46 06/13/23 09:46 <50.0 U mg/Kg

MB MB

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	06/12/23 10:46	06/13/23 09:46	1
o-Terphenyl	146	S1+	70 - 130	06/12/23 10:46	06/13/23 09:46	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 55253

LCS LCS Spike Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 900.1 90 70 - 130 mg/Kg (GRO)-C6-C10 1000 1169 Diesel Range Organics (Over mg/Kg 117 70 - 130C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: LCSD 880-55253/3-A

Lab Sample ID: LCS 880-55253/2-A

Matrix: Solid

Analysis Batch: 55372

Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 55372 Prep Batch: 55253

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	950.4		mg/Kg		95	70 - 130	5	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	1090		mg/Kg		109	70 - 130	7	20	
C10-C28)										

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 97 70 - 130 o-Terphenyl 113 70 - 130

Lab Sample ID: 890-4807-A-1-D MS

Matrix: Solid

Analysis Batch: 55372

Client Sample ID: Matrix Spike

Prep Type: Total/NA Prep Batch: 55253

Spike MS MS %Rec Sample Sample Result Qualifier Added Result Qualifier Unit %Rec Limits Analyte <49.9 U 1000 70 - 130 Gasoline Range Organics 1227 120 mg/Kg (GRO)-C6-C10 1000 874.4 Diesel Range Organics (Over <49.9 U mg/Kg 83 70 - 130

C10-C28)

	IVIS	IVIS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	119		70 - 130

Client: Ensolum Job ID: 890-4802-1 Project/Site: James Ranch Unit 2 702H SDG: 03C158049

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-4807-A-1-E MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 55372

Prep Type: Total/NA Prep Batch: 55253

Sample Sample Spike MSD MSD RPD Result Qualifier RPD Limit Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <49.9 U 998 1205 mg/Kg 118 70 - 130 2 20 (GRO)-C6-C10 998 Diesel Range Organics (Over <49.9 U 867.7 mg/Kg 83 70 - 130

C10-C28)

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	118		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-55340/1-A Client Sample ID: Method Blank **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 55377

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			06/13/23 16:27	1

Lab Sample ID: LCS 880-55340/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 55377

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 250	260.0		mg/Kg		104	90 - 110	

Lab Sample ID: LCSD 880-55340/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 55377

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	259.9		mg/Kg		104	90 - 110	0	20	

Lab Sample ID: 880-29371-A-1-B MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 55377

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	36.1		248	282.8		mg/Kg		100	90 - 110	

Lab Sample ID: 880-29371-A-1-C MSD

Matrix: Solid

Analysis Batch: 55377

Allalysis Datell. 33311											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	36.1		248	283.1		mg/Kg		100	90 - 110		20

Eurofins Carlsbad

Prep Type: Soluble

Client Sample ID: Matrix Spike Duplicate

QC Association Summary

Client: Ensolum

Project/Site: James Ranch Unit 2 702H

Job ID: 890-4802-1

SDG: 03C158049

GC VOA

Prep Batch: 55607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-55607/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 55615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4802-1	SW01	Total/NA	Solid	5035	
890-4802-2	SW02	Total/NA	Solid	5035	
MB 880-55615/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55615/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55615/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4801-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-4801-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 55657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4802-1	SW01	Total/NA	Solid	8021B	55615
890-4802-2	SW02	Total/NA	Solid	8021B	55615
MB 880-55607/5-A	Method Blank	Total/NA	Solid	8021B	55607
MB 880-55615/5-A	Method Blank	Total/NA	Solid	8021B	55615
LCS 880-55615/1-A	Lab Control Sample	Total/NA	Solid	8021B	55615
LCSD 880-55615/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55615
890-4801-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	55615
890-4801-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	55615

Analysis Batch: 55849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4802-1	SW01	Total/NA	Solid	Total BTEX	
890-4802-2	SW02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 55253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4802-1	SW01	Total/NA	Solid	8015NM Prep	
890-4802-2	SW02	Total/NA	Solid	8015NM Prep	
MB 880-55253/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55253/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55253/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4807-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4807-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 55372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4802-1	SW01	Total/NA	Solid	8015B NM	55253
890-4802-2	SW02	Total/NA	Solid	8015B NM	55253
MB 880-55253/1-A	Method Blank	Total/NA	Solid	8015B NM	55253
LCS 880-55253/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55253
LCSD 880-55253/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55253
890-4807-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	55253
890-4807-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	55253

QC Association Summary

Client: Ensolum Project/Site: James Ranch Unit 2 702H Job ID: 890-4802-1 SDG: 03C158049

GC Semi VOA

Analysis Batch: 55483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4802-1	SW01	Total/NA	Solid	8015 NM	
890-4802-2	SW02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 55340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4802-1	SW01	Soluble	Solid	DI Leach	
890-4802-2	SW02	Soluble	Solid	DI Leach	
MB 880-55340/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-55340/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-55340/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-29371-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-29371-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 55377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4802-1	SW01	Soluble	Solid	300.0	55340
890-4802-2	SW02	Soluble	Solid	300.0	55340
MB 880-55340/1-A	Method Blank	Soluble	Solid	300.0	55340
LCS 880-55340/2-A	Lab Control Sample	Soluble	Solid	300.0	55340
LCSD 880-55340/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	55340
880-29371-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	55340
880-29371-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	55340

Date Received: 06/09/23 08:30

Lab Chronicle

Client: Ensolum Job ID: 890-4802-1 Project/Site: James Ranch Unit 2 702H SDG: 03C158049

Client Sample ID: SW01 Lab Sample ID: 890-4802-1 Date Collected: 06/08/23 13:40

Matrix: Solid

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 55615 Total/NA Prep 4.99 g 5 mL 06/15/23 13:41 EL EET MID 8021B Total/NA Analysis 1 5 mL 5 mL 55657 06/17/23 10:58 SM **EET MID** Total/NA Analysis Total BTEX 55849 06/19/23 15:33 SM EET MID Total/NA 8015 NM 55483 **EET MID** Analysis 1 06/14/23 09:50 AJ Total/NA 8015NM Prep 55253 06/12/23 10:46 EET MID Prep 10.00 g 10 mL AJ Total/NA Analysis 8015B NM 1 uL 1 uL 55372 06/13/23 18:40 ΑJ **EET MID** Soluble DI Leach 4.99 g 50 mL 55340 06/12/23 14:36 KS Leach **EET MID** Soluble Analysis 300.0 55377 06/13/23 17:52 СН **EET MID**

Client Sample ID: SW02 Lab Sample ID: 890-4802-2

Date Collected: 06/08/23 14:00 **Matrix: Solid**

Date Received: 06/09/23 08:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	55615	06/15/23 13:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55657	06/17/23 11:19	SM	EET MID
Total/NA	Analysis	Total BTEX		1			55849	06/19/23 15:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			55483	06/14/23 09:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	55253	06/12/23 10:46	AJ	EET MIC
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55372	06/13/23 19:02	AJ	EET MIC
Soluble	Leach	DI Leach			5.05 g	50 mL	55340	06/12/23 14:36	KS	EET MIC
Soluble	Analysis	300.0		1			55377	06/13/23 17:57	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
Project/Site: James Ranch Unit 2 702H
SDG: 03C158049

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	NE	ELAP	T104704400-22-25	06-30-23
The following analytes	are included in this report, bu	it the laboratory is not certific	ed by the governing authority. This list ma	av include analytes for w
the agency does not of	fer certification.	,,	ou by the generaling during, the notine	ay molado analytoo for w
the agency does not of Analysis Method	fer certification. Prep Method	Matrix	Analyte	ay molade analytee for the
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Method Summary

Client: Ensolum

Project/Site: James Ranch Unit 2 702H

SDG: 03C158049

SDG: 03C158049

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: James Ranch Unit 2 702H

Job ID: 890-4802-1

SDG: 03C158049

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4802-1	SW01	Solid	06/08/23 13:40	06/09/23 08:30	0 - 1.5
890-4802-2	SW02	Solid	06/08/23 14:00	06/09/23 08:30	0 - 2

eurofins : Xenco **Environment Testing**

City, State ZIP:

Carlsbad, NM 88220 3122 National Parks Hwy

City, State ZIP:

Carlsbad, NM 88220 3104 E. Green St. XTO Energy Garrett Green

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

Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐

Work Order Comments

www.xenco.com

State of Project:

Address:

Company Name: Bill to: (if different)

Company Name: \ddress:

Ensolum

Tacoma Morrissey

Chain of Custody

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 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

										ADal	ADapt Other
ie: 303-8i	303-887-2946		Email: C	Email: Garrett.Green@ExxonMobil.com	@Exx	onMo	bil.co	3			
ct Name: Ja	James Ranch Unit 2 702H	1 2 702H	Turn /	Turn Around					ANALYSIS REQUEST		Preservative Codes
ä	03C1558049	19	✓ Routine	Rush	Pres. Code						None: NO DI Water: H ₂ O
ct Location:			Due Date:								Cool: Cool MeOH: Me
oler's Name:	Connor Whitman	man	TAT starts the	TAT starts the day received by							
)	the lab, if rece	the lab, if received by 4:30pm	rs						H ₂ S0 ₄ : H ₂ NaOH: Na
MPLE RECEIPT	Temp Blank:	Yes No	Wet Ice: (Yes No	nete	.0)					H ₃ PO ₄ : HP
oles Received Intact:	(Yes No	Thermometer ID:	D.	NWW OF	ıran	3000					NaHSO ₄ : NABIS
er Custody Seals:	Yes No NA	Correction Factor	otor:	10.0	Pa	A: 3					Na ₂ S ₂ O ₃ : NaSO ₃
	Z N	Temperature Reading:	Reading:	5.0		(EF			890-4802 Chain of Cu	Custody	Zn Acetate+NaOH: Zn
		Corrected Temperature	nperature:	0.0		IDES	15)	3021			NaOH+Ascorbic Acid: SAPC
Sample Identification	on Matrix	Date Sampled	Time Sampled	Depth Grab/	# of Cont	CHLOR	TPH (80	BTEX (Sample Comments
1925	n	6/8/23	Op:1	0-15 C		/	/	/			Incident ID:
SW02	5	6/8/23	2:00	0-2 C	-	/	1	1			nAPP2211654411
											Cost Center:
											1632571001
		/									AFE:
				1		1.					
					/5						
							1	1			
otal 200.7 / 6010	200.8 / 6020:	8R	8RCRA 13PPN	13PPM Texas 11	AS Sb	As Ba	ВаВ	Be B Cd	Ca Cr Co Cu Fe Pb Mg Mn	Mn Mo Ni K Se Ag SiO₂ Na Sr Tl Sn U V Zn	Na Sr Tl Sn U V Zn
é	tal(s) to be analy		TCLP / SP	LP 6010: 8R	RA	Sb A	s Ba	Be	TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se	Se Ag TI U Hg: 1631	Hg: 1631 / 245.1 / 7470 / 7471
Signature of this documen	nt and relinquishment of liable only for the cos	of samples constit	utes a valid purci shall not assume	nase order from cli	ent con for any	pany to	Eurofi	ns Xen	: 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 itse. 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	standard terms and conditions	
as venco. A minimum cri	large of \$65.00 will be	applied to each p	Oject and a clian	0.00			1		unis period. A millimum dialige di soudu wiii de appired de each project anne a crimige di soud par (Cinnet)	Deceived by: (Signal	ture) Date/Time
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Revised Date: 08/25/2020 Rev. 2020.:

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4802-1

SDG Number: 03C158049

Login Number: 4802 List Source: Eurofins Carlsbad

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.	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	

e 240 oj 270

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-4802-1 SDG Number: 03C158049

Login Number: 4802 **List Source: Eurofins Midland** List Number: 2 List Creation: 06/12/23 08:53 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	

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill Ensolum 601 N. Marienfeld St. Suite 400

Midland, Texas 79701

Generated 9/14/2023 7:59:37 AM

JOB DESCRIPTION

JAMES RANCH UNIT 702 SDG NUMBER 0313398049

JOB NUMBER

890-5221-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated 9/14/2023 7:59:37 AM

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
Project/Site: JAMES RANCH UNIT 702
Laboratory Job ID: 890-5221-1
SDG: 0313398049

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Definitions/Glossary

Job ID: 890-5221-1 Client: Ensolum Project/Site: JAMES RANCH UNIT 702

SDG: 0313398049

Qualifiers

GC VOA

Qualifier **Qualifier Description**

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**

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 Colony Forming Unit CFU **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) Limit of Quantitation (DoD/DOE) LOQ

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

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) TFF Toxicity Equivalent Quotient (Dioxin) **TEQ**

TNTC Too Numerous To Count

Case Narrative

Client: Ensolum

Job ID: 890-5221-1 SDG: 0313398049 Project/Site: JAMES RANCH UNIT 702

Job ID: 890-5221-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative 890-5221-1

Receipt

The samples were received on 9/7/2023 3:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 6.0°C

Receipt Exceptions

The following were sampled received and analyzed from an unpreserved bulk soil jar: SS05 (890-5221-1) and SS06 (890-5221-2).

GC VOA

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 samples were outside control limits: (CCV 880-62116/20) and (CCV 880-62116/5). 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.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Matrix: Solid

Lab Sample ID: 890-5221-1

Client Sample Results

Client: Ensolum Job ID: 890-5221-1
Project/Site: JAMES RANCH UNIT 702 SDG: 0313398049

Client Sample ID: SS05

Date Collected: 09/07/23 12:00 Date Received: 09/07/23 15:15

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		09/11/23 08:29	09/11/23 16:57	1
Toluene	<0.00201	U	0.00201	mg/Kg		09/11/23 08:29	09/11/23 16:57	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		09/11/23 08:29	09/11/23 16:57	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		09/11/23 08:29	09/11/23 16:57	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		09/11/23 08:29	09/11/23 16:57	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		09/11/23 08:29	09/11/23 16:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130			09/11/23 08:29	09/11/23 16:57	1
1,4-Difluorobenzene (Surr)	96		70 - 130			09/11/23 08:29	09/11/23 16:57	1
- 1,4-Dilidolobelizerie (Sdil)	00					00/11/20 00:20	00/11/20 10.01	
Method: TAL SOP Total BTEX		culation	70 - 700			00,11,20 00.20	00/1/1/20 10:07	•
- '	- Total BTEX Cald	culation Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: TAL SOP Total BTEX	- Total BTEX Cald	Qualifier		Unit mg/Kg	<u>D</u>			
Method: TAL SOP Total BTEX Analyte	- Total BTEX Calc Result <0.00402	Qualifier U	RL 0.00402		<u>D</u>		Analyzed	
Method: TAL SOP Total BTEX Analyte Total BTEX	- Total BTEX Calc Result <0.00402 esel Range Organ	Qualifier U	RL 0.00402		<u>D</u>		Analyzed	
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Die	- Total BTEX Calc Result <0.00402 esel Range Organ	Qualifier U ics (DRO) (C	RL 0.00402	mg/Kg		Prepared	Analyzed 09/12/23 08:56	Dil Fac
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Die Analyte Total TPH	- Total BTEX Calc Result <0.00402 esel Range Organ Result <50.5	Qualifier U ics (DRO) (Qualifier U	RL 0.00402 GC) RL 50.5	mg/Kg		Prepared	Analyzed 09/12/23 08:56 Analyzed	Dil Fac
Method: TAL SOP Total BTEX Analyte Total BTEX Method: SW846 8015 NM - Die Analyte	- Total BTEX Calc Result <0.00402 esel Range Organ Result <50.5	Qualifier U ics (DRO) (Qualifier U	RL 0.00402 GC) RL 50.5	mg/Kg		Prepared	Analyzed 09/12/23 08:56 Analyzed	Dil Fac

Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg	09/11/23 10:05	09/11/23 14:46	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130		09/11/23 10:05	09/11/23 14:46	1
o-Terphenyl	89		70 - 130		09/11/23 10:05	09/11/23 14:46	1

50.5

mg/Kg

09/11/23 10:05

09/11/23 14:46

Lab Sample ID: 890-5221-2

Matrix: Solid

<50.5 U

Method: EPA 300.0 - Anions, Ion C	hromatograp	hy - Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	57.7		5.04	mg/Kg			09/13/23 12:12	1

Client Sample ID: SS06 Date Collected: 09/07/23 11:20

Date Received: 09/07/23 15:15

Sample Depth: 0.5

(GRO)-C6-C10

C10-C28)

Diesel Range Organics (Over

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/11/23 08:29	09/11/23 17:18	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/11/23 08:29	09/11/23 17:18	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/11/23 08:29	09/11/23 17:18	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		09/11/23 08:29	09/11/23 17:18	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		09/11/23 08:29	09/11/23 17:18	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		09/11/23 08:29	09/11/23 17:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130			09/11/23 08:29	09/11/23 17:18	1

Released to Imaging: 7/24/2024 4:25:11 PM

Client Sample Results

Client: Ensolum Job ID: 890-5221-1
Project/Site: JAMES RANCH UNIT 702 SDG: 0313398049

Client Sample ID: SS06 Lab Sample ID: 890-5221-2

Date Collected: 09/07/23 11:20 Matrix: Solid
Date Received: 09/07/23 15:15

Sample Depth: 0.5

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	102		70 - 130			09/11/23 08:29	09/11/23 17:18	
Method: TAL SOP Total BTEX - 1	otal BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00404	U	0.00404	mg/Kg			09/12/23 08:56	
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	51.3		49.9	mg/Kg			09/11/23 18:07	
•	<49.9	Qualifier U	RL 49.9	Mnit mg/Kg	D	Prepared 09/11/23 10:05	Analyzed 09/11/23 15:08	DIIF
Analyte Gasoline Range Organics								Dil Fa
Diesel Range Organics (Over C10-C28)	51.3		49.9	mg/Kg		09/11/23 10:05	09/11/23 15:08	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		09/11/23 10:05	09/11/23 15:08	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	118		70 - 130			09/11/23 10:05	09/11/23 15:08	
o-Terphenyl	100		70 - 130			09/11/23 10:05	09/11/23 15:08	
Mathada EDA 200 0 Aniona Jan	Chromatogran	hy - Solubl	e					
Method: EPA 300.0 - Anions, ion	Omomatograp	my column	•					
Method: EPA 300.0 - Anions, Ion Analyte	• •	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

DFBZ = 1,4-Difluorobenzene (Surr)

Surrogate Summary

Client: Ensolum Job ID: 890-5221-1
Project/Site: JAMES RANCH UNIT 702 SDG: 0313398049

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

-				Percent Surrogate Re
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-5220-A-1-B MS	Matrix Spike	93	88	
890-5220-A-1-C MSD	Matrix Spike Duplicate	88	97	
890-5221-1	SS05	81	96	
890-5221-2	SS06	81	102	
LCS 880-62128/1-A	Lab Control Sample	88	93	
LCSD 880-62128/2-A	Lab Control Sample Dup	88	92	
MB 880-62128/5-A	Method Blank	107	110	
Surrogate Legend				
BFB = 4-Bromofluorober	nzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid Prep Type: Total/NA

_			
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-5220-A-1-G MS	Matrix Spike	106	79
890-5220-A-1-H MSD	Matrix Spike Duplicate	122	93
890-5221-1	SS05	109	89
890-5221-2	SS06	118	100
LCS 880-62150/2-A	Lab Control Sample	109	104
LCSD 880-62150/3-A	Lab Control Sample Dup	111	102
MB 880-62150/1-A	Method Blank	124	108

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: Ensolum Job ID: 890-5221-1 Project/Site: JAMES RANCH UNIT 702 SDG: 0313398049

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-62128/5-A

Matrix: Solid Analysis Batch: 62126 Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 62128

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		09/11/23 08:29	09/11/23 11:33	1
Toluene	<0.00200	U	0.00200	mg/Kg		09/11/23 08:29	09/11/23 11:33	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		09/11/23 08:29	09/11/23 11:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		09/11/23 08:29	09/11/23 11:33	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		09/11/23 08:29	09/11/23 11:33	1
Xylenes, Total	< 0.00400	U	0.00400	mg/Kg		09/11/23 08:29	09/11/23 11:33	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	09/11/23 08:29	09/11/23 11:33	1
1,4-Difluorobenzene (Surr)	110		70 - 130	09/11/23 08:29	09/11/23 11:33	1

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 880-62128/1-A

Matrix: Solid

Analysis Batch: 62126

Prep Type: Total/NA Prep Batch: 62128

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09879	-	mg/Kg		99	70 - 130	
Toluene	0.100	0.09526		mg/Kg		95	70 - 130	
Ethylbenzene	0.100	0.08903		mg/Kg		89	70 - 130	
m-Xylene & p-Xylene	0.200	0.1700		mg/Kg		85	70 - 130	
o-Xylene	0.100	0.07593		mg/Kg		76	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	88	70 - 130
1,4-Difluorobenzene (Surr)	93	70 - 130

Lab Sample ID: LCSD 880-62128/2-A

Matrix: Solid

Analysis Batch: 62126

Cilent	Sample	ID: Lab	Control	Sample L	up

Prep Type: Total/NA

Prep Batch: 62128

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1039		mg/Kg		104	70 - 130	5	35	
Toluene	0.100	0.09601		mg/Kg		96	70 - 130	1	35	
Ethylbenzene	0.100	0.09230		mg/Kg		92	70 - 130	4	35	
m-Xylene & p-Xylene	0.200	0.1839		mg/Kg		92	70 - 130	8	35	
o-Xylene	0.100	0.08759		mg/Kg		88	70 - 130	14	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		70 - 130
1.4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 890-5220-A-1-B MS

Matrix: Solid

Analysis Batch: 62126

Client Sample ID: Matrix Spike Prep Type: Total/NA

Prep Batch: 62128

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00202	U	0.0996	0.08712		mg/Kg		87	70 - 130	
Toluene	<0.00202	U	0.0996	0.08911		mg/Kg		89	70 - 130	

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Client: Ensolum Job ID: 890-5221-1 SDG: 0313398049 Project/Site: JAMES RANCH UNIT 702

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-5220-A-1-B MS

Lab Sample ID: 890-5220-A-1-C MSD

Matrix: Solid

Analysis Batch: 62126

Client	Sample	ID:	Matrix	Spike

Prep Type: Total/NA

Prep Batch: 62128

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00202	U	0.0996	0.08695		mg/Kg		87	70 - 130	
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1783		mg/Kg		90	70 - 130	
o-Xylene	<0.00202	U	0.0996	0.08376		mg/Kg		84	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	93	70 - 130
1,4-Difluorobenzene (Surr)	88	70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 62128

Analysis Batch: 62126

Matrix: Solid

Sam	ole Sample	Spike	MSD	MSD				%Rec		RPD
Analyte Res	ult Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene <0.002	02 U	0.101	0.1085		mg/Kg		108	70 - 130	22	35
Toluene <0.002	02 U	0.101	0.09862		mg/Kg		98	70 - 130	10	35
Ethylbenzene <0.002	02 U	0.101	0.08606		mg/Kg		85	70 - 130	1	35
m-Xylene & p-Xylene <0.004	03 U	0.202	0.1670		mg/Kg		83	70 - 130	7	35
o-Xylene <0.002	02 U	0.101	0.08790		mg/Kg		87	70 - 130	5	35

MSD MSD

Surrogate	%Recovery (Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-62150/1-A

Matrix: Solid

Analysis Batch: 62116

Client Sample ID: Method Blank
Prep Type: Total/NA

Prep Batch: 62150

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/11/23 08:00	09/11/23 08:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/11/23 08:00	09/11/23 08:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/11/23 08:00	09/11/23 08:30	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130	09/11/23 08:00	09/11/23 08:30	1
o-Terphenyl	108		70 - 130	09/11/23 08:00	09/11/23 08:30	1

Lab Sample ID: LCS 880-62150/2-A

Matrix: Solid

Analysis Batch: 62116

Client Sample	ID: Lab	Control Sample	
	_		

70 - 130

98

Prep Type: Total/NA Pren Batch: 62150

Allalysis Datch. 02110							Lieb	Datell.	02 130
	Spike	LCS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	1000	1053		mg/Kg		105	70 - 130		

978.7

mg/Kg

(GRO)-C6-C10 Diesel Range Organics (Over

C10-C28)

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1000

Client: Ensolum Job ID: 890-5221-1 Project/Site: JAMES RANCH UNIT 702 SDG: 0313398049

Limits

70 - 130

70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

LCS LCS

%Recovery Qualifier

109

Lab Sample ID: LCS 880-62150/2-A

Matrix: Solid

Surrogate

1-Chlorooctane

Matrix: Solid

Analysis Batch: 62116

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 62150

o-Terphenyl 104

Lab Sample ID: LCSD 880-62150/3-A

Analysis Batch: 62116

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 62150

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 1000 1066 107 70 - 13020 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1014 101 mg/Kg 70 - 13020 C10-C28)

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	102		70 - 130

Lab Sample ID: 890-5220-A-1-G MS Client Sample ID: Matrix Spike

MS MS

Matrix: Solid

Analysis Batch: 62116

Prep Type: Total/NA

Prep Batch: 62150

Sample Sample Spike Added Analyte Result Qualifier Result Qualifier Unit D %Rec Limits Gasoline Range Organics <50.3 U 997 1060 mg/Kg 105 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over <50.3 U 997 1023 mg/Kg 101 70 - 130

C10-C28)

MS MS %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 106 70 - 130 o-Terphenyl 79

Lab Sample ID: 890-5220-A-1-H MSD Client Sample ID: Matrix Spike Duplicate

Matrix: Solid

Analysis Batch: 62116

Prep Type: Total/NA

Prep Batch: 62150

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	<50.3	U	997	1266		mg/Kg		125	70 - 130	18	20	
(GRO)-C6-C10												
Diesel Range Organics (Over	<50.3	U	997	1196		mg/Kg		118	70 - 130	16	20	
C10 C20)												

C10-C28)

MSD MSD

Surrogate	%Recovery Qual	ifier Limits
1-Chlorooctane	122	70 - 130
o-Terphenyl	93	70 - 130

QC Sample Results

Client: Ensolum Job ID: 890-5221-1 Project/Site: JAMES RANCH UNIT 702

SDG: 0313398049

Client Sample ID: Method Blank

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-62211/1-A

Matrix: Solid

Analysis Batch: 62363

Prep Type: Soluble

Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed Chloride <5.00 U 5.00 mg/Kg 09/13/23 11:15

MB MB

Lab Sample ID: LCS 880-62211/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 62363

Spike LCS LCS %Rec Added %Rec Analyte Result Qualifier Unit D Limits Chloride 250 248.2 mg/Kg 99 90 - 110

Lab Sample ID: LCSD 880-62211/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble**

Analysis Batch: 62363

LCSD LCSD RPD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 245.1 mg/Kg 90 - 110

Lab Sample ID: 880-33057-A-1-C MS Client Sample ID: Matrix Spike **Prep Type: Soluble**

Matrix: Solid

Analysis Batch: 62363

MS MS Sample Sample Spike %Rec Analyte Result Qualifier Added Qualifier %Rec Result Unit Limits 302.6 Chloride 50.3 251 101 90 - 110 mg/Kg

Lab Sample ID: 880-33057-A-1-D MSD

Matrix: Solid

Analysis Batch: 62363

Sample Sample Spike MSD MSD %Rec RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 251 50.3 299.1 mg/Kg 99 90 - 110 20

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QC Association Summary

Client: Ensolum Job ID: 890-5221-1
Project/Site: JAMES RANCH UNIT 702 SDG: 0313398049

GC VOA

Analysis Batch: 62126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5221-1	SS05	Total/NA	Solid	8021B	62128
890-5221-2	SS06	Total/NA	Solid	8021B	62128
MB 880-62128/5-A	Method Blank	Total/NA	Solid	8021B	62128
LCS 880-62128/1-A	Lab Control Sample	Total/NA	Solid	8021B	62128
LCSD 880-62128/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	62128
890-5220-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	62128
890-5220-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	62128

Prep Batch: 62128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5221-1	SS05	Total/NA	Solid	5035	
890-5221-2	SS06	Total/NA	Solid	5035	
MB 880-62128/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-62128/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-62128/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5220-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
890-5220-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 62239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5221-1	SS05	Total/NA	Solid	Total BTEX	
890-5221-2	SS06	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 62116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5221-1	SS05	Total/NA	Solid	8015B NM	62150
890-5221-2	SS06	Total/NA	Solid	8015B NM	62150
MB 880-62150/1-A	Method Blank	Total/NA	Solid	8015B NM	62150
LCS 880-62150/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	62150
LCSD 880-62150/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	62150
890-5220-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	62150
890-5220-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	62150

Prep Batch: 62150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5221-1	SS05	Total/NA	Solid	8015NM Prep	
890-5221-2	SS06	Total/NA	Solid	8015NM Prep	
MB 880-62150/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-62150/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-62150/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5220-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5220-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 62227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5221-1	SS05	Total/NA	Solid	8015 NM	
890-5221-2	SS06	Total/NA	Solid	8015 NM	

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2

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4

6

8

3

111

13

14

QC Association Summary

Client: Ensolum
Project/Site: JAMES RANCH UNIT 702
Job ID: 890-5221-1
SDG: 0313398049

HPLC/IC

Leach Batch: 62211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5221-1	SS05	Soluble	Solid	DI Leach	
890-5221-2	SS06	Soluble	Solid	DI Leach	
MB 880-62211/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-62211/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-62211/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-33057-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-33057-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 62363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5221-1	SS05	Soluble	Solid	300.0	62211
890-5221-2	SS06	Soluble	Solid	300.0	62211
MB 880-62211/1-A	Method Blank	Soluble	Solid	300.0	62211
LCS 880-62211/2-A	Lab Control Sample	Soluble	Solid	300.0	62211
LCSD 880-62211/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	62211
880-33057-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	62211
880-33057-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	62211

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Eurofins Carlsbad

Client: Ensolum Job ID: 890-5221-1 Project/Site: JAMES RANCH UNIT 702 SDG: 0313398049

Client Sample ID: SS05 Lab Sample ID: 890-5221-1

Date Collected: 09/07/23 12:00 Matrix: Solid Date Received: 09/07/23 15:15

	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	62128	09/11/23 08:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62126	09/11/23 16:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62239	09/12/23 08:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62227	09/11/23 18:07	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 14:46	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	62211	09/11/23 14:22	AG	EET MID
Soluble	Analysis	300.0		1			62363	09/13/23 12:12	CH	EET MID

Client Sample ID: SS06 Lab Sample ID: 890-5221-2

Date Collected: 09/07/23 11:20 Date Received: 09/07/23 15:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	62128	09/11/23 08:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	62126	09/11/23 17:18	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			62239	09/12/23 08:56	AJ	EET MID
Total/NA	Analysis	8015 NM		1			62227	09/11/23 18:07	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	62150	09/11/23 10:05	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	62116	09/11/23 15:08	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	62211	09/11/23 14:22	AG	EET MID
Soluble	Analysis	300.0		1			62363	09/13/23 12:32	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Matrix: Solid

Accreditation/Certification Summary

Client: Ensolum Job ID: 890-5221-1 Project/Site: JAMES RANCH UNIT 702

Total BTEX

SDG: 0313398049

Laboratory: Eurofins Midland

Total BTEX

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority Texas		ogram	Identification Number	Expiration Date 06-30-24	
		ELAP	T104704400-23-26		
The following analytes	are included in this report, bu	ut the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes for	
the agency does not of	fer certification.				
the agency does not of Analysis Method	fer certification . Prep Method	Matrix	Analyte		

Solid

Method Summary

Client: Ensolum Job ID: 890-5221-1
Project/Site: JAMES RANCH UNIT 702 SDG: 0313398049

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

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Sample Summary

Client: Ensolum

Project/Site: JAMES RANCH UNIT 702

Job ID: 890-5221-1

SDG: 0313398049

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5221-1	SS05	Solid	09/07/23 12:00	09/07/23 15:15	0.5
890-5221-2	SS06	Solid	09/07/23 11:20	09/07/23 15:15	0.5

Work Order No: www.xenco.com Page of Work Order Comments UST/PST PRP Brownfields RRC Superfund ct:	D PST/UST TRRP Level IV D ADaPT Other: Preservative Codes None: NO DI Water: H ₂ O	VABIS NaSO 3 SHNOH:	Sample Comments JACIAN # NAPPAZ II 654411 CCST Carte ICSZ 257 IO 1 APT # SO-OIS - 15553	Ag SiO ₂ 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 Maifferent) Sifferent	ANALYSIS REQUEST Reporting: Level III Level	890-5221 Chain of Custody	L8 77	li K Se	P/Time Relinquished by: (Signature) 4:55 2 4 4 6
Cha Houston, TX (281) Environment Testing Houston, TX (281) Xenco EL Paso, TX (915): Hobbs, NM (575): Hobbs, NM (575): Company Name: EN 550 NO LOCALION (A Company Name: X Address: S A D NO LOCALION (A COmpany Name: X Address: S A D NO LOCALION (A COmpany Name: X Address: S A D NO LOCALION (A COmpany Name: X Address: S A D NO LOCALION (A COmpany Name: X Address: S A D NO LOCALION (A COmpany Name: X A COmpany Name: X A D NO LOCALION (A COMPAN)	16 Secol NM 8-3220 City, State ZIP. 6 19 -35 4-2652 Email: Cour rett 6 10 -35 4-2651 Tum Around Press. 21 55 90 40 Car State ZIP.	Solution Served Conference of Served Date: Served Correction Facts the day received by the lab, if received by 4:30pm TAT starts the day received by 4:30pm The lab, if received by 4:30pm	dentification Matrix Sampled Sampled CONTRS 17:00 CONTRS 17:00 CONTRS 11:00 CONTRS	Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al 5b As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo N Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco, will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$55 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously nego	Relinquished by: (Signature) Date (Alling) D

Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-5221-1 SDG Number: 0313398049

Login Number: 5221 List Source: Eurofins Carlsbad

List Number: 1

Creator: Lopez, Abraham

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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Login Sample Receipt Checklist

Client: Ensolum Job Number: 890-5221-1 SDG Number: 0313398049

> **List Source: Eurofins Midland** List Creation: 09/11/23 08:35 AM

Login Number: 5221 List Number: 2

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	N/A	

Eurofins Carlsbad

<6mm (1/4").

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 360694

QUESTIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	360694
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites		
Incident ID (n#)	nAPP2211654411	
Incident Name	NAPP2211654411 JAMES RANCH UNIT 2 702H @ 30-015-48533	
Incident Type	Release Other	
Incident Status	Remediation Closure Report Received	
Incident Well	[30-015-48533] JAMES RANCH UNIT DI 2 #702H	

Location of Release Source		
Please answer all the questions in this group.		
Site Name	JAMES RANCH UNIT 2 702H	
Date Release Discovered	04/13/2022	
Surface Owner	Federal	

Incident Details		
Please answer all the questions in this group.		
Incident Type	Release Other	
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 for 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	Not answered.	
Is the concentration of chloride in the produced water >10,000 mg/l	Not answered.	
Condensate Released (bbls) Details	Not answered.	
Natural Gas Vented (Mcf) Details	Not answered.	
Natural Gas Flared (Mcf) Details	Not answered.	
Other Released Details	Cause: Equipment Failure Other (Specify) Other (Specify) Released: 55 BBL Recovered: 40 BBL Lost: 15 BBL.	
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	During frac operations on the James Ranch Unit 2 702H, the fluid end separated from power end, causing fluids to release both to containment and pad.	

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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 360694

Phone:(505) 476-3470 Fax:(505) 476-3462	IONO (continued)
	IONS (continued)
Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380 Action Number: 360694 Action Type:
QUESTIONS	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)
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. 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 as	safety hazard that would result in injury
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.
	iation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative o ted or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of evaluation 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	knowledge and understand that pursuant to OCD rules and regulations all operators are required asses 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
	Name: Alan Romero

Title: Regulatory Analyst

Date: 07/02/2024

Email: alan.romero1@exxonmobil.com

I hereby agree and sign off to the above statement

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720 District III 1000 Rio Brazos Rd., Aztec, NM 87410

Phone:(505) 334-6178 Fax:(505) 334-6170 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS, Page 3

Action 360694

QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	360694
	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 approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.		
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)	
What method was used to determine the depth to ground water	OCD Imaging Records Lookup	
Did this release impact groundwater or surface water	No	
What is the minimum distance, between the closest lateral extents of the release ar	nd the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (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	Between 1 and 5 (mi.)	
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)	
Any other fresh water well or spring	Between 1 and 5 (mi.)	
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)	
A wetland	Between 1 and 5 (mi.)	
A subsurface mine	Between 1 and 5 (mi.)	
An (non-karst) unstable area	Between 1 and 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 co	ontamination 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 delineat	ted Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for e	each, in milligrams per kilograms.)
Chloride (EPA 300.0 or SM4500 Cl B)	7740
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	471
GRO+DRO (EPA SW-846 Method 8015M)	471
BTEX (EPA SW-846 Method 8021B or 8260B	0
Benzene (EPA SW-846 Method 8021B or 8260E	3) 0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report include which includes the anticipated timelines for beginning and completing the remediation	es completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, nn.
On what estimated date will the remediation commence	09/07/2022
On what date will (or did) the final sampling or liner inspection occur	06/08/2023
On what date will (or was) the remediation complete(d)	06/08/2023
What is the estimated surface area (in square feet) that will be reclaimed	ed 108000
What is the estimated volume (in cubic yards) that will be reclaimed	4000
What is the estimated surface area (in square feet) that will be remedia	ted 1735
What is the estimated volume (in cubic yards) that will be remediated	100
These estimated dates and measurements are recognized to be the best guess or calc	culation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.
The OCD recognizes that proposed remediation measures may have to be minimally	adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to

significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

District I

1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 **District II**

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720 **District III**

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170 **District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462 State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 4

Action 360694

QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	360694
	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

Name: Alan Romero Title: Regulatory Analyst

Email: alan.romero1@exxonmobil.com

Date: 07/02/2024

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: 7/24/2024 4:25:11 PM

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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 5

Action 360694

QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	360694
	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 No submission

District I

1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

<u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462 State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 6

Action 360694

QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	360694
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	360697
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/07/2022
What was the (estimated) number of samples that were to be gathered	6
What was the sampling surface area in square feet	1200

temediation Closure Request only answer the questions in this group if seeking remediation closure for this release because all re	emediation 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	1735
What was the total volume (cubic yards) remediated	100
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	108000
What was the total volume (in cubic yards) reclaimed	4000
Summarize any additional remediation activities not included by answers (above)	Following the release of produced water at the Site in April 2022, XTO excavated approximately 100 cubic yards of impacted soil, which was properly disposed of at an approved landfill. Depth to water was investigated and confirmed to be greater than 100 feet bgs, corroborating the desktop Site characterization and application for identifying the appropriate Site-specific Closure Criteria to the release. Lateral delineation was completed to verify the lateral extent of the release. Based on remedial actions and confirmation soil sample results, it appears XTO has adequately addressed the release, which has been protective of human health, the environment, and groundwater. Soil requiring reclamation at the time of pad abandonment remains in place. Although all laboratory analytical results for all soil samples indicate all impacted soil has been removed from the Site, an estimated 4,000 cubic yards of soil of waste-containing soil, to an estimated depth of 1 foot bgs remains in place across the facility. XTO believes the work completed to date fulfills the requirements of the approved Work Plan and conditions of approval.

The responsible party must attach information demonstrating they have compiled with all applicable closure requirements and any conditions or directives of the UCD. 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.

I hereby agree and sign off to the above statement

Name: Alan Romero

Title: Regulatory Analyst

Email: alan.romero1@exxonmobil.com

Date: 07/02/2024

District II 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

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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 360694

QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	360694
	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

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

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CONDITIONS

Action 360694

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC	5380
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	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
crystal.walker	Operator failed to provide proper Sampling Notification pursuant to 19.15.29.12.D.(1).(a) NMAC. Failure to provide proper sampling notice is a compliance issue and OCD may pursue compliance actions pursuant to 19.15.5 NMAC. Operator shall ensure future compliance with 19.15.29.12.D. (1).(a) NMAC	7/24/2024
crystal.walker	Remediation Closure Request is approved. Reclamation activities are to be completed following any major facility reconstruction or pad abandonment whichever occurs first. Please remember to submit sampling notifications for all confirmation sampling events.	7/24/2024