Spill Calculation - On-Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth (in.)	Estimated *Pool* Area (sq. ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	18	25	2.0	450.00	4.01	0.01	4.04
Rectangle B				0.00	0.00	0.00	0.00
Rectangle C				0.00	0.00	0.00	0.00
Rectangle D				0.00	0.00	0.00	0.00
Rectangle E				0.00	0.00	0.00	0.00
Rectangle F				0.00	0.00	0.00	0.00
Rectangle G				0.00	0.00	0.00	0.00
Rectangle H				0.00	0.00	0.00	0.00
Rectangle I				0.00	0.00	0.00	0.00
Rectangle J				0.00	0.00	0.00	0.00
				Total Volume Released to Unlined Secondary Containment:			4.0384

ENSOLUM

October 7, 2025

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
Pygmy State Com 003H
Incident Number nAPP2516140823
Lea County, New Mexico

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities at the Pygmy State Com 003H (Site). The purpose of the Site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of produced water into the pasture. Based on the excavation activities and analytical results from the soil sampling events, COG is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number nAPP2516140823.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 27, Township 21 South, Range 33 East, in Lea County, New Mexico (32.45573°, -103.56512°) and is associated with oil and gas exploration and production operations on private land owned by Merchant Livestock Company.

On May 29, 2025, failure of a water transfer pump resulted in the release of approximately 4 barrels (bbls) of produced water into the surrounding pasture. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 3 bbls of produced water were recovered. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on June 10, 2025. The release was assigned Incident Number nAPP2516140823.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization are summarized below and detailed in the NMOCD permitting portal Form C-141 Site Characterization section.

Depth to groundwater at the Site is 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 New Mexico Office of the State Engineer (NMOSE) well CP-1349, located approximately 893 feet south of the Site. The groundwater well has a reported depth to groundwater first encountered at 990 feet bgs and a static of 572 feet bgs with a total depth of 1,188 feet bgs. All wells used for depth to groundwater determination are presented on Figure 1 and the associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a seasonal dry wash, located approximately 5,506 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 I Closure Criteria (Closure Criteria) apply for contaminants of concern (COCs) listed below:

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

BIOLOGICAL COMPLIANCE AND REPORTING

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

- No environmentally sensitive receptors were located near the Site as mentioned in the Site Characterization.

- The soil type is classified as Kermit soils and Dune Land according to the Web Soil Survey. Kermit soils and Dune Land is considered a sensitive soil by the BLM definition. The disturbance area was minimized during remediation activities to limit impact of natural sensitive soils. The excavation was backfilled with the same soil type.

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On June 5, 2025, Ensolum personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Seven assessment soil samples (SS01 through SS07) were collected within and around the release extent from depths ranging from 0.5 feet to 3 feet bgs to assess the presence or absence of impacted soil.

The assessment soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The release extent and assessment soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation is included in Appendix B.

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

Laboratory analytical results for assessment soil samples SS01 through SS03, collected within the release extent, indicated TPH and/or chloride concentrations exceeded the Closure Criteria. Laboratory analytical results for soil samples SS04 through SS07 indicated all COC concentrations were compliant with the Closure Criteria and successfully defined the lateral extent of the release. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the assessment soil samples, delineation activities were warranted.

DELINEATION ACTIVITIES AND ANALYTICAL RESULTS

On July 10, 2025, Ensolum personnel were at the Site to oversee delineation activities. Five potholes (PH01 through PH05) were advanced via backhoe within the release extent to assess the vertical extent of impacted soil. The potholes were advanced to depths ranging from 2 feet to 6 feet bgs. Delineation soil samples were collected from each pothole from depths ranging from 1-foot to 6 feet bgs. Soil from the potholes was field screened for VOCs and chloride. Photographic documentation is included in Appendix B. Field screening results and observations for the potholes were logged on lithologic soil sampling logs, which are included in Appendix C. The pothole and delineation soil sample locations are depicted on Figure 2.

Laboratory analytical results for delineation soil samples collected from pothole PH01 indicated TPH and/or chloride concentrations exceeded the Closure Criteria at depths ranging from the ground surface to 5 feet bgs. Laboratory analytical results for potholes PH02 through PH05 indicated all COC concentrations were compliant with the Closure Criteria at depths ranging from 1-foot to 2 feet bgs. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the assessment and delineation soil samples, excavation activities were warranted.

EXCAVATION ACTIVITIES AND ANALYTICAL RESULTS

Between August 21, 2025, and September 3, 2025, Ensolum personnel were at the Site to oversee excavation activities as indicated by visible staining, field screening activities, and laboratory analytical results from the assessment and delineation soil samples. Excavation activities were performed via backhoe and transport vehicles to a maximum depth of 9 feet bgs. Photographic documentation is included in Appendix B.

To direct excavation activities, soil was screened for VOCs and chloride. Following removal of the impacted soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS04 were collected from the floor of the excavation at depths ranging from 7 feet to 9 feet bgs. Composite soil samples SW01 through SW05 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 9 feet bgs. The composite soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

Laboratory analytical results for excavation floor samples FS01 and FS02 and sidewall samples SW01 through SW05 indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for floor samples FS03 and FS04 indicated TPH concentrations initially exceeded the Closure Criteria. Additional soil was removed within the footprint of composite samples FS03 and FS04 and laboratory analytical results for the terminal samples collected at 8.5 feet and 7.5 feet bgs, respectively, indicated all COC concentrations were compliant with the Closure Criteria.

Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix D.

The excavation area measured approximately 850 square feet. A total of approximately 250 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the Lea Land Disposal Facility in Hobbs, New Mexico. After completion of the composite sampling, the excavation area was secured with fencing.

RECLAMATION ACTIVITIES

The Site was backfilled with locally procured sandy topsoil, consistent with the surrounding native soil type, and recontoured to match pre-existing conditions. One representative 5-point composite soil sample (BF01) was collected from the backfill material to confirm compliance with the NMOCD requirements for the reclaimed area to contain non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg and TPH concentrations less than 100 mg/kg.

Laboratory analytical results for backfill sample BF01 indicated all COC concentrations were compliant with the reclamation requirement.

The reclaimed area was seeded on October 2, 2025, with the below private land owner requested Homesteaders Choice seed mix at a rate of 20 pounds of pure live seeds (PLS) per acre to account for the application method.

Species/Cultivar
Blue Grama
Buffalograss
Sideoats Grama
Western Wheatgrass
Sand Dropseed

Following broadcast seeding, the area was chained to cover the seed. Photographs of the backfilled excavation and seeding of the reclaimed area are provided in Appendix B.

VEGETATION MONITORING

The Site will be monitored for vegetation growth to verify that reclamation activities were successful. Focus for this phase will be to prevent erosion and Site degradation, and to monitor for and treat invasive and noxious weed species.

- Erosion control of the newly reclaimed areas includes prompt revegetation and contouring of the surface to prevent concentrated surface water flow.
- Annual inspections will take place at the location to assess revegetation progress until vegetation is consistent with local natural vegetation density.
- If necessary, an additional application of the approved seed mix(es) will be applied.
- Noxious and invasive weeds will be identified and treated by a licensed contracted herbicide applicator or mechanically removed.

A *Re-vegetation Report* will be submitted to the NMOCD once vegetation growth in the reclaimed excavation area has a uniform vegetative cover that reflects a life-form ratio of plus or minus 50 percent (%) of pre-disturbance levels and a total percent plant cover of at least 70% of pre-disturbance levels, excluding noxious weeds, per NMAC 19.15.29.13 D.(3).

CLOSURE REQUEST

Site assessment, delineation, and excavation activities were conducted at the Site to address the May 2025, release of produced water into the surrounding pasture. Laboratory analytical results for the composite soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Closure Criteria. Based on the soil sample analytical results, no further remediation was required.

Excavation of impacted soil has mitigated impacts at this Site. COG believes these remedial actions are protective of human health, the environment, and groundwater. As such, COG respectfully requests closure and a status update to *Reclamation Report Approved, Pending submission of Re-Vegetation Report* for Incident Number nAPP2516140823.

If you have any questions or comments, please contact Ms. Hadlie Green at (432) 557-8895 or hgreen@ensolum.com.

Sincerely,
Ensolum, LLC

Tabitha Guadian
Staff Geologist

Daniel R. Moir, PG (licensed in WY & TX)
Senior Managing Geologist

cc: Jacob Laird, ConocoPhillips Company
Merchant Livestock Company

Appendices:

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

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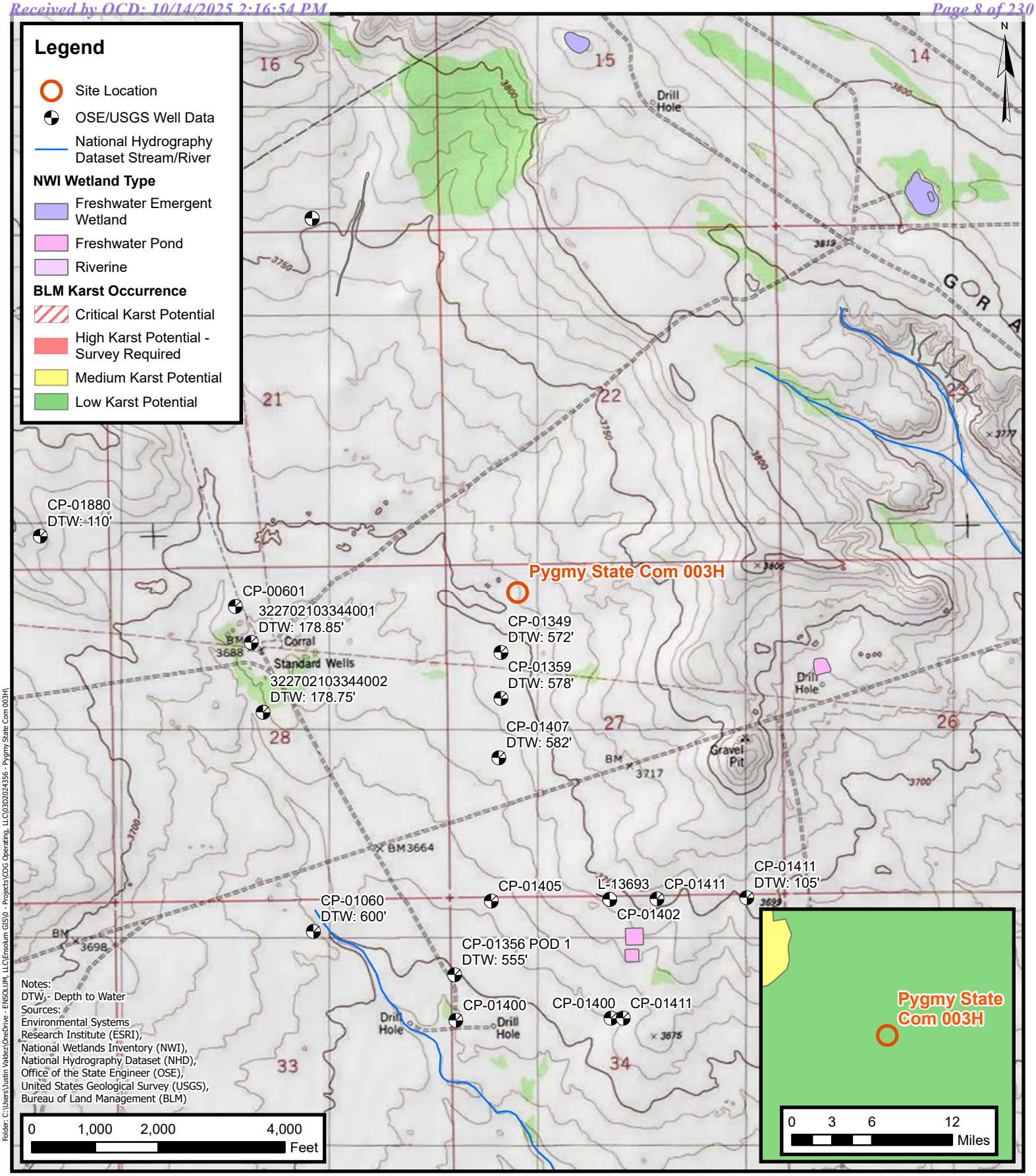
FIGURES



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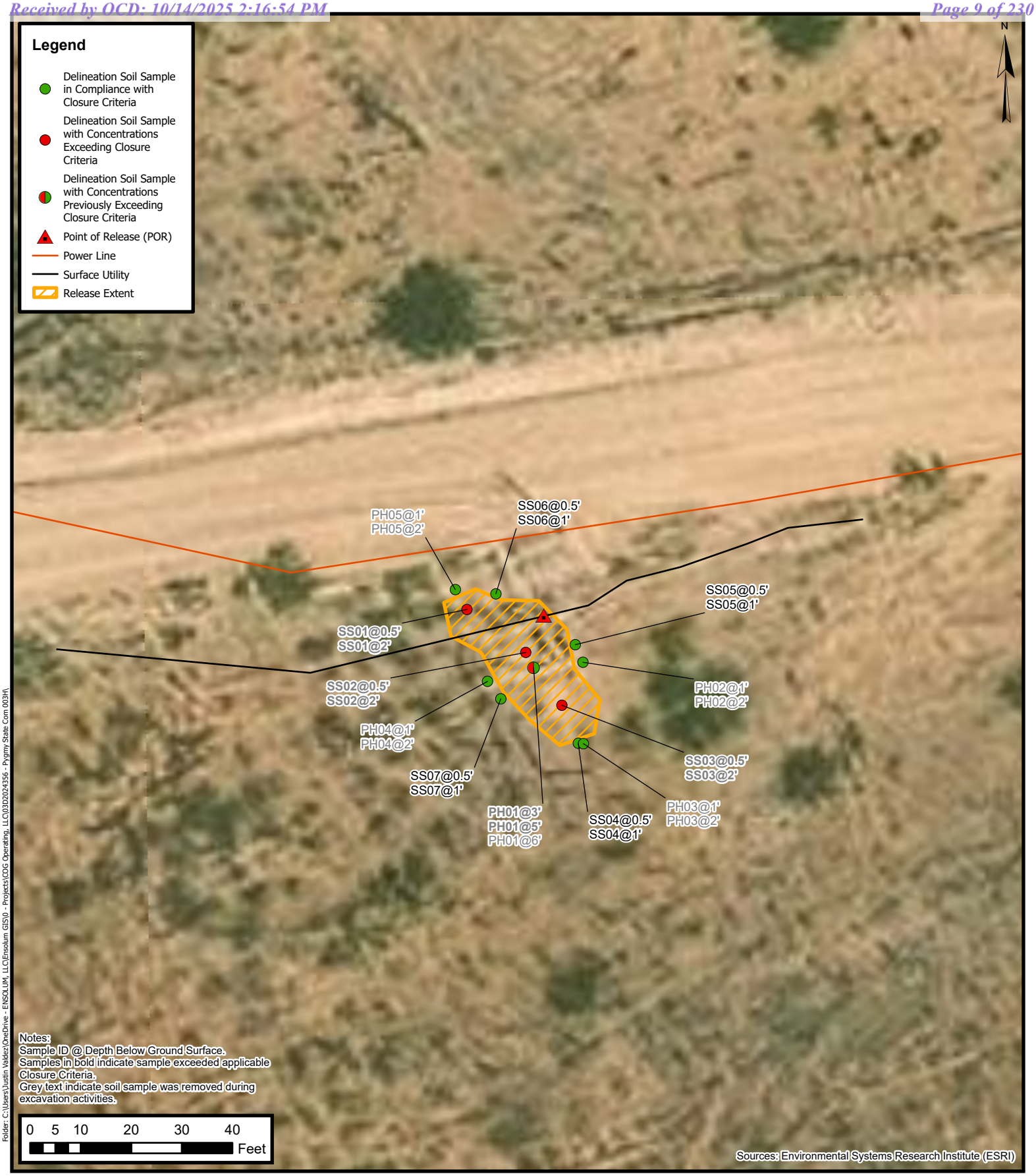
Site Receptor Map

COG Operating, LLC
Pygmy State Com 003H
Incident Number: nAPP2516140823
Unit D, Section 27, T 21S, R 33E
Lea County, New Mexico

FIGURE 1



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\COG Operating, LLC\03202024356 - Pygmy State Com 003H\

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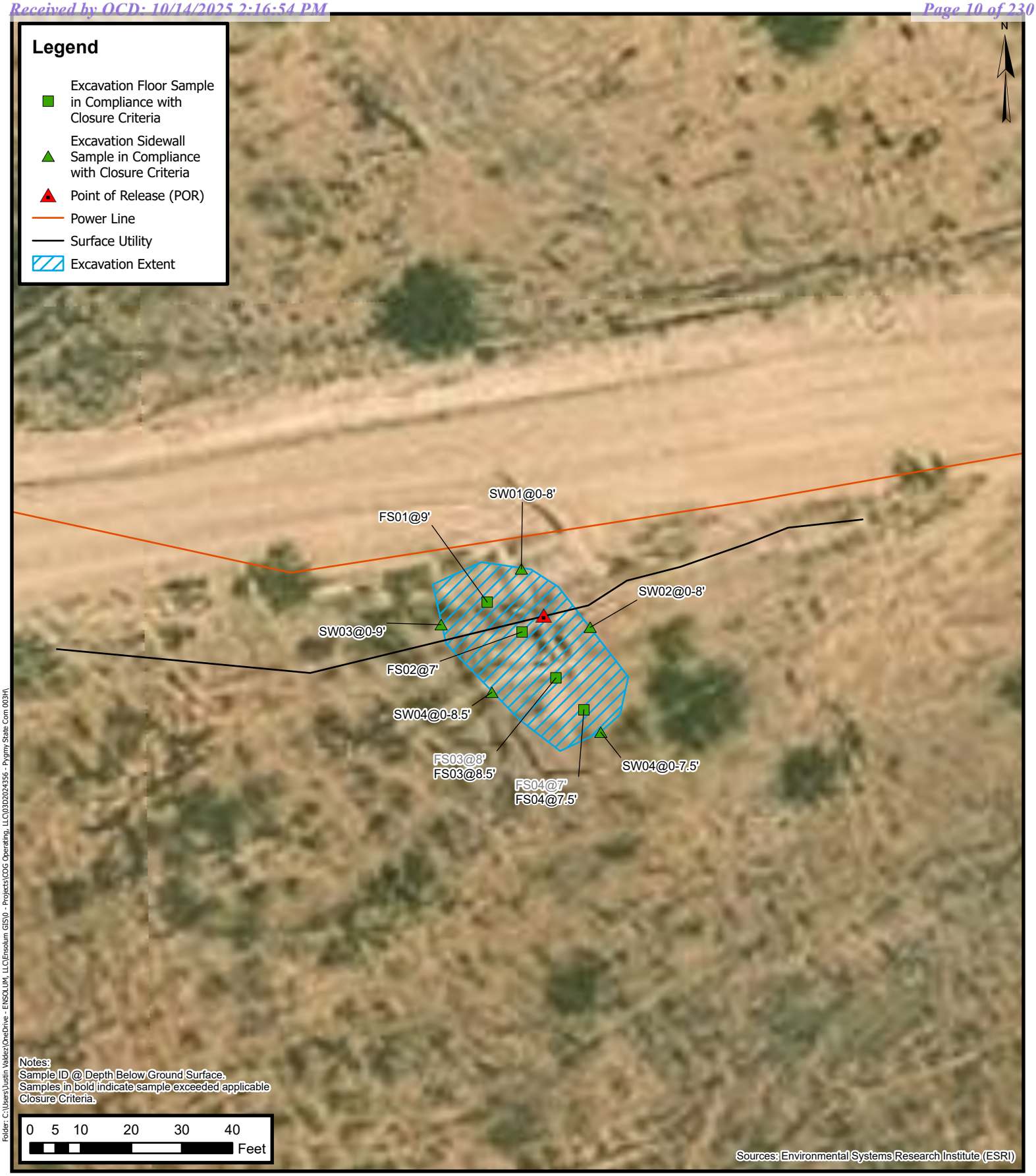
Environmental, Engineering and Hydrogeologic Consultants

Assessment and Delineation Soil Sample Locations

COG Operating, LLC
Pygmy State Com 003H
Incident Number: nAPP2516140823
Unit D, Section 27, T 21S, R 33E
Lea County, New Mexico

FIGURE 2



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Excavation Soil Sample Locations

COG Operating, LLC
Pygmy State Com 003H
Incident Number: nAPP2516140823
Unit D, Section 27, T 21S, R 33E
Lea County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Pygmy State Com 003H
COG Operating, LLC
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Assessment Soil Samples										
SS01	06/05/2025	0.5	<0.0996	5.95	394	6,190	<49.7	**6,584**	**6,580**	**5,740**
SS01	06/12/2025	2	<0.00202	<0.00403	<49.6	<49.6	<49.6	<49.6	<49.6	**3,380**
SS02	06/05/2025	0.5	<0.0994	59.4	1,530	6,020	<49.6	**7,550**	**7,550**	**15,400**
SS02	06/12/2025	3	1.50	143	2,300	10,200	<500	**12,500**	**12,500**	**8,020**
SS03	06/05/2025	0.5	<0.0998	10.4	618	13,100	<250	**13,718**	**13,700**	**3,970**
SS03	06/12/2025	2	<0.0996	3.83	67.4	1,590	<49.9	**1,657**	**1,660**	**1,310**
SS04	06/05/2025	0.5	<0.00200	<0.00399	<50.1	<50.1	<50.1	<50.1	<50.1	107
SS04	06/05/2025	1	<0.00199	<0.00398	<50.1	<50.1	<50.1	<50.1	<50.1	103
SS05	06/05/2025	0.5	<0.00199	<0.00398	<50.2	<50.2	<50.2	<50.2	<50.2	102
SS05	06/05/2025	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	107
SS06	06/05/2025	0.5	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	80.3
SS06	06/05/2025	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	105
SS07	06/05/2025	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	78.9
SS07	06/05/2025	1	<0.00202	<0.00404	<50.1	<50.1	<50.1	<50.1	<50.1	115
Delineation Soil Samples										
PH01	07/10/2025	3	<0.00202	2.090	285	4,220	<50.0	**4,505**	**4,510**	**717**
PH01	07/10/2025	5	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	**4,390**
PH01	07/10/2025	6	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	177
PH02	07/10/2025	1	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	108
PH02	07/10/2025	2	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	125
PH03	07/10/2025	1	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	104
PH03	07/10/2025	2	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	107
PH04	07/10/2025	1	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	<49.8	92.9
PH04	07/10/2025	2	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	75.2

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Pygmy State Com 003H
COG Operating, LLC
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
~~PH05~~	~~07/10/2025~~	~~1~~	~~<0.00200~~	~~<0.00399~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~109~~
~~PH05~~	~~07/10/2025~~	~~2~~	~~<0.00199~~	~~<0.00398~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~<50.0~~	~~118~~
Excavation Soil Samples										
FS01	08/21/2025	9	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	206
FS02	08/21/2025	7	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	183
~~FS03~~	~~08/21/2025~~	~~8~~	~~<0.00200~~	~~<0.00399~~	~~<49.8~~	~~184~~	~~<49.8~~	~~184~~	~~**184**~~	~~215~~
FS03	09/03/2025	8.5	<0.00198	<0.00396	<49.7	<49.7	<49.7	<49.7	<49.7	41.4
~~FS04~~	~~08/21/2025~~	~~7~~	~~<0.00201~~	~~<0.00402~~	~~<49.9~~	~~123~~	~~<49.9~~	~~123~~	~~**123**~~	~~378~~
FS04	09/03/2025	7.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	281
SW01	08/22/2025	0 - 8	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	76.1
SW02	08/22/2025	0 - 8	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	<49.8	36.2
SW03	08/22/2025	0 - 9	<0.00202	0.00902	<50.0	<50.0	<50.0	<50.0	<50.0	<10.1
SW04	09/03/2025	0 - 7.5	<0.00202	<0.00404	<49.8	<49.8	<49.8	<49.8	<49.8	49.3
SW05	09/03/2025	0 - 8.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	215
Backfill Soil Sample										
BF01	09/18/2025	NA	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	50.9

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NA: Not Applicable
NE: Not Established
NMOCD: New Mexico Oil Conservation Division
NMAC: New Mexico Administrative Code
SUCA: Surface Use and Compensation Agreement
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon

*Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.*
~~Grey~~ text represents samples that have been excavated

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APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE
2014 SEP 10 PM 2:15

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): CP-1349 (Tyler #1) *** ~~REVISED 09/09/14~~ ***	OSE FILE NUMBER(S):
WELL OWNER NAME(S): Merchants/Glenn's Water Well Service, Inc.	PHONE (OPTIONAL): 575-398-2424
WELL OWNER MAILING ADDRESS: P. O. Box 692	CITY: Tatum STATE: NM ZIP: 88267

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	27	11.3	N
LONGITUDE	103	33	57.7	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NE1/4SW1/4NW1/4 Section 27, Township 21 South, Range 33 East on Merchants Livestock Land

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD 421	Corky Glenn	Glenn's Water Well Service, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
07/12/14	07/18/14	1,188'	1,188'	990'

COMPLETED WELL IS: (•) ARTESIAN ( ) DRY HOLE ( ) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 572'

DRILLING FLUID: (•) AIR (•) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: (•) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0'	40'	20"	16"	None	15 1/2"	.250	
0'	754'	14 3/4"	9 5/8"	Thread & Collar	8.921"	36 lbs.	none
721'	1,188'	8 3/4"	7" (467' Total)	Thread & Collar	6.366"	23 lbs.	1/8"
			259.93' perforated				
			on bottom of liner				

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	40'	20"	Cemented	2 yds.	Top Pour
0	754'	14 3/4"	Float and shoe cemented to surface	777	Circulated

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1349	POD NUMBER	1	TRN NUMBER	548679
LOCATION	Exp1	21S.33E.27.132			PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	4'	4'	Sand	○ Y ◉ N	
4'	19'	15'	Caliche	○ Y ◉ N	
19'	35'	16'	Sand & Clay	○ Y ◉ N	
35'	122'	87'	Red Clay	○ Y ◉ N	
122'	145'	23'	Sandy Red Clay	○ Y ◉ N	
145'	417'	272'	Red & Brown Clay	○ Y ◉ N	
417'	720'	303'	Brown & Red Shale (some clay)	○ Y ◉ N	
720'	742'	22'	Red, Brown & Blue Clay	○ Y ◉ N	
742'	753'	11'	Brown Shale & Brown Sandrock	○ Y ◉ N	
753'	805'	52'	Red & Blue Clay	○ Y ◉ N	
805'	837'	32'	Brown & Red Shale (some sandrock)	○ Y ◉ N	
837'	885'	48'	Brown Sandrock & Shale	○ Y ◉ N	
885'	990'	105'	Red & Brown Shale (some sandrock)	○ Y ◉ N	
990'	1188'	198'	Watersand (Brown Sandrock)	◉ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ◉ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:
0' to 754' drilled with mud.
754' to 1,188' drilled with air and foam.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Corky Glenn — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

9/9/14 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1349	POD NUMBER	1	TRN NUMBER	548699
LOCATION	21S.33E.27.132				PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2014 AUG -4 AM 10: 48

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): CP - 1349 (Tyler #1)	OSE FILE NUMBER(S):
WELL OWNER NAME(S): Merchants Livestock/Glenn's Water Well Servcie, Inc.	PHONE (OPTIONAL): (575)398-2424
WELL OWNER MAILING ADDRESS: P.O. Box 692	CITY: Tatum STATE: NM ZIP: 88267

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	27	11.3	N
LONGITUDE	103	33	37.7	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

NE/SW/NW Sec. 27, T21S, R33E on Merchants Livestock Land

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD 421	Corky Glenn	Glenn's Water Well Service, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
7/12/14	7/18/14	1188'	1188'	990'

COMPLETED WELL IS: (•) ARTESIAN ( ) DRY HOLE ( ) SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT):

DRILLING FLUID: (•) AIR ( ) MUD ADDITIVES – SPECIFY:

DRILLING METHOD: (•) ROTARY ( ) HAMMER ( ) CABLE TOOL ( ) OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0'	40'	20"	16"	none	15 1/2'	.250	
0'	754'	14 3/4"	9 5/8"	Thread and collar	.352	36 lbs.	none
721'	1188'	8 3/4"	7"	Thread and collar	6.5"	23 lbs.	1/8"

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0'	40'	20"	Cemented	2 yds.	Top Pour
0'	754'	14 3/4"	Float and shoe cemented to surface	740	Circulated

FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1349	POD NUMBER	1	TRN NUMBER	548679
LOCATION	21S.33E.27.231				PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0'	4'	4'	Sand	○ Y ◉ N	
4'	19'	15'	Caleche	○ Y ◉ N	
19'	35'	16'	Sand & Clay	○ Y ◉ N	
35'	122'	87'	Red Sand	○ Y ◉ N	
122'	145'	23'	Sandy Red Clay	○ Y ◉ N	
145'	417'	272'	Red & Brown Clay	○ Y ◉ N	
417'	720'	303'	Brown & Red Shale (some clay)	○ Y ◉ N	
720'	742'	22'	Red, Brown & Blue Clay	○ Y ◉ N	
742'	753'	11'	Brown Shale & Brown Sandrock	○ Y ◉ N	
753'	805'	52'	Red & Blue Clay	○ Y ◉ N	
805'	837'	32'	Brown & Red Shale (some sandrock)	○ Y ◉ N	
837'	885'	48'	Brown Sandrock & Shale	○ Y ◉ N	
855'	990'	105'	Red & Brown Shale (some sandrock)	○ Y ◉ N	
990'	1188'	198'	Watersand(Brown sandrock)	◉ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ◉ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 50

5. TEST; RIG SUPERVISION

WELL TEST | TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

0' to 754' drilled with mud. 754' to 1188' drilled with air and foam.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Corky Glenn — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

8/1/14 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1349	POD NUMBER	1	TRN NUMBER	548679
LOCATION	21S.33E.27.231				PAGE 2 OF 2

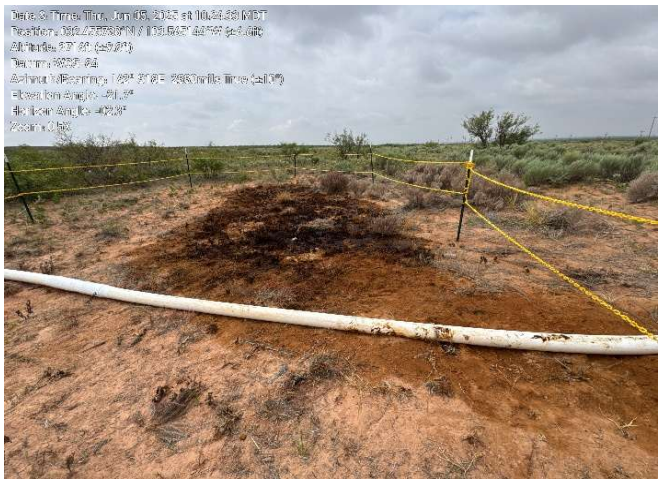
ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
COG Operating, LLC
Pygmy State Com 003H
Incident Number nAPP2516140823



Photograph: 1 Date: 6/5/2025
Description: Soil staining in release footprint
View: Southeast

Photograph: 2 Date: 6/5/2025
Description: Soil staining in release footprint
View: Southwest

Photograph: 3 Date: 6/5/2025
Description: Soil staining in release footprint
View: Northeast

Photograph: 4 Date: 6/5/2025
Description: Soil staining in release footprint
View: Southeast

ENSOLUM

Photographic Log
COG Operating, LLC
Pygmy State Com 003H
Incident Number nAPP2516140823

Photograph: 5 Date: 7/10/2025
Description: Delineation activities
View: Northwest

Photograph: 6 Date: 8/12/2025
Description: Excavation activities
View: Southwest

Photograph: 7 Date: 8/22/2025
Description: Excavation activities
View: Northeast

Photograph: 8 Date: 9/3/2025
Description: Excavation activities
View: Southeast

ENSOLUM

Photographic Log
COG Operating, LLC
Pygmy State Com 003H
Incident Number nAPP2516140823

Photograph: 9 Date: 9/3/2025
Description: Excavation activities
View: Southwest

Photograph: 10 Date: 10/2/2025
Description: Backfill and seeding activities
View: South

Photograph: 11 Date: 10/2/2025
Description: Backfill and seeding activities
View: East

Photograph: 12 Date: 10/2/2025
Description: Backfill and seeding activities
View: North

ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: SS01	Date: 6/12/2025
	Site Name: Pygmy State Com 003H	
	Incident Number: NAPP2516140823	
	Job Number: 03D2024356	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: RU	Method: Hand Auger
Coordinates: 32.455726, -103.565162	Hole Diameter: 4"	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	>3,438.4	966.0	N		1	1	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.
M	2,968	5.7	N	SS01	2	2	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.

Total depth @ 2 feet

ENSOLUM

	Sample Name: SS02	Date: 06/12/2025
	Site Name: Pygmy State Com 003H	
	Incident Number: NAPP2516140823	
	Job Number: 03D2024356	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: RU	Method: Hand Auger
Coordinates: 32.455703, -103.565125	Hole Diameter: 4"	Total Depth: 3'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	>3,438.4	1,540.0	N			1	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.
M	>3,438.4	1,242.0	N			2	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.
M	>3,438.4	348.0	N	SS03	3	3	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.

Total depth @ 3 feet

ENSOLUM

	Sample Name: SS03	Date: 06/12/2025
	Site Name: Pygmy State Com 003H	
	Incident Number: NAPP2516140823	
	Job Number: 03D2024356	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: RU	Method: Hand Auger
Coordinates: 32.455674, -103.565102	Hole Diameter: 4"	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	>3,438.4	734.2	N			1	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.
M	1,724.8	456.3	N	SS03	2	2	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.

Total depth @ 2 feet

ENSOLUM

	Sample Name: PH01	Date: 07/10/2025
	Site Name: Pygmy State Com 003H	
	Incident Number: NAPP2516140823	
	Job Number: 03D2024356	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LT	Method: Backhoe
Coordinates: 32.455694, -103.565120	Hole Diameter: NA	Total Depth: 8'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
						1		
						2		
M	1,456	1,793	N	PH01	3	3	SP	Fine grained sand, reddish/brown, poorly graded, slight odor, moist, soft and loose.
D	>3,522.4	399.4	N			4	GW	Oil odor, light tan/brown, loose, medium sand, dry, minor gravel.
D	>3.522.4	5.8	N	PH01	5	5	SP	Tan brown, poorly graded, sandy, minor gravel, fine sand.
D	257.6	12.7	N	PH01	6	6	SP	Tanish brown, poorly graded, loose, medium hardness, sandy, dry.
D	537.6	76.1	N			7	SP	Tanish brown, poorly graded, loose, medium hardness, sandy, dry.
D	1,204	46.5	N			8	SP	Tanish brown, poorly graded, loose, medium hardness, sandy, dry.
						9		Refusal

Total depth @ 8 feet

ENSOLUM

	Sample Name: PH02	Date: 07/10/2025
	Site Name: Pygmy State Com 003H	
	Incident Number: NAPP2516140823	
	Job Number: 03D2024356	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LT	Method: Hand Auger
Coordinates: 32.455697, -103.565088	Hole Diameter: 4"	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	<162.4	4.0	N	PH02	1	1	SP	Sandy, very fine, brown-red, soft, loose, poorly graded.
M	<162.4	3.5	N	PH02	2	2	SP	Sandy, very fine, brown-red, soft, loose, poorly graded.
Total depth @ 2 feet								

ENSOLUM

	Sample Name: PH03	Date: 07/10/2025
	Site Name: Pygmy State Com 003H	
	Incident Number: NAPP2516140823	
	Job Number: 03D2024356	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LT	Method: Hand Auger
Coordinates: 32.455653, -103.565088	Hole Diameter: 4"	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	<162.4	3.1	N	PH03	1	1	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.
M	<162.4	2.7	N	PH03	2	2	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.
Total Depth @ 2 feet								

ENSOLUM

	Sample Name: PH04	Date: 07/10/2025
	Site Name: Pygmy State Com 003H	
	Incident Number: NAPP2516140823	
	Job Number: 03D2024356	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LT	Method: Hand Auger
Coordinates: 32.455687, -103.565149	Hole Diameter: 4"	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	<162.4	0.2	N	PH04	1	1	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.
M	<162.4	0.1	N	PH04	2	2	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.

Total depth @ 2 feet

ENSOLUM

	Sample Name: PH05	Date: 07/10/2025
	Site Name: Pygmy State Com 003H	
	Incident Number: NAPP2516140823	
	Job Number: 03D2024356	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: LT	Method: Hand Auger
Coordinates: 32.455737, -103.565169	Hole Diameter: 4"	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	<162.4	3.7	N	PH05	1	1	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.
M	<162.4	4.7	N	PH05	2	2	SP	Fine grained sand, reddish/brown, poorly graded, moist, soft and loose.

Total depth @ 2 feet

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 6/11/2025 11:18:47 AM

JOB DESCRIPTION

Pygmy 27 Stat
Eddy County

JOB NUMBER

880-59043-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

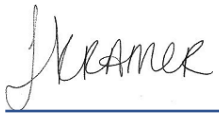
Eurofins Midland

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



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Pygmy 27 Stat

Laboratory Job ID: 880-59043-1
SDG: Eddy County

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-59043-1
Project/Site: Pygmy 27 Stat SDG: Eddy County

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project: Pygmy 27 Stat

Job ID: 880-59043-1

Job ID: 880-59043-1 Eurofins Midland

Job Narrative
880-59043-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 6/6/2025 3:30 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 2.2°C.

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-111715 and analytical batch 880-111645 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS06 (880-59043-9). 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: SS02 (880-59043-2) and SS03 (880-59043-3). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The following samples were diluted due to the nature of the sample matrix: SS01 (880-59043-1), SS02 (880-59043-2) and SS03 (880-59043-3). Elevated reporting limits (RLs) are provided.

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

Diesel Range Organics
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS01 (880-59043-1), SS02 (880-59043-2) and SS03 (880-59043-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-111735 and analytical batch 880-111818 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-111736 and analytical batch 880-111866 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS01

Lab Sample ID: 880-59043-1
Matrix: Solid
Date Collected: 06/05/25 11:04
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0996	U	0.0996		mg/Kg		06/06/25 15:50	06/06/25 23:55	50
Toluene	**1.00**		0.0996		mg/Kg		06/06/25 15:50	06/06/25 23:55	50
Ethylbenzene	**0.227**		0.0996		mg/Kg		06/06/25 15:50	06/06/25 23:55	50
m-Xylene & p-Xylene	**3.38**		0.199		mg/Kg		06/06/25 15:50	06/06/25 23:55	50
o-Xylene	**1.34**		0.0996		mg/Kg		06/06/25 15:50	06/06/25 23:55	50
Xylenes, Total	**4.72**		0.199		mg/Kg		06/06/25 15:50	06/06/25 23:55	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*06/06/25 15:50*	*06/06/25 23:55*	*50*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*06/06/25 15:50*	*06/06/25 23:55*	*50*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**5.95**		0.199		mg/Kg			06/06/25 23:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**6580**		49.7		mg/Kg			06/07/25 05:39	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	**394**		49.7		mg/Kg		06/05/25 15:34	06/07/25 05:39	1
Diesel Range Organics (Over C10-C28)	**6190**		49.7		mg/Kg		06/05/25 15:34	06/07/25 05:39	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		06/05/25 15:34	06/07/25 05:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*139*	*S1+*	*70 - 130*	*06/05/25 15:34*	*06/07/25 05:39*	*1*
o-Terphenyl	*280*	*S1+*	*70 - 130*	*06/05/25 15:34*	*06/07/25 05:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5740**		50.5		mg/Kg			06/10/25 10:33	5

Client Sample ID: SS02

Lab Sample ID: 880-59043-2
Matrix: Solid
Date Collected: 06/05/25 11:06
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0994	U	0.0994		mg/Kg		06/06/25 15:50	06/07/25 00:16	50
Toluene	**0.234**		0.0994		mg/Kg		06/06/25 15:50	06/07/25 00:16	50
Ethylbenzene	**2.31**		0.0994		mg/Kg		06/06/25 15:50	06/07/25 00:16	50
m-Xylene & p-Xylene	**39.0**		0.199		mg/Kg		06/06/25 15:50	06/07/25 00:16	50
o-Xylene	**17.9**		0.0994		mg/Kg		06/06/25 15:50	06/07/25 00:16	50
Xylenes, Total	**56.9**		0.199		mg/Kg		06/06/25 15:50	06/07/25 00:16	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*358*	*S1+*	*70 - 130*	*06/06/25 15:50*	*06/07/25 00:16*	*50*

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Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS02

Lab Sample ID: 880-59043-2
Matrix: Solid
Date Collected: 06/05/25 11:06
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/06/25 15:50*	*06/07/25 00:16*	*50*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**59.4**		0.199	mg/Kg			06/07/25 00:16	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**7550**		49.6	mg/Kg			06/07/25 05:55	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	**1530**		49.6	mg/Kg		06/05/25 15:34	06/07/25 05:55	1
Diesel Range Organics (Over C10-C28)	**6020**		49.6	mg/Kg		06/05/25 15:34	06/07/25 05:55	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		06/05/25 15:34	06/07/25 05:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*177*	*S1+*	*70 - 130*	*06/05/25 15:34*	*06/07/25 05:55*	*1*
o-Terphenyl	*247*	*S1+*	*70 - 130*	*06/05/25 15:34*	*06/07/25 05:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15400**		201	mg/Kg			06/10/25 10:54	20

Client Sample ID: SS03

Lab Sample ID: 880-59043-3
Matrix: Solid
Date Collected: 06/05/25 11:08
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0998	U	0.0998	mg/Kg		06/06/25 15:50	06/07/25 00:36	50
Toluene	**1.60**		0.0998	mg/Kg		06/06/25 15:50	06/07/25 00:36	50
Ethylbenzene	**0.469**		0.0998	mg/Kg		06/06/25 15:50	06/07/25 00:36	50
m-Xylene & p-Xylene	**4.93**		0.200	mg/Kg		06/06/25 15:50	06/07/25 00:36	50
o-Xylene	**3.39**		0.0998	mg/Kg		06/06/25 15:50	06/07/25 00:36	50
Xylenes, Total	**8.32**		0.200	mg/Kg		06/06/25 15:50	06/07/25 00:36	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*158*	*S1+*	*70 - 130*	*06/06/25 15:50*	*06/07/25 00:36*	*50*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/06/25 15:50*	*06/07/25 00:36*	*50*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**10.4**		0.200	mg/Kg			06/07/25 00:36	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**13700**		250	mg/Kg			06/07/25 06:10	1

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Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS03

Lab Sample ID: 880-59043-3
Matrix: Solid
Date Collected: 06/05/25 11:08
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

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	618		250		mg/Kg		06/05/25 15:34	06/07/25 06:10	5
Diesel Range Organics (Over C10-C28)	13100		250		mg/Kg		06/05/25 15:34	06/07/25 06:10	5
Oil Range Organics (Over C28-C36)	<250	U	250		mg/Kg		06/05/25 15:34	06/07/25 06:10	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*193*	*S1+*	*70 - 130*	*06/05/25 15:34*	*06/07/25 06:10*	*5*
o-Terphenyl	*389*	*S1+*	*70 - 130*	*06/05/25 15:34*	*06/07/25 06:10*	*5*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3970		49.9		mg/Kg			06/10/25 11:02	5

Client Sample ID: SS04

Lab Sample ID: 880-59043-4
Matrix: Solid
Date Collected: 06/05/25 10:38
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:50	06/06/25 22:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:50	06/06/25 22:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:50	06/06/25 22:13	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		06/06/25 15:50	06/06/25 22:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:50	06/06/25 22:13	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		06/06/25 15:50	06/06/25 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*06/06/25 15:50*	*06/06/25 22:13*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/06/25 15:50*	*06/06/25 22:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			06/06/25 22:13	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			06/07/25 06:26	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		06/05/25 15:34	06/07/25 06:26	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		06/05/25 15:34	06/07/25 06:26	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		06/05/25 15:34	06/07/25 06:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*06/05/25 15:34*	*06/07/25 06:26*	*1*
o-Terphenyl	*118*		*70 - 130*	*06/05/25 15:34*	*06/07/25 06:26*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS04

Date Collected: 06/05/25 10:38
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

Lab Sample ID: 880-59043-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	107		10.0		mg/Kg			06/10/25 11:23	1

Client Sample ID: SS04

Date Collected: 06/05/25 10:40
Date Received: 06/06/25 15:30
Sample Depth: 1'

Lab Sample ID: 880-59043-5
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/06/25 15:50	06/06/25 22:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/06/25 15:50	06/06/25 22:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/06/25 15:50	06/06/25 22:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/06/25 15:50	06/06/25 22:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/06/25 15:50	06/06/25 22:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/06/25 15:50	06/06/25 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*06/06/25 15:50*	*06/06/25 22:34*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*06/06/25 15:50*	*06/06/25 22:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/06/25 22:34	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			06/09/25 13:04	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		06/06/25 12:43	06/09/25 13:04	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		06/06/25 12:43	06/09/25 13:04	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		06/06/25 12:43	06/09/25 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*06/06/25 12:43*	*06/09/25 13:04*	*1*
o-Terphenyl	*116*		*70 - 130*	*06/06/25 12:43*	*06/09/25 13:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	103		9.96		mg/Kg			06/10/25 11:31	1

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS05

Date Collected: 06/05/25 10:42
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

Lab Sample ID: 880-59043-6
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/06/25 15:50	06/06/25 22:54	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/06/25 15:50	06/06/25 22:54	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/06/25 15:50	06/06/25 22:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/06/25 15:50	06/06/25 22:54	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/06/25 15:50	06/06/25 22:54	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/06/25 15:50	06/06/25 22:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*06/06/25 15:50*	*06/06/25 22:54*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/06/25 15:50*	*06/06/25 22:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/06/25 22:54	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			06/09/25 13:51	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		06/06/25 12:43	06/09/25 13:51	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		06/06/25 12:43	06/09/25 13:51	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		06/06/25 12:43	06/09/25 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*06/06/25 12:43*	*06/09/25 13:51*	*1*
o-Terphenyl	*118*		*70 - 130*	*06/06/25 12:43*	*06/09/25 13:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**102**		10.0		mg/Kg			06/10/25 11:38	1

Client Sample ID: SS05

Date Collected: 06/05/25 10:44
Date Received: 06/06/25 15:30
Sample Depth: 1'

Lab Sample ID: 880-59043-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:50	06/06/25 23:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:50	06/06/25 23:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:50	06/06/25 23:14	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		06/06/25 15:50	06/06/25 23:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:50	06/06/25 23:14	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		06/06/25 15:50	06/06/25 23:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/06/25 15:50*	*06/06/25 23:14*	*1*

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS05

Lab Sample ID: 880-59043-7
Matrix: Solid
Date Collected: 06/05/25 10:44
Date Received: 06/06/25 15:30
Sample Depth: 1'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/06/25 15:50*	*06/06/25 23:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			06/06/25 23:14	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/09/25 14:09	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		06/06/25 12:43	06/09/25 14:09	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/06/25 12:43	06/09/25 14:09	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/06/25 12:43	06/09/25 14:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*06/06/25 12:43*	*06/09/25 14:09*	*1*
o-Terphenyl	*123*		*70 - 130*	*06/06/25 12:43*	*06/09/25 14:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**107**		10.0	mg/Kg			06/10/25 11:45	1

Client Sample ID: SS06

Lab Sample ID: 880-59043-8
Matrix: Solid
Date Collected: 06/05/25 10:46
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/06/25 15:50	06/06/25 23:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/06/25 15:50	06/06/25 23:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/06/25 15:50	06/06/25 23:35	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		06/06/25 15:50	06/06/25 23:35	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/06/25 15:50	06/06/25 23:35	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		06/06/25 15:50	06/06/25 23:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*06/06/25 15:50*	*06/06/25 23:35*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*06/06/25 15:50*	*06/06/25 23:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			06/06/25 23:35	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			06/09/25 14:25	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS06

Lab Sample ID: 880-59043-8
Matrix: Solid
Date Collected: 06/05/25 10:46
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		06/06/25 12:43	06/09/25 14:25	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/06/25 12:43	06/09/25 14:25	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/06/25 12:43	06/09/25 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*06/06/25 12:43*	*06/09/25 14:25*	*1*
o-Terphenyl	*116*		*70 - 130*	*06/06/25 12:43*	*06/09/25 14:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**80.3**		10.1		mg/Kg			06/10/25 11:52	1

Client Sample ID: SS06

Lab Sample ID: 880-59043-9
Matrix: Solid
Date Collected: 06/05/25 10:48
Date Received: 06/06/25 15:30
Sample Depth: 1'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:58	06/06/25 18:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:58	06/06/25 18:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:58	06/06/25 18:46	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		06/06/25 15:58	06/06/25 18:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:58	06/06/25 18:46	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		06/06/25 15:58	06/06/25 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*177*	*S1+*	*70 - 130*	*06/06/25 15:58*	*06/06/25 18:46*	*1*
1,4-Difluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*06/06/25 15:58*	*06/06/25 18:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			06/06/25 18:46	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			06/09/25 14:41	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/06/25 12:43	06/09/25 14:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/06/25 12:43	06/09/25 14:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/06/25 12:43	06/09/25 14:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*06/06/25 12:43*	*06/09/25 14:41*	*1*
o-Terphenyl	*127*		*70 - 130*	*06/06/25 12:43*	*06/09/25 14:41*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS06

Lab Sample ID: 880-59043-9
Matrix: Solid
Date Collected: 06/05/25 10:48
Date Received: 06/06/25 15:30
Sample Depth: 1'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	105	F1	10.1		mg/Kg			06/10/25 14:12	1

Client Sample ID: SS07

Lab Sample ID: 880-59043-10
Matrix: Solid
Date Collected: 06/05/25 10:50
Date Received: 06/06/25 15:30
Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		06/06/25 15:58	06/06/25 19:06	1
Toluene	<0.00201	U	0.00201		mg/Kg		06/06/25 15:58	06/06/25 19:06	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		06/06/25 15:58	06/06/25 19:06	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		06/06/25 15:58	06/06/25 19:06	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		06/06/25 15:58	06/06/25 19:06	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		06/06/25 15:58	06/06/25 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*06/06/25 15:58*	*06/06/25 19:06*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*06/06/25 15:58*	*06/06/25 19:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			06/06/25 19:06	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			06/09/25 14:57	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/06/25 12:43	06/09/25 14:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/06/25 12:43	06/09/25 14:57	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/06/25 12:43	06/09/25 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*06/06/25 12:43*	*06/09/25 14:57*	*1*
o-Terphenyl	*119*		*70 - 130*	*06/06/25 12:43*	*06/09/25 14:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	78.9		10.1		mg/Kg			06/10/25 14:34	1

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS07

Date Collected: 06/05/25 10:52
Date Received: 06/06/25 15:30
Sample Depth: 1'

Lab Sample ID: 880-59043-11

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		06/06/25 15:58	06/06/25 19:27	1
Toluene	<0.00202	U	0.00202		mg/Kg		06/06/25 15:58	06/06/25 19:27	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/06/25 15:58	06/06/25 19:27	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		06/06/25 15:58	06/06/25 19:27	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/06/25 15:58	06/06/25 19:27	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		06/06/25 15:58	06/06/25 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*06/06/25 15:58*	*06/06/25 19:27*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*06/06/25 15:58*	*06/06/25 19:27*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			06/06/25 19:27	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			06/09/25 15:13	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		06/06/25 12:43	06/09/25 15:13	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		06/06/25 12:43	06/09/25 15:13	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		06/06/25 12:43	06/09/25 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*06/06/25 12:43*	*06/09/25 15:13*	*1*
o-Terphenyl	*121*		*70 - 130*	*06/06/25 12:43*	*06/09/25 15:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**115**		9.98		mg/Kg			06/10/25 14:41	1

Surrogate Summary

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-59043-1	SS01	96	103
880-59043-2	SS02	358 S1+	94
880-59043-3	SS03	158 S1+	100
880-59043-4	SS04	106	100
880-59043-5	SS04	97	105
880-59043-6	SS05	97	101
880-59043-7	SS05	101	101
880-59043-8	SS06	108	82
880-59043-9	SS06	177 S1+	132 S1+
880-59043-9 MS	SS06	108	101
880-59043-9 MSD	SS06	110	99
880-59043-10	SS07	121	111
880-59043-11	SS07	123	110
LCS 880-111701/1-A	Lab Control Sample	97	102
LCS 880-111715/1-A	Lab Control Sample	98	98
LCSD 880-111701/2-A	Lab Control Sample Dup	101	100
LCSD 880-111715/2-A	Lab Control Sample Dup	105	98
MB 880-111701/5-A	Method Blank	89	95
MB 880-111715/5-A	Method Blank	208 S1+	125

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-59043-1	SS01	139 S1+	280 S1+
880-59043-2	SS02	177 S1+	247 S1+
880-59043-3	SS03	193 S1+	389 S1+
880-59043-4	SS04	116	118
880-59043-5	SS04	122	116
880-59043-5 MS	SS04	109	114
880-59043-5 MSD	SS04	110	115
880-59043-6	SS05	119	118
880-59043-7	SS05	124	123
880-59043-8	SS06	118	116
880-59043-9	SS06	125	127
880-59043-10	SS07	120	119
880-59043-11	SS07	120	121
LCS 880-111637/2-A	Lab Control Sample	101	98
LCS 880-111692/2-A	Lab Control Sample	100	108
LCSD 880-111637/3-A	Lab Control Sample Dup	103	99
LCSD 880-111692/3-A	Lab Control Sample Dup	105	110
MB 880-111637/1-A	Method Blank	83	87
MB 880-111692/1-A	Method Blank	84	83

Surrogate Legend

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Surrogate Summary

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-111701/5-A
Matrix: Solid
Analysis Batch: 111642

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 111701

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/06/25 14:31	06/06/25 16:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/06/25 14:31	06/06/25 16:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/06/25 14:31	06/06/25 16:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/06/25 14:31	06/06/25 16:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/06/25 14:31	06/06/25 16:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/06/25 14:31	06/06/25 16:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*06/06/25 14:31*	*06/06/25 16:33*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*06/06/25 14:31*	*06/06/25 16:33*	*1*

Lab Sample ID: LCS 880-111701/1-A
Matrix: Solid
Analysis Batch: 111642

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 111701

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1139		mg/Kg		114	70 - 130		
Toluene			0.100	0.09834		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.1050		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2108		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1060		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-111701/2-A
Matrix: Solid
Analysis Batch: 111642

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 111701

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1131		mg/Kg		113	70 - 130	1	35
Toluene			0.100	0.09681		mg/Kg		97	70 - 130	2	35
Ethylbenzene			0.100	0.1025		mg/Kg		103	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2058		mg/Kg		103	70 - 130	2	35
o-Xylene			0.100	0.1035		mg/Kg		104	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 880-111715/5-A
Matrix: Solid
Analysis Batch: 111645

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 111715

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:58	06/06/25 18:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:58	06/06/25 18:17	1

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QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

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

Lab Sample ID: MB 880-111715/5-A
Matrix: Solid
Analysis Batch: 111645

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 111715

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:58	06/06/25 18:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/06/25 15:58	06/06/25 18:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/06/25 15:58	06/06/25 18:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/06/25 15:58	06/06/25 18:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*208*	*S1+*	*70 - 130*	*06/06/25 15:58*	*06/06/25 18:17*	*1*
1,4-Difluorobenzene (Surr)	*125*		*70 - 130*	*06/06/25 15:58*	*06/06/25 18:17*	*1*

Lab Sample ID: LCS 880-111715/1-A
Matrix: Solid
Analysis Batch: 111645

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 111715

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09670		mg/Kg		97	70 - 130		
Toluene			0.100	0.09396		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.09572		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene			0.200	0.1981		mg/Kg		99	70 - 130		
o-Xylene			0.100	0.1138		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-111715/2-A
Matrix: Solid
Analysis Batch: 111645

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 111715

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1010		mg/Kg		101	70 - 130	4	35
Toluene			0.100	0.09780		mg/Kg		98	70 - 130	4	35
Ethylbenzene			0.100	0.1046		mg/Kg		105	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2076		mg/Kg		104	70 - 130	5	35
o-Xylene			0.100	0.1198		mg/Kg		120	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 880-59043-9 MS
Matrix: Solid
Analysis Batch: 111645

Client Sample ID: SS06
Prep Type: Total/NA
Prep Batch: 111715

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.100	0.08750		mg/Kg		88	70 - 130		
Toluene	<0.00200	U	0.100	0.09294		mg/Kg		93	70 - 130		
Ethylbenzene	<0.00200	U	0.100	0.08937		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2051		mg/Kg		103	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

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

Lab Sample ID: 880-59043-9 MS
Matrix: Solid
Analysis Batch: 111645

Client Sample ID: SS06
Prep Type: Total/NA
Prep Batch: 111715

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	<0.00200	U	0.100	0.1193		mg/Kg		119	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-59043-9 MSD
Matrix: Solid
Analysis Batch: 111645

Client Sample ID: SS06
Prep Type: Total/NA
Prep Batch: 111715

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.1025		mg/Kg		102	70 - 130	16	35
Toluene	<0.00200	U	0.100	0.09173		mg/Kg		92	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.100	0.1049		mg/Kg		105	70 - 130	16	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.2255		mg/Kg		113	70 - 130	9	35
o-Xylene	<0.00200	U	0.100	0.1270		mg/Kg		127	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-111637/1-A
Matrix: Solid
Analysis Batch: 111716

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 111637

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		06/05/25 15:34	06/07/25 00:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/05/25 15:34	06/07/25 00:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/05/25 15:34	06/07/25 00:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*06/05/25 15:34*	*06/07/25 00:04*	*1*
o-Terphenyl	*87*		*70 - 130*	*06/05/25 15:34*	*06/07/25 00:04*	*1*

Lab Sample ID: LCS 880-111637/2-A
Matrix: Solid
Analysis Batch: 111716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 111637

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	981.5		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	1000	866.0		mg/Kg		87	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

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

Lab Sample ID: LCS 880-111637/2-A
Matrix: Solid
Analysis Batch: 111716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 111637

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: LCSD 880-111637/3-A
Matrix: Solid
Analysis Batch: 111716

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 111637

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	999.9		mg/Kg		100	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	878.3		mg/Kg		88	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	99		70 - 130

Lab Sample ID: MB 880-111692/1-A
Matrix: Solid
Analysis Batch: 111786

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 111692

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/06/25 12:42	06/09/25 09:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/06/25 12:42	06/09/25 09:35	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/06/25 12:42	06/09/25 09:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130	06/06/25 12:42	06/09/25 09:35	1
o-Terphenyl	83		70 - 130	06/06/25 12:42	06/09/25 09:35	1

Lab Sample ID: LCS 880-111692/2-A
Matrix: Solid
Analysis Batch: 111786

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 111692

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	916.9		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1036		mg/Kg		104	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	108		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

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

Lab Sample ID: LCSD 880-111692/3-A
Matrix: Solid
Analysis Batch: 111786

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 111692

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	961.1		mg/Kg		96	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	1075		mg/Kg		107	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: 880-59043-5 MS
Matrix: Solid
Analysis Batch: 111786

Client Sample ID: SS04
Prep Type: Total/NA
Prep Batch: 111692

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	999	758.5		mg/Kg		76	70 - 130
Diesel Range Organics (Over C10-C28)	<50.1	U	999	876.3		mg/Kg		88	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*109*		*70 - 130*
o-Terphenyl	*114*		*70 - 130*

Lab Sample ID: 880-59043-5 MSD
Matrix: Solid
Analysis Batch: 111786

Client Sample ID: SS04
Prep Type: Total/NA
Prep Batch: 111692

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	999	787.5		mg/Kg		79	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<50.1	U	999	879.5		mg/Kg		88	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-111735/1-A
Matrix: Solid
Analysis Batch: 111818

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			06/10/25 08:29	1

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-111735/2-A
Matrix: Solid
Analysis Batch: 111818

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	260.1		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-111735/3-A
Matrix: Solid
Analysis Batch: 111818

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	261.6		mg/Kg		105	90 - 110	1	20

Lab Sample ID: 880-59043-1 MS
Matrix: Solid
Analysis Batch: 111818

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	5740		1260	6703	4	mg/Kg		76	90 - 110		

Lab Sample ID: 880-59043-1 MSD
Matrix: Solid
Analysis Batch: 111818

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5740		1260	6819	4	mg/Kg		85	90 - 110	2	20

Lab Sample ID: MB 880-111736/1-A
Matrix: Solid
Analysis Batch: 111866

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			06/10/25 13:50	1

Lab Sample ID: LCS 880-111736/2-A
Matrix: Solid
Analysis Batch: 111866

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	266.9		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-111736/3-A
Matrix: Solid
Analysis Batch: 111866

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	265.4		mg/Kg		106	90 - 110	1	20

Lab Sample ID: 880-59043-9 MS
Matrix: Solid
Analysis Batch: 111866

Client Sample ID: SS06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	105	F1	252	403.9	F1	mg/Kg		119	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-59043-9 MSD
Matrix: Solid
Analysis Batch: 111866

Client Sample ID: SS06
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	105	F1	252	404.5	F1	mg/Kg		119	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

GC VOA

Analysis Batch: 111642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-1	SS01	Total/NA	Solid	8021B	111701
880-59043-2	SS02	Total/NA	Solid	8021B	111701
880-59043-3	SS03	Total/NA	Solid	8021B	111701
880-59043-4	SS04	Total/NA	Solid	8021B	111701
880-59043-5	SS04	Total/NA	Solid	8021B	111701
880-59043-6	SS05	Total/NA	Solid	8021B	111701
880-59043-7	SS05	Total/NA	Solid	8021B	111701
880-59043-8	SS06	Total/NA	Solid	8021B	111701
MB 880-111701/5-A	Method Blank	Total/NA	Solid	8021B	111701
LCS 880-111701/1-A	Lab Control Sample	Total/NA	Solid	8021B	111701
LCSD 880-111701/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	111701

Analysis Batch: 111645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-9	SS06	Total/NA	Solid	8021B	111715
880-59043-10	SS07	Total/NA	Solid	8021B	111715
880-59043-11	SS07	Total/NA	Solid	8021B	111715
MB 880-111715/5-A	Method Blank	Total/NA	Solid	8021B	111715
LCS 880-111715/1-A	Lab Control Sample	Total/NA	Solid	8021B	111715
LCSD 880-111715/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	111715
880-59043-9 MS	SS06	Total/NA	Solid	8021B	111715
880-59043-9 MSD	SS06	Total/NA	Solid	8021B	111715

Prep Batch: 111701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-1	SS01	Total/NA	Solid	5035	
880-59043-2	SS02	Total/NA	Solid	5035	
880-59043-3	SS03	Total/NA	Solid	5035	
880-59043-4	SS04	Total/NA	Solid	5035	
880-59043-5	SS04	Total/NA	Solid	5035	
880-59043-6	SS05	Total/NA	Solid	5035	
880-59043-7	SS05	Total/NA	Solid	5035	
880-59043-8	SS06	Total/NA	Solid	5035	
MB 880-111701/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-111701/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-111701/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 111715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-9	SS06	Total/NA	Solid	5035	
880-59043-10	SS07	Total/NA	Solid	5035	
880-59043-11	SS07	Total/NA	Solid	5035	
MB 880-111715/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-111715/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-111715/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-59043-9 MS	SS06	Total/NA	Solid	5035	
880-59043-9 MSD	SS06	Total/NA	Solid	5035	

Analysis Batch: 111819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-1	SS01	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

GC VOA (Continued)

Analysis Batch: 111819 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-2	SS02	Total/NA	Solid	Total BTEX	
880-59043-3	SS03	Total/NA	Solid	Total BTEX	
880-59043-4	SS04	Total/NA	Solid	Total BTEX	
880-59043-5	SS04	Total/NA	Solid	Total BTEX	
880-59043-6	SS05	Total/NA	Solid	Total BTEX	
880-59043-7	SS05	Total/NA	Solid	Total BTEX	
880-59043-8	SS06	Total/NA	Solid	Total BTEX	
880-59043-9	SS06	Total/NA	Solid	Total BTEX	
880-59043-10	SS07	Total/NA	Solid	Total BTEX	
880-59043-11	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 111637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-1	SS01	Total/NA	Solid	8015NM Prep	
880-59043-2	SS02	Total/NA	Solid	8015NM Prep	
880-59043-3	SS03	Total/NA	Solid	8015NM Prep	
880-59043-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-111637/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-111637/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-111637/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 111692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-5	SS04	Total/NA	Solid	8015NM Prep	
880-59043-6	SS05	Total/NA	Solid	8015NM Prep	
880-59043-7	SS05	Total/NA	Solid	8015NM Prep	
880-59043-8	SS06	Total/NA	Solid	8015NM Prep	
880-59043-9	SS06	Total/NA	Solid	8015NM Prep	
880-59043-10	SS07	Total/NA	Solid	8015NM Prep	
880-59043-11	SS07	Total/NA	Solid	8015NM Prep	
MB 880-111692/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-111692/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-111692/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-59043-5 MS	SS04	Total/NA	Solid	8015NM Prep	
880-59043-5 MSD	SS04	Total/NA	Solid	8015NM Prep	

Analysis Batch: 111716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-1	SS01	Total/NA	Solid	8015B NM	111637
880-59043-2	SS02	Total/NA	Solid	8015B NM	111637
880-59043-3	SS03	Total/NA	Solid	8015B NM	111637
880-59043-4	SS04	Total/NA	Solid	8015B NM	111637
MB 880-111637/1-A	Method Blank	Total/NA	Solid	8015B NM	111637
LCS 880-111637/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	111637
LCSD 880-111637/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	111637

Analysis Batch: 111786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-5	SS04	Total/NA	Solid	8015B NM	111692

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

GC Semi VOA (Continued)

Analysis Batch: 111786 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-6	SS05	Total/NA	Solid	8015B NM	111692
880-59043-7	SS05	Total/NA	Solid	8015B NM	111692
880-59043-8	SS06	Total/NA	Solid	8015B NM	111692
880-59043-9	SS06	Total/NA	Solid	8015B NM	111692
880-59043-10	SS07	Total/NA	Solid	8015B NM	111692
880-59043-11	SS07	Total/NA	Solid	8015B NM	111692
MB 880-111692/1-A	Method Blank	Total/NA	Solid	8015B NM	111692
LCS 880-111692/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	111692
LCSD 880-111692/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	111692
880-59043-5 MS	SS04	Total/NA	Solid	8015B NM	111692
880-59043-5 MSD	SS04	Total/NA	Solid	8015B NM	111692

Analysis Batch: 111808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-1	SS01	Total/NA	Solid	8015 NM	
880-59043-2	SS02	Total/NA	Solid	8015 NM	
880-59043-3	SS03	Total/NA	Solid	8015 NM	
880-59043-4	SS04	Total/NA	Solid	8015 NM	
880-59043-5	SS04	Total/NA	Solid	8015 NM	
880-59043-6	SS05	Total/NA	Solid	8015 NM	
880-59043-7	SS05	Total/NA	Solid	8015 NM	
880-59043-8	SS06	Total/NA	Solid	8015 NM	
880-59043-9	SS06	Total/NA	Solid	8015 NM	
880-59043-10	SS07	Total/NA	Solid	8015 NM	
880-59043-11	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 111735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-1	SS01	Soluble	Solid	DI Leach	
880-59043-2	SS02	Soluble	Solid	DI Leach	
880-59043-3	SS03	Soluble	Solid	DI Leach	
880-59043-4	SS04	Soluble	Solid	DI Leach	
880-59043-5	SS04	Soluble	Solid	DI Leach	
880-59043-6	SS05	Soluble	Solid	DI Leach	
880-59043-7	SS05	Soluble	Solid	DI Leach	
880-59043-8	SS06	Soluble	Solid	DI Leach	
MB 880-111735/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-111735/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-111735/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-59043-1 MS	SS01	Soluble	Solid	DI Leach	
880-59043-1 MSD	SS01	Soluble	Solid	DI Leach	

Leach Batch: 111736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-9	SS06	Soluble	Solid	DI Leach	
880-59043-10	SS07	Soluble	Solid	DI Leach	
880-59043-11	SS07	Soluble	Solid	DI Leach	
MB 880-111736/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-111736/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

HPLC/IC (Continued)

Leach Batch: 111736 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-111736/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-59043-9 MS	SS06	Soluble	Solid	DI Leach	
880-59043-9 MSD	SS06	Soluble	Solid	DI Leach	

Analysis Batch: 111818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-1	SS01	Soluble	Solid	300.0	111735
880-59043-2	SS02	Soluble	Solid	300.0	111735
880-59043-3	SS03	Soluble	Solid	300.0	111735
880-59043-4	SS04	Soluble	Solid	300.0	111735
880-59043-5	SS04	Soluble	Solid	300.0	111735
880-59043-6	SS05	Soluble	Solid	300.0	111735
880-59043-7	SS05	Soluble	Solid	300.0	111735
880-59043-8	SS06	Soluble	Solid	300.0	111735
MB 880-111735/1-A	Method Blank	Soluble	Solid	300.0	111735
LCS 880-111735/2-A	Lab Control Sample	Soluble	Solid	300.0	111735
LCSD 880-111735/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	111735
880-59043-1 MS	SS01	Soluble	Solid	300.0	111735
880-59043-1 MSD	SS01	Soluble	Solid	300.0	111735

Analysis Batch: 111866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59043-9	SS06	Soluble	Solid	300.0	111736
880-59043-10	SS07	Soluble	Solid	300.0	111736
880-59043-11	SS07	Soluble	Solid	300.0	111736
MB 880-111736/1-A	Method Blank	Soluble	Solid	300.0	111736
LCS 880-111736/2-A	Lab Control Sample	Soluble	Solid	300.0	111736
LCSD 880-111736/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	111736
880-59043-9 MS	SS06	Soluble	Solid	300.0	111736
880-59043-9 MSD	SS06	Soluble	Solid	300.0	111736

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS01
Date Collected: 06/05/25 11:04
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111701	MNR	EET MID	06/06/25 15:50
Total/NA	Analysis	8021B		50	111642	MNR	EET MID	06/06/25 23:55
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/06/25 23:55
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/07/25 05:39
Total/NA	Prep	8015NM Prep			111637	FC	EET MID	06/05/25 15:34
Total/NA	Analysis	8015B NM		1	111716	TKC	EET MID	06/07/25 05:39
Soluble	Leach	DI Leach			111735	SMC	EET MID	06/07/25 14:08
Soluble	Analysis	300.0		5	111818	CH	EET MID	06/10/25 10:33

Client Sample ID: SS02
Date Collected: 06/05/25 11:06
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111701	MNR	EET MID	06/06/25 15:50
Total/NA	Analysis	8021B		50	111642	MNR	EET MID	06/07/25 00:16
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/07/25 00:16
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/07/25 05:55
Total/NA	Prep	8015NM Prep			111637	FC	EET MID	06/05/25 15:34
Total/NA	Analysis	8015B NM		1	111716	TKC	EET MID	06/07/25 05:55
Soluble	Leach	DI Leach			111735	SMC	EET MID	06/07/25 14:08
Soluble	Analysis	300.0		20	111818	CH	EET MID	06/10/25 10:54

Client Sample ID: SS03
Date Collected: 06/05/25 11:08
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111701	MNR	EET MID	06/06/25 15:50
Total/NA	Analysis	8021B		50	111642	MNR	EET MID	06/07/25 00:36
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/07/25 00:36
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/07/25 06:10
Total/NA	Prep	8015NM Prep			111637	FC	EET MID	06/05/25 15:34
Total/NA	Analysis	8015B NM		5	111716	TKC	EET MID	06/07/25 06:10
Soluble	Leach	DI Leach			111735	SMC	EET MID	06/07/25 14:08
Soluble	Analysis	300.0		5	111818	CH	EET MID	06/10/25 11:02

Client Sample ID: SS04
Date Collected: 06/05/25 10:38
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111701	MNR	EET MID	06/06/25 15:50
Total/NA	Analysis	8021B		1	111642	MNR	EET MID	06/06/25 22:13
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/06/25 22:13

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS04
Date Collected: 06/05/25 10:38
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/07/25 06:26
Total/NA	Prep	8015NM Prep			111637	FC	EET MID	06/05/25 15:34
Total/NA	Analysis	8015B NM		1	111716	TKC	EET MID	06/07/25 06:26
Soluble	Leach	DI Leach			111735	SMC	EET MID	06/07/25 14:08
Soluble	Analysis	300.0		1	111818	CH	EET MID	06/10/25 11:23

Client Sample ID: SS04
Date Collected: 06/05/25 10:40
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111701	MNR	EET MID	06/06/25 15:50
Total/NA	Analysis	8021B		1	111642	MNR	EET MID	06/06/25 22:34
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/06/25 22:34
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/09/25 13:04
Total/NA	Prep	8015NM Prep			111692	FC	EET MID	06/06/25 12:43
Total/NA	Analysis	8015B NM		1	111786	TKC	EET MID	06/09/25 13:04
Soluble	Leach	DI Leach			111735	SMC	EET MID	06/07/25 14:08
Soluble	Analysis	300.0		1	111818	CH	EET MID	06/10/25 11:31

Client Sample ID: SS05
Date Collected: 06/05/25 10:42
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111701	MNR	EET MID	06/06/25 15:50
Total/NA	Analysis	8021B		1	111642	MNR	EET MID	06/06/25 22:54
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/06/25 22:54
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/09/25 13:51
Total/NA	Prep	8015NM Prep			111692	FC	EET MID	06/06/25 12:43
Total/NA	Analysis	8015B NM		1	111786	TKC	EET MID	06/09/25 13:51
Soluble	Leach	DI Leach			111735	SMC	EET MID	06/07/25 14:08
Soluble	Analysis	300.0		1	111818	CH	EET MID	06/10/25 11:38

Client Sample ID: SS05
Date Collected: 06/05/25 10:44
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111701	MNR	EET MID	06/06/25 15:50
Total/NA	Analysis	8021B		1	111642	MNR	EET MID	06/06/25 23:14
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/06/25 23:14
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/09/25 14:09
Total/NA	Prep	8015NM Prep			111692	FC	EET MID	06/06/25 12:43
Total/NA	Analysis	8015B NM		1	111786	TKC	EET MID	06/09/25 14:09

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS05
Date Collected: 06/05/25 10:44
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			111735	SMC	EET MID	06/07/25 14:08
Soluble	Analysis	300.0		1	111818	CH	EET MID	06/10/25 11:45

Client Sample ID: SS06
Date Collected: 06/05/25 10:46
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111701	MNR	EET MID	06/06/25 15:50
Total/NA	Analysis	8021B		1	111642	MNR	EET MID	06/06/25 23:35
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/06/25 23:35
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/09/25 14:25
Total/NA	Prep	8015NM Prep			111692	FC	EET MID	06/06/25 12:43
Total/NA	Analysis	8015B NM		1	111786	TKC	EET MID	06/09/25 14:25
Soluble	Leach	DI Leach			111735	SMC	EET MID	06/07/25 14:08
Soluble	Analysis	300.0		1	111818	CH	EET MID	06/10/25 11:52

Client Sample ID: SS06
Date Collected: 06/05/25 10:48
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111715	MNR	EET MID	06/06/25 15:58
Total/NA	Analysis	8021B		1	111645	MNR	EET MID	06/06/25 18:46
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/06/25 18:46
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/09/25 14:41
Total/NA	Prep	8015NM Prep			111692	FC	EET MID	06/06/25 12:43
Total/NA	Analysis	8015B NM		1	111786	TKC	EET MID	06/09/25 14:41
Soluble	Leach	DI Leach			111736	SMC	EET MID	06/07/25 14:11
Soluble	Analysis	300.0		1	111866	CH	EET MID	06/10/25 14:12

Client Sample ID: SS07
Date Collected: 06/05/25 10:50
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111715	MNR	EET MID	06/06/25 15:58
Total/NA	Analysis	8021B		1	111645	MNR	EET MID	06/06/25 19:06
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/06/25 19:06
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/09/25 14:57
Total/NA	Prep	8015NM Prep			111692	FC	EET MID	06/06/25 12:43
Total/NA	Analysis	8015B NM		1	111786	TKC	EET MID	06/09/25 14:57
Soluble	Leach	DI Leach			111736	SMC	EET MID	06/07/25 14:11
Soluble	Analysis	300.0		1	111866	CH	EET MID	06/10/25 14:34

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Client Sample ID: SS07

Date Collected: 06/05/25 10:52
Date Received: 06/06/25 15:30

Lab Sample ID: 880-59043-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			111715	MNR	EET MID	06/06/25 15:58
Total/NA	Analysis	8021B		1	111645	MNR	EET MID	06/06/25 19:27
Total/NA	Analysis	Total BTEX		1	111819	SM	EET MID	06/06/25 19:27
Total/NA	Analysis	8015 NM		1	111808	SM	EET MID	06/09/25 15:13
Total/NA	Prep	8015NM Prep			111692	FC	EET MID	06/06/25 12:43
Total/NA	Analysis	8015B NM		1	111786	TKC	EET MID	06/09/25 15:13
Soluble	Leach	DI Leach			111736	SMC	EET MID	06/07/25 14:11
Soluble	Analysis	300.0		1	111866	CH	EET MID	06/10/25 14:41

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

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: Pygmy 27 Stat

Job ID: 880-59043-1
SDG: Eddy County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-59043-1	SS01	Solid	06/05/25 11:04	06/06/25 15:30	0.5'
880-59043-2	SS02	Solid	06/05/25 11:06	06/06/25 15:30	0.5'
880-59043-3	SS03	Solid	06/05/25 11:08	06/06/25 15:30	0.5'
880-59043-4	SS04	Solid	06/05/25 10:38	06/06/25 15:30	0.5'
880-59043-5	SS04	Solid	06/05/25 10:40	06/06/25 15:30	1'
880-59043-6	SS05	Solid	06/05/25 10:42	06/06/25 15:30	0.5'
880-59043-7	SS05	Solid	06/05/25 10:44	06/06/25 15:30	1'
880-59043-8	SS06	Solid	06/05/25 10:46	06/06/25 15:30	0.5'
880-59043-9	SS06	Solid	06/05/25 10:48	06/06/25 15:30	1'
880-59043-10	SS07	Solid	06/05/25 10:50	06/06/25 15:30	0.5'
880-59043-11	SS07	Solid	06/05/25 10:52	06/06/25 15:30	1'

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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

880-59043 Chain of Custody

www.xenco.com Page 1 of 2

Project Manager:	Hadlie Green	Bill to: (if different)	Ensolum (Hadlie Green)
Company Name:	Ensolum, LLC	Company Name:	
Address:	601 N Marienfeld St Ste 400	Address:	
City, State ZIP:	Midland, TX 79701	City, State ZIP:	
Phone:	(432)-557-8895	Email:	hgreen@ensolum.com/tguadian@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	03D2024356	Turn Around	
Project Number:	Pygmy 27 State 3H Produced water	☐ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	
Sampler's Name:	Tabitha Guadian	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	03D2024356		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR-8
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	2.3
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.2
Total Containers:		Corrected Temperature:	IR-8

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2SO_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX 8021	TPH 8015	Chlorides 300	Sample Comments
SS01	S	6/5/25	1104	0.5'	G	1		X	X	X	
SS02			1106	0.5'	G			X	X	X	
SS03			1108	0.5'	G			X	X	X	
SS04			1038	0.5'	G			X	X	X	
SS04			1040	1'	G			X	X	X	
SS05			1042	0.5'	G			X	X	X	
SS05			1044	1'	G			X	X	X	
SS06			1046	0.5'	G			X	X	X	
SS06			1048	1'	G			X	X	X	
SS07			1050	0.5	G			X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		6/5/25 650	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Hadlie Green	Bill to: (if different)	Ensolum (Hadlie Green)
Company Name:	Ensolum, LLC	Company Name:	
Address:	601 N Marienfeld St Ste 400	Address:	
City, State ZIP:	Midland, TX 79701	City, State ZIP:	
Phone:	(432)557-8895	Email:	hgreene@ensolum.com/tguardian@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pygmy 27 State 3H Produced Water	Turn Around	
Project Number:	03D2024356	☐ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	
Sampler's Name:	Tabitha Guardian	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	03D2024356		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR 8
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.3
Total Containers:		Corrected Temperature:	2.2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX 8021	TPH 8015	Chlorides 300	Sample Comments
SS07	S	6/5/25	1052	1'	G	1		X	X	X	

AFE

6/5/25

TNG

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		6/5/25 1530	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-59043-1
SDG Number: Eddy County

Login Number: 59043
List Number: 1
Creator: Vasquez, Julisa

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

Pygmy 27 State 3H
Eunice

JOB NUMBER

880-59279-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

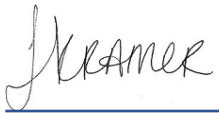
Eurofins Midland

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



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Laboratory Job ID: 880-59279-1
SDG: Eunice

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-59279-1
Project/Site: Pygmy 27 State 3H SDG: Eunice

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

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project: Pygmy 27 State 3H

Job ID: 880-59279-1

Job ID: 880-59279-1 Eurofins Midland

Job Narrative
880-59279-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 6/13/2025 8:45 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 3.9°C.

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-112210 and analytical batch 880-112158 were outside control limits. Non-homogeneity is 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: SS02 (880-59279-2). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: SS02 (880-59279-2). 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.

Diesel Range Organics
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS02 (880-59279-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC
Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-112228 and analytical batch 880-112234 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

Client Sample ID: SS01

Lab Sample ID: 880-59279-1
Matrix: Solid
Date Collected: 06/12/25 10:00
Date Received: 06/13/25 08:45
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		06/13/25 11:44	06/13/25 21:37	1
Toluene	<0.00202	U	0.00202		mg/Kg		06/13/25 11:44	06/13/25 21:37	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/13/25 11:44	06/13/25 21:37	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		06/13/25 11:44	06/13/25 21:37	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/13/25 11:44	06/13/25 21:37	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		06/13/25 11:44	06/13/25 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*06/13/25 11:44*	*06/13/25 21:37*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*06/13/25 11:44*	*06/13/25 21:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			06/13/25 21:37	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			06/14/25 01:36	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	<49.6	U	49.6		mg/Kg		06/13/25 09:51	06/14/25 01:36	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		06/13/25 09:51	06/14/25 01:36	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		06/13/25 09:51	06/14/25 01:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*06/13/25 09:51*	*06/14/25 01:36*	*1*
o-Terphenyl	*111*		*70 - 130*	*06/13/25 09:51*	*06/14/25 01:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3380**	**F1**	50.0		mg/Kg			06/16/25 15:02	5

Client Sample ID: SS02

Lab Sample ID: 880-59279-2
Matrix: Solid
Date Collected: 06/12/25 12:20
Date Received: 06/13/25 08:45
Sample Depth: 3'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.50**		0.0996		mg/Kg		06/13/25 11:44	06/13/25 19:22	50
Toluene	**37.8**		1.00		mg/Kg		06/20/25 11:15	06/20/25 15:08	500
Ethylbenzene	**15.5**		0.0996		mg/Kg		06/13/25 11:44	06/13/25 19:22	50
m-Xylene & p-Xylene	**69.6**		2.01		mg/Kg		06/20/25 11:15	06/20/25 15:08	500
o-Xylene	**18.1**		0.0996		mg/Kg		06/13/25 11:44	06/13/25 19:22	50
Xylenes, Total	**97.5**		2.01		mg/Kg		06/20/25 11:15	06/20/25 15:08	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*334*	*S1+*	*70 - 130*	*06/13/25 11:44*	*06/13/25 19:22*	*50*

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Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

Client Sample ID: SS02

Date Collected: 06/12/25 12:20
Date Received: 06/13/25 08:45
Sample Depth: 3'

Lab Sample ID: 880-59279-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*06/13/25 11:44*	*06/13/25 19:22*	*50*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**143**		2.01		mg/Kg			06/20/25 15:08	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**12500**		500		mg/Kg			06/14/25 01:50	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	**2300**		500		mg/Kg		06/13/25 09:51	06/14/25 01:50	10
Diesel Range Organics (Over C10-C28)	**10200**		500		mg/Kg		06/13/25 09:51	06/14/25 01:50	10
Oil Range Organics (Over C28-C36)	<500	U	500		mg/Kg		06/13/25 09:51	06/14/25 01:50	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*207*	*S1+*	*70 - 130*	*06/13/25 09:51*	*06/14/25 01:50*	*10*
o-Terphenyl	*321*	*S1+*	*70 - 130*	*06/13/25 09:51*	*06/14/25 01:50*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8020**		100		mg/Kg			06/16/25 15:23	10

Client Sample ID: SS03

Date Collected: 06/12/25 10:55
Date Received: 06/13/25 08:45
Sample Depth: 2'

Lab Sample ID: 880-59279-3

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0996	U	0.0996		mg/Kg		06/13/25 11:44	06/13/25 19:42	50
Toluene	**0.187**		0.0996		mg/Kg		06/13/25 11:44	06/13/25 19:42	50
Ethylbenzene	<0.0996	U	0.0996		mg/Kg		06/13/25 11:44	06/13/25 19:42	50
m-Xylene & p-Xylene	**2.58**		0.199		mg/Kg		06/13/25 11:44	06/13/25 19:42	50
o-Xylene	**1.06**		0.0996		mg/Kg		06/13/25 11:44	06/13/25 19:42	50
Xylenes, Total	**3.64**		0.199		mg/Kg		06/13/25 11:44	06/13/25 19:42	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*	*06/13/25 11:44*	*06/13/25 19:42*	*50*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*06/13/25 11:44*	*06/13/25 19:42*	*50*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**3.83**		0.199		mg/Kg			06/13/25 19:42	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1660**		49.9		mg/Kg			06/18/25 05:06	1

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Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

Client Sample ID: SS03

Date Collected: 06/12/25 10:55
Date Received: 06/13/25 08:45
Sample Depth: 2'

Lab Sample ID: 880-59279-3

Matrix: Solid

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	67.4		49.9		mg/Kg		06/16/25 09:28	06/18/25 05:06	1
Diesel Range Organics (Over C10-C28)	1590		49.9		mg/Kg		06/16/25 09:28	06/18/25 05:06	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/16/25 09:28	06/18/25 05:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*06/16/25 09:28*	*06/18/25 05:06*	*1*
o-Terphenyl	*120*		*70 - 130*	*06/16/25 09:28*	*06/18/25 05:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1310		9.96		mg/Kg			06/16/25 15:31	1

Surrogate Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

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)
880-59279-1	SS01	98	92
880-59279-2	SS02	334 S1+	93
880-59279-3	SS03	129	76
LCS 880-112210/1-A	Lab Control Sample	93	100
LCS 880-112668/1-A	Lab Control Sample	95	96
LCSD 880-112210/2-A	Lab Control Sample Dup	92	101
LCSD 880-112668/2-A	Lab Control Sample Dup	99	96
MB 880-112158/8	Method Blank	103	89
MB 880-112210/5-A	Method Blank	102	90
MB 880-112668/5-A	Method Blank	99	86

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-59279-1	SS01	105	111
880-59279-2	SS02	207 S1+	321 S1+
880-59279-3	SS03	102	120
LCS 880-112168/2-A	Lab Control Sample	124	122
LCS 880-112287/2-A	Lab Control Sample	95	103
LCSD 880-112168/3-A	Lab Control Sample Dup	121	119
LCSD 880-112287/3-A	Lab Control Sample Dup	106	114
MB 880-112168/1-A	Method Blank	92	98
MB 880-112287/1-A	Method Blank	76	77

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-112158/8
Matrix: Solid
Analysis Batch: 112158

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			06/13/25 11:19	1
Toluene	<0.00200	U	0.00200		mg/Kg			06/13/25 11:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			06/13/25 11:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			06/13/25 11:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			06/13/25 11:19	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			06/13/25 11:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*06/13/25 11:19*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*		*06/13/25 11:19*	*1*

Lab Sample ID: MB 880-112210/5-A
Matrix: Solid
Analysis Batch: 112158

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 112210

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/13/25 11:44	06/13/25 16:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/13/25 11:44	06/13/25 16:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/13/25 11:44	06/13/25 16:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/13/25 11:44	06/13/25 16:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/13/25 11:44	06/13/25 16:16	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/13/25 11:44	06/13/25 16:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/13/25 11:44*	*06/13/25 16:16*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*06/13/25 11:44*	*06/13/25 16:16*	*1*

Lab Sample ID: LCS 880-112210/1-A
Matrix: Solid
Analysis Batch: 112158

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 112210

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1165		mg/Kg		116	70 - 130		
Toluene			0.100	0.1036		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1099		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene			0.200	0.2288		mg/Kg		114	70 - 130		
o-Xylene			0.100	0.1137		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-112210/2-A
Matrix: Solid
Analysis Batch: 112158

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 112210

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1157		mg/Kg		116	70 - 130	1	35

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

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

Lab Sample ID: LCSD 880-112210/2-A
Matrix: Solid
Analysis Batch: 112158

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 112210

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09576		mg/Kg		96	70 - 130	8	35
Ethylbenzene			0.100	0.09882		mg/Kg		99	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.2026		mg/Kg		101	70 - 130	12	35
o-Xylene			0.100	0.1001		mg/Kg		100	70 - 130	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: MB 880-112668/5-A
Matrix: Solid
Analysis Batch: 112656

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 112668

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/20/25 09:29	06/20/25 11:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/20/25 09:29	06/20/25 11:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/20/25 09:29	06/20/25 11:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/20/25 09:29	06/20/25 11:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/20/25 09:29	06/20/25 11:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/20/25 09:29	06/20/25 11:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*06/20/25 09:29*	*06/20/25 11:42*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*06/20/25 09:29*	*06/20/25 11:42*	*1*

Lab Sample ID: LCS 880-112668/1-A
Matrix: Solid
Analysis Batch: 112656

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 112668

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1089		mg/Kg		109	70 - 130		
Toluene			0.100	0.09616		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.09969		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.2076		mg/Kg		104	70 - 130		
o-Xylene			0.100	0.1022		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-112668/2-A
Matrix: Solid
Analysis Batch: 112656

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 112668

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1101		mg/Kg		110	70 - 130	1	35
Toluene			0.100	0.09947		mg/Kg		99	70 - 130	3	35
Ethylbenzene			0.100	0.1038		mg/Kg		104	70 - 130	4	35

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

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

Lab Sample ID: LCSD 880-112668/2-A
Matrix: Solid
Analysis Batch: 112656

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 112668

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Xylene & p-Xylene			0.200	0.2166		mg/Kg		108	70 - 130	4	35
o-Xylene			0.100	0.1069		mg/Kg		107	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-112168/1-A
Matrix: Solid
Analysis Batch: 112175

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 112168

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/13/25 09:51	06/13/25 20:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/13/25 09:51	06/13/25 20:02	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/13/25 09:51	06/13/25 20:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*06/13/25 09:51*	*06/13/25 20:02*	*1*
o-Terphenyl	*98*		*70 - 130*	*06/13/25 09:51*	*06/13/25 20:02*	*1*

Lab Sample ID: LCS 880-112168/2-A
Matrix: Solid
Analysis Batch: 112175

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 112168

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1144		mg/Kg		114	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1079		mg/Kg		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*124*		*70 - 130*
o-Terphenyl	*122*		*70 - 130*

Lab Sample ID: LCSD 880-112168/3-A
Matrix: Solid
Analysis Batch: 112175

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 112168

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1126		mg/Kg		113	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	1041		mg/Kg		104	70 - 130	4	20

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

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

Lab Sample ID: LCSD 880-112168/3-A
Matrix: Solid
Analysis Batch: 112175

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 112168

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	119		70 - 130

Lab Sample ID: MB 880-112287/1-A
Matrix: Solid
Analysis Batch: 112402

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 112287

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/16/25 09:28	06/18/25 01:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/16/25 09:28	06/18/25 01:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/16/25 09:28	06/18/25 01:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	76		70 - 130	06/16/25 09:28	06/18/25 01:34	1
o-Terphenyl	77		70 - 130	06/16/25 09:28	06/18/25 01:34	1

Lab Sample ID: LCS 880-112287/2-A
Matrix: Solid
Analysis Batch: 112402

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 112287

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	940.3		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	963.9		mg/Kg		96	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: LCSD 880-112287/3-A
Matrix: Solid
Analysis Batch: 112402

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 112287

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1017		mg/Kg		102	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	1033		mg/Kg		103	70 - 130	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	114		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-112228/1-A
Matrix: Solid
Analysis Batch: 112234

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			06/16/25 13:00	1

Lab Sample ID: LCS 880-112228/2-A
Matrix: Solid
Analysis Batch: 112234

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	257.6		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-112228/3-A
Matrix: Solid
Analysis Batch: 112234

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	253.0		mg/Kg		101	90 - 110	2	20

Lab Sample ID: 880-59279-1 MS
Matrix: Solid
Analysis Batch: 112234

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	3380	F1	1250	4844	F1	mg/Kg		117	90 - 110		

Lab Sample ID: 880-59279-1 MSD
Matrix: Solid
Analysis Batch: 112234

Client Sample ID: SS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3380	F1	1250	4867	F1	mg/Kg		119	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

GC VOA

Analysis Batch: 112158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-1	SS01	Total/NA	Solid	8021B	112210
880-59279-2	SS02	Total/NA	Solid	8021B	112210
880-59279-3	SS03	Total/NA	Solid	8021B	112210
MB 880-112158/8	Method Blank	Total/NA	Solid	8021B	
MB 880-112210/5-A	Method Blank	Total/NA	Solid	8021B	112210
LCS 880-112210/1-A	Lab Control Sample	Total/NA	Solid	8021B	112210
LCSD 880-112210/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	112210

Prep Batch: 112210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-1	SS01	Total/NA	Solid	5035	
880-59279-2	SS02	Total/NA	Solid	5035	
880-59279-3	SS03	Total/NA	Solid	5035	
MB 880-112210/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-112210/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-112210/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 112298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-1	SS01	Total/NA	Solid	Total BTEX	
880-59279-2	SS02	Total/NA	Solid	Total BTEX	
880-59279-3	SS03	Total/NA	Solid	Total BTEX	

Analysis Batch: 112656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-2	SS02	Total/NA	Solid	8021B	112668
MB 880-112668/5-A	Method Blank	Total/NA	Solid	8021B	112668
LCS 880-112668/1-A	Lab Control Sample	Total/NA	Solid	8021B	112668
LCSD 880-112668/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	112668

Prep Batch: 112668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-2	SS02	Total/NA	Solid	5035	
MB 880-112668/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-112668/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-112668/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 112168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-1	SS01	Total/NA	Solid	8015NM Prep	
880-59279-2	SS02	Total/NA	Solid	8015NM Prep	
MB 880-112168/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-112168/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-112168/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 112175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-1	SS01	Total/NA	Solid	8015B NM	112168
880-59279-2	SS02	Total/NA	Solid	8015B NM	112168

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

GC Semi VOA (Continued)

Analysis Batch: 112175 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-112168/1-A	Method Blank	Total/NA	Solid	8015B NM	112168
LCS 880-112168/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	112168
LCSD 880-112168/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	112168

Prep Batch: 112287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-112287/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-112287/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-112287/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 112328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-1	SS01	Total/NA	Solid	8015 NM	
880-59279-2	SS02	Total/NA	Solid	8015 NM	
880-59279-3	SS03	Total/NA	Solid	8015 NM	

Analysis Batch: 112402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-3	SS03	Total/NA	Solid	8015B NM	112287
MB 880-112287/1-A	Method Blank	Total/NA	Solid	8015B NM	112287
LCS 880-112287/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	112287
LCSD 880-112287/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	112287

HPLC/IC

Leach Batch: 112228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-1	SS01	Soluble	Solid	DI Leach	
880-59279-2	SS02	Soluble	Solid	DI Leach	
880-59279-3	SS03	Soluble	Solid	DI Leach	
MB 880-112228/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-112228/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-112228/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-59279-1 MS	SS01	Soluble	Solid	DI Leach	
880-59279-1 MSD	SS01	Soluble	Solid	DI Leach	

Analysis Batch: 112234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-59279-1	SS01	Soluble	Solid	300.0	112228
880-59279-2	SS02	Soluble	Solid	300.0	112228
880-59279-3	SS03	Soluble	Solid	300.0	112228
MB 880-112228/1-A	Method Blank	Soluble	Solid	300.0	112228
LCS 880-112228/2-A	Lab Control Sample	Soluble	Solid	300.0	112228
LCSD 880-112228/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	112228
880-59279-1 MS	SS01	Soluble	Solid	300.0	112228
880-59279-1 MSD	SS01	Soluble	Solid	300.0	112228

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

Client Sample ID: SS01

Lab Sample ID: 880-59279-1
Matrix: Solid
Date Collected: 06/12/25 10:00
Date Received: 06/13/25 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			112210	MNR	EET MID	06/13/25 11:44
Total/NA	Analysis	8021B		1	112158	MNR	EET MID	06/13/25 21:37
Total/NA	Analysis	Total BTEX		1	112298	SM	EET MID	06/13/25 21:37
Total/NA	Analysis	8015 NM		1	112328	SM	EET MID	06/14/25 01:36
Total/NA	Prep	8015NM Prep			112168	FC	EET MID	06/13/25 09:51
Total/NA	Analysis	8015B NM		1	112175	TKC	EET MID	06/14/25 01:36
Soluble	Leach	DI Leach			112228	SI	EET MID	06/13/25 15:28
Soluble	Analysis	300.0		5	112234	CH	EET MID	06/16/25 15:02

Client Sample ID: SS02

Lab Sample ID: 880-59279-2
Matrix: Solid
Date Collected: 06/12/25 12:20
Date Received: 06/13/25 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			112210	MNR	EET MID	06/13/25 11:44
Total/NA	Analysis	8021B		50	112158	MNR	EET MID	06/13/25 19:22
Total/NA	Prep	5035			112668	MNR	EET MID	06/20/25 11:15
Total/NA	Analysis	8021B		500	112656	MNR	EET MID	06/20/25 15:08
Total/NA	Analysis	Total BTEX		1	112298	SM	EET MID	06/20/25 15:08
Total/NA	Analysis	8015 NM		1	112328	SM	EET MID	06/14/25 01:50
Total/NA	Prep	8015NM Prep			112168	FC	EET MID	06/13/25 09:51
Total/NA	Analysis	8015B NM		10	112175	TKC	EET MID	06/14/25 01:50
Soluble	Leach	DI Leach			112228	SI	EET MID	06/13/25 15:28
Soluble	Analysis	300.0		10	112234	CH	EET MID	06/16/25 15:23

Client Sample ID: SS03

Lab Sample ID: 880-59279-3
Matrix: Solid
Date Collected: 06/12/25 10:55
Date Received: 06/13/25 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			112210	MNR	EET MID	06/13/25 11:44
Total/NA	Analysis	8021B		50	112158	MNR	EET MID	06/13/25 19:42
Total/NA	Analysis	Total BTEX		1	112298	SM	EET MID	06/13/25 19:42
Total/NA	Analysis	8015 NM		1	112328	SM	EET MID	06/18/25 05:06
Total/NA	Prep	8015NM Prep			112287	EL	EET MID	06/16/25 09:28
Total/NA	Analysis	8015B NM		1	112402	TKC	EET MID	06/18/25 05:06
Soluble	Leach	DI Leach			112228	SI	EET MID	06/13/25 15:28
Soluble	Analysis	300.0		1	112234	CH	EET MID	06/16/25 15:31

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

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: Pygmy 27 State 3H

Job ID: 880-59279-1
SDG: Eunice

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-59279-1	SS01	Solid	06/12/25 10:00	06/13/25 08:45	2'
880-59279-2	SS02	Solid	06/12/25 12:20	06/13/25 08:45	3'
880-59279-3	SS03	Solid	06/12/25 10:55	06/13/25 08:45	2'

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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

880-59279 Chain of Custody

www.xenco.com

Project Manager:	Hadlie Green	Bill to: (if different)	Hadlie Green
Company Name:	Ensolum	Company Name:	Ensolum
Address:	601 N Marienfeld St. Suite 400	Address:	601 N Marienfeld St. Suite 400
City, State ZIP:	Midland TX, 79701	City, State ZIP:	Midland, TX 79701
Phone:	432 557 8895	Email:	hgreen@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pygmy 27 State 3H -	Turn Around	
Project Number:	03D2024356	☑ Routine ☐ Rush	
Project Location:	Eunice	Due Date:	
Sampler's Name:	Raheal Udeh	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TR4	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-.1	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	4.0	
Total Containers:		Corrected Temperature:	3.9	

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX 8021	TPH 8015	Chloride	Sample Comments
SS01	S	6/12/25	1000	2'	G	1		X	X	X	
SS02	S	↓	1220	3'	G	1		↓	↓	↓	
SS03	S	↓	1055	2'	G	1		↓	↓	↓	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		6/12/25	2		6/12/25 545
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-59279-1
SDG Number: Eunice

Login Number: 59279
List Number: 1
Creator: Vasquez, Julisa

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 7/15/2025 2:35:25 PM

JOB DESCRIPTION

Pygmy 27 State 3H Produced Water
Lea County

JOB NUMBER

880-60264-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

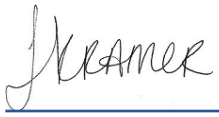
Eurofins Midland

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



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-60264-1
Project/Site: Pygmy 27 State 3H Produced Water SDG: Lea County

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
*+	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.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum Job ID: 880-60264-1
Project: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1 Eurofins Midland

Job Narrative
880-60264-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 7/10/2025 4:00 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 4.6°C.

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-113971 and analytical batch 880-113946 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: PH01 (880-60264-1) and PH01 (880-60264-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside the upper control limit: PH04 (880-60264-9). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-113989 and analytical batch 880-114063 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: PH01 (880-60264-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

Diesel Range Organics
Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-113957 and 880-113958 and analytical batch 880-114090 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 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: PH01 (880-60264-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH01

Lab Sample ID: 880-60264-1
Matrix: Solid
Date Collected: 07/10/25 09:52
Date Received: 07/10/25 16:00
Sample Depth: 3'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/11/25 09:32	07/12/25 03:32	1
Toluene	**0.271**		0.00202		mg/Kg		07/11/25 09:32	07/12/25 03:32	1
Ethylbenzene	**0.0448**		0.00202		mg/Kg		07/11/25 09:32	07/12/25 03:32	1
m-Xylene & p-Xylene	**0.794**		0.0797		mg/Kg		07/14/25 09:46	07/14/25 16:42	20
o-Xylene	**0.980**		0.0398		mg/Kg		07/14/25 09:46	07/14/25 16:42	20
Xylenes, Total	**1.77**		0.0797		mg/Kg		07/14/25 09:46	07/14/25 16:42	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*588*	*S1+*	*70 - 130*	*07/11/25 09:32*	*07/12/25 03:32*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*07/11/25 09:32*	*07/12/25 03:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**2.09**		0.0797		mg/Kg			07/14/25 16:42	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**4510**		50.0		mg/Kg			07/14/25 23:19	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**285**		50.0		mg/Kg		07/11/25 09:05	07/14/25 23:19	1
Diesel Range Organics (Over C10-C28)	**4220**	***+**	50.0		mg/Kg		07/11/25 09:05	07/14/25 23:19	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/11/25 09:05	07/14/25 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*07/11/25 09:05*	*07/14/25 23:19*	*1*
o-Terphenyl	*160*	*S1+*	*70 - 130*	*07/11/25 09:05*	*07/14/25 23:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**717**		9.98		mg/Kg			07/12/25 01:53	1

Client Sample ID: PH01

Lab Sample ID: 880-60264-2
Matrix: Solid
Date Collected: 07/10/25 10:14
Date Received: 07/10/25 16:00
Sample Depth: 5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/11/25 09:32	07/12/25 03:53	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/11/25 09:32	07/12/25 03:53	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/11/25 09:32	07/12/25 03:53	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/11/25 09:32	07/12/25 03:53	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/11/25 09:32	07/12/25 03:53	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/11/25 09:32	07/12/25 03:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*148*	*S1+*	*70 - 130*	*07/11/25 09:32*	*07/12/25 03:53*	*1*

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH01

Date Collected: 07/10/25 10:14
Date Received: 07/10/25 16:00
Sample Depth: 5'

Lab Sample ID: 880-60264-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*07/11/25 09:32*	*07/12/25 03:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			07/12/25 03:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/14/25 23:35	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/11/25 09:05	07/14/25 23:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0	mg/Kg		07/11/25 09:05	07/14/25 23:35	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/11/25 09:05	07/14/25 23:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/11/25 09:05*	*07/14/25 23:35*	*1*
o-Terphenyl	*99*		*70 - 130*	*07/11/25 09:05*	*07/14/25 23:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4390**		49.7	mg/Kg			07/12/25 02:00	5

Client Sample ID: PH01

Date Collected: 07/10/25 10:52
Date Received: 07/10/25 16:00
Sample Depth: 6'

Lab Sample ID: 880-60264-3

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		07/11/25 09:32	07/12/25 04:13	1
Toluene	<0.00201	U	0.00201	mg/Kg		07/11/25 09:32	07/12/25 04:13	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		07/11/25 09:32	07/12/25 04:13	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		07/11/25 09:32	07/12/25 04:13	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		07/11/25 09:32	07/12/25 04:13	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		07/11/25 09:32	07/12/25 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*07/11/25 09:32*	*07/12/25 04:13*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/11/25 09:32*	*07/12/25 04:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			07/12/25 04:13	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/14/25 23:50	1

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Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH01

Lab Sample ID: 880-60264-3
Matrix: Solid
Date Collected: 07/10/25 10:52
Date Received: 07/10/25 16:00
Sample Depth: 6'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/11/25 09:05	07/14/25 23:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		07/11/25 09:05	07/14/25 23:50	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/11/25 09:05	07/14/25 23:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*07/11/25 09:05*	*07/14/25 23:50*	*1*
o-Terphenyl	*98*		*70 - 130*	*07/11/25 09:05*	*07/14/25 23:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**177**		9.92		mg/Kg			07/12/25 02:07	1

Client Sample ID: PH02

Lab Sample ID: 880-60264-5
Matrix: Solid
Date Collected: 07/10/25 09:36
Date Received: 07/10/25 16:00
Sample Depth: 1'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/11/25 09:32	07/12/25 04:34	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/11/25 09:32	07/12/25 04:34	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/11/25 09:32	07/12/25 04:34	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/11/25 09:32	07/12/25 04:34	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/11/25 09:32	07/12/25 04:34	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/11/25 09:32	07/12/25 04:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*07/11/25 09:32*	*07/12/25 04:34*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*07/11/25 09:32*	*07/12/25 04:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/12/25 04:34	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/15/25 00:07	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/11/25 09:05	07/15/25 00:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		07/11/25 09:05	07/15/25 00:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/11/25 09:05	07/15/25 00:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/11/25 09:05*	*07/15/25 00:07*	*1*
o-Terphenyl	*91*		*70 - 130*	*07/11/25 09:05*	*07/15/25 00:07*	*1*

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH02
Lab Sample ID: 880-60264-5
Date Collected: 07/10/25 09:36
Matrix: Solid
Date Received: 07/10/25 16:00
Sample Depth: 1'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	108		10.0		mg/Kg			07/12/25 02:29	1

Client Sample ID: PH02
Lab Sample ID: 880-60264-6
Date Collected: 07/10/25 09:38
Matrix: Solid
Date Received: 07/10/25 16:00
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/11/25 09:32	07/12/25 04:54	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/11/25 09:32	07/12/25 04:54	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/11/25 09:32	07/12/25 04:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/11/25 09:32	07/12/25 04:54	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/11/25 09:32	07/12/25 04:54	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/11/25 09:32	07/12/25 04:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*07/11/25 09:32*	*07/12/25 04:54*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/11/25 09:32*	*07/12/25 04:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/12/25 04:54	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/15/25 00:22	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/11/25 09:05	07/15/25 00:22	1
Diesel Range Organics (Over C10-C28)	<49.8	U *+	49.8		mg/Kg		07/11/25 09:05	07/15/25 00:22	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/11/25 09:05	07/15/25 00:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/11/25 09:05*	*07/15/25 00:22*	*1*
o-Terphenyl	*99*		*70 - 130*	*07/11/25 09:05*	*07/15/25 00:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	125		10.1		mg/Kg			07/12/25 02:36	1

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH03

Lab Sample ID: 880-60264-7
Matrix: Solid
Date Collected: 07/10/25 09:40
Date Received: 07/10/25 16:00
Sample Depth: 1'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/12/25 05:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/12/25 05:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/12/25 05:14	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/11/25 09:32	07/12/25 05:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/12/25 05:14	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/11/25 09:32	07/12/25 05:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*07/11/25 09:32*	*07/12/25 05:14*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*07/11/25 09:32*	*07/12/25 05:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/12/25 05:14	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/15/25 00:38	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/11/25 09:05	07/15/25 00:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		07/11/25 09:05	07/15/25 00:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/11/25 09:05	07/15/25 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*07/11/25 09:05*	*07/15/25 00:38*	*1*
o-Terphenyl	*96*		*70 - 130*	*07/11/25 09:05*	*07/15/25 00:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**104**		10.1		mg/Kg			07/12/25 02:43	1

Client Sample ID: PH03

Lab Sample ID: 880-60264-8
Matrix: Solid
Date Collected: 07/10/25 09:40
Date Received: 07/10/25 16:00
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/11/25 09:32	07/12/25 05:35	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/11/25 09:32	07/12/25 05:35	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/11/25 09:32	07/12/25 05:35	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/11/25 09:32	07/12/25 05:35	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/11/25 09:32	07/12/25 05:35	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/11/25 09:32	07/12/25 05:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*07/11/25 09:32*	*07/12/25 05:35*	*1*

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH03

Lab Sample ID: 880-60264-8
Matrix: Solid
Date Collected: 07/10/25 09:40
Date Received: 07/10/25 16:00
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*07/11/25 09:32*	*07/12/25 05:35*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			07/12/25 05:35	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			07/15/25 00:54	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		07/11/25 09:05	07/15/25 00:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0	mg/Kg		07/11/25 09:05	07/15/25 00:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		07/11/25 09:05	07/15/25 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*07/11/25 09:05*	*07/15/25 00:54*	*1*
o-Terphenyl	*98*		*70 - 130*	*07/11/25 09:05*	*07/15/25 00:54*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**107**		10.0	mg/Kg			07/12/25 02:51	1

Client Sample ID: PH04

Lab Sample ID: 880-60264-9
Matrix: Solid
Date Collected: 07/10/25 10:22
Date Received: 07/10/25 16:00
Sample Depth: 1'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/11/25 09:32	07/12/25 05:55	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/11/25 09:32	07/12/25 05:55	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/11/25 09:32	07/12/25 05:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/11/25 09:32	07/12/25 05:55	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/11/25 09:32	07/12/25 05:55	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/11/25 09:32	07/12/25 05:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*07/11/25 09:32*	*07/12/25 05:55*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*07/11/25 09:32*	*07/12/25 05:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			07/12/25 05:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			07/15/25 01:10	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH04

Lab Sample ID: 880-60264-9
Matrix: Solid
Date Collected: 07/10/25 10:22
Date Received: 07/10/25 16:00
Sample Depth: 1'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/11/25 09:05	07/15/25 01:10	1
Diesel Range Organics (Over C10-C28)	<49.8	U *+	49.8		mg/Kg		07/11/25 09:05	07/15/25 01:10	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/11/25 09:05	07/15/25 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/11/25 09:05*	*07/15/25 01:10*	*1*
o-Terphenyl	*98*		*70 - 130*	*07/11/25 09:05*	*07/15/25 01:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**92.9**		9.96		mg/Kg			07/12/25 02:58	1

Client Sample ID: PH04

Lab Sample ID: 880-60264-10
Matrix: Solid
Date Collected: 07/10/25 10:24
Date Received: 07/10/25 16:00
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/12/25 06:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/12/25 06:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/12/25 06:16	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/11/25 09:32	07/12/25 06:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/12/25 06:16	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/11/25 09:32	07/12/25 06:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*07/11/25 09:32*	*07/12/25 06:16*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*07/11/25 09:32*	*07/12/25 06:16*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/12/25 06:16	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/15/25 01:25	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/11/25 09:05	07/15/25 01:25	1
Diesel Range Organics (Over C10-C28)	<49.8	U *+	49.8		mg/Kg		07/11/25 09:05	07/15/25 01:25	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/11/25 09:05	07/15/25 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*07/11/25 09:05*	*07/15/25 01:25*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/11/25 09:05*	*07/15/25 01:25*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH04

Lab Sample ID: 880-60264-10
Matrix: Solid
Date Collected: 07/10/25 10:24
Date Received: 07/10/25 16:00
Sample Depth: 2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	75.2		9.92		mg/Kg			07/12/25 03:05	1

Client Sample ID: PH05

Lab Sample ID: 880-60264-11
Matrix: Solid
Date Collected: 07/10/25 09:48
Date Received: 07/10/25 16:00
Sample Depth: 1'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/14/25 09:46	07/14/25 16:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/25 09:46	07/14/25 16:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/25 09:46	07/14/25 16:22	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/14/25 09:46	07/14/25 16:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/25 09:46	07/14/25 16:22	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/14/25 09:46	07/14/25 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*07/14/25 09:46*	*07/14/25 16:22*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*07/14/25 09:46*	*07/14/25 16:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/14/25 16:22	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/15/25 03:34	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/11/25 09:08	07/15/25 03:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		07/11/25 09:08	07/15/25 03:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/11/25 09:08	07/15/25 03:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/11/25 09:08*	*07/15/25 03:34*	*1*
o-Terphenyl	*98*		*70 - 130*	*07/11/25 09:08*	*07/15/25 03:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	109		9.94		mg/Kg			07/12/25 03:27	1

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH05

Date Collected: 07/10/25 09:50
Date Received: 07/10/25 16:00
Sample Depth: 2'

Lab Sample ID: 880-60264-12

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/11/25 10:30	07/12/25 04:01	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/11/25 10:30	07/12/25 04:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/11/25 10:30	07/12/25 04:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/11/25 10:30	07/12/25 04:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/11/25 10:30	07/12/25 04:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/11/25 10:30	07/12/25 04:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*07/11/25 10:30*	*07/12/25 04:01*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/11/25 10:30*	*07/12/25 04:01*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/12/25 04:01	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/15/25 04:22	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/11/25 09:08	07/15/25 04:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		07/11/25 09:08	07/15/25 04:22	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/11/25 09:08	07/15/25 04:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*07/11/25 09:08*	*07/15/25 04:22*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/11/25 09:08*	*07/15/25 04:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**118**		10.0		mg/Kg			07/12/25 03:34	1

Surrogate Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-60264-1	PH01	588 S1+	84
880-60264-2	PH01	148 S1+	105
880-60264-3	PH01	123	87
880-60264-5	PH02	126	89
880-60264-6	PH02	124	91
880-60264-7	PH03	123	88
880-60264-8	PH03	121	89
880-60264-9	PH04	131 S1+	89
880-60264-10	PH04	130	88
880-60264-11	PH05	98	89
880-60264-12	PH05	98	96
LCS 880-113971/1-A	Lab Control Sample	112	97
LCS 880-113987/1-A	Lab Control Sample	97	103
LCS 880-113989/1-A	Lab Control Sample	96	102
LCSD 880-113971/2-A	Lab Control Sample Dup	120	91
LCSD 880-113987/2-A	Lab Control Sample Dup	100	98
LCSD 880-113989/2-A	Lab Control Sample Dup	99	97
MB 880-113951/5-A	Method Blank	96	85
MB 880-113953/5-A	Method Blank	108	89
MB 880-113971/5-A	Method Blank	110	88
MB 880-113987/5-A	Method Blank	94	86
MB 880-113989/5-A	Method Blank	102	81

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-60264-1	PH01	107	160 S1+
880-60264-2	PH01	97	99
880-60264-3	PH01	96	98
880-60264-5	PH02	92	91
880-60264-6	PH02	97	99
880-60264-7	PH03	94	96
880-60264-8	PH03	96	98
880-60264-9	PH04	97	98
880-60264-10	PH04	99	102
880-60264-11	PH05	97	98
880-60264-11 MS	PH05	87	97
880-60264-11 MSD	PH05	107	97
880-60264-12	PH05	100	102
LCS 880-113957/2-A	Lab Control Sample	93	103
LCS 880-113958/2-A	Lab Control Sample	92	102
LCSD 880-113957/3-A	Lab Control Sample Dup	93	104
LCSD 880-113958/3-A	Lab Control Sample Dup	91	102

Surrogate Summary

Client: Ensolum Job ID: 880-60264-1
Project/Site: Pygmy 27 State 3H Produced Water SDG: Lea County

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
MB 880-113957/1-A	Method Blank	102	106								
MB 880-113958/1-A	Method Blank	99	102								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-113951/5-A
Matrix: Solid
Analysis Batch: 113947

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 113951

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/25 08:30	07/11/25 11:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/25 08:30	07/11/25 11:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/25 08:30	07/11/25 11:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/25 08:30	07/11/25 11:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/25 08:30	07/11/25 11:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/25 08:30	07/11/25 11:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/11/25 08:30*	*07/11/25 11:15*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*07/11/25 08:30*	*07/11/25 11:15*	*1*

Lab Sample ID: MB 880-113953/5-A
Matrix: Solid
Analysis Batch: 113946

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 113953

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/25 08:40	07/11/25 11:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/25 08:40	07/11/25 11:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/25 08:40	07/11/25 11:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/25 08:40	07/11/25 11:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/25 08:40	07/11/25 11:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/25 08:40	07/11/25 11:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*07/11/25 08:40*	*07/11/25 11:15*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*07/11/25 08:40*	*07/11/25 11:15*	*1*

Lab Sample ID: MB 880-113971/5-A
Matrix: Solid
Analysis Batch: 113946

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 113971

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/11/25 22:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/11/25 22:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/11/25 22:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/25 09:32	07/11/25 22:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/25 09:32	07/11/25 22:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/25 09:32	07/11/25 22:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*07/11/25 09:32*	*07/11/25 22:12*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*07/11/25 09:32*	*07/11/25 22:12*	*1*

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

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

Lab Sample ID: LCS 880-113971/1-A
Matrix: Solid
Analysis Batch: 113946

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113971

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08878		mg/Kg		89	70 - 130		
Toluene			0.100	0.08703		mg/Kg		87	70 - 130		
Ethylbenzene			0.100	0.08427		mg/Kg		84	70 - 130		
m-Xylene & p-Xylene			0.200	0.1646		mg/Kg		82	70 - 130		
o-Xylene			0.100	0.08484		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-113971/2-A
Matrix: Solid
Analysis Batch: 113946

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 113971

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08475		mg/Kg		85	70 - 130	5	35
Toluene			0.100	0.09099		mg/Kg		91	70 - 130	4	35
Ethylbenzene			0.100	0.09198		mg/Kg		92	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.1847		mg/Kg		92	70 - 130	11	35
o-Xylene			0.100	0.09487		mg/Kg		95	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: MB 880-113987/5-A
Matrix: Solid
Analysis Batch: 113947

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 113987

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/25 10:30	07/11/25 22:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/25 10:30	07/11/25 22:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/25 10:30	07/11/25 22:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/25 10:30	07/11/25 22:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/25 10:30	07/11/25 22:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/25 10:30	07/11/25 22:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/11/25 10:30*	*07/11/25 22:40*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*07/11/25 10:30*	*07/11/25 22:40*	*1*

Lab Sample ID: LCS 880-113987/1-A
Matrix: Solid
Analysis Batch: 113947

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113987

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09412		mg/Kg		94	70 - 130		
Toluene			0.100	0.08665		mg/Kg		87	70 - 130		

Eurofins Midland

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

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

Lab Sample ID: LCS 880-113987/1-A
Matrix: Solid
Analysis Batch: 113947

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113987

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.100	0.09613		mg/Kg		96	70 - 130
m-Xylene & p-Xylene	0.200	0.1950		mg/Kg		98	70 - 130
o-Xylene	0.100	0.09873		mg/Kg		99	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-113987/2-A
Matrix: Solid
Analysis Batch: 113947

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 113987

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08821		mg/Kg		88	70 - 130	6	35
Toluene	0.100	0.08717		mg/Kg		87	70 - 130	1	35
Ethylbenzene	0.100	0.09648		mg/Kg		96	70 - 130	0	35
m-Xylene & p-Xylene	0.200	0.1959		mg/Kg		98	70 - 130	0	35
o-Xylene	0.100	0.09919		mg/Kg		99	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 880-113989/5-A
Matrix: Solid
Analysis Batch: 114063

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 113989

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/11/25 17:00	07/14/25 12:09	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/11/25 17:00	07/14/25 12:09	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/11/25 17:00	07/14/25 12:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		07/11/25 17:00	07/14/25 12:09	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/11/25 17:00	07/14/25 12:09	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		07/11/25 17:00	07/14/25 12:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*07/11/25 17:00*	*07/14/25 12:09*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*07/11/25 17:00*	*07/14/25 12:09*	*1*

Lab Sample ID: LCS 880-113989/1-A
Matrix: Solid
Analysis Batch: 114063

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113989

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09332		mg/Kg		93	70 - 130
Toluene	0.100	0.09060		mg/Kg		91	70 - 130
Ethylbenzene	0.100	0.1024		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.200	0.2086		mg/Kg		104	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

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

Lab Sample ID: LCS 880-113989/1-A
Matrix: Solid
Analysis Batch: 114063

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113989

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1049		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-113989/2-A
Matrix: Solid
Analysis Batch: 114063

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 113989

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09020		mg/Kg		90	70 - 130	3	35
Toluene			0.100	0.09109		mg/Kg		91	70 - 130	1	35
Ethylbenzene			0.100	0.1023		mg/Kg		102	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2091		mg/Kg		105	70 - 130	0	35
o-Xylene			0.100	0.1051		mg/Kg		105	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 880-113957/1-A
Matrix: Solid
Analysis Batch: 114090

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 113957

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/11/25 09:04	07/14/25 18:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/11/25 09:04	07/14/25 18:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/11/25 09:04	07/14/25 18:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*07/11/25 09:04*	*07/14/25 18:48*	*1*
o-Terphenyl	*106*		*70 - 130*	*07/11/25 09:04*	*07/14/25 18:48*	*1*

Lab Sample ID: LCS 880-113957/2-A
Matrix: Solid
Analysis Batch: 114090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113957

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1219		mg/Kg		122	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1401	*+	mg/Kg		140	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

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

Lab Sample ID: LCS 880-113957/2-A
Matrix: Solid
Analysis Batch: 114090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113957

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: LCSD 880-113957/3-A
Matrix: Solid
Analysis Batch: 114090

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 113957

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1271		mg/Kg		127	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1403	*+	mg/Kg		140	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	104		70 - 130

Lab Sample ID: MB 880-113958/1-A
Matrix: Solid
Analysis Batch: 114090

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 113958

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/11/25 09:04	07/15/25 02:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/11/25 09:04	07/15/25 02:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/11/25 09:04	07/15/25 02:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	07/11/25 09:04	07/15/25 02:47	1
o-Terphenyl	102		70 - 130	07/11/25 09:04	07/15/25 02:47	1

Lab Sample ID: LCS 880-113958/2-A
Matrix: Solid
Analysis Batch: 114090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113958

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1200		mg/Kg		120	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1391	*+	mg/Kg		139	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	102		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

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

Lab Sample ID: LCSD 880-113958/3-A
Matrix: Solid
Analysis Batch: 114090

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 113958

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1245		mg/Kg		124	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1393	*+	mg/Kg		139	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

Lab Sample ID: 880-60264-11 MS
Matrix: Solid
Analysis Batch: 114090

Client Sample ID: PH05
Prep Type: Total/NA
Prep Batch: 113958

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	995	860.5		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U *+	995	976.0		mg/Kg		98	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Lab Sample ID: 880-60264-11 MSD
Matrix: Solid
Analysis Batch: 114090

Client Sample ID: PH05
Prep Type: Total/NA
Prep Batch: 113958

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	995	882.5		mg/Kg		89	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U *+	995	939.5		mg/Kg		94	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-113985/1-A
Matrix: Solid
Analysis Batch: 114024

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			07/12/25 01:03	1

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-113985/2-A
Matrix: Solid
Analysis Batch: 114024

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	233.3		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-113985/3-A
Matrix: Solid
Analysis Batch: 114024

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	232.7		mg/Kg		93	90 - 110	0	20

Lab Sample ID: 880-60264-10 MS
Matrix: Solid
Analysis Batch: 114024

Client Sample ID: PH04
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	75.2		248	316.8		mg/Kg		97	90 - 110		

Lab Sample ID: 880-60264-10 MSD
Matrix: Solid
Analysis Batch: 114024

Client Sample ID: PH04
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	75.2		248	317.5		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

GC VOA

Analysis Batch: 113946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-1	PH01	Total/NA	Solid	8021B	113971
880-60264-2	PH01	Total/NA	Solid	8021B	113971
880-60264-3	PH01	Total/NA	Solid	8021B	113971
880-60264-5	PH02	Total/NA	Solid	8021B	113971
880-60264-6	PH02	Total/NA	Solid	8021B	113971
880-60264-7	PH03	Total/NA	Solid	8021B	113971
880-60264-8	PH03	Total/NA	Solid	8021B	113971
880-60264-9	PH04	Total/NA	Solid	8021B	113971
880-60264-10	PH04	Total/NA	Solid	8021B	113971
MB 880-113953/5-A	Method Blank	Total/NA	Solid	8021B	113953
MB 880-113971/5-A	Method Blank	Total/NA	Solid	8021B	113971
LCS 880-113971/1-A	Lab Control Sample	Total/NA	Solid	8021B	113971
LCSD 880-113971/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	113971

Analysis Batch: 113947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-12	PH05	Total/NA	Solid	8021B	113987
MB 880-113951/5-A	Method Blank	Total/NA	Solid	8021B	113951
MB 880-113987/5-A	Method Blank	Total/NA	Solid	8021B	113987
LCS 880-113987/1-A	Lab Control Sample	Total/NA	Solid	8021B	113987
LCSD 880-113987/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	113987

Prep Batch: 113951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-113951/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 113953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-113953/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 113971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-1	PH01	Total/NA	Solid	5035	
880-60264-2	PH01	Total/NA	Solid	5035	
880-60264-3	PH01	Total/NA	Solid	5035	
880-60264-5	PH02	Total/NA	Solid	5035	
880-60264-6	PH02	Total/NA	Solid	5035	
880-60264-7	PH03	Total/NA	Solid	5035	
880-60264-8	PH03	Total/NA	Solid	5035	
880-60264-9	PH04	Total/NA	Solid	5035	
880-60264-10	PH04	Total/NA	Solid	5035	
MB 880-113971/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-113971/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-113971/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 113987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-12	PH05	Total/NA	Solid	5035	
MB 880-113987/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-113987/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-113987/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

GC VOA

Prep Batch: 113989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-1	PH01	Total/NA	Solid	5035	
880-60264-11	PH05	Total/NA	Solid	5035	
MB 880-113989/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-113989/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-113989/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 114063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-1	PH01	Total/NA	Solid	8021B	113989
880-60264-11	PH05	Total/NA	Solid	8021B	113989
MB 880-113989/5-A	Method Blank	Total/NA	Solid	8021B	113989
LCS 880-113989/1-A	Lab Control Sample	Total/NA	Solid	8021B	113989
LCSD 880-113989/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	113989

Analysis Batch: 114097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-1	PH01	Total/NA	Solid	Total BTEX	
880-60264-2	PH01	Total/NA	Solid	Total BTEX	
880-60264-3	PH01	Total/NA	Solid	Total BTEX	
880-60264-5	PH02	Total/NA	Solid	Total BTEX	
880-60264-6	PH02	Total/NA	Solid	Total BTEX	
880-60264-7	PH03	Total/NA	Solid	Total BTEX	
880-60264-8	PH03	Total/NA	Solid	Total BTEX	
880-60264-9	PH04	Total/NA	Solid	Total BTEX	
880-60264-10	PH04	Total/NA	Solid	Total BTEX	
880-60264-11	PH05	Total/NA	Solid	Total BTEX	
880-60264-12	PH05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 113957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-1	PH01	Total/NA	Solid	8015NM Prep	
880-60264-2	PH01	Total/NA	Solid	8015NM Prep	
880-60264-3	PH01	Total/NA	Solid	8015NM Prep	
880-60264-5	PH02	Total/NA	Solid	8015NM Prep	
880-60264-6	PH02	Total/NA	Solid	8015NM Prep	
880-60264-7	PH03	Total/NA	Solid	8015NM Prep	
880-60264-8	PH03	Total/NA	Solid	8015NM Prep	
880-60264-9	PH04	Total/NA	Solid	8015NM Prep	
880-60264-10	PH04	Total/NA	Solid	8015NM Prep	
MB 880-113957/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-113957/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-113957/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 113958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-11	PH05	Total/NA	Solid	8015NM Prep	
880-60264-12	PH05	Total/NA	Solid	8015NM Prep	
MB 880-113958/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-113958/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

GC Semi VOA (Continued)

Prep Batch: 113958 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-113958/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-60264-11 MS	PH05	Total/NA	Solid	8015NM Prep	
880-60264-11 MSD	PH05	Total/NA	Solid	8015NM Prep	

Analysis Batch: 114090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-1	PH01	Total/NA	Solid	8015B NM	113957
880-60264-2	PH01	Total/NA	Solid	8015B NM	113957
880-60264-3	PH01	Total/NA	Solid	8015B NM	113957
880-60264-5	PH02	Total/NA	Solid	8015B NM	113957
880-60264-6	PH02	Total/NA	Solid	8015B NM	113957
880-60264-7	PH03	Total/NA	Solid	8015B NM	113957
880-60264-8	PH03	Total/NA	Solid	8015B NM	113957
880-60264-9	PH04	Total/NA	Solid	8015B NM	113957
880-60264-10	PH04	Total/NA	Solid	8015B NM	113957
880-60264-11	PH05	Total/NA	Solid	8015B NM	113958
880-60264-12	PH05	Total/NA	Solid	8015B NM	113958
MB 880-113957/1-A	Method Blank	Total/NA	Solid	8015B NM	113957
MB 880-113958/1-A	Method Blank	Total/NA	Solid	8015B NM	113958
LCS 880-113957/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	113957
LCS 880-113958/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	113958
LCSD 880-113957/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	113957
LCSD 880-113958/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	113958
880-60264-11 MS	PH05	Total/NA	Solid	8015B NM	113958
880-60264-11 MSD	PH05	Total/NA	Solid	8015B NM	113958

Analysis Batch: 114204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-1	PH01	Total/NA	Solid	8015 NM	
880-60264-2	PH01	Total/NA	Solid	8015 NM	
880-60264-3	PH01	Total/NA	Solid	8015 NM	
880-60264-5	PH02	Total/NA	Solid	8015 NM	
880-60264-6	PH02	Total/NA	Solid	8015 NM	
880-60264-7	PH03	Total/NA	Solid	8015 NM	
880-60264-8	PH03	Total/NA	Solid	8015 NM	
880-60264-9	PH04	Total/NA	Solid	8015 NM	
880-60264-10	PH04	Total/NA	Solid	8015 NM	
880-60264-11	PH05	Total/NA	Solid	8015 NM	
880-60264-12	PH05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 113985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-1	PH01	Soluble	Solid	DI Leach	
880-60264-2	PH01	Soluble	Solid	DI Leach	
880-60264-3	PH01	Soluble	Solid	DI Leach	
880-60264-5	PH02	Soluble	Solid	DI Leach	
880-60264-6	PH02	Soluble	Solid	DI Leach	
880-60264-7	PH03	Soluble	Solid	DI Leach	
880-60264-8	PH03	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

HPLC/IC (Continued)

Leach Batch: 113985 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-9	PH04	Soluble	Solid	DI Leach	
880-60264-10	PH04	Soluble	Solid	DI Leach	
880-60264-11	PH05	Soluble	Solid	DI Leach	
880-60264-12	PH05	Soluble	Solid	DI Leach	
MB 880-113985/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-113985/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-113985/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-60264-10 MS	PH04	Soluble	Solid	DI Leach	
880-60264-10 MSD	PH04	Soluble	Solid	DI Leach	

Analysis Batch: 114024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-60264-1	PH01	Soluble	Solid	300.0	113985
880-60264-2	PH01	Soluble	Solid	300.0	113985
880-60264-3	PH01	Soluble	Solid	300.0	113985
880-60264-5	PH02	Soluble	Solid	300.0	113985
880-60264-6	PH02	Soluble	Solid	300.0	113985
880-60264-7	PH03	Soluble	Solid	300.0	113985
880-60264-8	PH03	Soluble	Solid	300.0	113985
880-60264-9	PH04	Soluble	Solid	300.0	113985
880-60264-10	PH04	Soluble	Solid	300.0	113985
880-60264-11	PH05	Soluble	Solid	300.0	113985
880-60264-12	PH05	Soluble	Solid	300.0	113985
MB 880-113985/1-A	Method Blank	Soluble	Solid	300.0	113985
LCS 880-113985/2-A	Lab Control Sample	Soluble	Solid	300.0	113985
LCSD 880-113985/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	113985
880-60264-10 MS	PH04	Soluble	Solid	300.0	113985
880-60264-10 MSD	PH04	Soluble	Solid	300.0	113985

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH01
Date Collected: 07/10/25 09:52
Date Received: 07/10/25 16:00

Lab Sample ID: 880-60264-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113989	AA	EET MID	07/14/25 09:46
Total/NA	Analysis	8021B		20	114063	MNR	EET MID	07/14/25 16:42
Total/NA	Prep	5035			113971	AA	EET MID	07/11/25 09:32
Total/NA	Analysis	8021B		1	113946	MNR	EET MID	07/12/25 03:32
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/14/25 16:42
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/14/25 23:19
Total/NA	Prep	8015NM Prep			113957	EL	EET MID	07/11/25 09:05
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/14/25 23:19
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		1	114024	CS	EET MID	07/12/25 01:53

Client Sample ID: PH01
Date Collected: 07/10/25 10:14
Date Received: 07/10/25 16:00

Lab Sample ID: 880-60264-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113971	AA	EET MID	07/11/25 09:32
Total/NA	Analysis	8021B		1	113946	MNR	EET MID	07/12/25 03:53
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/12/25 03:53
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/14/25 23:35
Total/NA	Prep	8015NM Prep			113957	EL	EET MID	07/11/25 09:05
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/14/25 23:35
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		5	114024	CS	EET MID	07/12/25 02:00

Client Sample ID: PH01
Date Collected: 07/10/25 10:52
Date Received: 07/10/25 16:00

Lab Sample ID: 880-60264-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113971	AA	EET MID	07/11/25 09:32
Total/NA	Analysis	8021B		1	113946	MNR	EET MID	07/12/25 04:13
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/12/25 04:13
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/14/25 23:50
Total/NA	Prep	8015NM Prep			113957	EL	EET MID	07/11/25 09:05
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/14/25 23:50
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		1	114024	CS	EET MID	07/12/25 02:07

Lab Chronicle

Client: Ensolum
Job ID: 880-60264-1
Project/Site: Pygmy 27 State 3H Produced Water
SDG: Lea County

Client Sample ID: PH02
Lab Sample ID: 880-60264-5
Date Collected: 07/10/25 09:36
Matrix: Solid
Date Received: 07/10/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113971	AA	EET MID	07/11/25 09:32
Total/NA	Analysis	8021B		1	113946	MNR	EET MID	07/12/25 04:34
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/12/25 04:34
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/15/25 00:07
Total/NA	Prep	8015NM Prep			113957	EL	EET MID	07/11/25 09:05
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/15/25 00:07
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		1	114024	CS	EET MID	07/12/25 02:29

Client Sample ID: PH02
Lab Sample ID: 880-60264-6
Date Collected: 07/10/25 09:38
Matrix: Solid
Date Received: 07/10/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113971	AA	EET MID	07/11/25 09:32
Total/NA	Analysis	8021B		1	113946	MNR	EET MID	07/12/25 04:54
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/12/25 04:54
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/15/25 00:22
Total/NA	Prep	8015NM Prep			113957	EL	EET MID	07/11/25 09:05
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/15/25 00:22
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		1	114024	CS	EET MID	07/12/25 02:36

Client Sample ID: PH03
Lab Sample ID: 880-60264-7
Date Collected: 07/10/25 09:40
Matrix: Solid
Date Received: 07/10/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113971	AA	EET MID	07/11/25 09:32
Total/NA	Analysis	8021B		1	113946	MNR	EET MID	07/12/25 05:14
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/12/25 05:14
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/15/25 00:38
Total/NA	Prep	8015NM Prep			113957	EL	EET MID	07/11/25 09:05
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/15/25 00:38
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		1	114024	CS	EET MID	07/12/25 02:43

Client Sample ID: PH03
Lab Sample ID: 880-60264-8
Date Collected: 07/10/25 09:40
Matrix: Solid
Date Received: 07/10/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113971	AA	EET MID	07/11/25 09:32
Total/NA	Analysis	8021B		1	113946	MNR	EET MID	07/12/25 05:35
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/12/25 05:35

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH03
Date Collected: 07/10/25 09:40
Date Received: 07/10/25 16:00

Lab Sample ID: 880-60264-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/15/25 00:54
Total/NA	Prep	8015NM Prep			113957	EL	EET MID	07/11/25 09:05
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/15/25 00:54
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		1	114024	CS	EET MID	07/12/25 02:51

Client Sample ID: PH04
Date Collected: 07/10/25 10:22
Date Received: 07/10/25 16:00

Lab Sample ID: 880-60264-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113971	AA	EET MID	07/11/25 09:32
Total/NA	Analysis	8021B		1	113946	MNR	EET MID	07/12/25 05:55
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/12/25 05:55
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/15/25 01:10
Total/NA	Prep	8015NM Prep			113957	EL	EET MID	07/11/25 09:05
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/15/25 01:10
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		1	114024	CS	EET MID	07/12/25 02:58

Client Sample ID: PH04
Date Collected: 07/10/25 10:24
Date Received: 07/10/25 16:00

Lab Sample ID: 880-60264-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113971	AA	EET MID	07/11/25 09:32
Total/NA	Analysis	8021B		1	113946	MNR	EET MID	07/12/25 06:16
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/12/25 06:16
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/15/25 01:25
Total/NA	Prep	8015NM Prep			113957	EL	EET MID	07/11/25 09:05
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/15/25 01:25
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		1	114024	CS	EET MID	07/12/25 03:05

Client Sample ID: PH05
Date Collected: 07/10/25 09:48
Date Received: 07/10/25 16:00

Lab Sample ID: 880-60264-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113989	AA	EET MID	07/14/25 09:46
Total/NA	Analysis	8021B		1	114063	MNR	EET MID	07/14/25 16:22
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/14/25 16:22
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/15/25 03:34
Total/NA	Prep	8015NM Prep			113958	EL	EET MID	07/11/25 09:08
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/15/25 03:34

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-60264-1
SDG: Lea County

Client Sample ID: PH05

Lab Sample ID: 880-60264-11

Date Collected: 07/10/25 09:48
Matrix: Solid
Date Received: 07/10/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		1	114024	CS	EET MID	07/12/25 03:27

Client Sample ID: PH05

Lab Sample ID: 880-60264-12

Date Collected: 07/10/25 09:50
Matrix: Solid
Date Received: 07/10/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			113987	AA	EET MID	07/11/25 10:30
Total/NA	Analysis	8021B		1	113947	MNR	EET MID	07/12/25 04:01
Total/NA	Analysis	Total BTEX		1	114097	SA	EET MID	07/12/25 04:01
Total/NA	Analysis	8015 NM		1	114204	SA	EET MID	07/15/25 04:22
Total/NA	Prep	8015NM Prep			113958	EL	EET MID	07/11/25 09:08
Total/NA	Analysis	8015B NM		1	114090	TKC	EET MID	07/15/25 04:22
Soluble	Leach	DI Leach			113985	SMC	EET MID	07/11/25 10:26
Soluble	Analysis	300.0		1	114024	CS	EET MID	07/12/25 03:34

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Job ID: 880-60264-1
Project/Site: Pygmy 27 State 3H Produced Water
SDG: Lea County

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum Job ID: 880-60264-1
Project/Site: Pygmy 27 State 3H Produced Water SDG: Lea County

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
Job ID: 880-60264-1
Project/Site: Pygmy 27 State 3H Produced Water
SDG: Lea County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-60264-1	PH01	Solid	07/10/25 09:52	07/10/25 16:00	3'
880-60264-2	PH01	Solid	07/10/25 10:14	07/10/25 16:00	5'
880-60264-3	PH01	Solid	07/10/25 10:52	07/10/25 16:00	6'
880-60264-5	PH02	Solid	07/10/25 09:36	07/10/25 16:00	1'
880-60264-6	PH02	Solid	07/10/25 09:38	07/10/25 16:00	2'
880-60264-7	PH03	Solid	07/10/25 09:40	07/10/25 16:00	1'
880-60264-8	PH03	Solid	07/10/25 09:40	07/10/25 16:00	2'
880-60264-9	PH04	Solid	07/10/25 10:22	07/10/25 16:00	1'
880-60264-10	PH04	Solid	07/10/25 10:24	07/10/25 16:00	2'
880-60264-11	PH05	Solid	07/10/25 09:48	07/10/25 16:00	1'
880-60264-12	PH05	Solid	07/10/25 09:50	07/10/25 16:00	2'

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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

880-60264 Chain of Custody

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Project Manager:	Hadlie Green	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	601 N Marienfeld Street Suite 400	Address:	
City, State ZIP:	Midland TX 79701	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pygmy 27 State 3H	Turn Around	
Project Number:	Produced water 03D2024356	☒ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	
Sampler's Name:	Yesenia Tarin	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	03D2024356		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TR8
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-.1
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.7
Total Containers:		Corrected Temperature:	4.6

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2SO_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX 8021	TPH 8015	Chlorides 300	Sample Comments
PH01	S	7/10/25	0952	3'	G	1		X	X	X	HOLD PH01 7'
PH01			1014	5'	G			X	X	X	
PH01			1052	6'				X	X	X	
PH01			1103	7'				HOLD			
PH02			0936	1'				X	X	X	
PH02			0938	2'				X	X	X	
PH03			0940	1'				X	X	X	
PH03			0940	2'				X	X	X	
PH04			1022	1'				X	X	X	
PH04			1024	2'				X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1600 7/10/25	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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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

Work Order No: _____

www.xenco.com Page 2 of 2

Project Manager:	Hallie Green	Bill to: (if different)	
Company Name:	Ensolum LLC	Company Name:	
Address:	601 Marienfeld Street Suite 400	Address:	
City, State ZIP:	Midland Tx 79701	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pygmy 27 State 3H Produced Water	Turn Around	☐Routine ☐Rush
Project Number:	03D2024356	Due Date:	
Project Location:	Lea County	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Belinda Tafoya		
PO #:	03D2024356		

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	
Total Containers:		Corrected Temperature:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX 8021	TPH 8015	Chlorides 300	Sample Comments
PH05	S	7/10/25	0948	1'	G	1		X	X	X	
PH05	S	7/10/25	0950	2'	G	1		X	X	X	

NFE

7/10/25

4T

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	1010	7/10/25	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-60264-1
SDG Number: Lea County

Login Number: 60264
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 8/26/2025 10:14:21 AM

JOB DESCRIPTION

PYGMY 27 STATE 3H PRODUCED WATER
03D2024356

JOB NUMBER

890-8718-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

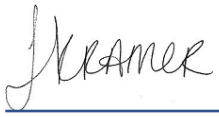
Eurofins Carlsbad

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
8/26/2025 10:14:21 AM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Laboratory Job ID: 890-8718-1
SDG: 03D2024356

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-8718-1
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER SDG: 03D2024356

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum Job ID: 890-8718-1
Project: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1 Eurofins Carlsbad

Job Narrative
890-8718-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 8/21/2025 4:15 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 5.8°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS 01 (890-8718-1), FS 02 (890-8718-2), FS 03 (890-8718-3) and FS 04 (890-8718-4).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-117391 and analytical batch 880-117424 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Diesel Range Organics
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-8715-A-8-B MS). 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 Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

Client Sample ID: FS 01

Date Collected: 08/21/25 11:58
Date Received: 08/21/25 16:15
Sample Depth: 9

Lab Sample ID: 890-8718-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/22/25 11:58	08/24/25 10:46	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/22/25 11:58	08/24/25 10:46	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/22/25 11:58	08/24/25 10:46	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		08/22/25 11:58	08/24/25 10:46	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/22/25 11:58	08/24/25 10:46	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		08/22/25 11:58	08/24/25 10:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*08/22/25 11:58*	*08/24/25 10:46*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*08/22/25 11:58*	*08/24/25 10:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			08/24/25 10:46	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			08/26/25 06:52	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/22/25 07:49	08/26/25 06:52	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/22/25 07:49	08/26/25 06:52	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/22/25 07:49	08/26/25 06:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*08/22/25 07:49*	*08/26/25 06:52*	*1*
o-Terphenyl	*73*		*70 - 130*	*08/22/25 07:49*	*08/26/25 06:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**206**		10.0		mg/Kg			08/22/25 19:54	1

Client Sample ID: FS 02

Date Collected: 08/21/25 08:19
Date Received: 08/21/25 16:15
Sample Depth: 7

Lab Sample ID: 890-8718-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/22/25 11:58	08/24/25 11:06	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/22/25 11:58	08/24/25 11:06	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/22/25 11:58	08/24/25 11:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/22/25 11:58	08/24/25 11:06	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/22/25 11:58	08/24/25 11:06	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/22/25 11:58	08/24/25 11:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*08/22/25 11:58*	*08/24/25 11:06*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

Client Sample ID: FS 02

Date Collected: 08/21/25 08:19
Date Received: 08/21/25 16:15
Sample Depth: 7

Lab Sample ID: 890-8718-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*08/22/25 11:58*	*08/24/25 11:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			08/24/25 11:06	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			08/26/25 07:07	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		08/22/25 07:49	08/26/25 07:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		08/22/25 07:49	08/26/25 07:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		08/22/25 07:49	08/26/25 07:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*08/22/25 07:49*	*08/26/25 07:07*	*1*
o-Terphenyl	*71*		*70 - 130*	*08/22/25 07:49*	*08/26/25 07:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**183**		9.92	mg/Kg			08/22/25 20:00	1

Client Sample ID: FS 03

Date Collected: 08/21/25 10:38
Date Received: 08/21/25 16:15
Sample Depth: 8

Lab Sample ID: 890-8718-3

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/22/25 11:58	08/24/25 11:27	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/22/25 11:58	08/24/25 11:27	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/22/25 11:58	08/24/25 11:27	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		08/22/25 11:58	08/24/25 11:27	1
o-Xylene	**0.00209**		0.00200	mg/Kg		08/22/25 11:58	08/24/25 11:27	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		08/22/25 11:58	08/24/25 11:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*08/22/25 11:58*	*08/24/25 11:27*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*08/22/25 11:58*	*08/24/25 11:27*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			08/24/25 11:27	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**184**		49.8	mg/Kg			08/26/25 07:23	1

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Client Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

Client Sample ID: FS 03

Date Collected: 08/21/25 10:38
Date Received: 08/21/25 16:15
Sample Depth: 8

Lab Sample ID: 890-8718-3
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/22/25 07:49	08/26/25 07:23	1
Diesel Range Organics (Over C10-C28)	**184**		49.8		mg/Kg		08/22/25 07:49	08/26/25 07:23	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/22/25 07:49	08/26/25 07:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*72*		*70 - 130*	*08/22/25 07:49*	*08/26/25 07:23*	*1*
o-Terphenyl	*74*		*70 - 130*	*08/22/25 07:49*	*08/26/25 07:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**215**		10.1		mg/Kg			08/22/25 20:05	1

Client Sample ID: FS 04

Date Collected: 08/21/25 08:23
Date Received: 08/21/25 16:15
Sample Depth: 7

Lab Sample ID: 890-8718-4
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/22/25 11:58	08/24/25 11:47	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/22/25 11:58	08/24/25 11:47	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/22/25 11:58	08/24/25 11:47	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/22/25 11:58	08/24/25 11:47	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/22/25 11:58	08/24/25 11:47	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/22/25 11:58	08/24/25 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*08/22/25 11:58*	*08/24/25 11:47*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*08/22/25 11:58*	*08/24/25 11:47*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			08/24/25 11:47	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**123**		49.9		mg/Kg			08/26/25 07:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/22/25 07:49	08/26/25 07:39	1
Diesel Range Organics (Over C10-C28)	**123**		49.9		mg/Kg		08/22/25 07:49	08/26/25 07:39	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/22/25 07:49	08/26/25 07:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*08/22/25 07:49*	*08/26/25 07:39*	*1*
o-Terphenyl	*77*		*70 - 130*	*08/22/25 07:49*	*08/26/25 07:39*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

Client Sample ID: FS 04
Date Collected: 08/21/25 08:23
Date Received: 08/21/25 16:15
Sample Depth: 7

Lab Sample ID: 890-8718-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	378		10.0		mg/Kg			08/25/25 17:48	1

Surrogate Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

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)
890-8716-A-8-D MSD	Matrix Spike Duplicate	110	97
890-8716-A-8-F MS	Matrix Spike	117	95
890-8718-1	FS 01	110	88
890-8718-2	FS 02	110	91
890-8718-3	FS 03	107	87
890-8718-4	FS 04	109	91
LCS 880-117391/1-A	Lab Control Sample	111	96
LCSD 880-117391/2-A	Lab Control Sample Dup	114	95
MB 880-117176/5-A	Method Blank	112	83
MB 880-117391/5-A	Method Blank	113	86

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-8715-A-8-B MS	Matrix Spike	69 S1-	74
890-8715-A-8-C MSD	Matrix Spike Duplicate	84	75
890-8718-1	FS 01	73	73
890-8718-2	FS 02	73	71
890-8718-3	FS 03	72	74
890-8718-4	FS 04	76	77
LCS 880-117339/2-A	Lab Control Sample	99	113
LCSD 880-117339/3-A	Lab Control Sample Dup	99	114
MB 880-117339/1-A	Method Blank	86	89

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-117176/5-A
Matrix: Solid
Analysis Batch: 117424

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117176

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/20/25 15:32	08/23/25 22:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/20/25 15:32	08/23/25 22:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/20/25 15:32	08/23/25 22:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/20/25 15:32	08/23/25 22:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/20/25 15:32	08/23/25 22:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/20/25 15:32	08/23/25 22:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*08/20/25 15:32*	*08/23/25 22:45*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*08/20/25 15:32*	*08/23/25 22:45*	*1*

Lab Sample ID: MB 880-117391/5-A
Matrix: Solid
Analysis Batch: 117424

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117391

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/22/25 11:58	08/24/25 09:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/22/25 11:58	08/24/25 09:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/22/25 11:58	08/24/25 09:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/22/25 11:58	08/24/25 09:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/22/25 11:58	08/24/25 09:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/22/25 11:58	08/24/25 09:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*08/22/25 11:58*	*08/24/25 09:43*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*08/22/25 11:58*	*08/24/25 09:43*	*1*

Lab Sample ID: LCS 880-117391/1-A
Matrix: Solid
Analysis Batch: 117424

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117391

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09367		mg/Kg		94	70 - 130		
Toluene			0.100	0.08705		mg/Kg		87	70 - 130		
Ethylbenzene			0.100	0.09828		mg/Kg		98	70 - 130		
m-Xylene & p-Xylene			0.200	0.1950		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09810		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-117391/2-A
Matrix: Solid
Analysis Batch: 117424

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117391

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.07966		mg/Kg		80	70 - 130	16	35

QC Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

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

Lab Sample ID: LCSD 880-117391/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 117424 — **Prep Batch: 117391**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.07383		mg/Kg		74	70 - 130	16	35
Ethylbenzene			0.100	0.08344		mg/Kg		83	70 - 130	16	35
m-Xylene & p-Xylene			0.200	0.1649		mg/Kg		82	70 - 130	17	35
o-Xylene			0.100	0.08403		mg/Kg		84	70 - 130	15	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 890-8716-A-8-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 117424 — **Prep Batch: 117391**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.100	0.05574	F1	mg/Kg		56	70 - 130	20	35
Toluene	<0.00200	U F1	0.100	0.04918	F1	mg/Kg		49	70 - 130	26	35
Ethylbenzene	<0.00200	U F1	0.100	0.05435	F1	mg/Kg		54	70 - 130	26	35
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1068	F1	mg/Kg		53	70 - 130	25	35
o-Xylene	<0.00200	U F1	0.100	0.05573	F1	mg/Kg		56	70 - 130	21	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 890-8716-A-8-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 117424 — **Prep Batch: 117391**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1	0.100	0.06819	F1	mg/Kg		68	70 - 130
Toluene	<0.00200	U F1	0.100	0.06369	F1	mg/Kg		64	70 - 130
Ethylbenzene	<0.00200	U F1	0.100	0.07087		mg/Kg		71	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1377	F1	mg/Kg		69	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.06853	F1	mg/Kg		69	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

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

Lab Sample ID: MB 880-117339/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 117448 — **Prep Batch: 117339**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/22/25 07:48	08/26/25 02:12	1

QC Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

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

Lab Sample ID: MB 880-117339/1-A
Matrix: Solid
Analysis Batch: 117448

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117339

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/22/25 07:48	08/26/25 02:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/22/25 07:48	08/26/25 02:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*08/22/25 07:48*	*08/26/25 02:12*	*1*
o-Terphenyl	*89*		*70 - 130*	*08/22/25 07:48*	*08/26/25 02:12*	*1*

Lab Sample ID: LCS 880-117339/2-A
Matrix: Solid
Analysis Batch: 117448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117339

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1016		mg/Kg		102	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1018		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Lab Sample ID: LCSD 880-117339/3-A
Matrix: Solid
Analysis Batch: 117448

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117339

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1032		mg/Kg		103	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	1024		mg/Kg		102	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*114*		*70 - 130*

Lab Sample ID: 890-8715-A-8-B MS
Matrix: Solid
Analysis Batch: 117448

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 117339

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	848.4		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	999	857.8		mg/Kg		86	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*69*	*S1-*	*70 - 130*
o-Terphenyl	*74*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

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

Lab Sample ID: 890-8715-A-8-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 117448 — **Prep Batch: 117339**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	830.4		mg/Kg		83	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	801.0		mg/Kg		80	70 - 130	7	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-117356/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 117399

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			08/22/25 17:15	1

Lab Sample ID: LCS 880-117356/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 117399

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	235.1		mg/Kg		94	90 - 110		

Lab Sample ID: LCSD 880-117356/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 117399

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	236.3		mg/Kg		95	90 - 110	1	20

Lab Sample ID: 890-8716-A-3-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 117399

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	<9.96	U	249	237.7		mg/Kg		94	90 - 110		

Lab Sample ID: 890-8716-A-3-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 117399

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	<9.96	U	249	237.7		mg/Kg		94	90 - 110	0	20

QC Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-117435/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 117517

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			08/25/25 14:58	1

Lab Sample ID: LCS 880-117435/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 117517

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	228.4		mg/Kg		91	90 - 110		

Lab Sample ID: LCSD 880-117435/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 117517

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	225.7		mg/Kg		90	90 - 110	1	20

Lab Sample ID: 880-61871-A-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 117517

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	79.0		251	318.3		mg/Kg		96	90 - 110		

Lab Sample ID: 880-61871-A-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 117517

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	79.0		251	316.4		mg/Kg		95	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

GC VOA

Prep Batch: 117176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-117176/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 117391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-1	FS 01	Total/NA	Solid	5035	
890-8718-2	FS 02	Total/NA	Solid	5035	
890-8718-3	FS 03	Total/NA	Solid	5035	
890-8718-4	FS 04	Total/NA	Solid	5035	
MB 880-117391/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-117391/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-117391/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-8716-A-8-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
890-8716-A-8-F MS	Matrix Spike	Total/NA	Solid	5035	

Analysis Batch: 117424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-1	FS 01	Total/NA	Solid	8021B	117391
890-8718-2	FS 02	Total/NA	Solid	8021B	117391
890-8718-3	FS 03	Total/NA	Solid	8021B	117391
890-8718-4	FS 04	Total/NA	Solid	8021B	117391
MB 880-117176/5-A	Method Blank	Total/NA	Solid	8021B	117176
MB 880-117391/5-A	Method Blank	Total/NA	Solid	8021B	117391
LCS 880-117391/1-A	Lab Control Sample	Total/NA	Solid	8021B	117391
LCSD 880-117391/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	117391
890-8716-A-8-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	117391
890-8716-A-8-F MS	Matrix Spike	Total/NA	Solid	8021B	117391

Analysis Batch: 117512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-1	FS 01	Total/NA	Solid	Total BTEX	
890-8718-2	FS 02	Total/NA	Solid	Total BTEX	
890-8718-3	FS 03	Total/NA	Solid	Total BTEX	
890-8718-4	FS 04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 117339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-1	FS 01	Total/NA	Solid	8015NM Prep	
890-8718-2	FS 02	Total/NA	Solid	8015NM Prep	
890-8718-3	FS 03	Total/NA	Solid	8015NM Prep	
890-8718-4	FS 04	Total/NA	Solid	8015NM Prep	
MB 880-117339/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-117339/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-117339/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-8715-A-8-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-8715-A-8-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 117448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-1	FS 01	Total/NA	Solid	8015B NM	117339

QC Association Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

GC Semi VOA (Continued)

Analysis Batch: 117448 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-2	FS 02	Total/NA	Solid	8015B NM	117339
890-8718-3	FS 03	Total/NA	Solid	8015B NM	117339
890-8718-4	FS 04	Total/NA	Solid	8015B NM	117339
MB 880-117339/1-A	Method Blank	Total/NA	Solid	8015B NM	117339
LCS 880-117339/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	117339
LCSD 880-117339/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	117339
890-8715-A-8-B MS	Matrix Spike	Total/NA	Solid	8015B NM	117339
890-8715-A-8-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	117339

Analysis Batch: 117567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-1	FS 01	Total/NA	Solid	8015 NM	
890-8718-2	FS 02	Total/NA	Solid	8015 NM	
890-8718-3	FS 03	Total/NA	Solid	8015 NM	
890-8718-4	FS 04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 117356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-1	FS 01	Soluble	Solid	DI Leach	
890-8718-2	FS 02	Soluble	Solid	DI Leach	
890-8718-3	FS 03	Soluble	Solid	DI Leach	
MB 880-117356/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-117356/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-117356/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-8716-A-3-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-8716-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 117399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-1	FS 01	Soluble	Solid	300.0	117356
890-8718-2	FS 02	Soluble	Solid	300.0	117356
890-8718-3	FS 03	Soluble	Solid	300.0	117356
MB 880-117356/1-A	Method Blank	Soluble	Solid	300.0	117356
LCS 880-117356/2-A	Lab Control Sample	Soluble	Solid	300.0	117356
LCSD 880-117356/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	117356
890-8716-A-3-C MS	Matrix Spike	Soluble	Solid	300.0	117356
890-8716-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	117356

Leach Batch: 117435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-4	FS 04	Soluble	Solid	DI Leach	
MB 880-117435/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-117435/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-117435/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-61871-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-61871-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

HPLC/IC

Analysis Batch: 117517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8718-4	FS 04	Soluble	Solid	300.0	117435
MB 880-117435/1-A	Method Blank	Soluble	Solid	300.0	117435
LCS 880-117435/2-A	Lab Control Sample	Soluble	Solid	300.0	117435
LCSD 880-117435/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	117435
880-61871-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	117435
880-61871-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	117435

Lab Chronicle

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

Client Sample ID: FS 01

Lab Sample ID: 890-8718-1
Matrix: Solid
Date Collected: 08/21/25 11:58
Date Received: 08/21/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	117391	08/22/25 11:58	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	117424	08/24/25 10:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			117512	08/24/25 10:46	SA	EET MID
Total/NA	Analysis	8015 NM		1			117567	08/26/25 06:52	SA	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	117339	08/22/25 07:49	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	117448	08/26/25 06:52	TKC	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	117356	08/22/25 10:25	SI	EET MID
Soluble	Analysis	300.0		1			117399	08/22/25 19:54	CS	EET MID

Client Sample ID: FS 02

Lab Sample ID: 890-8718-2
Matrix: Solid
Date Collected: 08/21/25 08:19
Date Received: 08/21/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	117391	08/22/25 11:58	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	117424	08/24/25 11:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			117512	08/24/25 11:06	SA	EET MID
Total/NA	Analysis	8015 NM		1			117567	08/26/25 07:07	SA	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	117339	08/22/25 07:49	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	117448	08/26/25 07:07	TKC	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	117356	08/22/25 10:25	SI	EET MID
Soluble	Analysis	300.0		1			117399	08/22/25 20:00	CS	EET MID

Client Sample ID: FS 03

Lab Sample ID: 890-8718-3
Matrix: Solid
Date Collected: 08/21/25 10:38
Date Received: 08/21/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	117391	08/22/25 11:58	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	117424	08/24/25 11:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			117512	08/24/25 11:27	SA	EET MID
Total/NA	Analysis	8015 NM		1			117567	08/26/25 07:23	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	117339	08/22/25 07:49	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	117448	08/26/25 07:23	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	117356	08/22/25 10:25	SI	EET MID
Soluble	Analysis	300.0		1			117399	08/22/25 20:05	CS	EET MID

Client Sample ID: FS 04

Lab Sample ID: 890-8718-4
Matrix: Solid
Date Collected: 08/21/25 08:23
Date Received: 08/21/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	117391	08/22/25 11:58	AA	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	117424	08/24/25 11:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			117512	08/24/25 11:47	SA	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

Client Sample ID: FS 04

Date Collected: 08/21/25 08:23
Date Received: 08/21/25 16:15

Lab Sample ID: 890-8718-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			117567	08/26/25 07:39	SA	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	117339	08/22/25 07:49	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	117448	08/26/25 07:39	TKC	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	117435	08/25/25 09:04	SI	EET MID
Soluble	Analysis	300.0		1			117517	08/25/25 17:48	CS	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

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: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8718-1
SDG: 03D2024356

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-8718-1	FS 01	Solid	08/21/25 11:58	08/21/25 16:15	9
890-8718-2	FS 02	Solid	08/21/25 08:19	08/21/25 16:15	7
890-8718-3	FS 03	Solid	08/21/25 10:38	08/21/25 16:15	8
890-8718-4	FS 04	Solid	08/21/25 08:23	08/21/25 16:15	7

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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

Work Order No: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	
Company Name:	Ensolum	Company Name:	
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com, Sbrooks@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pygmy 27 State 3H produced water	Turn Around	
Project Number:	03E2024356	☒ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	
Sampler's Name:	Shirele Brooks/Leandra Tapia	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	Tmac7	
~~Cooler Custody Seals:~~	~~Yes No (N/A)~~	Correction Factor:	0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	6.8	
Total Containers:		Corrected Temperature:	5.8	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX 8021	TPH 8015	Chlorides 300
FS01	Soil	8/12/25	11:58	9'	C	1		X	X	X
FS02	"	"	08:19	7'	"	"		"	"	"
FS03	"	"	10:38	8'	"	"		"	"	"
FS04	"	"	08:23	7'	"	"		"	"	"

890-8718 Chain of Custody

Preservative Codes

None: NO — DI Water: H_2O
pol: Cool — MeOH: Me
CL: HC — HNO_3: HN
$_2SO_4$: H_2 — NaOH: Na
$_3PO_4$: HP
~~$aHSO_4$: NABIS~~
~~$a_2S_2O_3$: $NaSO_3$~~
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Total 200.7 / 6010 **200.8 / 6020:** 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010:** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Shirele Brooks		8/21 16:15	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone: 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Kramer, Jessica	Carrier Tracking No(s): N/A	COC No: 890-5794.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-8718-1
Address: 1211 W. Florida Ave,	Due Date Requested: 8/27/2025			
City: Midland	TAT Requested (days): N/A			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: PYGMY 27 STATE 3H PRODUCED WATER	Project #: 89000145			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:
-
Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep(MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACHChloride	8021B/5035FP_Calc(MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
FS 01 (890-8718-1)	8/21/25	11:58 Mountain	G	Solid			X	X	X	X	X	1	
FS 02 (890-8718-2)	8/21/25	08:19 Mountain	G	Solid			X	X	X	X	X	1	
FS 03 (890-8718-3)	8/21/25	10:38 Mountain	G	Solid			X	X	X	X	X	1	
FS 04 (890-8718-4)	8/21/25	08:23 Mountain	G	Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 8/21 1630	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Tabby Rundell Le	Date/Time: 8/22/25 0800	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.2/4.1 IR-8 (-0.1)

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8718-1
SDG Number: 03D2024356

Login Number: 8718
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8718-1
SDG Number: 03D2024356

Login Number: 8718
List Number: 2
Creator: Laing, Edmundo

List Source: Eurofins Midland
List Creation: 08/22/25 08:17 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 8/26/2025 1:08:02 PM

JOB DESCRIPTION

Pygmy 27 State 3H Poduced Water
Lea County, NM

JOB NUMBER

880-61876-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

Eurofins Midland

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
8/26/2025 1:08:02 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Pygmy 27 State 3H Poduced Water

Laboratory Job ID: 880-61876-1
SDG: Lea County, NM

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-61876-1
Project/Site: Pygmy 27 State 3H Poduced Water SDG: Lea County, NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum Job ID: 880-61876-1
Project: Pygmy 27 State 3H Poduced Water

Job ID: 880-61876-1 Eurofins Midland

Job Narrative
880-61876-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 8/22/2025 5:15 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 3.1°C.

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-117452 and analytical batch 880-117431 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Diesel Range Organics
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-8715-A-8-B MS). 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 Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-61876-1
SDG: Lea County, NM

Client Sample ID: SW01

Lab Sample ID: 880-61876-1
Matrix: Solid
Date Collected: 08/22/25 12:10
Date Received: 08/22/25 17:15
Sample Depth: 0-8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/25/25 10:49	08/26/25 04:22	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/25/25 10:49	08/26/25 04:22	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/25/25 10:49	08/26/25 04:22	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/25/25 10:49	08/26/25 04:22	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/25/25 10:49	08/26/25 04:22	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/25/25 10:49	08/26/25 04:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*08/25/25 10:49*	*08/26/25 04:22*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*08/25/25 10:49*	*08/26/25 04:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/26/25 04:22	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			08/26/25 08:09	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/22/25 07:49	08/26/25 08:09	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/22/25 07:49	08/26/25 08:09	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/22/25 07:49	08/26/25 08:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*08/22/25 07:49*	*08/26/25 08:09*	*1*
o-Terphenyl	*76*		*70 - 130*	*08/22/25 07:49*	*08/26/25 08:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**76.1**		10.0		mg/Kg			08/25/25 19:01	1

Client Sample ID: SW02

Lab Sample ID: 880-61876-2
Matrix: Solid
Date Collected: 08/22/25 11:44
Date Received: 08/22/25 17:15
Sample Depth: 0-8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/25/25 10:49	08/26/25 04:43	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/25/25 10:49	08/26/25 04:43	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/25/25 10:49	08/26/25 04:43	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/25/25 10:49	08/26/25 04:43	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/25/25 10:49	08/26/25 04:43	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/25/25 10:49	08/26/25 04:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*08/25/25 10:49*	*08/26/25 04:43*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Poduced Water

Job ID: 880-61876-1
SDG: Lea County, NM

Client Sample ID: SW02

Lab Sample ID: 880-61876-2
Matrix: Solid
Date Collected: 08/22/25 11:44
Date Received: 08/22/25 17:15
Sample Depth: 0-8'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*08/25/25 10:49*	*08/26/25 04:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/26/25 04:43	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			08/26/25 08:24	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		08/22/25 07:49	08/26/25 08:24	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		08/22/25 07:49	08/26/25 08:24	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		08/22/25 07:49	08/26/25 08:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*73*		*70 - 130*	*08/22/25 07:49*	*08/26/25 08:24*	*1*
o-Terphenyl	*74*		*70 - 130*	*08/22/25 07:49*	*08/26/25 08:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36.2**		9.98	mg/Kg			08/25/25 19:07	1

Client Sample ID: SW03

Lab Sample ID: 880-61876-3
Matrix: Solid
Date Collected: 08/22/25 12:16
Date Received: 08/22/25 17:15
Sample Depth: 0-9'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		08/25/25 10:49	08/26/25 05:03	1
Toluene	**0.00349**		0.00202	mg/Kg		08/25/25 10:49	08/26/25 05:03	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		08/25/25 10:49	08/26/25 05:03	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		08/25/25 10:49	08/26/25 05:03	1
o-Xylene	**0.00553**		0.00202	mg/Kg		08/25/25 10:49	08/26/25 05:03	1
Xylenes, Total	**0.00553**		0.00404	mg/Kg		08/25/25 10:49	08/26/25 05:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*08/25/25 10:49*	*08/26/25 05:03*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*08/25/25 10:49*	*08/26/25 05:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00902**		0.00404	mg/Kg			08/26/25 05:03	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/26/25 08:40	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Poduced Water

Job ID: 880-61876-1
SDG: Lea County, NM

Client Sample ID: SW03

Date Collected: 08/22/25 12:16
Date Received: 08/22/25 17:15
Sample Depth: 0-9'

Lab Sample ID: 880-61876-3

Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/22/25 07:49	08/26/25 08:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/22/25 07:49	08/26/25 08:40	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/22/25 07:49	08/26/25 08:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*08/22/25 07:49*	*08/26/25 08:40*	*1*
o-Terphenyl	*75*		*70 - 130*	*08/22/25 07:49*	*08/26/25 08:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.1	U	10.1		mg/Kg			08/25/25 19:24	1

Surrogate Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Poduced Water

Job ID: 880-61876-1
SDG: Lea County, NM

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)
880-61876-1	SW01	104	87
880-61876-2	SW02	104	91
880-61876-3	SW03	77	104
LCS 880-117452/1-A	Lab Control Sample	117	99
LCSD 880-117452/2-A	Lab Control Sample Dup	108	98
MB 880-117437/5-A	Method Blank	105	86
MB 880-117452/5-A	Method Blank	114	90

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-61876-1	SW01	75	76
880-61876-2	SW02	73	74
880-61876-3	SW03	74	75
LCS 880-117339/2-A	Lab Control Sample	99	113
LCSD 880-117339/3-A	Lab Control Sample Dup	99	114
MB 880-117339/1-A	Method Blank	86	89

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-61876-1
SDG: Lea County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-117437/5-A
Matrix: Solid
Analysis Batch: 117431

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117437

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/25 09:24	08/25/25 11:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/25 09:24	08/25/25 11:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/25 09:24	08/25/25 11:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/25/25 09:24	08/25/25 11:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/25 09:24	08/25/25 11:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/25/25 09:24	08/25/25 11:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*08/25/25 09:24*	*08/25/25 11:10*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*08/25/25 09:24*	*08/25/25 11:10*	*1*

Lab Sample ID: MB 880-117452/5-A
Matrix: Solid
Analysis Batch: 117431

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117452

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/25 10:49	08/25/25 22:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/25 10:49	08/25/25 22:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/25 10:49	08/25/25 22:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/25/25 10:49	08/25/25 22:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/25 10:49	08/25/25 22:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/25/25 10:49	08/25/25 22:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*08/25/25 10:49*	*08/25/25 22:41*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*08/25/25 10:49*	*08/25/25 22:41*	*1*

Lab Sample ID: LCS 880-117452/1-A
Matrix: Solid
Analysis Batch: 117431

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117452

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08891		mg/Kg		89	70 - 130		
Toluene			0.100	0.08618		mg/Kg		86	70 - 130		
Ethylbenzene			0.100	0.09857		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1970		mg/Kg		99	70 - 130		
o-Xylene			0.100	0.09865		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-117452/2-A
Matrix: Solid
Analysis Batch: 117431

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117452

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09154		mg/Kg		92	70 - 130	3	35

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-61876-1
SDG: Lea County, NM

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

Lab Sample ID: LCSD 880-117452/2-A
Matrix: Solid
Analysis Batch: 117431

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117452

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08150		mg/Kg		82	70 - 130	6	35
Ethylbenzene			0.100	0.09071		mg/Kg		91	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1786		mg/Kg		89	70 - 130	10	35
o-Xylene			0.100	0.08952		mg/Kg		90	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

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

Lab Sample ID: MB 880-117339/1-A
Matrix: Solid
Analysis Batch: 117448

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117339

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/22/25 07:48	08/26/25 02:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/22/25 07:48	08/26/25 02:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/22/25 07:48	08/26/25 02:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*08/22/25 07:48*	*08/26/25 02:12*	*1*
o-Terphenyl	*89*		*70 - 130*	*08/22/25 07:48*	*08/26/25 02:12*	*1*

Lab Sample ID: LCS 880-117339/2-A
Matrix: Solid
Analysis Batch: 117448

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117339

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1016		mg/Kg		102	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1018		mg/Kg		102	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Lab Sample ID: LCSD 880-117339/3-A
Matrix: Solid
Analysis Batch: 117448

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117339

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1032		mg/Kg		103	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	1024		mg/Kg		102	70 - 130	1	20

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Poduced Water

Job ID: 880-61876-1
SDG: Lea County, NM

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

Lab Sample ID: LCSD 880-117339/3-A
Matrix: Solid
Analysis Batch: 117448

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117339

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*114*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-117441/1-A
Matrix: Solid
Analysis Batch: 117518

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			08/25/25 18:16	1

Lab Sample ID: LCS 880-117441/2-A
Matrix: Solid
Analysis Batch: 117518

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	233.3		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-117441/3-A
Matrix: Solid
Analysis Batch: 117518

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	229.2		mg/Kg		92	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced Water

Job ID: 880-61876-1
SDG: Lea County, NM

GC VOA

Analysis Batch: 117431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-61876-1	SW01	Total/NA	Solid	8021B	117452
880-61876-2	SW02	Total/NA	Solid	8021B	117452
880-61876-3	SW03	Total/NA	Solid	8021B	117452
MB 880-117437/5-A	Method Blank	Total/NA	Solid	8021B	117437
MB 880-117452/5-A	Method Blank	Total/NA	Solid	8021B	117452
LCS 880-117452/1-A	Lab Control Sample	Total/NA	Solid	8021B	117452
LCSD 880-117452/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	117452

Prep Batch: 117437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-117437/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 117452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-61876-1	SW01	Total/NA	Solid	5035	
880-61876-2	SW02	Total/NA	Solid	5035	
880-61876-3	SW03	Total/NA	Solid	5035	
MB 880-117452/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-117452/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-117452/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 117614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-61876-1	SW01	Total/NA	Solid	Total BTEX	
880-61876-2	SW02	Total/NA	Solid	Total BTEX	
880-61876-3	SW03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 117339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-61876-1	SW01	Total/NA	Solid	8015NM Prep	
880-61876-2	SW02	Total/NA	Solid	8015NM Prep	
880-61876-3	SW03	Total/NA	Solid	8015NM Prep	
MB 880-117339/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-117339/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-117339/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 117448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-61876-1	SW01	Total/NA	Solid	8015B NM	117339
880-61876-2	SW02	Total/NA	Solid	8015B NM	117339
880-61876-3	SW03	Total/NA	Solid	8015B NM	117339
MB 880-117339/1-A	Method Blank	Total/NA	Solid	8015B NM	117339
LCS 880-117339/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	117339
LCSD 880-117339/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	117339

Analysis Batch: 117569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-61876-1	SW01	Total/NA	Solid	8015 NM	
880-61876-2	SW02	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Poduced Water

Job ID: 880-61876-1
SDG: Lea County, NM

GC Semi VOA (Continued)

Analysis Batch: 117569 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-61876-3	SW03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 117441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-61876-1	SW01	Soluble	Solid	DI Leach	
880-61876-2	SW02	Soluble	Solid	DI Leach	
880-61876-3	SW03	Soluble	Solid	DI Leach	
MB 880-117441/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-117441/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-117441/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 117518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-61876-1	SW01	Soluble	Solid	300.0	117441
880-61876-2	SW02	Soluble	Solid	300.0	117441
880-61876-3	SW03	Soluble	Solid	300.0	117441
MB 880-117441/1-A	Method Blank	Soluble	Solid	300.0	117441
LCS 880-117441/2-A	Lab Control Sample	Soluble	Solid	300.0	117441
LCSD 880-117441/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	117441

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 State 3H Poduced Water

Job ID: 880-61876-1
SDG: Lea County, NM

Client Sample ID: SW01

Lab Sample ID: 880-61876-1
Matrix: Solid
Date Collected: 08/22/25 12:10
Date Received: 08/22/25 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			117452	AA	EET MID	08/25/25 10:49
Total/NA	Analysis	8021B		1	117431	MNR	EET MID	08/26/25 04:22
Total/NA	Analysis	Total BTEX		1	117614	SA	EET MID	08/26/25 04:22
Total/NA	Analysis	8015 NM		1	117569	SA	EET MID	08/26/25 08:09
Total/NA	Prep	8015NM Prep			117339	EL	EET MID	08/22/25 07:49
Total/NA	Analysis	8015B NM		1	117448	TKC	EET MID	08/26/25 08:09
Soluble	Leach	DI Leach			117441	SI	EET MID	08/25/25 10:25
Soluble	Analysis	300.0		1	117518	CS	EET MID	08/25/25 19:01

Client Sample ID: SW02

Lab Sample ID: 880-61876-2
Matrix: Solid
Date Collected: 08/22/25 11:44
Date Received: 08/22/25 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			117452	AA	EET MID	08/25/25 10:49
Total/NA	Analysis	8021B		1	117431	MNR	EET MID	08/26/25 04:43
Total/NA	Analysis	Total BTEX		1	117614	SA	EET MID	08/26/25 04:43
Total/NA	Analysis	8015 NM		1	117569	SA	EET MID	08/26/25 08:24
Total/NA	Prep	8015NM Prep			117339	EL	EET MID	08/22/25 07:49
Total/NA	Analysis	8015B NM		1	117448	TKC	EET MID	08/26/25 08:24
Soluble	Leach	DI Leach			117441	SI	EET MID	08/25/25 10:25
Soluble	Analysis	300.0		1	117518	CS	EET MID	08/25/25 19:07

Client Sample ID: SW03

Lab Sample ID: 880-61876-3
Matrix: Solid
Date Collected: 08/22/25 12:16
Date Received: 08/22/25 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			117452	AA	EET MID	08/25/25 10:49
Total/NA	Analysis	8021B		1	117431	MNR	EET MID	08/26/25 05:03
Total/NA	Analysis	Total BTEX		1	117614	SA	EET MID	08/26/25 05:03
Total/NA	Analysis	8015 NM		1	117569	SA	EET MID	08/26/25 08:40
Total/NA	Prep	8015NM Prep			117339	EL	EET MID	08/22/25 07:49
Total/NA	Analysis	8015B NM		1	117448	TKC	EET MID	08/26/25 08:40
Soluble	Leach	DI Leach			117441	SI	EET MID	08/25/25 10:25
Soluble	Analysis	300.0		1	117518	CS	EET MID	08/25/25 19:24

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Job ID: 880-61876-1
Project/Site: Pygmy 27 State 3H Poduced Water
SDG: Lea County, NM

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Poduced Water

Job ID: 880-61876-1
SDG: Lea County, NM

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: Pygmy 27 State 3H Poduced Water

Job ID: 880-61876-1
SDG: Lea County, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-61876-1	SW01	Solid	08/22/25 12:10	08/22/25 17:15	0-8'
880-61876-2	SW02	Solid	08/22/25 11:44	08/22/25 17:15	0-8'
880-61876-3	SW03	Solid	08/22/25 12:16	08/22/25 17:15	0-9'

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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

880-61876 Chain of Custody

www.xenco.com

Page 1

Project Manager:	Hadlie Green	Bill to: (if different)	Hadlie Green
Company Name:	Ensolum LLC	Company Name:	
Address:	601 Marienfeld St. Suit 400	Address:	
City, State ZIP:	Midland Tx 79701	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pygmy 27 State 3H Produced Water	Turn Around	
Project Number:	03D2024356	☑ Routine ☐ Rush	
Project Location:	Lea County, NM	Due Date:	
Sampler's Name:	LeAndra Tarin	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	03D2024356		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR8
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	0.1
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.2
Total Containers:		Corrected Temperature:	3.1

Preservative Codes

None: NO | DI Water: H_2O
Cool: Cool | MeOH: Me
HCL: HC | HNO_3: HN
H_2SO_4: H_2 | NaOH: Na
H_3PO_4: HP
NaHSO 4: NABIS
$Na_2S_2O_3$: NaSO 3
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX 8021	TPH 8015	Chloride 300	Sample Comments
SW01	S	8/22/25	1210	0-8'	C	1		X	X	X	
SW02			1144	0-8'	C	1		X	X	X	
SW03	↓	↓	1216	0-9'	C	1		X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		8/22/25 1715	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-61876-1
SDG Number: Lea County, NM

Login Number: 61876
List Number: 1
Creator: Vasquez, Julisa

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 9/11/2025 4:43:10 PM Revision 1

JOB DESCRIPTION

Pygmy 27 State 3H Produced
Lea County

JOB NUMBER

880-62229-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

Eurofins Midland

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
9/11/2025 4:43:10 PM
Revision 1

Authorized for release by
John Builes, Project Manager
John.Builes@et.eurofinsus.com
Designee for
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Laboratory Job ID: 880-62229-1
SDG: Lea County

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum Job ID: 880-62229-1
Project: Pygmy 27 State 3H Produced

Job ID: 880-62229-1 Eurofins Midland

Job Narrative
880-62229-1

REVISION

The report being provided is a revision of the original report sent on 9/10/2025. The report (revision 1) is being revised due to Revised report due to a transcription error from the COC..

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 9/3/2025 3:21 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 1.7°C.

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

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

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

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Client Sample ID: FS03

Lab Sample ID: 880-62229-1
Matrix: Solid
Date Collected: 09/03/25 11:05
Date Received: 09/03/25 15:21
Sample Depth: 8.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/05/25 09:10	09/05/25 13:37	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/05/25 09:10	09/05/25 13:37	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/05/25 09:10	09/05/25 13:37	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/05/25 09:10	09/05/25 13:37	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/05/25 09:10	09/05/25 13:37	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/05/25 09:10	09/05/25 13:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*09/05/25 09:10*	*09/05/25 13:37*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*09/05/25 09:10*	*09/05/25 13:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			09/05/25 13:37	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			09/09/25 14:32	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	<49.7	U	49.7		mg/Kg		09/03/25 14:14	09/09/25 14:32	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/03/25 14:14	09/09/25 14:32	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/03/25 14:14	09/09/25 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*09/03/25 14:14*	*09/09/25 14:32*	*1*
o-Terphenyl	*120*		*70 - 130*	*09/03/25 14:14*	*09/09/25 14:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**41.4**		9.90		mg/Kg			09/05/25 16:10	1

Client Sample ID: FS04

Lab Sample ID: 880-62229-2
Matrix: Solid
Date Collected: 09/03/25 11:08
Date Received: 09/03/25 15:21
Sample Depth: 7.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/05/25 09:10	09/05/25 13:57	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/05/25 09:10	09/05/25 13:57	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/05/25 09:10	09/05/25 13:57	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/05/25 09:10	09/05/25 13:57	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/05/25 09:10	09/05/25 13:57	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/05/25 09:10	09/05/25 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*09/05/25 09:10*	*09/05/25 13:57*	*1*

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Client Sample ID: FS04

Date Collected: 09/03/25 11:08
Date Received: 09/03/25 15:21
Sample Depth: 7.5'

Lab Sample ID: 880-62229-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*09/05/25 09:10*	*09/05/25 13:57*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			09/05/25 13:57	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			09/09/25 14:47	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		09/03/25 14:14	09/09/25 14:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		09/03/25 14:14	09/09/25 14:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		09/03/25 14:14	09/09/25 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/03/25 14:14*	*09/09/25 14:47*	*1*
o-Terphenyl	*101*		*70 - 130*	*09/03/25 14:14*	*09/09/25 14:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**281**		10.1	mg/Kg			09/05/25 16:16	1

Client Sample ID: SW04

Date Collected: 09/03/25 11:12
Date Received: 09/03/25 15:21
Sample Depth: 0-7.5'

Lab Sample ID: 880-62229-3
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		09/05/25 09:10	09/05/25 14:18	1
Toluene	<0.00202	U	0.00202	mg/Kg		09/05/25 09:10	09/05/25 14:18	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		09/05/25 09:10	09/05/25 14:18	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		09/05/25 09:10	09/05/25 14:18	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		09/05/25 09:10	09/05/25 14:18	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		09/05/25 09:10	09/05/25 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/05/25 09:10*	*09/05/25 14:18*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*09/05/25 09:10*	*09/05/25 14:18*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			09/05/25 14:18	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			09/09/25 15:28	1

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Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Client Sample ID: SW04

Date Collected: 09/03/25 11:12
Date Received: 09/03/25 15:21
Sample Depth: 0-7.5'

Lab Sample ID: 880-62229-3
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/03/25 14:14	09/09/25 15:28	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/03/25 14:14	09/09/25 15:28	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/03/25 14:14	09/09/25 15:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*09/03/25 14:14*	*09/09/25 15:28*	*1*
o-Terphenyl	*108*		*70 - 130*	*09/03/25 14:14*	*09/09/25 15:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**49.3**		9.98		mg/Kg			09/05/25 16:36	1

Client Sample ID: SW05

Date Collected: 09/03/25 11:15
Date Received: 09/03/25 15:21
Sample Depth: 0-8.5'

Lab Sample ID: 880-62229-4
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/05/25 09:10	09/05/25 14:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/05/25 09:10	09/05/25 14:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/05/25 09:10	09/05/25 14:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/05/25 09:10	09/05/25 14:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/05/25 09:10	09/05/25 14:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/05/25 09:10	09/05/25 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*09/05/25 09:10*	*09/05/25 14:38*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*09/05/25 09:10*	*09/05/25 14:38*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/05/25 14:38	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/09/25 15:43	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/03/25 14:14	09/09/25 15:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/03/25 14:14	09/09/25 15:43	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/03/25 14:14	09/09/25 15:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/03/25 14:14*	*09/09/25 15:43*	*1*
o-Terphenyl	*102*		*70 - 130*	*09/03/25 14:14*	*09/09/25 15:43*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Client Sample ID: SW05

Date Collected: 09/03/25 11:15
Date Received: 09/03/25 15:21
Sample Depth: 0-8.5'

Lab Sample ID: 880-62229-4

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	215		10.1		mg/Kg			09/05/25 16:43	1

Surrogate Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-62229-1	FS03	114	97
880-62229-2	FS04	123	92
880-62229-3	SW04	115	94
880-62229-4	SW05	74	81
LCS 880-118315/1-A	Lab Control Sample	109	96
LCS 880-118357/1-A	Lab Control Sample	125	102
LCSD 880-118315/2-A	Lab Control Sample Dup	112	99
LCSD 880-118357/2-A	Lab Control Sample Dup	116	98
MB 880-118315/5-A	Method Blank	115	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-62229-1	FS03	117	120
880-62229-2	FS04	102	101
880-62229-3	SW04	106	108
880-62229-4	SW05	102	102
LCS 880-118177/2-A	Lab Control Sample	89	103
LCSD 880-118177/3-A	Lab Control Sample Dup	106	99
MB 880-118177/1-A	Method Blank	94	95

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-118315/5-A
Matrix: Solid
Analysis Batch: 118307

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 118315

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/05/25 09:10	09/05/25 11:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/05/25 09:10	09/05/25 11:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/05/25 09:10	09/05/25 11:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/05/25 09:10	09/05/25 11:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/05/25 09:10	09/05/25 11:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/05/25 09:10	09/05/25 11:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*09/05/25 09:10*	*09/05/25 11:33*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/05/25 09:10*	*09/05/25 11:33*	*1*

Lab Sample ID: LCS 880-118315/1-A
Matrix: Solid
Analysis Batch: 118307

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118315

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08001		mg/Kg		80	70 - 130		
Toluene			0.100	0.08435		mg/Kg		84	70 - 130		
Ethylbenzene			0.100	0.09861		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1975		mg/Kg		99	70 - 130		
o-Xylene			0.100	0.1017		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-118315/2-A
Matrix: Solid
Analysis Batch: 118307

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 118315

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08445		mg/Kg		84	70 - 130	5	35
Toluene			0.100	0.08571		mg/Kg		86	70 - 130	2	35
Ethylbenzene			0.100	0.09953		mg/Kg		100	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2020		mg/Kg		101	70 - 130	2	35
o-Xylene			0.100	0.1051		mg/Kg		105	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCS 880-118357/1-A
Matrix: Solid
Analysis Batch: 118307

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118357

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08919		mg/Kg		89	70 - 130		
Toluene			0.100	0.08994		mg/Kg		90	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

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

Lab Sample ID: LCS 880-118357/1-A
Matrix: Solid
Analysis Batch: 118307

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118357

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ethylbenzene			0.100	0.1049		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2114		mg/Kg		106	70 - 130		
o-Xylene			0.100	0.1093		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 880-118357/2-A
Matrix: Solid
Analysis Batch: 118307

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 118357

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08983		mg/Kg		90	70 - 130	1	35
Toluene			0.100	0.08928		mg/Kg		89	70 - 130	1	35
Ethylbenzene			0.100	0.1027		mg/Kg		103	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2072		mg/Kg		104	70 - 130	2	35
o-Xylene			0.100	0.1091		mg/Kg		109	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

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

Lab Sample ID: MB 880-118177/1-A
Matrix: Solid
Analysis Batch: 118543

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 118177

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/03/25 14:14	09/09/25 09:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/03/25 14:14	09/09/25 09:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/03/25 14:14	09/09/25 09:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*09/03/25 14:14*	*09/09/25 09:31*	*1*
o-Terphenyl	*95*		*70 - 130*	*09/03/25 14:14*	*09/09/25 09:31*	*1*

Lab Sample ID: LCS 880-118177/2-A
Matrix: Solid
Analysis Batch: 118543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118177

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1050		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1057		mg/Kg		106	70 - 130		

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QC Sample Results

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

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

Lab Sample ID: LCS 880-118177/2-A
Matrix: Solid
Analysis Batch: 118543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 118177

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*89*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Lab Sample ID: LCSD 880-118177/3-A
Matrix: Solid
Analysis Batch: 118543

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 118177

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1016		mg/Kg		102	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	952.9		mg/Kg		95	70 - 130	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*99*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-118286/1-A
Matrix: Solid
Analysis Batch: 118296

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			09/05/25 15:10	1

Lab Sample ID: LCS 880-118286/2-A
Matrix: Solid
Analysis Batch: 118296

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	234.1		mg/Kg		94	90 - 110		

Lab Sample ID: LCSD 880-118286/3-A
Matrix: Solid
Analysis Batch: 118296

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	234.4		mg/Kg		94	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

GC VOA

Analysis Batch: 118307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-62229-1	FS03	Total/NA	Solid	8021B	118315
880-62229-2	FS04	Total/NA	Solid	8021B	118315
880-62229-3	SW04	Total/NA	Solid	8021B	118315
880-62229-4	SW05	Total/NA	Solid	8021B	118315
MB 880-118315/5-A	Method Blank	Total/NA	Solid	8021B	118315
LCS 880-118315/1-A	Lab Control Sample	Total/NA	Solid	8021B	118315
LCS 880-118357/1-A	Lab Control Sample	Total/NA	Solid	8021B	118357
LCSD 880-118315/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	118315
LCSD 880-118357/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	118357

Prep Batch: 118315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-62229-1	FS03	Total/NA	Solid	5035	
880-62229-2	FS04	Total/NA	Solid	5035	
880-62229-3	SW04	Total/NA	Solid	5035	
880-62229-4	SW05	Total/NA	Solid	5035	
MB 880-118315/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-118315/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-118315/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 118357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-118357/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-118357/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 118440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-62229-1	FS03	Total/NA	Solid	Total BTEX	
880-62229-2	FS04	Total/NA	Solid	Total BTEX	
880-62229-3	SW04	Total/NA	Solid	Total BTEX	
880-62229-4	SW05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 118177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-62229-1	FS03	Total/NA	Solid	8015NM Prep	
880-62229-2	FS04	Total/NA	Solid	8015NM Prep	
880-62229-3	SW04	Total/NA	Solid	8015NM Prep	
880-62229-4	SW05	Total/NA	Solid	8015NM Prep	
MB 880-118177/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-118177/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-118177/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 118543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-62229-1	FS03	Total/NA	Solid	8015B NM	118177
880-62229-2	FS04	Total/NA	Solid	8015B NM	118177
880-62229-3	SW04	Total/NA	Solid	8015B NM	118177
880-62229-4	SW05	Total/NA	Solid	8015B NM	118177
MB 880-118177/1-A	Method Blank	Total/NA	Solid	8015B NM	118177

QC Association Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

GC Semi VOA (Continued)

Analysis Batch: 118543 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-118177/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	118177
LCSD 880-118177/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	118177

Analysis Batch: 118607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-62229-1	FS03	Total/NA	Solid	8015 NM	
880-62229-2	FS04	Total/NA	Solid	8015 NM	
880-62229-3	SW04	Total/NA	Solid	8015 NM	
880-62229-4	SW05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 118286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-62229-1	FS03	Soluble	Solid	DI Leach	
880-62229-2	FS04	Soluble	Solid	DI Leach	
880-62229-3	SW04	Soluble	Solid	DI Leach	
880-62229-4	SW05	Soluble	Solid	DI Leach	
MB 880-118286/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-118286/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-118286/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 118296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-62229-1	FS03	Soluble	Solid	300.0	118286
880-62229-2	FS04	Soluble	Solid	300.0	118286
880-62229-3	SW04	Soluble	Solid	300.0	118286
880-62229-4	SW05	Soluble	Solid	300.0	118286
MB 880-118286/1-A	Method Blank	Soluble	Solid	300.0	118286
LCS 880-118286/2-A	Lab Control Sample	Soluble	Solid	300.0	118286
LCSD 880-118286/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	118286

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Client Sample ID: FS03
Date Collected: 09/03/25 11:05
Date Received: 09/03/25 15:21

Lab Sample ID: 880-62229-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			118315	AA	EET MID	09/05/25 09:10
Total/NA	Analysis	8021B		1	118307	MNR	EET MID	09/05/25 13:37
Total/NA	Analysis	Total BTEX		1	118440	SA	EET MID	09/05/25 13:37
Total/NA	Analysis	8015 NM		1	118607	SA	EET MID	09/09/25 14:32
Total/NA	Prep	8015NM Prep			118177	EL	EET MID	09/03/25 14:14
Total/NA	Analysis	8015B NM		1	118543	TKC	EET MID	09/09/25 14:32
Soluble	Leach	DI Leach			118286	SI	EET MID	09/04/25 15:42
Soluble	Analysis	300.0		1	118296	CS	EET MID	09/05/25 16:10

Client Sample ID: FS04
Date Collected: 09/03/25 11:08
Date Received: 09/03/25 15:21

Lab Sample ID: 880-62229-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			118315	AA	EET MID	09/05/25 09:10
Total/NA	Analysis	8021B		1	118307	MNR	EET MID	09/05/25 13:57
Total/NA	Analysis	Total BTEX		1	118440	SA	EET MID	09/05/25 13:57
Total/NA	Analysis	8015 NM		1	118607	SA	EET MID	09/09/25 14:47
Total/NA	Prep	8015NM Prep			118177	EL	EET MID	09/03/25 14:14
Total/NA	Analysis	8015B NM		1	118543	TKC	EET MID	09/09/25 14:47
Soluble	Leach	DI Leach			118286	SI	EET MID	09/04/25 15:42
Soluble	Analysis	300.0		1	118296	CS	EET MID	09/05/25 16:16

Client Sample ID: SW04
Date Collected: 09/03/25 11:12
Date Received: 09/03/25 15:21

Lab Sample ID: 880-62229-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			118315	AA	EET MID	09/05/25 09:10
Total/NA	Analysis	8021B		1	118307	MNR	EET MID	09/05/25 14:18
Total/NA	Analysis	Total BTEX		1	118440	SA	EET MID	09/05/25 14:18
Total/NA	Analysis	8015 NM		1	118607	SA	EET MID	09/09/25 15:28
Total/NA	Prep	8015NM Prep			118177	EL	EET MID	09/03/25 14:14
Total/NA	Analysis	8015B NM		1	118543	TKC	EET MID	09/09/25 15:28
Soluble	Leach	DI Leach			118286	SI	EET MID	09/04/25 15:42
Soluble	Analysis	300.0		1	118296	CS	EET MID	09/05/25 16:36

Client Sample ID: SW05
Date Collected: 09/03/25 11:15
Date Received: 09/03/25 15:21

Lab Sample ID: 880-62229-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			118315	AA	EET MID	09/05/25 09:10
Total/NA	Analysis	8021B		1	118307	MNR	EET MID	09/05/25 14:38
Total/NA	Analysis	Total BTEX		1	118440	SA	EET MID	09/05/25 14:38

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Client Sample ID: SW05

Date Collected: 09/03/25 11:15
Date Received: 09/03/25 15:21

Lab Sample ID: 880-62229-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 NM		1	118607	SA	EET MID	09/09/25 15:43
Total/NA	Prep	8015NM Prep			118177	EL	EET MID	09/03/25 14:14
Total/NA	Analysis	8015B NM		1	118543	TKC	EET MID	09/09/25 15:43
Soluble	Leach	DI Leach			118286	SI	EET MID	09/04/25 15:42
Soluble	Analysis	300.0		1	118296	CS	EET MID	09/05/25 16:43

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

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: Pygmy 27 State 3H Produced

Job ID: 880-62229-1
SDG: Lea County

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-62229-1	FS03	Solid	09/03/25 11:05	09/03/25 15:21	8.5'
880-62229-2	FS04	Solid	09/03/25 11:08	09/03/25 15:21	7.5'
880-62229-3	SW04	Solid	09/03/25 11:12	09/03/25 15:21	0-7.5'
880-62229-4	SW05	Solid	09/03/25 11:15	09/03/25 15:21	0-8.5'

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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

880-62229 Chain of Custody

www.xenco.com Page ___ of 1

Project Manager:	Hadlie Green	Bill to: (if different)	Hadlie Green
Company Name:	Ensolum, LLC	Company Name:	
Address:	601 N Marienfeld st Ste 400	Address:	
City, State ZIP:	Midland, TX 79701	City, State ZIP:	
Phone:	(432) 557-8895	Email:	hgreen@ensolum.com / tguadian@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pygmy 27 State 3H Produced Water	Turn Around	☐ Routine ☐ Rush
Project Number:	03D2024356	Due Date:	
Project Location:	Lea County	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Tabitha Guadian		
PO #:	03D2024356		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR8
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-1
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.8
Total Containers:		Corrected Temperature:	1.7

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	BTEX 8021	TPH 8015	Chlorides 300	Sample Comments
FS03	S	9/3/25	1105	8.5'	C	1		X	X	X	
FS04			1108	7.5'	C	1		X	X	X	
SW04			1112	0-7.5'	C	1		X	X	X	
SW05	↓	↓	1115	0-8.5'	C	1		X	X	X	
											TNG
				9/3/25							
NFE											

Preservative Codes

None: NO — DI Water: H_2O
Cool: Cool — MeOH: Me
HCL: HC — HNO_3: HN
H_2SO_4: H_2 — NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		9/3/25 1521	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-62229-1
SDG Number: Lea County

Login Number: 62229
List Number: 1
Creator: Vasquez, Julisa

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 9/23/2025 11:28:36 AM

JOB DESCRIPTION

PYGMY 27 STATE 3H PRODUCED WATER
03D2024356

JOB NUMBER

890-8826-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

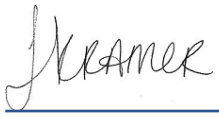
Eurofins Carlsbad

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



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9/23/2025 11:28:36 AM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Laboratory Job ID: 890-8826-1
SDG: 03D2024356

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-8826-1
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER SDG: 03D2024356

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi 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.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum Job ID: 890-8826-1
Project: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1 Eurofins Carlsbad

Job Narrative
890-8826-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The sample was received on 9/18/2025 12:50 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C.

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: BF01 (890-8826-1).

The following sample was received and analyzed from an unpreserved bulk soil jar: BF01 (890-8826-1).

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

Diesel Range Organics
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-119262/2-A), (880-62821-A-19-E MS) and (880-62821-A-19-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-119262 and analytical batch 880-119454 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 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-119262/3-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

Client Sample ID: BF01

Date Collected: 09/18/25 11:30
Date Received: 09/18/25 12:50

Lab Sample ID: 890-8826-1

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/19/25 09:10	09/19/25 17:46	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/19/25 09:10	09/19/25 17:46	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/19/25 09:10	09/19/25 17:46	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		09/19/25 09:10	09/19/25 17:46	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/19/25 09:10	09/19/25 17:46	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		09/19/25 09:10	09/19/25 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*09/19/25 09:10*	*09/19/25 17:46*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*09/19/25 09:10*	*09/19/25 17:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			09/19/25 17:46	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/22/25 23:38	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *+	49.8		mg/Kg		09/19/25 08:31	09/22/25 23:38	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/19/25 08:31	09/22/25 23:38	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/19/25 08:31	09/22/25 23:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*09/19/25 08:31*	*09/22/25 23:38*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/19/25 08:31*	*09/22/25 23:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.9**		9.98		mg/Kg			09/19/25 21:18	1

Surrogate Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

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)
880-62814-A-21-B MS	Matrix Spike	121	100
880-62814-A-21-C MSD	Matrix Spike Duplicate	116	105
890-8826-1	BF01	117	102
LCS 880-119254/1-A	Lab Control Sample	118	103
LCSD 880-119254/2-A	Lab Control Sample Dup	108	105
MB 880-119254/5-A	Method Blank	108	95

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-62821-A-19-E MS	Matrix Spike	107	148 S1+
880-62821-A-19-F MSD	Matrix Spike Duplicate	120	169 S1+
890-8826-1	BF01	98	106
LCS 880-119262/2-A	Lab Control Sample	127	149 S1+
LCSD 880-119262/3-A	Lab Control Sample Dup	144 S1+	174 S1+
MB 880-119262/1-A	Method Blank	121	130

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-119254/5-A
Matrix: Solid
Analysis Batch: 119180

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 119254

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/18/25 15:56	09/19/25 11:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/18/25 15:56	09/19/25 11:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/18/25 15:56	09/19/25 11:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/18/25 15:56	09/19/25 11:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/18/25 15:56	09/19/25 11:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/18/25 15:56	09/19/25 11:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*09/18/25 15:56*	*09/19/25 11:45*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*09/18/25 15:56*	*09/19/25 11:45*	*1*

Lab Sample ID: LCS 880-119254/1-A
Matrix: Solid
Analysis Batch: 119180

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119254

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07278		mg/Kg		73	70 - 130		
Toluene			0.100	0.08381		mg/Kg		84	70 - 130		
Ethylbenzene			0.100	0.08689		mg/Kg		87	70 - 130		
m-Xylene & p-Xylene			0.200	0.1766		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.09121		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-119254/2-A
Matrix: Solid
Analysis Batch: 119180

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119254

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.07908		mg/Kg		79	70 - 130	8	35
Toluene			0.100	0.08376		mg/Kg		84	70 - 130	0	35
Ethylbenzene			0.100	0.08336		mg/Kg		83	70 - 130	4	35
m-Xylene & p-Xylene			0.200	0.1658		mg/Kg		83	70 - 130	6	35
o-Xylene			0.100	0.08551		mg/Kg		86	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 880-62814-A-21-B MS
Matrix: Solid
Analysis Batch: 119180

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 119254

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.07987		mg/Kg		80	70 - 130		
Toluene	<0.00201	U	0.100	0.09049		mg/Kg		90	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

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

Lab Sample ID: 880-62814-A-21-B MS
Matrix: Solid
Analysis Batch: 119180

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 119254

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.100	0.09234		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1876		mg/Kg		94	70 - 130
o-Xylene	<0.00201	U	0.100	0.09580		mg/Kg		96	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-62814-A-21-C MSD
Matrix: Solid
Analysis Batch: 119180

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 119254

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.07451		mg/Kg		75	70 - 130	7	35
Toluene	<0.00201	U	0.100	0.07973		mg/Kg		80	70 - 130	13	35
Ethylbenzene	<0.00201	U	0.100	0.08043		mg/Kg		80	70 - 130	14	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1623		mg/Kg		81	70 - 130	14	35
o-Xylene	<0.00201	U	0.100	0.08267		mg/Kg		83	70 - 130	15	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

Lab Sample ID: MB 880-119262/1-A
Matrix: Solid
Analysis Batch: 119454

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 119262

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/19/25 08:31	09/22/25 18:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/19/25 08:31	09/22/25 18:33	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/19/25 08:31	09/22/25 18:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*09/19/25 08:31*	*09/22/25 18:33*	*1*
o-Terphenyl	*130*		*70 - 130*	*09/19/25 08:31*	*09/22/25 18:33*	*1*

Lab Sample ID: LCS 880-119262/2-A
Matrix: Solid
Analysis Batch: 119454

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119262

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1147		mg/Kg		115	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1076		mg/Kg		108	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

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

Lab Sample ID: LCS 880-119262/2-A
Matrix: Solid
Analysis Batch: 119454

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 119262

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	127		70 - 130
o-Terphenyl	149	S1+	70 - 130

Lab Sample ID: LCSD 880-119262/3-A
Matrix: Solid
Analysis Batch: 119454

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 119262

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1322	*+	mg/Kg		132	70 - 130	14	20
Diesel Range Organics (Over C10-C28)			1000	1240		mg/Kg		124	70 - 130	14	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	144	S1+	70 - 130
o-Terphenyl	174	S1+	70 - 130

Lab Sample ID: 880-62821-A-19-E MS
Matrix: Solid
Analysis Batch: 119454

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 119262

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+	998	922.0		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)	489		998	1316		mg/Kg		83	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	148	S1+	70 - 130

Lab Sample ID: 880-62821-A-19-F MSD
Matrix: Solid
Analysis Batch: 119454

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 119262

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+	998	1064		mg/Kg		107	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	489		998	1510		mg/Kg		102	70 - 130	14	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	120		70 - 130
o-Terphenyl	169	S1+	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-119283/1-A
Matrix: Solid
Analysis Batch: 119330

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg			09/19/25 18:29	1

Lab Sample ID: LCS 880-119283/2-A
Matrix: Solid
Analysis Batch: 119330

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	258.4		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-119283/3-A
Matrix: Solid
Analysis Batch: 119330

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	258.7		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 880-62821-A-27-D MS
Matrix: Solid
Analysis Batch: 119330

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	46.7		253	303.6		mg/Kg		102	90 - 110		

Lab Sample ID: 880-62821-A-27-E MSD
Matrix: Solid
Analysis Batch: 119330

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	46.7		253	304.3		mg/Kg		102	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

GC VOA

Analysis Batch: 119180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8826-1	BF01	Total/NA	Solid	8021B	119254
MB 880-119254/5-A	Method Blank	Total/NA	Solid	8021B	119254
LCS 880-119254/1-A	Lab Control Sample	Total/NA	Solid	8021B	119254
LCSD 880-119254/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	119254
880-62814-A-21-B MS	Matrix Spike	Total/NA	Solid	8021B	119254
880-62814-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	119254

Prep Batch: 119254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8826-1	BF01	Total/NA	Solid	5035	
MB 880-119254/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-119254/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-119254/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-62814-A-21-B MS	Matrix Spike	Total/NA	Solid	5035	
880-62814-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 119482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8826-1	BF01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 119262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8826-1	BF01	Total/NA	Solid	8015NM Prep	
MB 880-119262/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-119262/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-119262/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-62821-A-19-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-62821-A-19-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 119454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8826-1	BF01	Total/NA	Solid	8015B NM	119262
MB 880-119262/1-A	Method Blank	Total/NA	Solid	8015B NM	119262
LCS 880-119262/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	119262
LCSD 880-119262/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	119262
880-62821-A-19-E MS	Matrix Spike	Total/NA	Solid	8015B NM	119262
880-62821-A-19-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	119262

Analysis Batch: 119573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8826-1	BF01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 119283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8826-1	BF01	Soluble	Solid	DI Leach	
MB 880-119283/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-119283/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-119283/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

HPLC/IC (Continued)

Leach Batch: 119283 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-62821-A-27-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-62821-A-27-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 119330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8826-1	BF01	Soluble	Solid	300.0	119283
MB 880-119283/1-A	Method Blank	Soluble	Solid	300.0	119283
LCS 880-119283/2-A	Lab Control Sample	Soluble	Solid	300.0	119283
LCSD 880-119283/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	119283
880-62821-A-27-D MS	Matrix Spike	Soluble	Solid	300.0	119283
880-62821-A-27-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	119283

Lab Chronicle

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

Client Sample ID: BF01
Date Collected: 09/18/25 11:30
Date Received: 09/18/25 12:50

Lab Sample ID: 890-8826-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	119254	09/19/25 09:10	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	119180	09/19/25 17:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			119482	09/19/25 17:46	SA	EET MID
Total/NA	Analysis	8015 NM		1			119573	09/22/25 23:38	SA	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	119262	09/19/25 08:31	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	119454	09/22/25 23:38	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	119283	09/19/25 09:26	SI	EET MID
Soluble	Analysis	300.0		1			119330	09/19/25 21:18	CS	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

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: PYGMY 27 STATE 3H PRODUCED WATER

Job ID: 890-8826-1
SDG: 03D2024356

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
890-8826-1	BF01	Solid	09/18/25 11:30	09/18/25 12:50	New Mexico

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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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	
Company Name:	Ensolum	Company Name:	
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pygmy 27 State 3H Produced Water	Turn Around	
Project Number:	03D2024356	☑ Routine ☐ Rush	
Project Location:	Lea County	Due Date:	
Sampler's Name:	Kaoru Shimada	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	Thermo
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.0
Total Containers:		Corrected Temperature:	1.8

ANALYSIS REQUEST

890-8826 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (300)	TPH (8015M)	BTEX (8021)	RCI	Paint Filter Test	TCLP	VOC	SVOC	
BF01	Soil	9/18/2025	1130	NA	Comp	1		x	x	x						

Parameters

Sample Comments

Incident ID:

Cost Center:

AFE:

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 ~~Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn~~

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $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.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		9/18 1250	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone: 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Kramer, Jessica	Carrier Tracking No(s): N/A	COC No: 890-5897.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-8826-1
Address: 1211 W. Florida Ave, ,	Due Date Requested: 9/24/2025			
City: Midland	TAT Requested (days): N/A			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: PYGMY 27 STATE 3H PRODUCED WATER	Project #: 89000145			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	8015MOD_Calc	8021B/5035FP_Calc(MOD) BTEX	8015MOD_NM/8015NM_S_Prep(MOD) Full TPH	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
BF01 (890-8826-1)	9/18/25	11:30 Mountain	G	Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Leticia Juarez	9/18/25 16:30				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			Kathy Randell Lee	9/19/25 0800	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		3.2/3.1 °C IR-8 (0.1)

Ver: 10/10/2024

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone: 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Kramer, Jessica	Carrier Tracking No(s): N/A	COC No: 890-5897.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-8826-1
Address: 1211 W. Florida Ave, ,	Due Date Requested: 9/24/2025			
City: Midland	TAT Requested (days): N/A			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: PYGMY 27 STATE 3H PRODUCED WATER	Project #: 89000145			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:
-

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	8015MOD_Calc	8021B/5035FP_Calc(MOD) BTEX	8015MOD_NM/8015NM_S_Prep(MOD) Full TPH	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
BF01 (890-8826-1)	9/18/25	11:30 Mountain	G	Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Leticia Juarez	9/18/25 16:30				
Relinquished by:	Date/Time:	Company	Received by: Kelly Randell Lee	Date/Time: 9/19/25 0800	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.2/3.1 °C IR-8 (0.1)

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8826-1
SDG Number: 03D2024356

Login Number: 8826
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8826-1
SDG Number: 03D2024356

Login Number: 8826
List Number: 2
Creator: Laing, Edmundo

List Source: Eurofins Midland
List Creation: 09/19/25 08:19 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

ENSOLUM

APPENDIX E

NMOCD Correspondence

Hadlie Green

From: Hadlie Green
Sent: Wednesday, August 27, 2025 12:56 PM
To: ocd.enviro@state.nm.us
Cc: Laird, Jacob; Esparza, Brittany; Dan Moir; Tabitha Guadian
Subject: COG - Extension Request - Pygmy State Com 003H (Incident Number nAPP2516140823)

To Whom It May Concern,

Pygmy State Com 003H (Incident Number nAPP2516140823)

COG Operating, LLC (COG) is requesting an extension for the current deadline of August 27, 2025, for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for the Pygmy State Com 003H (Incident Number nAPP2516140823). The release was discovered on May 29, 2025. Initial assessment, delineation, and excavation activities have been completed; however, based on the most recent analytical results, additional excavation activities are required. In order to complete remediation efforts, review the laboratory analytical results, and submit a remediation work plan or closure report, COG requests a 90-day extension of this deadline until November 25, 2025.

Depth to groundwater is estimated to be greater than 100 feet bgs. The closest continuously flowing or significant watercourse to the Site is a fresh water pond that is 4,848 feet east 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 not overlying a subsurface mine. The Site is not within a 100-year floodplain. The Site is a low karst designation area.

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 515151
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2516140823**
Incident Name	**NAPP2516140823 PYGMY STATE COM 003H @ FAPP2203851379**
Incident Type	**Produced Water Release**
Incident Status	**Reclamation Report Received**
Incident Facility	**[fAPP2203851379] Pygmy 27 St 3H Battery**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Pygmy State Com 003H
Date Release Discovered	05/29/2025
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications 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	Cause: Equipment Failure | Flow Line - Production | Produced Water | Released: 4 BBL | Recovered: 3 BBL | Lost: 1 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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Oil Conservation Division
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Santa Fe, NM 87505

QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 515151
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**More info needed to determine if this will be treated as a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	*Unavailable.*
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Brittany Esparza Title: Environmental Technician Email: brittany.Esparza@ConocoPhillips.com Date: 10/14/2025

Sante Fe Main Office
Phone: (505) 476-3441

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Santa Fe, NM 87505

QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 515151
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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 500 and 1000 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	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 ½ and 1 (mi.)
Any other fresh water well or spring	Between 500 and 1000 (ft.)
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	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 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 contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	15400
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	13700
GRO+DRO (EPA SW-846 Method 8015M)	13718
BTEX (EPA SW-846 Method 8021B or 8260B)	59.4
Benzene (EPA SW-846 Method 8021B or 8260B)	1.5
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	05/29/2025
On what date will (or did) the final sampling or liner inspection occur	09/03/2025
On what date will (or was) the remediation complete(d)	09/03/2025
What is the estimated surface area (in square feet) that will be reclaimed	850
What is the estimated volume (in cubic yards) that will be reclaimed	250
What is the estimated surface area (in square feet) that will be remediated	850
What is the estimated volume (in cubic yards) that will be remediated	250
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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

QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 515151
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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	fEEM0112342028 LEA LAND LANDFILL
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Brittany Esparza Title: Environmental Technician Email: brittany.Esparza@ConocoPhillips.com Date: 10/14/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 515151
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Deferral Requests Only *Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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Phone: (505) 629-6116

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

QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 515151
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**500317**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**09/03/2025**
What was the (estimated) number of samples that were to be gathered	**4**
What was the sampling surface area in square feet	**858**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	850
What was the total volume (cubic yards) remediated	250
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	850
What was the total volume (in cubic yards) reclaimed	250
Summarize any additional remediation activities not included by answers (above)	excavation of impacted soil.

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Brittany Esparza Title: Environmental Technician Email: brittany.Esparza@ConocoPhillips.com Date: 10/14/2025

Sante Fe Main Office
Phone: (505) 476-3441

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QUESTIONS (continued)

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 515151
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	850
What was the total volume of replacement material (in cubic yards) for this site	250
Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.	
Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseeding commence(d)	10/02/2025
Summarize any additional reclamation activities not included by answers (above)	NA
The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 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: Brittany Esparza Title: Environmental Technician Email: brittany.Esparza@ConocoPhillips.com Date: 10/14/2025

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QUESTIONS (continued)

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	Action Number: 515151
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Revegetation Report	
Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.	
Requesting a restoration complete approval with this submission	No
Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.	

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CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 515151
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your reclamation/remediation closure report for Incident #NAPP2516140823 Pygmy State Com 003H, thank you. The reclamation/remediation closure report is approved.	11/18/2025